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Land Use Planning Reports

Wisconsin Counties

Vol. I.

1. Outline for County Land Use Planning in Wisconsin
2. Adams
3. Ashland (Unified)
4. Ashland (Intensive)
5. Barron
6. Bayfield
7. Burnett
8. Door
9. Green

Vol. II.

10. Kenosha
11. Juneau
12. Lafayette
13. Marinette
14. Oconto
15. Town Consolidation - Oconto
16. Pierce

Vol. III.

17. Price
18. Taylor
19. Trempealeau
20. Washburn
21. Washington
22. Waushara

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Kenosha

FOREWORD

When the Land Use Planning Project was first suggested for Kenosha County, we wondered whether it had any place in a long settled, highly developed area such as this. However, we decided to give the project a trial and the results have been gratifying.

The Project was approached with an attitude of weighing everything that might have a bearing on the ultimate use of land in this county. Considered from this approach, little that has to do with the land or the people of the County can be overlooked. A little reflection on the part of anyone familiar with rural life will call to mind present situations in land use that are the result of a chain of cirsumstances comparable to a Rube Goldberg cartoon.

This is a preliminary report. Far more time than has been given to this project is necessary before it can be considered anywhere near complete or final. Some of the conclusions reached in this report may be revised as we consider other things that have to do with land use; and as we are faced with the problem of coordinating and of correlating the new findings with the old.

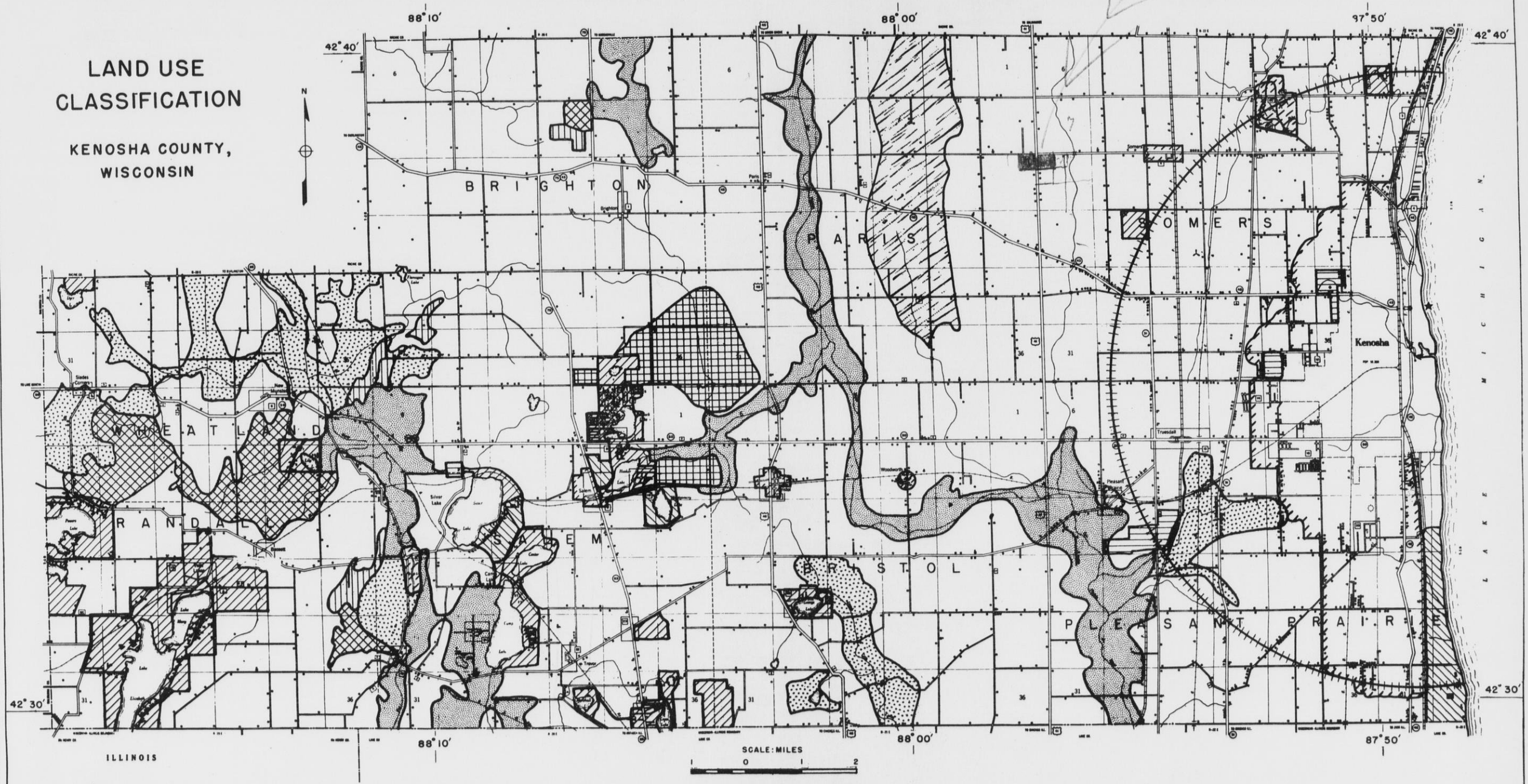
This report has been prepared by a County-wide committee and by township farmer committees in every township of the County. It represents the first step of this kind in Kenosha County in getting farmer opinion on specific agricultural matters.

It proved a fascinating task and one that will undoubtedly be fruitful in the future even as the work done to date has been productive of results.

Milton Meredith - Chairman
Kenosha County Land Use
Planning Committee

LAND USE CLASSIFICATION

KENOSHA COUNTY,
WISCONSIN





KENOSHA COUNTY

- E1 *Drainage needed.*
- E1A *Drainage, a problem.*
- E1B *Abandoned drainage district.*
- E2 *Recreation area.*
- E2A *County park.*
- E2B *Proposed recreation areas.*
- E3 *Game area recommended.*
- E4 *Reforestation proposed.*
- E4A *Partial reforestation recommended.*
- E5 *Public owned lands.*
- E6 *Area subject to subdivision control by city of Kenosha.*
- E7 *Suburban areas.*
- E *Established farming areas.*

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY. COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

U.S. DEPARTMENT OF AGRICULTURE.

BUREAU OF AGRICULTURAL ECONOMICS

TABLE OF CONTENTS

	Page
STATEMENT OF PROCEDURE	1
A. Limitations	1
B. Procedure	2
PHYSICAL CHARACTERISTICS	5
ALL LAND ARABLE	6
LAND USE AREAS AND SUITABILITY TO THE PRESENT USES	6
A. Description of Sub-Areas	7
GENERAL MAJOR ADJUSTMENTS	9
PERMANENT AND SEMI-PERMANENT PRACTICES	10
A. Soil Fertility	10
B. Lime	10
C. Phosphates	10
D. Potash	10
E. Drainage	10
F. Pasture Improvements	11
G. Reforestration	12
H. Woodlot Management	12
I. Weeds	12
PRACTICES TO BE PERFORMED ANNUALLY	13
A. Truck Crops	
I. Plant Diseases	13
II. Insect Pests	13
III. Horticultural Varieties	13
IV. Recommendations	13
THE FARM	14
A. Size	14
B. Part Time Farms	14
C. Ownership	14
D. Tenancy	15
OTHER RECOMMENDATIONS	16
A. Livestock	16
B. Diversity	16
C. A.A.A.	16
THE COMMUNITY	17
A. Recreation	17
B. Game	18
C. Zoning	18
FORM NO. 4	20
SUMMARY	21

STATEMENT OF PROCEDURE

A. Limitations

It must be recognized that there are many limitations to the project as it has been conducted in Kenosha County. One of the most fundamental is a matter of time and timing. It is imperative that committee meetings be conducted before work begins in the fields. Farmer committee members cannot give their best to a job of this sort during a season when they are spending long hours in the fields. It was not possible to hold more than one series of community committee meetings in Kenosha County before field work began. At its best, this is a winter project.

More time might well be given to a proper evaluation and organization of information all ready on hand in the State and County offices.

There should have been more community committee meetings. It would have then been possible to re-examine the material prepared by the Secretary so as to express more clearly the committee's thoughts.

More community committee meetings are necessary to broaden the topic of discussion. There are many things, other than those considered, that affect land use. Some of these were mentioned by the community committee members. They include taxation, capitalization, debt, schools, public relief problems, as well as labor and other social and economic problems.

The County Agent should not be devoting his "busy season" to planning. The time for action should be reserved for action. Planning should be done at other times. In Kenosha County, that period usually coincides with the time that farmers are most available for committee service.

The two homemakers on the County Committee, one of whom served on a township committee, made their contribution to a degree that indicates that such a project would profit by a county, if not community committees of homemakers. As is pointed out in the summary, poor management in the home has bankrupt good farmers in Kenosha County.

A completed project should contain a summary of those things the individual farmer may do for himself within his own farming unit and a summary of those external things requiring community or public action. Because of the time limitation, this report deals more with the internal than with the external. However, this is good, for the average man will get farther in the solution of his own problems than he will by looking to the outside for all of the answers. The internal problems are as important as are the external to the well being of the farmer and his family and the individual can do more about their solution.

The facilities for following many of the recommendations may be limited, but not impossible to attain. For example, we may advise a farmer to expand his poultry as a worth-while source of income, but he may not

have proper housing facilities for a larger flock. Again, we may advise crop diversity, and the farmer may lack knowledge and experience in the production of the kind of crops recommended.

However, this project has one really big advantage. People don't need to be sold on a program which they drew up themselves.

B. Procedure

Kenosha is a small, highly developed county. Those things influencing land use are so diverse and so varied from town to town that it was considered essential that not more than one township be represented as a community.

I. Organization

The County Agricultural Agent served as Secretary to All Land Use Planning Committees. The County Agricultural Committee is the basic organization. An attempt was made to include all interested groups. The County Agricultural Agent was asked to submit recommendations for the eight Community Committees as well as for the representatives of the other interested groups. To get nominations for the community committees, he explained the project to the rural members of the County Board and asked each for nominations from his township. From the nominations submitted by the County Agent, the County Agricultural Committee selected the following committees:

a. County Committee

Wm. E. Thompson, R#4, Kenosha, Wis. State Committeeman
Milton Meredith, R#2, Union Grove, Wis. Chairman, Land Use Comm.
Willis Upson - Bristol, Wisconsin, Kenosha Co. Park Board
Phil Saunders, Kenosha, Wis. Kenosha Co. Conservation Club
John Schumacher, R#3, Kenosha, Wis., AAA
Ralph Dunwiddle, Elkhorn, Wis., Farm Credit Administration
J. W. Brook, Bristol, Wis., Kenosha Co. Finance Comm. Farm Owner
M. M. Schnurr, Wilmot, Wisconsin, Smith-Hughes
Floyd Carlson, Kenosha, Wis., Kenosha Park Department
Maude Murdock, Bristol, Wis., Farm Homemaker
Mrs. Jas. Waldo, " " " "
Henry Nienhaus, Bassett, Wisconsin, Randall Twp. Farmer
Jos. A. Kerkman, R#3, Burlington, Wis., Wheatland Twp. "
B. J. Gillmore, Bristol, Wis., Bristol Twp. "
Wm. Mayer, R#2, Kenosha, Wis., Pleasant Prairie Twp. "
Oscar Stollenwerk, R#2, Union Grove, Wis., Paris Twp. "
Elmer Richter, R#3, Burlington, Wis., Brighton Twp. "
Wm. E. Thompson, R#4, Kenosha, Wis., Somers Twp. "
Phil Stockwell, Salem , Wis., Salem Twp. "

b. Community Committees

Somers:
Wm. E. Thompson, R#4, Kenosha, Wisconsin, Chairman
Erwin DeSchmidt, R#1, Sturtevant, Wisconsin
J. W. Miller, Somers, Wis.
Louis Barrows, R#4, Kenosha, Wisconsin
Walter Middlecamp, R#4, Kenosha, Wisconsin

Paris:
Oscar Stollenwerk, R#2, Union Grove, Wis., Chairman
Henry Richter, R#2, Union Grove, Wisconsin
Roscoe Torrey, Bristol, Wisconsin
Paul Burgess, Bristol, Wisconsin
Chas. Holloway, R#2, Union Grove, Wisconsin

Bristol
B. J. Gillmore, Bristol, Wisconsin, Chairman
R. D. Pringle, R#2, Kenosha, Wisconsin
B. F. Gillmore, Bristol, Wisconsin
James Waldo, R#2, Kenosha, Wisconsin
Jay B. Edwards, R#2, Kenosha, Wisconsin

Brighton:
Elmer Richter, R#3, Burlington, Wisconsin, Chairman
James W. Brook, Bristol, Wis.
Wendolyn Reiter, Bristol, Wisconsin
Claude Dixon, Kansasville, Wisconsin
Joe Leach, R#1, Burlington, Wisconsin

Salem:
Phil Stockwell, Salem, Wisconsin Chairman
Willis Sheen, Trevor, Wisconsin
William Griffin, Salem, Wisconsin
Andrew Fennema, Salem, Wisconsin
W. L. Barthel, Salem, Wisconsin

Wheatland:
Joe A. Kerkman, R#3, Burlington, Wis. Chairman
Fred Getka, R#3, Burlington, Wisconsin
Otto Schenning, Wilmot, Wisconsin
Gilbert Runkel, R#3, Burlington, Wisconsin
Oscar Uebele, R#4, Burlington, Wisconsin

Randall:
Henry Nienhaus-Bassett, Wisconsin Chairman
Geo. Vincent, Genoa City, Wisconsin
Ben Robers, Bassett, Wisconsin
Geo. Hyde, Bassett, Wisconsin

Pleasant Prairie:
Wm. Mayer, R#2, Kenosha, Wisconsin, Chairman
John Stratton, R#2, Kenosha, Wisconsin
Earl Torrey, R#3, Kenosha, Wisconsin

II. Community Committees

The Community Committees were made up of some of the most able, successful farmers in the Community. Their educations ranged from the grades to men who have University degrees. Many are short course graduates. In the past, a few had followed professions other than farming. Most of them are leaders in their communities and life-long residents of Kenosha County.

No question of nationality, of religion, nor of social significance came up at any time to prevent the proper functioning of any committee - community or county.

III. Meetings

Because of the lateness of the season, only a limited number of meetings could be held. The county committee was assembled and the project explained and discussed. Each community committee met only once. The results of the community committee meetings were summarized by the Secretary and placed before the County Committee for corrections and correlation.

IV. Community Committee Meetings

The Community Committee meetings were informal round table discussions.

The Secretary explained the purpose of the meeting, the uses to be made of the information, sources of information and the method of procedure. He presented some preliminary information concerning the town such as acreage and livestock statistics, soils maps, topographical maps, pertinent A.A.A. statistics, etc.

V. Correlation of Material

Recommendations made on the maps were colored roughly with a uniform key for all townships. The maps were then trimmed and glued together to form one large county map. Viewed as a whole, the discrepancies from township to township were surprisingly slight

From the notes taken at each township meeting, narrative statements were prepared (typed triple space) and sent to each community chairman for his corrections, additions or observations.

The results of the community committee meetings were summarized to make up the County narrative report. These, together with the map, were presented to the County Committee for correlation of results from township to township and for the county as a whole. The state specialists were kept pretty much in the background until this had been accomplished.

The physical description taken from the Soil Survey of Racine and Kenosha Counties was adapted to Kenosha County.

The corrected summary follows:

PHYSICAL CHARACTERISTICS OF KENOSHA COUNTY

Kenosha County is located in the southeastern corner of the state with Lake Michigan forming the eastern boundary, and the State of Illinois the southern boundary. The total area is about 268½ square miles or approximately 172,187 acres.

The surface features of the region fall naturally into several divisions, each of which is fairly distinct. Beginning along the Lake Michigan shore the first feature of interest is the narrow belt of bench or terrace land which extends back from the lake for about two miles and runs parallel with the lake across the county. Its surface is level or very nearly so. The lake has an elevation of 581 feet above sea level and the terrace at Kenosha is 61[illegible] feet. The western border of the terrace is marked in a number of places by a more or less continuous low ridge of gravelly sandy material which represents an old beach line and marks the shore line of the lake when the water stood at a much higher level than at present. This terrace soil is made up largely of sandy soils immediately along the lake shore with a Clyde Silt Loam composing most of the rest of it. A great deal of this bench is now covered with the city of Kenosha and its suburban settlements. Where drained, as in the town of Somers, and properly developed, this makes one of the best truck crop soils to be found any place in the State.

West of the lake terrace is an extensive belt of gently undulating country where the soils are for the most part very heavy and where the surface consists of a series of very broad, low, flat, ridges or swells. The slope is so gentle that, because of the heavy soils, the natural drainage is somewhat deficient in places. Perhaps one-half of these wet areas have been included in drainage districts and probably over three-fourths of these naturally poorly drained soils are under cultivation. Some of this cultivation is intermittent, depending upon the seasons. This belt of undulating country contains much of the original prairie soils in the county. The early settlers reported it to be covered with prairie bunch grasses, grassy marshes, broken with clumps of oak and other hardwood trees. This region is somewhat higher than the terrace, the town of Bristol being 782 feet above sea level. The belt is from 12 to 18 miles wide. The soils are largely of the Carrington series which developed under prairie conditions and make up about 31.5% of the area of the county. The clumps of trees were growing chiefly on Miami soils which developed under forest conditions. The Miami soils are found in all parts of the county and constitute about 28.5% of the area of the County.

The extreme western end of the county is a belt of gently rolling to hilly country which presents a marked contrast to the other two regions just described. It consists of country having an uneven surface which ranges from gently rolling to rough, bumpy, broken and hilly, and contains a great variety of soils. Most of the lakes of the area are found in this belt. It is known to geologists as a recessional moraine of the late Wisconsin Ice Sheet and is a part of the Valpariso Moraine.

Within this belt there are a number of water laid or alluvial deposits where the surface of the land is level. These are usually found bordering streams or lakes. The total area of such tracts is small but the areas are distinct and readily recognized by their flat surfaces.

In addition to these various divisions, there are scattered throughout the county numerous areas of low lying land where there has been an accumulation of organic matter, in many places sufficient to be classed as peat. Associated with the peat and usually bordering the drainage ways there are also rather numerous areas of heavy, black soils which are poorly drained, where there is also a large accumulation of organic matter but not sufficient to be classed as muck or peat.

Kenosha County has two drainage systems. The first includes that part of the county, except a small area along the Illinois line lying east of the Chicago, Milwaukee and St. Paul Railroad. It is drained into Lake Michigan by the Pike River and also by a number of short intermittent streams which have their heads along the eastern slope of the most easterly ridges of the region bordering the lake terrace.

The second system is drained by the Des Plaines River and the Fox River into the Illinois River. The DesPlaines and Fox are separated by a divide extending from east of Cross Lake north through Salem, and Klondike to the north central part of Brighton township. The large number of lakes, swamps and marshes in this region indicates a very young topography, so young that practically all of the lowland has very poor drainage or no drainage at all. The streams have not had time to develop valleys sufficiently deep to ramify all sections with their tributaries to provide drainage for those low areas.

ALL LAND IN KENOSHA COUNTY IS ARABLE

The percent of land in farms is 81.6 of which 63% is arable. With the exception of one or possibly two farms in the County every farm falls within the arable classification. A.A.A. records include a farm in the tamarack swamp area of Wheatland that fails to show more than 10% of the land under cultivation. There are also a few farms in the county that have been worked in the past but that are now idle or being used entirely for pastures because of having been subdivided, because of lack of buildings or for some similar reason. However all they need to be classed as tilled land is the application of the plow.

LAND USE AREAS AND SUITABILITY TO THE PRESENT USES

The primary land use areas of the County are those areas consisting of the Lake Michigan Terrace and part of the central plain being used for truck crop production, and the remainder of the central plain and the western moraine, being used for dairying with some general livestock farming being included. All committees felt that the land was suited to its present uses. The land being used for truck crops is level, fertile and has been well drained. These farms have little that may be classed as wasteland. In the rest of the county, the rough and the wet lands being used as permanent pastures blend well with the arable lands for dairying or for general livestock farming. Some suggestions were made for the growing of trees on some of the more ravelly hills (E-4) in the western part of the county which would remove not to exceed 1% of the present crop land from cultivation.

99 percent of the present cultivated crop land on farms should be continued in cultivation.

The general topography of the County is gently undulating. Most of the hillier rougher parts of the county are in trees, permanent pastures, orchards, recreation areas, etc. The only reason for shifting to non-arable is the more profitable uses some lands may be put to for other purposes.

I. Drainage Needed E-1

The Des Plaines and its tributaries is typical river bottom land of the partially blocked, sluggish type. The head of the river is in Racine County less than a mile north of the County line. The river might be considered intermittent; for in some seasons of many years, in parts of Paris it is dry, and in Bristol and Pleasant Prairie it flows a very small stream of water. It is a rather broad, flat, level river bottom with partial natural dams south of the State line and in Section 9 of Bristol Township. The flush of flood waters spreads over quite an area and takes some time to drain off. Much of the area is permanently marshy. The soils are largely of the Clyde series, and they are highly productive when properly drained.

The Fox River carries a much greater volume of water than does the Des Plaines although there are immense differences from low water to the flood stage. The river through Kenosha County is a rather sluggish meandering stream, with much of the bottom lands too wet to cultivate; so that it is used chiefly for pasture and wild hay.

The drainage problem is intensified by the dam at Wilmot although the economic consequences are questionable. The dam is low and the area above naturally marshy. Here too the soils are of the Clyde series.

E-1 west and south of Camp Lake in Salem township varies from a floating bog peat soil to a clyde silt loam. Some of the peat along the lake shore has been subdivided and as such has been a tax delinquency problem.

In Brighton the E-1 or E-3 is a typical grass marsh area largely peat which it is possible to drain, but the present economic value of such drainage is questionable. That was the basis of the E-3 or Shooting Grounds recommendation, for in its present state it will offer good cover for small game.

II. Drainage A Problem E-1A

Pleasant Prairie This area is largely under cultivation. The low, level nature of the land and the poor drainage outlet offered by the Des Plaines river makes the escape of excess moisture a slow process. A broad Town Ditch put in by early settlers and improved by a C.W.A. Project furnishes the drainage for this area.

Randall This area drains North, East and Southeast into the Fox River. A ridge of higher land blocks the area from the river. The land is level and consists of peat, muck and Clyde silt loam. Better outlets and more tile are needed.

The rest of the E1A areas in Wheatland and Brighton are:
a. as in western Wheatland, flat level stretches that may drain two ways,
b. partially blocked creek bottom; or
c. mingled high lands (partly arable) and low lands where the natural drainage has not fully developed.

In Bristol Township E-1A is land that is drained by the Dutch Gap Canal. The upper end of this area, to the east of Lake George is peat land underlaid with marl. Since the establishment of the Drainage system, this land has never been worked except perhaps for relatively small fields around the edges of the original marsh. Over much of this marsh the peat has been burned off; and typical of such areas, is rough and bumpy and in places only ashes remain over the surface of the marl. The rest of the area consists largely of Clyde soils the surface of which is low and uneven enough to make drainage a problem in parts of most fields. In addition to a good outlet, this area needs considerable tile to give its best performance as arable land.

III. Abandoned Drainage District E-1B This area in the township of Paris is highly productive being used chiefly for general Dairy Farming with some Truck Crops being grown. It is very level, originally a grass marsh of Clyde soils that has been drained. However the two districts draining this area have been abandoned and the system is showing the results of neglect. Indications are that unless some steps are taken to keep up these systems, the area will gradually revert to its original condition.

IV. Recreation Areas E-2 Most of the Recreation areas are around lakes. Twin Lakes is the most highly developed of these being the largest lake area in the county and set among hills that range to a kettle moraine.

The development around the other lakes is on a more modest scale. Full use is being made of most of these areas, but the lots and the cottages are smaller allowing for the accommodation of more people in a given area.

The other E-2 areas in Randall, Salem and Somers townships are Country Clubs and Golf Courses.

V. County Parks, E-2A at Fox River in Salem township and at Petrifying Springs in Somers township are large and well developed. Both are used to capacity although the Petrifying Springs Park with its Golf Course, Lighted Ball Diamonds, general greater development and nearness to the city receives the greater use.

VI. Proposed Recreation Areas E-2B The areas marked E-2B around the lakes in Salem will have a greater value for recreation than for agriculture. They are mostly hilly with considerable woods the soils of which range from silt loam to gravel.

Montgomery is a rather small lake with probably half its area covered with weeds, many of which are of the grass and reed type growing above the water. It is owned by one man and is perhaps best suited for a Country estate for some man interested in duck shooting and other similar types of small game hunting.

In Pleasant Prairie the area E-2B between the Railroad tracks and Lake Michigan ranges from a Waukesha fine sand to a typical dune sand. Its development as a recreation area should take some of the load off the County Parks.

VII. Shooting Grounds Recommended E-3 This area in Wheatland and Randall townships extends across and forms a natural division between the two towns. It ranges from a typical kettle moraine of Rodman gravelly loam through marsh to what would total about two sections of tamarack swamp. The hills and low lands are intermingled.

The E-3 area centering in Section 25 of Randall is low muck land too wet to be suitable for cultivation. It is an area so difficult to drain that it has been removed from consideration as arable land. Together with the little knobs E-4 just to the north and other surrounding areas, it is naturally suited for game purposes.

VIII. Reforestation Recommended E-4 These areas in Randall, Wheatland and Brighton townships are gravel hills chiefly of the Kettle moraine type. The trees have been wholly or partially removed and most of those remaining are dying.

IX. Partial Reforestation E-4A is an area of land that ranges from level, arable land to hilly, bumpy and stony. It covers the corners of Brighton, Salem, Paris and Bristol townships. The rougher portion of this area should be in trees rather than Pasture or Plow Land. Other portions are suitable for permanent pastures and the rest is arable. Some of this rough land that should be maintained in a permanent stand of trees is so located that trees will add to the value of the adjacent recreation areas.

GENERAL MAJOR CROPPING ADJUSTMENTS

Under general and dairy farming, some adjustments were deemed advisable. An increase of intertilled crops of about 2% chiefly in corn to bring the total to forty percent was recommended. It was the feeling of most of the committee that too large an acreage of small grains is being grown. However, some of the committee members felt that there should be no reduction in barley and other cash crops, and others considered oats an important part of their dairy ration chiefly for the bulk it provides. It was recommended that the acreage of small grains be cut to about twenty percent of the total crop acreage.

The present tame hay acreage is about one acre per head of dairy cattle. More legume hay is needed for Kenosha County. A bout one-third of the needed acreage of alfalfa is grown. With the use of crop land pastures, and legumes for hay and for silage, grasses and legumes should occupy about forty percent of the crop land. In areas with more permanent pastures, the committee seemed to feel that legumes and grasses should occupy a minimum of thirty percent of the crop land. Here small grains might make up more than 20 percent.

The truck farmer should have about seventy percent of their land in intertilled crops. A bout fifteen percent of the plow land may be in wheat or barley as a cash and nurse crop and the remaining fifteen percent in sod would be used as a green manure. It is considered impossible to maintain the

organic matter of the soil unless the land is in sod one year out of five or six. Grains plowed under will not do it.

PERMANENT AND SEMI-PERMANENT PRACTICES

A. Soil Fertility

It was the concensus of opinion that the soils of the County are growing poorer. There are exceptions, and a general realization of the situation is causing considerable interest in the use of soil conserving and soil building practices. Originally, the soils of Kenosha County are among the more fertile soils of the State. A hundred years of Agriculture is showing its effect in the loss of humus and plant food and by an increase in soil acidity. The mottled appearance of A ir Photographs indicates considerable sheet erosion which is not surprising considering this long period of cultivation.

B. Lime

In the western moraine area, about fifty percent of the soils need lime. In the central plain area, over 75% of the soils are in need of lime. For the County as a whole, including rural and urban, limed and unlimed, the results of several hundred tests show that 68.2 percent of the soils have a slight or greater acidity. The amount of lime needed will average between two and three tons per acre. Stimulated by A.A.A., by the W.P.A. Marl Project and low lime prices, there have been increasing amounts of lime used in recent years. However, even yet the annual application is probably no greater than the losses.

C. Phosphates

The majority of the acid soils in the County, and many that are not acid, show very low amounts of available phosphorus per acre. In the truck crop areas, many hundred tons of fertilizer are used annually. Throughout the other parts of the County there is an increasing use of phosphates and mixed fertilizers. As a step in soil building second only to the use of lime, it is to be recommended that the application of phosphates be encouraged.

D. Potash

Potash has not yet become a serious limiting factor to crop production except in some of the lower lands. Here, and to improve yields and quality of Truck Crops, its increased use is recommended.

E. Drainage

Drainage has always been a serious problem in a large part of the County. The representative of the Farm Drainage Board indicated that the water table has dropped 14 feet since the County was settled. This caused considerable discussion on the part of the Committee as to the advisability of additional drainage. However, it was pointed out by a farmer member of the County Committee that, during the time that many of them have

operated their farms, they have seen the water level in their wells drop 10 to 12 feet with no effect on crops. It was likewise pointed out that the drainage of large areas had no effect on the crops on the adjoining high land. Therefore, drainage, when and where profitable on the lands concerned, was deemed advisable.

In the eastern part of the County, a great deal of the wet land has been drained. However, all of these drainage districts have been disbanded or maintenance work has been stopped. As a result, the upkeep of present drainage districts is an important problem. Some of the ditches in the Town of Somers may require no further attention. Others such as the district in Paris (E-1) are showing the results of neglect. Silt is accumulating in the ditch bottoms to the extent that some of the larger tile emptying into them are blocked and washed out by the water received from their laterals. Much of this silt comes from ditch banks being washed in by rains, and by pasturing livestock cutting the soil into the ditches as they cross or walk along them.

There is need for additional drainage in all parts of the County. Many cropped areas suffer frequently from an excess of water, and many other fields are cropped only during the drier years. Even lands now considered well drained for general Agricultural purposes will need corrective draining for the growing of truck crops. Most of these soils needing drainage are of the Clyde series being either the clay or the silt loam. Where drained, they are fertile and capable of producing high yields. This drainage will undoubtedly have to wait until such time as the economic conditions make it profitable.

The Des Plaines river bottoms (E-1) are unsuited for Agriculture until such time as they may be properly drained. In the township of Pleasant Prairie and the township of Bristol, drainage has never been accomplished because it requires the cooperation of people in the State of Illinois in order to lower the level of the river. It has never been possible to get this cooperation.

F. Pasture Improvement

About 63 percent of the land in farms is crop land. A large share of the remaining land in farms is used as pasture. This includes all land that is at present too wet to crop or so rough as not to lend itself to cropping purposes. Such of the rough lands as may not be suited to recreation or other better paying uses should be improved as pastures through fertilization, reseeding, and where needed, liming. In most cases, the only fertilizer needed after the acidity has been corrected is phosphorus. Some of the more alkaline soils may need applications of potash; and still other thin, mineral soils would benefit by applications of nitrogenous fertilizers. Seedings consisting largely of perennial grasses and legumes such as clover, sweet clover, alfalfa, Brome Grass and Red Top, should be made on those soils needing them. Most of the wet land may eventually be drained and used for drop land. Until it pays to drain, most of these wet lands can be made to pay their way as pastures. The improvement suggested is the use of Reed's Canary Grass and other low land grass crops that will improve quality and carrying capacity. Fertilizers may benefit some of them.

G. Reforestation

In the western moraine end of the County, reforestation received considerable attention. Coming, east, the attention lessened to the point where the committees would recommend the growing of these for recreation and aesthetic purposes but no other.

Most of the woodland pastures yield too small an amount of feed to make them economically worth while. In addition, pasturing destroys the undergrowth and deteriorates the woodlot. They should be either pasture or woodlot. In the western moraine area, it was felt that all farms contained some land that is better suited to growing trees than to any other use. Most of this land is now either in a thin stand of trees or permanent pasture. About 15% of the land area is of this nature. The land in the little knobs in the town of Randall (E-4) and in the gravel hills in Wheatland and Brighton (E-4) should be maintained in as thick a stand of trees as possible. There are other kettle moraine and gravel hill areas being used for or recommended for some recreational or game preserve area that should be growing thick stands of trees. In other areas such as that in the corner of the four towns of Brighton, Paris, Bristol and Salem (E-4-A) the rougher stonier land should be trees. The better of these rough lands blend well with the plow land as permanent pastures and should be improved as such.

In the central plain, about one-half of the farms have some land better suited to the growing of trees than to any other purpose. About 10% of the areas in these farms should be in trees. The remaining rough land is sufficiently fertile to make it worth while to improve them as pastures.

H. Woodlot Management

90 percent of the woodlots need fencing. About 85 percent of the woodlots in the county are thin stands that should be thickened either by keeping out livestock and allowing nature to take its course or by interplanting or both. We may encourage the proper use of the farm woodlots by taking advantage of the Wisconsin law which exempts these lands from taxation where properly managed. Provision should also be made to provide forest planting stock of the best species adapted to this region of the state.

I. Weeds

The increase of noxious weeds, particularly Field Bindweed or Creeping Jenny, is a serious menace to crop production in Kenosha County. A partially completed survey of the County shows an infestation of Creeping Jenny, ranging from 5 percent of the farms in the western end of the County to 100 percent of the farms in the eastern end of the County. Many of these farms have relatively small patches, and it would prove advisable to put them into some sod crop such as alfalfa or pasture to prevent their spread until such time as the farmer may be able to concentrate on the eradication of this pest.

Mustard, Sow Thistle, Horse Nettle and many other weeds have become or are becoming serious menaces. Other weeds not serious in themselves, carry over disease to economic plants. Weeds are a serious handicap in the production of pure bred seed grains. The loss in yields, quality of

produce and labor and equipment expenses caused by weeds, amount to many thousands of dollars annually.

A more intensive educational drive is needed to prevent the spread of weeds in the County. Farmers should be made more conscious of how weeds spread by means of seed, feeds, threshing machines, etc. One community committeeman reported the introduction of field bindweed to his farm by the hauling of dirt for the purpose of building a state highway past his farm.

PRACTICES TO BE PERFORMED ANNUALLY

A. Truck Crops

The truck crop industry is important in Kenosha County, occupying over 7.5% of the best arable land of the County. Because of the price of truck crops, the money value bulks large. There are, however, a great many obstacles in the way of maximum net income.

I. Plant Disease - takes its annual toll of all farm produce. It is more serious in the more intensive crops such as cabbage, onions, potatoes and sugar beets.

II. Insects Pests - must be contended with each year and like plant diseases, causes large money losses by decreased yields and low quality and due to the expense of labor and materials involved in their control.

III. Horticultural Varieties - and cultural practices even on crops that have been grown in the community for many years leaves much to be desired. With some more recent crops, such as tomatoes, the problems that have to do with successful crop production are more serious. Adaptability, quality, and uniformity are some of the problems most often noted.

IV. Recommendations

a. New crops would add to the diversity.

b. The practice of sending out timely advice on disease, insect pests and on weed control from the County Agent's office should be continued.

c. It is recommended that we continue to cooperate with the University of Wisconsin in the solution of these problems.

Effective in the past have been

1. Calling attention of the College of Agriculture to our problems and requesting help in their solution.
2. Calling attention of our Legislative Representative to these problems so that they could be better informed in their decision as to the needs of the University in working on these problems.
3. The building of a field laboratory at the Petrifying Springs County Park for the use of the University.

4. Obtaining the use of County owned land on the Willowbrook Farm for experimental plots.

5. The supply of private help, land and equipment in cooperative plots with the University.

THE FARM

A. The Farm Size

The minimum family-sized farm in the truck crop area should contain 40 acres of plow land. This is a cash crop industry employing a considerable amount of machine and hand labor highly seasonable in nature.

Due to changed methods of production, the average dairy or general farm is becoming an awkward unit. It is too small for one man or too small for two men and too large for one man. The minimum sized dairy and general farm should contain about 70 acres of plow land. 160 acres is the better sized farm where the equipment and labor are available.

Acreages of arable land should be added to the "Awkward units" if these farms are to continue to be used for dairying and for general livestock farms. Farmers who cannot add to their arable acreage, should grow more truck and other intensive crops to balance off the unit. A small acreage of plow land may limit livestock diversity, but truck crops and pure bred seed production can be used to overcome this handicap.

B. Part time Farms

From about 40 years of observation, the community committee members feel that the five or ten acre subsistence or part time farmer apparently has no place in the Kenosha County picture. The factory, which employs the part time farmer is usually busiest at just the time he should be at work on the land. In addition, the capitalization necessary to obtain equipment is so large as to make it uneconomical. The part time or subsistence farm should contain from one to two acres. There is no known equipment devised for the larger units, and the acreage should be small enough to be operated with the wheel hoe and other hand implements. In most cases the five to twenty acre subsistence farm adjacent to the city is either growing weeds or is being combined with other land so as to make an economic sized working unit.

C. Farm Ownership

Absentee ownership is on the increase in Kenosha County. In general, this is considered undesirable. These farms are apparently being purchased by city people as hobbies and for investment purposes, and as one committeeman puts it, as a safety valve to give the owner an opportunity to blow off steam. A better quality livestock is kept. The fences and buildings are usually improved. The result is a general better appearance which is a

decided improvement to the County. However, many of these farms are eventually farmed by tenants or owners who must make their living from the land, and the improvements made are often an encumbrance rather than a help. The most usual objection of the farmers to absentee ownership are as follows: First, the workers and their families usually do not mix socially with the other farmers of the community. They do not exchange work. Second, a wage standard is set for hired help which local farmers cannot meet. Third, the example of the absentee owner encourages extravagance on the part of the less thoughtful farm operator. It was observed that the example of the city has made "plungers" of many otherwise good farmers, much to the detriment of the farmer, the farm and the community. Fourth, perhaps the most important is that the example of show places set the standard of inspection demanded by City Health department inspectors. These standard are expensive and considered by the average farmer as unnecessarily high.

D. Tenancy

According to information collected by the Resettlement Administration, 34 percent of the farms in Kenosha County are operated by tenants. A check of the A.A.A. information for five of the eight townships in Kenosha County shows from 42 to 51 percent or a weighted average of 44.3 percent of the farms operated by tenants. Of these, from 16 to 47.5 percent or a weighted average of 34.5 percent are related to the owner. Because of the small farms near the city and the difficulty of checking the ownership of the farms and of checking the relationship of the operator to the owner of the farm, the towns of Somers and Pleasant Prairie were not included in this check. The relation of the operator to landlord is important for several reasons, perhaps chiefly because in most cases the tenant will eventually become owner of the farm. It is usually a case of one of the children taking over the farm and paying off the rest of the heirs. This causes a rather heavy debt burden on the farm and is a means of getting the rural area in debt to the cities.

Particularly in the western end of the County, from one-third to one-half of the rented farms are operated by local lads, not related to their landlords, but who will eventually become land owners. These usually remain on the same farm a good many years - if not permanently. This is another highly desirable type of tenancy.

The County Committee is in favor of some such financial aid as is offered in the Bankhead Act to help young people become farm owners. They make the best of citizens.

Some renters are chronic movers. It is particularly this latter group and those tenants who are not sure how long they will remain on a farm that is responsible for so many run-down farms infested with weeds and with buildings in poor repair. Tenants do not lime, use commercial fertilizer nor plow under crops. They grow too much annual hay. Too many farms are rented on a cash basis. It is considered desirable that the farms should be rented on a share basis. The owner then retains a vital interest in the productivity of the farm. Too many owners move to town and let the farm deteriorate. Their only interest seems to be a cash income for their declining years and they will do nothing to maintain the farm.

OTHER RECOMMENDATIONS

A. Livestock

Kenosha County at one time purchased nearly all of its replacement dairy cattle. More replacement stock is now being raised in the County. As a means of diversity, to encourage the breeding of better stock, and to give the farmer better stock with which to work, it is recommended that as much of the replacement stock be raised at home as possible.

It was also the feeling of several of the committees that the farmers of the county are attempting to carry more livestock than is economical. It has been observed that those farmers who have four or more acres of land per livestock unit are usually the more prosperous farmers of the county.

B. Diversity

It was the concensus of opinion among the farmers in the dairy section of the county that too large a percentage of the income is from milk.

On most farms other sources of income should be added, and present sources other than dairying should be enlarged so as to make them large enough to be worth while. There should be cash crops and livestock for meat, breeding and work purposes. In addition to dairy cattle, there should be hogs, poultry, and where the danger from dogs is not to great, sheep.

Some communities feel that each farm should be more self-sufficient. In other words, there should be enough vegetables, meat, dairy and poultry products produced to furnish them more of the living. More of the food for the family should be canned or otherwise preserved for winter consumption. In the past, many good farmers have failed because of high living expenses.

C. A.A.A.

1. Bases

The universal comment on the A.A.A. was that bases are too low. Low bases tend to prevent diversity. It was considered fair for a dairy farmer to have a 60 percent soil depleting allotment, and an 85 percent allotment for the truck farmer. The present allotment for the county is 53.3 percent. Kenosha County is level enough to be well suited to the growing of tilled crops.

In the setting of bases, it was thought that more consideration should be given to the carrying capacity of permanent pastures.

Sugar beet growers feel that all domestic consumed sugar should be home grown and that there should be no restriction on the acreage of sugar beets.

To meet low allotments, it was recommended that consideration be given to: 1st, Legume Silage; 2nd, More Legume Hay; 3rd More crop land pastures.

II. Payments.

Soil building payments should be divorced from the general payments. It was the feeling of the committee that soil building practices performed should receive consideration. This is of particular importance in an area where farm tenancy is high, which makes maintenenace of the soil a difficult problem. It was also the feeling of the committee that divorcing of the payments would give consideration to the farmer who had a low base due to his having followed the practices now recommended before the A.A.A. Act was passed.

III. Education.

It was the feeling of the Committee that too many of the form letters were legally correct; but that they failed to convey the idea to the farmer. One committeeman writes, "Well thought out, timely letters explaining the purpose of the Act and its adaptability locally might well supplement the not easily understood forms which have been considered sufficient in the past."

If it is to maintain farmer support, the Act must not only fit locally but the farmer must understand how it fits.

IV. Marketing Quotas.

The Truck Crop farmers believe that there should be marketing quotas based on grading. They also feel that a farmer should be paid for holding produce off the market.

V. Dairy Program.

The Dairymen want a Dairy program. Most of them seem to favor making butter a basic commodity.

THE COMMUNITY

A. Recreation

Being near large centers of population, considerable use is being made of suitable recreation areas. There is a Kenosha Boy Scout Camp (E-2) on Dyer lake in Wheatland township. There are summer homes, cottages, resorts and camps on nearly every lake in the County (E-2). Some of the areas subdivided for cottages, such as that on the south and the west shore of Camp Lake, are of questionable value because of the marshy nature of the soil. There are golf courses and country clubs in Randall, Salem and Somers (E-3) There are large, well developed county parks at Fox River and the Petrifying Springs County Park in Somers, (E-2-A) as well as the smaller Old Settlers' Park at Paddock Lake.

Some community committees recommended consideration of such areas as the Kettle Moraine in Randall, Wheatland, and Brighton (Part of the village of Twin Lakes, part of E-3 and E-4) for public parks. However, the County Committee did not feel that these areas were sufficiently well suited to this purpose to include them in these recommendations. The Sand Dunes Area, south of the City of Kenosha, particularly east of the Chicago Northwestern Railroad, (E-2-B) was recommended for consideration as a public park.

B. Game

The possibility of establishing licensed shooting preserves under Section 29.573 should be considered in the central and western parts of Kenosha County.

Shooting preserves are established under license issued by the Conservation Department based on the release of pheasants. The operator charges a fee for the privilege of hunting on his private shooting preserve. This is part of a program of recreation and land use that might well be given consideration near the large centers of population. Under this plan farmers would be given control over those who hunt on their land. Under the present law hunters often are a nuisance. Many leave gates open, cut fences, steal produce and are generally destructive to property. The licensed shooting preserves provide a means whereby the operator may control the shooting on his preserve and charge a fee to all hunters.

It is recommended that until drained, the Des Plaines River bottoms in Pleasant Prairie and Bristol (E-1) and the lowlands and woods in Brighton (E-1, E-3, E-4) be used for public hunting grounds. It was also recommended that the hills and swamp north of Bassett in the Towns of Randall and Wheatland (E-3) also be used for this purpose.

Bill No. 17-S now in the legislature which provides for the establishment of public hunting grounds also provides for the protection of farmers who lease their lands for public hunting and makes provisions for the payment of damages by hunters. Such a bill would meet many of the criticisms now voiced by farmers and would provide an orderly system under which the farmer would receive the protection which he rightfully demands.

Some smaller areas which are strategically located to the public hunting grounds and are valuable for game because of the good and cover they contain might be set aside as game refuges. Special sanctuary areas where no hunting of any kind is permitted - in order to insure that the game birds crop be not completely removed by hunters in any one season. Game refuges are privately owned lands which are established jointly by the owner and the Wisconsin Conservation Department who give the area maximum protection.

C. Zoning.

The County Park Commission has had before it for some time a proposed comprehensive zoning ordinance for all of the county outside of the incorporated areas. It is proposed by this ordinance to establish certain districts devoted to residential use in the lake area at the western part of the county and in the immediate environs of the city of Kenosha. It is also proposed to set up at selected locations within the county commercial districts which will contain all the future business and light industrial development taking place in the county, thereby freeing

the rural highways from the hazards of scattered business. The ordinance also contains a proposed system of highway setback lines for the future economic and safe development of highways. The proposed ordinance also contains minimum land subdivision regulations which are sufficiently high to discourage the type of wild cat development which has previously resulted in subdivisions of a type whose standard is so low that they have become largely tax delinquent, so that no taxes are collected from them as subdivided property nor is any tax levied as agricultural land, - to the loss of the county.

The ordinance sets up a system of residential, commercial and industrial zones in the immediate environs of the city of Kenosha with the objective of so regulating the use of rural lands in this area as to produce an order of development which, together with the county wide ordinance, will have the effect of stabilizing and preserving property values. The zoning ordinance will be an underlying structure in the general county agricultural plan which will supplement and enhance the value of land use planning.

With these objectives and purposes of this zoning ordinance , the County and Community Land Use Planning Committees are in substantial agreement.

Form No. 4
U. S. Department of Agriculture
AAA. Division of Program Planning

Sheet No. 1
of 1 sheets

Summary Sheet - County Planning Project, 1939, North Central Region

Wisconsin, Kenosha
State and County

ITEMS	Areas: Truck	Areas: Livestock & Dairying	Weighted County Average
Percentage of Present Cultivated Cropland to be Continued in Cultivation	100	99	99
Approximate number of acres of land in the area to be continued in cultivation	6500	79,000	85,500
Percentage of Recommended Cultivation Acreage to be in:			
1. Intertilled Crops	70	40	42.3
2. Small-grains and other close grown crops	15	25	24.2
3. Grass and Hay Crops	15	35	33.5
Percentage of Recommended Cultivated Cropland Acreage needing Soil-Conserving Practices:			
1. Lime-phosphate application	—	70	64.7
2. Small-grains and other close grown crops	75	67.6	68.2
3. Winter cover crop for green manure - including sod land to be plowed under	30		2.3
4. Summer cover crop for green manure - sod	15		1.1
Approximate acreage recommended for Permanent Pasture (rough and wet lands)		28,000	28,000
Percentage of Recommended Pasture Acreage needing Soil-Conserving Practices:		95	95
1. Lime-phosphate application		70	70
2. Reseeding		60	60
Approximate Acreage Recommended for Farm Forests		10,000	10,000

SUMMARY

1. STATEMENT OF PROCEDURE

A. Limitations

There should be more County and Community Committee meetings.
At its best, this is a winter project.
All pertinent information on hand needs to be evaluated.
More homemakers should work on the project.
Should summarize the internal or individual problems and the external or community problems.
Facilities for following recommendations may be limited.

B. Procedure

Each township was represented as a community.

I. County Agent served as secretary to all Land Use Planning Committees. The County Agricultural Committee selected the Committees.

II. The County Committees were made up of successful farmers. No intolerance interferred with committee meetings.

III. Only one meeting was held in each community. The County Committee met twice.

IV. Community Committee meetings were informal round table discussions.

a. Physical characteristics
b. Present land uses
c. Suitability to present uses
d. Land Use Problems
e. Farm Security, A.A.A. and other agricultural programs.

V. The material was correlated.

2. PHYSICAL CHARACTERISTICS OF KENOSHA COUNTY

Three areas - level lake Michigan terrace, gently undulating central plain, level to hilly western moraine.

3. ALL LAND IN KENOSHA COUNTY IS ARABLE

4. LAND USE AREAS AND SUITABILITY TO PRESENT USES . (Form 4 summarizes)

5. GENERAL MAJOR CROPPING ADJUSTMENTS (Form 4 summarizes)

6. PERMANENT AND SEMI-PERMANENT PRACTICES

A. Soil Fertility is decreasing
B. Lime is needed on 68.2 percent of the area.
C. Phosphates are lacking on acid and many nonacid soils.
D. Potash no serious shortage but needed on sour soils and crops.
E. Drainage is needed in all parts of the county. Abandoned districts bring maintenance problems. The Des Plaines River level needs lowering.
F. Pasture Improvement Lime Fertilizer and reseeding is needed.
G. Reforestation
H. Woodlot management
I. Weeds - A serious menace.

7. PRACTICES TO BE PERFORMED ANNUALLY

A. Truck crops – Farms occupy about 7.5 percent of the arable land.
   I. Plant Diseases
   II. Insects Pests
   III. Horticultural Varieties and cultural practices
   IV. Other Recommendations
      a. New crops would add diversity
      b. Timely advice on problems should be sent out from the County Agent's office.
      c. Cooperate with the University of Wisconsin

8. THE FARM

A. Size

Minimum sized truck farm should contain 40 acres of plow land.
Minimum size dairy and general farm should contain 70 acres, 160 better.
Intensive cropping is solution for small general farm.

B. Part Time Farms should be limited to one or two acres.
C. Farm Ownership Absentee ownership is on the increase and is undesirable.
D. Tenancy is High The County Committee favors some such financial aid as is offered in the Bankhead Act to help young people become farm owners.

9. OTHER RECOMMENDATIONS

A. Livestock should be raised at home.
B. Diversity More sources of income should be added.
The farm should be more self-sufficient.
C. A.A.A.
   I. Bases are too low.
   To meet low bases consider Legume silage, legume hay, and more crop land pastures.
   II. Payments.
   Divorce the soil building from the general payment.
   III. Education – The act must not only fit but must be understood
   IV. Marketing Quotas should be established for truck crops.
   V. Dairy programs advocated.

10. THE COMMUNITY

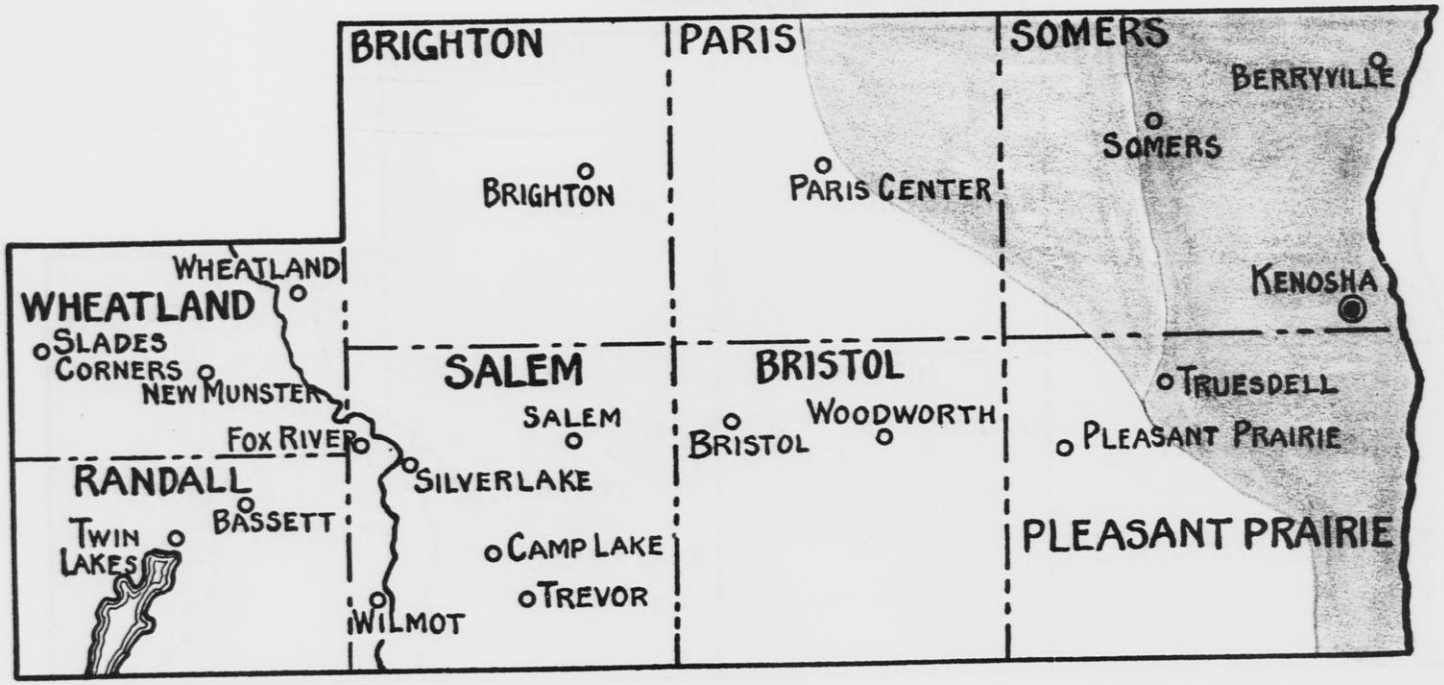
A. Recreation
Many facilities are now available. Other areas, particularly the dunes south of Kenosha, should be considered as public parks.
B. Public Shooting grounds should be established.
Trespassing laws should be amended to give the farmer some control over those who hunt on his land. Many hunters are destructive.
The Des Plaines River bottom (E-1) and hills and swamps of Randall Wheatland and Brighton (E-1, E-3, E-4) should be considered for game purposes.

C. Zoning

City Plan
County Considering Rural Zoning.

MAJOR AGRICULTURAL LAND USE AREAS

KENOSHA COUNTY



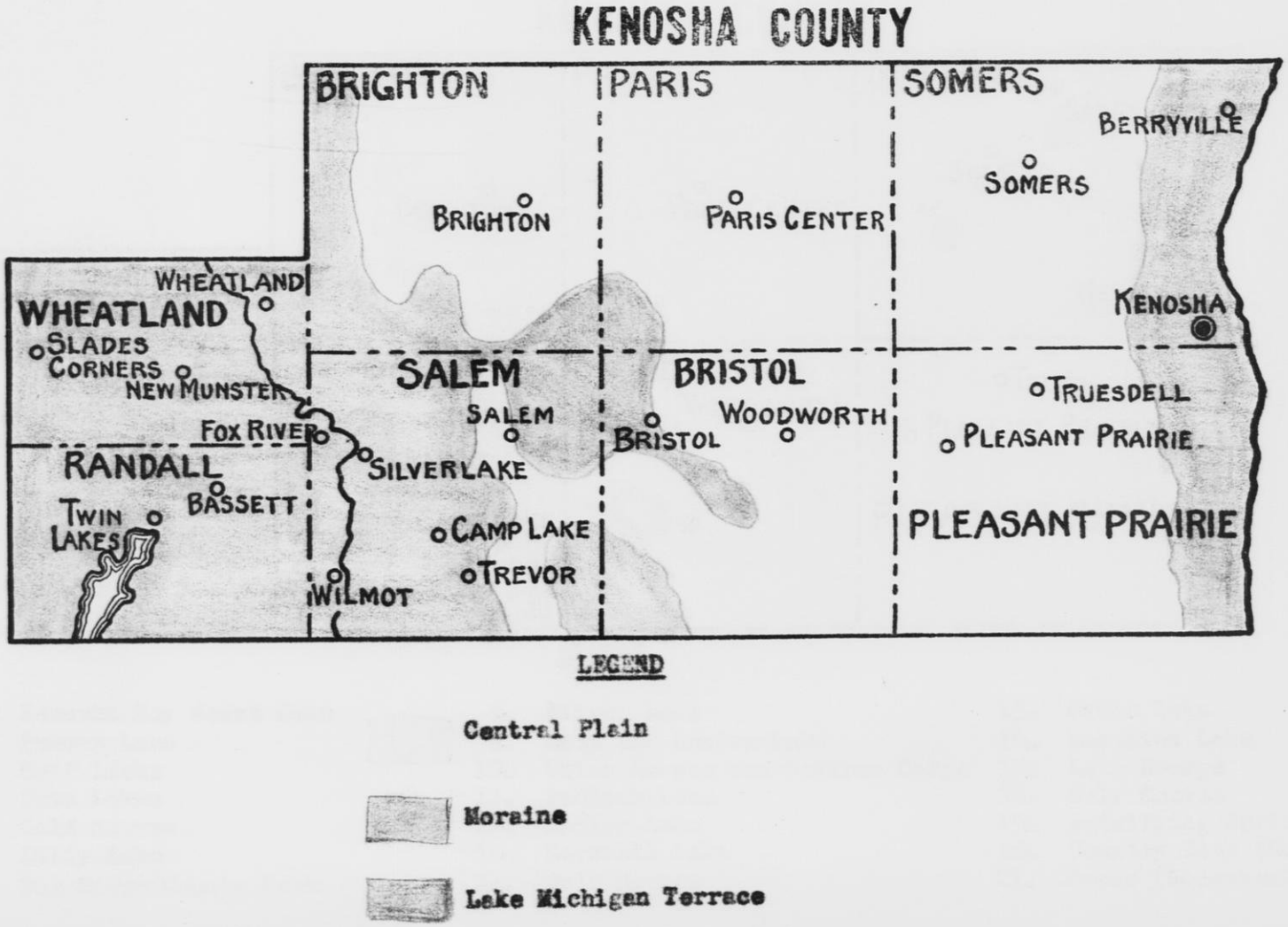
LEGEND

General Livestock (Chiefly Dairying)

Truck and Market Garden

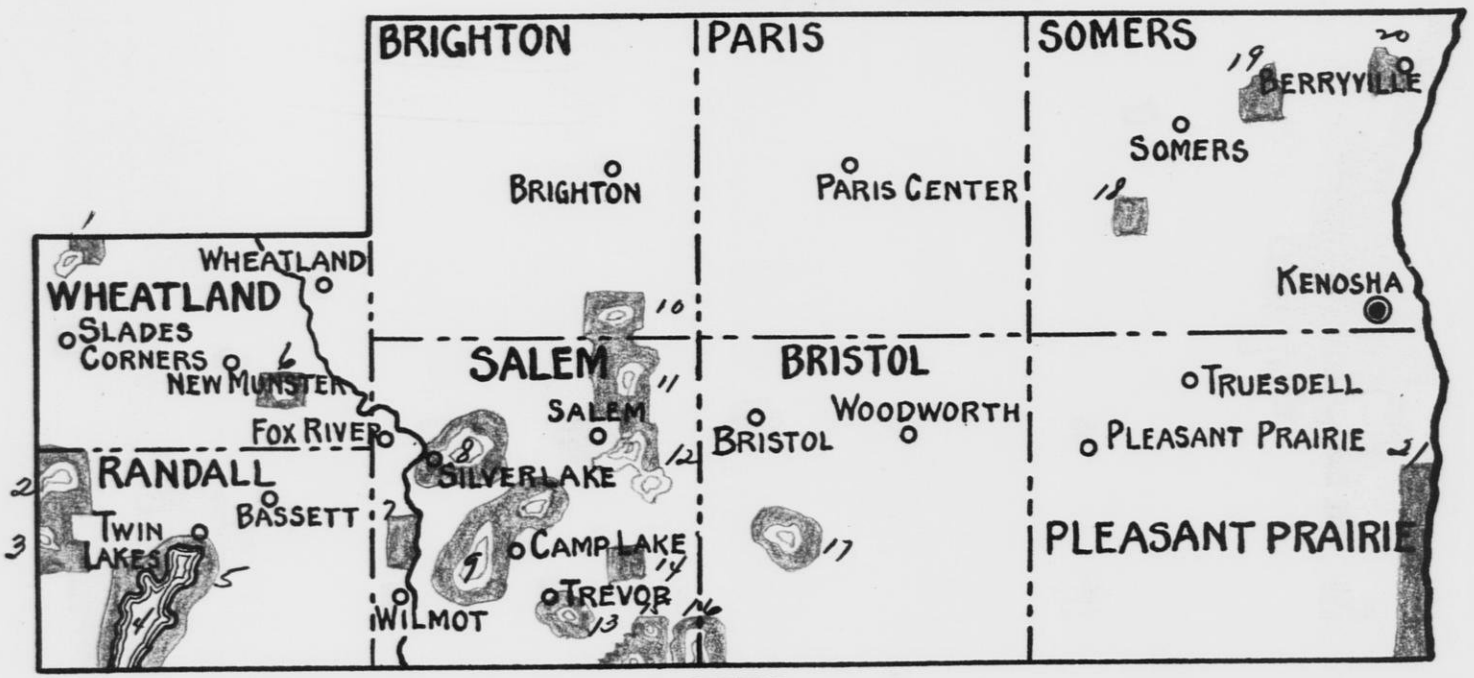
General and Truck Crops

SHOWING CHIEF PHYSICAL DIVISIONS



RECREATION AREAS

KENOSHA COUNTY

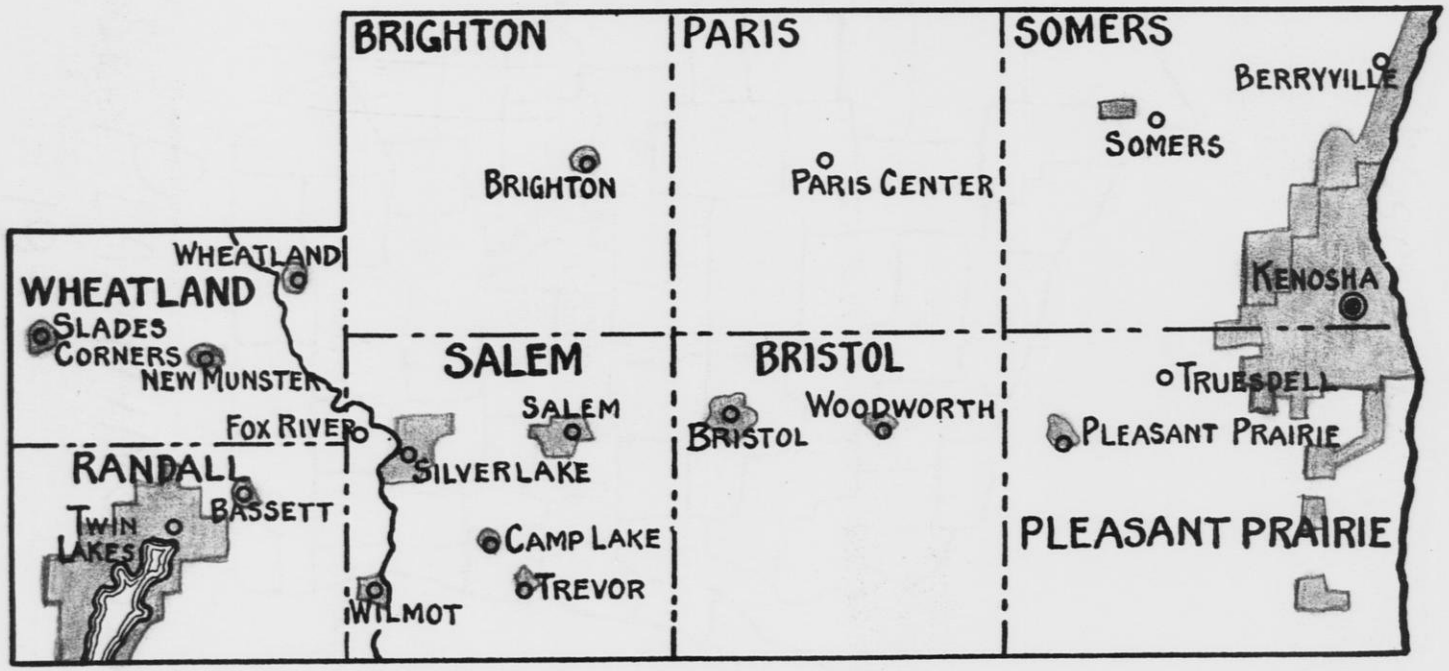


LEGEND

1. Kenosha Boy Scout Camp
2. Powers Lake
3. Golf Links
4. Twin Lakes
5. Golf Course
6. Lilly Lake
7. Fox River County Park
8. Silver Lake
9. Camp and Center Lake
10. Union League and Workers Camps
11. Paddock Lake
12. Hooker Lake
13. Marshall Lake
14. Golf Course
15. Cross Lake
16. paschion Lake
17. Lake George
18. Golf Course
19. Petrifying Spring County Park
20. Country Club (Golf - Stables)
21. Dunes (Recommended)

URBAN AND SUBURBAN AREAS

KENOSHA COUNTY



LEGEND

Incorporated City and Villages

Unincorporated Village and Suburban Areas

JUNEAU COUNTY
WISCONSIN



LAND USE PLANNING REPORT
1941

TABLE OF CONTENTS

Page

Organization:

Procedure..... 1
County Committee..... 5
Community Committees..... 6

Description of County:

Early History..... 10
Soils..... 11
Climate..... 13
Forest lands..... 14
Game..... 16
Farm acreage and tenancy..... 17
Farm income..... 19

Livestock and Crops:

Cattle, swine, and chickens..... 20
Milk Production..... 21
Crop Yields..... 22
Lime and Fertilizer..... 24

Land Use Classification..... 25
Summary Sheet of Classification..... 26

Committee Recommendations for Juneau County:

Class C areas (Red)..... R 3
Class E areas (Yellow)..... R 4
Class B areas (Green)..... R10
Class A areas (Blue)..... R10
Class D areas (Orange)..... R11

General:

Farm crops and soils..... R12
Size of Farms..... R13
Youth..... R15
Federal Purchase..... R16
Drainage Ditch Control..... R16
Tenant Leases..... R16
Public Welfare..... R17
Indian Situation..... R18
Summary of Recommendations..... R18

FIGURES

			Page
Number	1	Soil Classification by towns.....	12
	2	Average Annual Rainfall.....	13
	3	Farm Land According to Use.....	14
	4	Distribution of Farmland and Utilization of Farmland.....	15
	5	Farms: Number, Land area, Size, and Tenancy.....	17
	6	Source of Gross Farm Income.....	19
	7	Livestock, Juneau County.....	20
	8	Milk Production.....	21
	9	Crop Yields.....	22
	10	Crops--Average Yields & Acreage.....	23
	11	Lime--Soil Testers Results.....	24
	12	Percentage.....	24
	13	Summary of Classification by towns in percentages.....	26

FORWARD

The Juneau County Agricultural Committee of the Juneau County Board of Supervisors considered the Land Use Planning Program as a means of solving some of the major agricultural problems in Juneau County. The plan was carefully explained by Walter Rowlands, Planning Leader; L. G. Sorden, State B.A.E. Representative; and Emil Jorgensen, Extension Supervisor, and after careful consideration the Agricultural Committee, the County Agricultural Agent and the Chairman of the County Board decided that this was a program well suited to the needs of Juneau County.

Lambert Stahler was assigned to assist the County Agent in this work. The various community committees turned out in almost every case 100%, to help may their townships. At no series of meetings ever held in Juneau County have committees turned out so well and shown so much interest.

The County Land Use Committee wishes to express its appreciation of the assistance given them in this Land Use Planning work by W. A. Rowlands, Emil Jorgensen, Extension Supervisor, and L. G. Sorden, State B.A.E. Representative, U. S. Department of Agriculture. Much credit is to be given Lambert Stahler for his untiring efforts in putting over this good piece of work.

Signed:

Mike Dinneen

Mike Dinneen, Chairman

Manly Sharp

Manly Sharp, Secretary

ORGANIZATION

The County Agricultural Committee requested and sponsored the Land Use Planning Program in Juneau County.

At a meeting of the various agricultural agencies, Public Welfare, and the Agriculture Committee on September 5th the land use project was explained by W. A. Rowlands, Planning Leader, and L. G. Sorden, State Representative of the U. S. Bureau of Agriculture Economics. The committee formally moved the adoption of the land use planning program for Juneau County, and requested the assistance of Lambert J. Stahler to W. W. Clark, associate director of Agriculture Extension. Emil Jorgensen, District Supervisor of Agriculture Extension, explained the project as carried on in Waushara County.

Community land use planning committees were then named by the County Agricultural Committee and Manly Sharp, County Agent. Towns were regarded as communities and in most instances the town chairman, assessor, AAA representative, town clerk and two additional farmers who were well acquainted with the land in their towns were selected. Community committees, meeting in the evening at the Town Halls, were given a map of their respective towns on which each 40 acres could be identified. At these meetings background information was presented which included the following:

1. A large map of the County showing the location of county owned lands, forest crop lands, Consolidated Water Power and Paper Company lands, Federal Government lands, Indian lands, State lands, and

Federal Land Bank land.

2. Charts showing the following:

   a. Size of farms, amount of farm crop land, number of idle acres, and forest land.

   b. The location and type of erosion in Juneau County.

   c. The estimated county public assistance for 1938-39.

   d. The location of public assistance by towns, the amount from each agency and source, whether from county, state or federal.

   e. Tax delinquency by towns.

   f. Number of acres mortgaged by Federal Land Bank by towns.

   g. The result of the soil chemist tests.

   h. Farm security loan and grants, amount and location by towns.

   i. Results of the Geological Soil Survey of 1914 by towns.

   j. The value of land by towns.

   k. The Geological Soil Survey map of Juneau County.

After being presented with this information each community committee proceeded to map their respective towns. There was general discussion regarding the classification but agreement was always reached by a majority of the committee before the classification was made. Although the mapping work lasted late

in the evening, discussion often followed regarding farm practices and land use. W. A. Rowland, State Planning Leader, explained the land use program to committee members at the meeting in Lyndon Station.

A second series of these meetings were held in order to secure recommendations for each area. Two members from each community committee were asked to attend one of the three district meetings. Mr. Emil Jorgensen led the discussion at two of these meetings.

At each of these district meetings recommendations were received regarding rotation, lime and fertilizer, strip cropping, shelter belt, size of farm, farm labor, drainage, soil conservation practices, wild life, relief, youth, forestry, and irrigation. Recommended farm practices for each land use area were made. In the water erosion area actual soil profiles were exhibited to the committee from this district.

COUNTY LAND USE MEETING

The county agricultural committee, in cooperation with Manly Sharp, County Agent, appointed a county land use committee which met at the Court House on the afternoon of Tuesday November 18th. L. G. Sorden, State B.A.E. Representative, was present and led the discussion. Clyde Smith, of the Forest Service, presented data regarding forest crop practices in Juneau County. In opening the meeting, Lester Palmer, County Board Chairman, explained the purpose of the land use planning and what had been accomplished. The classification, made by community committees, was

unanimously approved. It was pointed out that the map had been made by 19 community committees and was the work of nearly 100 Juneau County farmers who were well acquainted with their respective communities and Juneau County's land use problems.

A mimeographed copy of district recommendations were given each of the County Committee. All recommendations were approved and many additional recommendations secured.

COUNTY COMMITTEE

Name	Address	Occupation
Lester Palmer, Chairman	Mauston	Farmer
Ted Paulson	Union Center	Farmer
Mike Dineen	Lyndon Station	Farmer
Fred Gavin	Lyndon Station	Farmer
Otto Sather	Elroy	Farmer
Matt Riddlestine	Mauston	Farmer
Clarence Gerkin	Elroy	Farmer
Robert Lee	Baraboo	Soil Conservation Service
Earl Sandleback	Mauston	Soil Conservation Service
Clyde Smith	531 Baker St. Wis. Rapids	Soil Conservation Department
John Henry	Mauston	County Clerk
C. C. Hansen	Camp Douglas	Farmer
Ray Peterson	Nekoosa	Farmer
W. H. Harrison	Sprague	Farmer
L. H. Lindner	Mauston	County NYA Director
John Novotny	Necedah	Farmer
Babe Lawrence	Mauston	Juneau County Soil Chemist
Miss Marion Walters	Mauston	County Nurse
Miss Kennedy	Mauston	Supervising Teacher
Earl Peterson	New Lisbon	Farmer
Miss Mary Louise Curran	Mauston	County Welfare Director
Ruth Riessenaur	Mauston	Farm Security Administration
Ivan Witz	New Lisbon	Farmer
Manly Sharp, Secretary	Mauston	County Agriculture Agent
Lambert Stahler	Mauston	Assistant County Agent

COMMUNITY COMMITTEES

ARMENIA

Name	Address
Raymond Peterson	Nekoosa, Wisconsin
Henry Schmidt Jr.	Nekoosa, Wisconsin
Jos. A. Lenski	Necedah, Wisconsin
Frank Petrusky	Nekoosa, Wisconsin
Francis Garman	Nekoosa, Wisconsin
Martin Brozak	Nekoosa, Wisconsin
Emil Brown	Nekoosa, Wisconsin
John Novotny	Nekoosa, Wisconsin

CLEARFIELD

Name	Address
Charles O'Day	New Lisbon, Wisconsin
Frank Wildner	New Lisbon, Wisconsin
Lester Kegler	New Lisbon, Wisconsin
C. F. Blackburn	New Lisbon, Wisconsin
John Tesch	New Lisbon, Wisconsin

CUTLER

Name	Address
Elsie Anderson	Camp Douglas, Wisconsin
C. C. Hansen	Camp Douglas, Wisconsin
H. T. Hansen	Camp Douglas, Wisconsin
Homer Georgeson	Camp Douglas, Wisconsin

FINLEY

Name	Address
Mr. & Mrs. Louis Peck	Finley, Wisconsin
Charles Lipar	Necedah, Wisconsin
Albert Johnson	Finley, Wisconsin
Clarence Brovald	Babcock, Wisconsin
Dewey Brandt	Finley, Wisconsin
Al. Gorman	Finley, Wisconsin

FOUNTAIN

Name	Address
Ed Northcott	New Lisbon, Wisconsin
R. E. Mead	New Lisbon, Wisconsin
Carl W. Benson	New Lisbon, Wisconsin

GERMANTOWN

Name	Address
Joseph May	Necedah, Wisconsin
Ed Kuska	New Lisbon, Wisconsin
August Baratta	New Lisbon, Wisconsin
Bert Chamberlain	Necedah, Wisconsin
S. H. Grundel	Necedah, Wisconsin
Herman Hornburg	Necedah, Wisconsin

KILDARE

Name	Address
John Pfeifer	Lyndon Station, Wisconsin
Richard Ressler	Lyndon Station, Wisconsin
Felix Reginer	Lyndon Station, Wisconsin
Tom Tracy	Lyndon Station, Wisconsin
Francis Havey	Lyndon Station, Wisconsin
Martin Pleva	Lyndon Station, Wisconsin

KINGSTON

Name	Address
H. S. DeLong	Mather, Wisconsin
James Griffen	Mather, Wisconsin
Fred Hoffman	Mather, Wisconsin
Beatrice Olson	Mather, Wisconsin
Jane Charles	Mather, Wisconsin

LEMONWEIR

Name	Address
Lester Palmer	Mauston, Wisconsin
Jim Morrissey	Mauston, Wisconsin
Henry Moore	Mauston, Wisconsin
John Rose	Mauston, Wisconsin
William Powers	Mauston, Wisconsin
Earl Herriot	Mauston, Wisconsin

LINDINA

Name	Address
H. G. Stackman	Mauston, Wisconsin
George Seebecker	Mauston, Wisconsin
Ed Mauer	Mauston, Wisconsin
W. H. Wells	Mauston, Wisconsin

Alfred Steiner	Mauston, Wisconsin
Alva Covey	Mauston, Wisconsin

LISBON

Name	Address
Ivan P. Witz	New Lisbon, Wisconsin
Ray Cure	New Lisbon, Wisconsin
Tom Merideth	New Lisbon, Wisconsin
Nestor Fleming	New Lisbon, Wisconsin
Lou Nuttal	New Lisbon, Wisconsin
Edwin White	New Lisbon, Wisconsin

LYNDON

Name	Address
Sig Woida	Lyndon Station, Wisconsin
Jim Mitchell	Lyndon Station, Wisconsin
John Dees	Lyndon Station, Wisconsin
Willard Blood	Wisconsin Dells, Wisconsin
M. L. Dinneen	Lyndon Station, Wisconsin
Ernest Goman	Wisconsin Dells, Wisconsin
Ben Sikorski	Lyndon Station, Wisconsin
Emmet Dougherty	Lyndon Station, Wisconsin

MARION

Name	Address
William A. Blank	Mauston, Wisconsin
P. B. Bala	Mauston, Wisconsin
Frank Pokorney	Mauston, Wisconsin
Joseph Pudelko	Mauston, Wisconsin
Fred Unke	Mauston, Wisconsin
John J. Pomazal	Mauston, Wisconsin

NECEDAH

Name	Address
Fred Backer	Necedah, Wisconsin
William Reinhardt	Necedah, Wisconsin
Jeanette Jorandby	Necedah, Wisconsin
Louis Vopelak	Necedah, Wisconsin
Wilbur A. Harrison	Sprague, Wisconsin

ORANGE

Name	Address
George Greeno	Camp Douglas, Wisconsin
Hilmer Birkness	Camp Douglas, Wisconsin
James Barrett	Camp Douglas, Wisconsin
Harry Belcher	Camp Douglas, Wisconsin
H. L. Hansen	New Lisbon, Wisconsin
Ben Mason	Camp Douglas, Wisconsin

PLYMOUTH

Name	Address
Otto Sather	Elroy, Wisconsin
Clarence Gerken	Elroy, Wisconsin
John P. Conway	Elroy, Wisconsin
M. P. Cafferty	Elroy, Wisconsin
John Cleaver	Elroy, Wisconsin
Clayton Knickerbocker	Elroy, Wisconsin
D. L. Braund	Elroy, Wisconsin

SEVEN MILE CREEK

Name	Address
Fred Gavin	Lyndon Station, Wisconsin
Art Walsh	Lyndon Station, Wisconsin
Matt Riddlestine	Mauston, Wisconsin
Dennis Costigan	Lyndon Station, Wisconsin
Andrew Kieffer	Mauston, Wisconsin
John W. Kelly	Mauston, Wisconsin
John Brown	Mauston, Wisconsin

SUMMIT

Name	Address
Harry Scharfenberg	Mauston, Wisconsin
Ned Lucht	Mauston, Wisconsin
Erwin Demanski	Wonewoc, Wisconsin
Ben Hess	Mauston, Wisconsin
Clarence Cattles	Mauston, Wisconsin
Arthur Franke	Mauston, Wisconsin
George Pfaff	Mauston, Wisconsin

WONEWOC

Name	Address
Lester Smith	Wonewoc, Wisconsin
August Brockman	Wonewoc, Wisconsin

Jesse Santas Wonewoc, Wisconsin
J. M. Jones Wonewoc, Wisconsin

DESCRIPTION OF JUNEAU COUNTY

Juneau County is located a little south of the center of Wisconsin and is bounded on the north by Wood County, on the east by the Wisconsin River, which separates it from Adams County, on the south by Sauk County, and on the west by Vernon, Monroe, and Jackson Counties. Mauston, the county seat, is in the south central part of Juneau County.

The first settlers came into the county in 1832 and located in the Lemonweir Valley. Settled almost simultaneously were those localities which are now Wonewoc, Plymouth, Lyndon, Kildare, Seven Mile Creek, Lemonweir, Lindina, and Lisbon towns. Lumbering was the first industry that attracted settlers to Juneau County. Adams County, which originally included Juneau, was established in 1848, but in 1857 Juneau was made a separate county. In 1857 Mauston had a population of 800. Among the early settlerswere a considerable number of English, Irish, and some French. The first permanent white settlement was made in the southeastern part of the county in 1838 when R. V. Allen constructed a cabin at what is now known as Dells Eddy.

According to the 1940 census the population of Juneau County was 18,708. Approximately 50 per cent of the total population live in the six upland towns. In 1940 there were

2,122 farms in Juneau County. The average size of the farm was 140.6 acres. The average value per farm was $4,557.

In area, Juneau County ranks thirty-third among the 71 counties in the state. It has approximate land area of 508,800 areas of which 58.6 per cent were in farms in 1940.

The county is divided into two physiographic regions which can be separated by a line drawn southeast from Camp Douglas through Mauston and Lyndon to the southeast corner of the county. The region to the north, comprising about two-thirds of the county, is the sandy Central Plain while south and west of the line it is the rugged Western Upland. The drainage of the entire county is the Wisconsin River.

The soil survey of 1914 shows 16 soil types. Sandy soils occupy 36 per cent of the county and are most extensive in the eastern and northern parts of the county. Boone fine sand accounts for almost 26 per cent of the total area of the county. Swamp or marsh soils accounted for 26 per cent of the entire area in 1914. There has been extensive drainage operations since 1914 which would change this percentage. Heavy soils, of which Knox silt loam is the most extensive, predominates in the six towns in the southwestern corner of the county, as shown in figure 1. Miscellaneous soils, largely meadow and rough stony land account for 13.4 per cent of the total area. Most of the meadow land is located along the rivers.

Figure 1.

Soil Classification by Towns
Juneau County, Wisconsin
Estimated by Wisconsin Crop Reporting Service

Woodland, Swamp, and Marsh
Acreage by Towns--Juneau County
Wisconsin Land Economic Inventory

TOWNS	I Heavy Soils	II Loams and Fine Sandy Loams	III Sandy Soils	IV Poorly Drained	V Miscellaneous	Woodland	Swamp and Marsh		
							Open	Wooded	Total
	Percent	Percent	Percent	Percent	Percent	Acres	Acres	Acres	Acres
Armenia			70.9	18.7	10.4	32,234	720	1,054	1,774
Clearfield	.8	15.5	60.5	15.9	7.3	14,053	1,408	727	2,135
Cutler	1.6	12.8	14.8	61.7	9.1	21,526	5,821	887	6,708
Finley			3.7	86.3	10.0	13,998	3,707	1,144	4,851
Fountain	38.8	15.9	18.3	4.3	22.7	6,558	484		484
Germantown	.1		69.4	12.5	18.0	16,221	949	2,424	3,373
Kildare	9.8	1.8	75.4	9.0	4.0	8,637	664	1,079	1,742
Kingston			15.8	82.5	1.7	23,518	5,984	138	6,122
Lemonweir	15.8	5.2	45.6	13.6	19.8	9,035	1,238	1,021	2,259
Lindina	48.8	7.2	18.5	5.2	20.3	5,527	462	70	532
Lisbon	11.9	18.0	37.6	16.6	15.9	7,194	1,745	1,103	2,848
Lyndon	12.5	3.5	71.6	2.2	10.2	7,254	581	59	640
Marion	.6	3.6	68.8	14.7	12.3	7,602	855	1,157	2,013
Necedah			44.2	45.5	10.3	31,187	3,144	3,159	6,303
Orange	9.1	25.8	22.4	31.4	11.3	7,497	2,747	1,053	3,800
Plymouth	78.4		10.0		11.6	8,641	123		123
Seven Mile Creek	54.4	3.1	14.7	7.7	20.1	9,795	624	245	869
Summit	60.0	.4	7.7	.8	31.1	10,608		175	175
Wonewoc	61.5	.2	17.4	3.2	17.7	6,213	351	435	786
County Total	18.7	5.3	36.1	26.5	13.4	247,298	31,607	15,930	47,537

Figure 2--Average Annual Rainfall--Mather, Wisconsin

Year	Average Rainfall (inches)
1921	21.20
1922	30.40
1923	23.30
1924	34.30
1925	35.14
1926	34.40
1927	30.60
1928	34.10
1929	32.10
1930	26.40
1931	27.00
1932	27.88
1933	23.78
1906--1934	32.10

Water is the all important factor for the north half and southeastern part of Juneau County. Records show an average rainfall for Mather to be 32.10 inches. This record was taken just previous to 1934 and extends back 28 years. Drying winds dissipate moisture very rapidly over the sandy area. This condition is intensified by dryness due to heat radiation. A temperature of 170 degrees F. one fourth inch in the soil was recorded on the Hancock Experiment Farm in 1936 on a cultivated field. On the same field a temperature of 153.5 degrees F. was recorded on the soil surface in the sun.

Figure 3 Farm Land According to Use

Year	Cropland Harvested-Acres	Cropland Idle or Fallow Acres	Plowable Pasture Acres	Woodland Acres	All Other Land Acres
1929	111,671	17,549	20,212	100,702	50,693
1934	112,052	15,590	25,069	112,499	57,438
1939	102,968	11,016	30,384	79,836	73,247

In 1939 there were 9,349 acres of crop failure reported as compared with 506 acres in 1929, and 3,475 acres in 1934. Ten per cent of the cropland in Juneau County is idle or fallow. However census figures show that in 1939 there were 6,533 less acres idle or fallow as compared with 1929. During this same period plowable pasture increased over 10,000 acres. Farm woodlands decreased 20,866 acres from 1929 to 1939 as shown in figure 3.

Forest and Waste Land

The Wisconsin Land Economic Inventory shows 297,303 acres of forest land in 1934. This was 58.5 percent of the total area of the county. Of this, 50,018 acres were open burned or cleared and abondoned. The report showed about 109,000 acres contained trees of sufficient size to be classed as merchantable timber in 1934. The major part of the timber is located in the sandy or northern part of Juneau County.

Oak woodland accounts for the greatest acreage of all the types of woodland in the county, and in 1933-34 comprised about 43 percent of the total woodland. Forty-seven percent of the oak cover was classed as scrub oak, 32 percent as oak of medium grade, and 21 percent as fairly good grade oak. Thirty percent of the total woodland was Jack Pine.

Figure 4. Distribution and Utilization of farm land, cropland, and pasture land
Juneau County, Wisconsin
Crops Reporting Service

TOWN	FARM LAND U.S. Census-1930				CROPLAND Assessors' 1929-33				PASTURE Assessors'-1929		
	Cropland	Pasture		All Other Land	Corn and Small grains	Hay	Cash Crops	Rotation	Permanent		Woodland
		Plowable	Other						Plowable	Unplowable	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Armenia	35.0	5.4	34.8	24.8	87.7	8.3	4.0	4.5	5.2	6.7	83.6
Clearfield	35.3	4.5	37.9	22.3	76.1	20.8	3.1	3.9	11.8	21.7	62.6
Cutler	31.7	6.3	52.2	9.8	67.4	30.6	2.0	5.9	4.4	33.9	55.8
Finley	39.4	4.4	37.8	18.4	66.1	31.8	2.1	2.8	4.2	26.9	66.1
Fountain	42.4	7.8	36.9	12.9	63.6	34.0	2.4	25.9	38.5	17.3	18.3
Germantown	41.4	1.1	33.4	24.1	83.1	13.8	3.1	4.2	9.9	7.7	78.2
Kildare	40.6	7.3	28.2	23.9	76.7	17.1	6.2	6.5	21.7	28.7	43.1
Kingston	20.4	0.5	21.7	57.4	40.1	56.1	3.8	5.0	6.9	40.6	47.5
Lemonweir	51.4	10.3	24.5	13.8	71.1	25.8	3.1	14.5	16.9	22.4	46.2
Lindina	53.0	10.1	21.2	15.7	66.9	30.7	2.4	7.5	22.3	29.9	40.3
Lisbon	54.0	5.9	28.9	11.2	72.0	26.0	2.0	7.5	19.1	33.1	40.3
Lyndon	44.6	9.2	25.2	21.0	71.6	21.3	7.1	7.9	17.4	18.6	56.1
Marion	45.1	3.2	31.4	20.3	83.0	12.1	4.9	7.5	8.2	25.4	58.9
Necedah	40.8	3.7	33.4	22.1	86.4	8.9	4.7	3.2	5.0	4.7	87.1
Orange	37.1	7.7	38.0	17.2	64.6	32.7	2.7	5.2	11.2	23.2	60.3
Plymouth	45.9	9.5	33.4	11.2	56.2	41.9	1.9	11.1	12.9	30.8	45.2
Seven Mile Creek	43.4	5.4	35.5	15.7	68.5	26.9	4.6	2.9	5.8	16.9	74.4
Summit	46.3	6.2	37.7	9.8	64.6	32.5	2.9	5.5	7.1	45.2	42.2
Wonewoc	46.6	6.6	36.9	9.9	57.3	39.7	3.0	1.9	5.4	49.4	43.3
County	43.6	6.7	32.7	17.0	68.2	28.5	3.3	6.9	12.5	25.6	55.1

32,224 acres, or 6.3 percent of the entire area, was mapped as waste, marsh and water, by the Wisconsin Land Economic Inventory in 1934. There were 618 acres mapped as marsh. This included the cranberry marsh land. Summit was the only one of the 19 towns that did not have some open marsh within its boundaries. Fountain and Plymouth were the only towns where timbered swamp was not reported. Kingston reported the most open swamp and was third in total swamp.

Game

Early settlers were helped in their food supply by the abundance of game, grouse, wild ducks, and geese. Wild honey was very abundant in the region south of the Lemonweir. In the fall of 1850 one man is reported to have gathered eight barrels of strained honey in four weeks. Wild cranberries were also purchased from the Indians as early as 1849. The establishment of a game refuge of 92,000 acres in 1935-38 for migratory and nesting birds has greatly promoted their increase in the entire area. Natural marsh conditions, with its scattered ponds and sloughs, make an ideal breeding ground for water foul. The peat sand area is well suited for mixed game. Seeds and fruits from the weeds and grasses in the northern area supply ample food for upland game. Partridge, sharptail grouse and particularly the prairie chicken subsides largely on seeds in winter. Mild winters and light snow fall have made it possible for quail to become quite common in the northern part of Juneau County. Deer, rabbits, squirrels and the fur bearing animals are also found in almost all of the 19 towns in Juneau County. In recent years

the Ring Neck Pheasant has become a common sight along the roads of Southern Juneau County. Game birds are also economically important in the roll they play each year in destroying insects.

Figure 5--Farms: Number, Land Area, Size, and Tenancy Juneau County, Wisconsin 1880-1940

Year	Farms			Tenancy
	Total Number	Acreage Acres	Av. Size Acres	Percent
1860	673	86,445	128.4	
1870	1,230			
1880	1,888	245,002	129.8	6.8
1890	1,964	265,974	135.4	9.6
1900	2,694	356,327	132.3	13.4
1910	2,470	344,650	139.6	11.8
1920	2,479	327,561	132.1	13.0
1925	2,256	301,014	133.4	14.6
1930	2,221	304,302	137.0	17.5
1935	2,428	331,997	136.7	19.3
1940	2,122	298,354	140.6	21.4

Farm Acreage and Size of Farms

The average of land in farms was largest in 1900 when it was 356,000 acres. In 1940 there were 298,354 acres in farms, the lowest since 1890. Farm size has increased almost steadily since 1920 and at present are the largest compared with available records of Juneau County.

Farm Tenancy

The proportion of tenant farms has increased almost steadily from 6.8 per cent to 1880 to 21.4 percent in 1940 as shown in Figure 5. However, this is below the state average which is 23 percent.

Value of Land Buildings

In 1940 the average value of land and buildings per farm was $4,557. This was $2,527 less per farm than in 1930. Total value of farms (land and buildings) in 1940 amounted to $9,670,019. Buildings alone amounted to $4,487,968. Machinery and implements on Juneau County farms were valued at $1,409,790 in 1940.

Farm Income--Juneau County

The importance of agriculture in Juneau County can be seen by the fact that the value of all products manufactured in the County in 1935 were less than half of the gross farm income. In 1936 the gross farm income was estimated to be $3,406,085. This was $1,500,000 greater than in 1933. The average gross farm income in 1936 was $1,431 per farm or $10.26 per acre of land in farms. In gross income per farm, Juneau County ranked 47th in the state and 50th in income per acre of land in farms in 1936.

The major part of the gross farm income is supplied by livestock and livestock products. Eighty-two percent of the total was derived from these sources in 1936. The percentage of income contributed by livestock and livestock products in 1936 represents a decline from 85 percent which these products contributed in 1927.

Figure 6--Source of Gross Farm Income in Percent

	1927--Percent	1936--Percent
Milk	53	46.0
Hogs	2	14.1
Poultry and Eggs	9	10.9
Cattle and Calves	10	10.3
Potatoes	5	7.6
Fruits	1	4.0
Grains	4	.9
Other Items	6	6.2
Total	100	100.0

Milk accounted for 46 percent of the total gross farm income in 1936 as shown in Figure 6. A larger percent of the gross farm income was derived from milk than from the combined sources from hogs, poultry and eggs, sheep, wool, honey, and crops. Fruits accounted for 4 percent of the total gross farm income in 1936.

Figure 7--Livestock--Juneau County

Year	All Cattle	Milk Cows and Heifers	Swine	Chickens on Farm Jan. 1st	Sheep and Lambs
1926	28,800	20,200	13,900	157,000	3,400
1928	28,400	19,700	14,200	156,000	4,500
1930	29,400	18,700	12,200	155,700	5,100
1932	32,390	20,700	13,500	152,500	5,000
1934	33,720	21,800	11,000	194,200	5,000
1936	32,200	21,400	13,000	168,800	5,100
1938	32,800	22,200	12,600	135,300	4,900
1940	29,863	19,854	7,777 (1)	123,761 (1)	3,591 (2)
Average 1928-36	31,251	20,560	13,010	162,360	4,800

(1) over 4 months old April 1st--(2) over 6 months old April 1st

From 1928 the cattle population increased to an all high of 33,720 in 1934. 1939 showed a similar increase to 32,800, the highest number since 1934. Cattle far out number other livestock (except chickens) on Juneau County Farms.

The number of chickens on farms has changed little from year to year; however, 1940 figures do show a slight decline. Egg production increased from less than 15 million eggs in 1925 to over 18 million in 1934 and 1936. In 1939 egg production decreased to a little over 10 million eggs.

Horses and mules have decreased in number from 8,910 in 1915 to 5,850 in 1940.

Figure 8--Milk Production

Year	Producing Cows	Milk Production Per Cow	Total Milk Production
	Number	Pounds	1,000 Pounds
1925	19,600	4,700	92,000
1927	18,600	5,200	97,000
1929	18,000	4,800	86,650
1931	19,400	5,000	97,100
1933	20,600	5,000	103,250
1935	20,400	4,800	97,920
1937	21,200	5,200	110,240
1939	18,088	4,620	83,301
Average			
1927-36	19,560	5,040	98,617

There were fewer producing cows in 1939 than any year since 1929. Only twice, 1929 and 1939, have there been less than 18,300 producing cows in the county. Milk production, which had been on an almost gradual increase since 1924, showed

a decrease in 1939. There was a decline of 1,472 cows in 1939 from the 1927-36 average of 19,560 cows as shown in Figure 8.

Creamery butter increased from 336,00 pounds in 1885 to 4,100,000 pounds in 1938. In 1939 there were 2,520,111 pounds of butterfat sold as cream in Juneau County and 1,330,572 gallons of whole milk sold. There were 401,000 pounds of cheese produced in 1935. More American cheese than any other type of cheese has been produced.

Figure 9--Crop Yields--Juneau County

	Acreage		Production	
Crop	1939	1917--36 Average	1939	1917--36 Average
	Acres	Acres	Acres	Bushels Acres
Corn	26,624	25,063	519,370	687,678
Oats	24,587	28,616	1,281,177	863,652
Barley	1,783	4,341	38,933	118,024
Rye	4,416	8,534	32,801	92,790
Wheat(all)	443	1,142	4,937	19,362
Buckwheat	534	1,136	8,522	13,176
Potatoes	1,921	4,836	151,308	451,476

More than half of the corn acreage was harvested for grain in 1939. The average yield of corn from 1917 to 1936 was 27.4 bushels per acre. Average corn yields have varied during this period from 14 to 35 bushels per acre. Corn Acreage in 1939 exceeded that of oats. In only one year from 1917 to 1938 had the corn acreage ever exceeded that of oats, that being the drought year of 1934. There were nearly 4000 acres less planted to oats in 1939 than during the average 1917-36. Barley acreage also dropped 2,915 acres in 1939 compared with the

average from 1917-36. In 1939 buckwheat, wheat, rye, and potatoes acreages have all decreased to about half the average acreage of 1917-36. Potato acreage has not exceeded 4000 acres since 1924 and in 1939 there were only 1,921 acres.

Figure 10--Crops--Average Yield and Acreage

Crop	1917--36			1927--36		
	Acreage	Yield	Production	Acreage	Yield	Production
	Acres	Bushels	Bushels	Acres	Bushels	Bushels
Corn	25,063	27.4	687,678	24,843	27.2	675,150
Oats	28,614	30.2	863,652	27,957	28.4	793,403
Barley	4,341	27.2	118,024	4,833	26.4	127,390
Rye	8,534	10.9	92,790	5,815	9.1	52,751
All Wheat	1,142	17.0	19,362	484	17.6	8,514

According to the Land Use Committees there were approximately 11,800 acres of land used for cranberry production in the town of Cutler and approximately 2,360 acres in the town of Kingston. In 1929 Juneau County ranked third in the state in the production of cranberries. Actual land on which cranberries were harvested would be relatively small compared with the total used in their production.

Lime and Fertilizer

Juneau County's soil chemist had tested 399 farms by September 1st, 1941. In testing those farms he made a total of 2,428 tests. Figure 11 shows the results of these tests.

Figure 11--Lime--Soil Tester Results

Farms needing 5 ton of Lime per acre--3 percent
Farms needing 4 ton of Lime per acre--30 percent
Farms needing 3 ton of Lime per acre--36 percent
Farms needing 2 ton of Lime per acre--14 percent
Farms needing 1 ton of Lime per acre--15 percent
Farms needing 0 ton of Lime per acre--2 percent

Figure 12--Percentage

	Very Low	Low	Adequate	High	Very High
Phosphorus	61	24	10	1	4
Potassium	4	52	31	7	6

Results of 2,428 tests on 399 Juneau County farms show that 36 percent needed 3 ton of lime, 61 percent were very low in phosphorus and 52 percent low in potassium.

Lime Applied

Year	Tons Applied
1937	3,375
1938	8,973
1939	8,938
1940	7,575
1941	12,863
Total	43,724

It has been estimated that in 1942 there will be 20,000 tons of lime applied, almost doubling that amount applied in 1941. While since 1937 available figures show that 43,724 tons of lime have been applied, a fair estimate would be 58,300 tons of lime applied over this 5 year period. At the rate lime has been applied during the past 5 years it will be approximately 35 years before all of the crop land in Juneau County will have had one application of lime, 3 tons per acre. In 1941 there were 190 tons of commercial fertilizer distributed in Juneau County.

LAND USE CLASSIFICATION

This land classification involves the classification of each designed land use area. An area consisted of not more

than one farm and in most cases not less than forty acres.

Each area in Juneau County was designated by committeemen using the standard classification as follows:

A. Areas Now In Farms Which Are Not Suited For Farming And Which Should Be Put To Some Other Use. (Colored Blue)

B. Areas Not Now In Farms And Which Should Not Be Used For Farming. (Colored Green)

C. Areas Now In Farms And Which Are Questionably Suited For Farming. (Colored Red)

D. Areas Not Now In Farms But Which Are Suitable For Development. (Colored Orange)

E. Areas Which Are Now In Farms And Which Should Remain In Farming. (Colored Yellow)

The committee decided that land used for cranberry production be designated E1.

Figure 13--SUMMARY OF CLASSIFICATION BY TOWNS IN PERCENTAGE

Town	Percent Class A Blue	Percent Class B Green	Percent Class C Red	Percent Class D Orange	Percent Class E Yellow
Armenia	5.82	51.70	36.13	0.16	6.16
Clearfield	8.69	44.84	16.49	0.05	29.69
Cutler	0.81	51.73	11.57	0.23	35.64
Finley	0.00	74.19	11.85	0.00	13.94
Fountain	3.09	14.25	26.23	1.23	55.16
Germantown	11.69	14.76	48.83	0.00	24.70
Kildare	0.00	33.72	35.61	0.00	30.66
Kingston	0.00	93.92	0.00	0.00	6.46
Lemonweir	18.38	15.00	12.50	0.00	54.11
Lindina	0.72	5.96	14.28	0.00	79.02
Lisbon	10.50	31.51	6.93	0.21	50.84
Lyndon	4.63	3.75	31.34	0.88	59.38
Marion	17.66	17.66	14.24	2.84	47.57
Necedah	3.36	48.39	28.10	3.06	17.07
Orange	1.41	34.92	24.11	1.59	37.94
Plymouth	0.00	7.59	3.43	2.35	86.61
Seven Mile Creek	9.93	3.93	15.15	0.00	70.73
Summit	0.00	8.93	9.83	0.16	81.16
Wonewoc	0.00	2.96	1.04	0.00	95.81
County Percentage	4.78	34.00	19.29	0.73	41.20

RECOMMENDATIONS OF THE JUNEAU COUNTY
LAND USE PLANNING COMMITTEE

SOIL EROSION AND LAND USE

Cultivation, pasturing and deforestation have removed protective plant cover. Man with his axe, plow, livestock and his drainage operations has destroyed a large portion of the natural plant cover that originally protected the soil for destruction by erosion. Erosion losses are increasing. Each year, cultivated crops remove or destroy a part of this plant food or organic matter. When this protective cover is lacking, wind erosion of the light soil occurs. Heavy, hard rains are typical of our climate. According to work at the Erosion Control Experiment Station at LaCrosse but three or four hard rains cause our major soil loss during the year.

The erosion and land use problems are one of Juneau County's major problems because the soil is Juneau County's basic resource.

EVIDENCE OF SOIL EROSION

Our erosion problem is evident from several sources.

1. Reports of the various community committees shows the erosion and land use problems and the need for control measures to be a serious one.

2. The Soil erosion survey of Wisconsin by the State Soil Conservation Committee in cooperation with the Agricultural Experiment Station in 1941 shows over 60% of the land in the heavy soil area has lost one plow depth of soil or more; for the Northwest section about 25% of the land area has lost this amount and the East side of the county as subject to wind erosion.

3. The reconnaissance erosion survey of Juneau

County made in 1934 by the Soil Conservation Service shows the heavy soil area of the county to have lost 25-75 percent of its topsoil with frequent gullying. It also showed the eastern part of the county as having severe wind erosion with little or no erosion in the Northwestern part of the county.

4. Soil profiles were obtained in Plymouth Township. from an area quite typical of the heavy soil area of the County. These profiles revealed a loss of 13 inches of topsoil from land that had been farmed for a number of years (perhaps 50-75). The profiles were taken on approximately a 10 percent slope and a considerable percentage of the hilly land now being farmed in the County runs over ten percent.

SUB-DIVISIONS OF LAND BEING USED AS FARM LAND:

The County Land Use Planning Committee decided that Class "E" land (Colored yellow), or farm land that should remain in farming, should be subdivided on the basis of erosion, soil type, topography, and proper land use beplaced into three sub-divisions as follows:

SUB-DIVISIONS--Class E (Colored yellow)

1. Excellent Cropland. Areas in which soil erosion is little or no problem. It may be either:
   (a) Level, deep developed, well drained upland soil, or terrace soils.

   (b) Level, well drained, bottomland soils.

2. Good Cropland. Areas in which soil erosion is often a problem and in which there is need for change in cropping practices if supporting conservation practices havenot already been put into effect. It may be classed as:

   (a) Upland, gently rolling, slight to moderate erosion, or level bottomland, or low terrace with fair to poor drainage or overlying sand.

3. Fair Cropland. Upland, rolling to strongly rolling, moderate to severe erosion or sandy soils subject to moderate wind or water erosion.

For land use recommendations on excellent, good, and fair cropland see recommendations for heavy soil (page A5) and for sandy soils (page R4). Recommendations pertaining to erosion control practices are also given (page R6)

Class C Questionable farm land (colored red). This area is questionably suited for farming because of unproductive, droughthy, light or sandy soils or other heavy upland soils that are too steep or shallow for safe cultivation or have been very severely eroded.

Recommendations from committee members for some of this land are as follows:

1. The heavier soils should be converted from cropland to pasture. Soil treatments of lime and fertilizer according to soil test and reseeding with legumes as recommended, and pasture renovation should be followed.

2. The light soils are often best suited for woodland and wildlife and should be protected from fire and grazing. With the increased interest in hunting it was felt by the committee that more attention should be given to developing these submarginal areas for wildlife--partly in the form of scattered small closed refuges surrounded by open areas developed for wildlife and open to hunting.

LAND USE RECOMMENDATIONS FOR SANDY SOILS SUBJECT TO WIND EROSION

By following the recommendations of the Hancock Experiment Farm and with careful management, land of a low capability may be used with some success for a higher scale of use. When this is attempted specialized treatments such as drainage and irrigation together with adequate applications of lime, manure, and fertilizer are needed. The use of larger units with a combination of forests crops and farm crops should receive serious consideration. Drainage and irrigation should be attempted only after careful survey and experimentation.

Land Class	Type of Land	Suggested Rotation	Suggested Practice
Fair Cropland E (yellow)	Sandy soils not included below	C-G-H-H-H-P-P *	None
		C-G-H-H-H-P or	Shelterbelts alone.
		C-Wg-SwCl-C-WG or	
		C-WG-SG-H-H-H	
		C-G-H-H-H or	Strip Crop, Shelterbelts, Terrace, and protect from wind.
		C-WG-SG-H-H	
		C-G-H-H-H	
Questionable Cropland C (red)	Sandy soils with organic content low, often droughthy.	As above	
Hay or Pasture	Sandy areas with too high a water table (12" or less) periodically.	Tame Hay or Pasture.	Establish stands of legumes and grasses and top dress with ferterlizer to prolong stand. Plow and cultivate only when absolutely necessary to re-seed.
		Wild Hay or Pasture	Cut wild hay or pasture native grasses. Seed Reed Canary grass when practical.
Woodland	Rough topography, sand and fine sands, gravelly areas. Level areas with surface soil removed by wind erosion. Dunes and blow holes. Level areas of coarse sand lying too high above the water table	Woodland and Wildlife products	Protect from fire and grazing, selective cutting and plant desirable trees.

SG-Spring Grain
WG-Grain, fall seeded
C--Clean tilled crops

G-Small Grain
P-Pasture
H-Legume Hay Crop

LAND USE RECOMMENDATIONS FOR HEAVY SOILS:

These cropland recommendations are made on the basis that manure will be applied regularly and the soils will be limed and fertilized according to soil test.

Land Class	Type of Land	Suggested Rotation	Suggested Practice
Excellent Cropland E yellow	a-Level, deep developed well drained upland or terrace soils. b-Level, well drained bottomland soils.	C-G-H	None
Good Cropland E yellow	a-Level bottomland or low terrace, fair to poor drainage or overlying sand. b-Upland, gently rolling slight to moderate erosion.	C-C-G-H-H-H C-G-H-H-H-H C-C-G-H-H-H C-G-H-H C-G-H-H-H	None None Terraces Contour strip Field or Buffer strips
Fair Cropland E yellow	a-Upland, rolling to strongly rolling, moderate to severe erosion.	C-G-H-H C-G-H-H-H C-G-H-H-H-H C-G (6 years)H Hayland or Pasture	Terraces Contour strip Field or buffer strips. No Practices
Questionable Cropland C Red	a-Upland, too steep or shallow for safe cultivation or very severely eroded.	Hayland or Pasture	Plowed only occasionally (in strips) and only for reseeding and soil treatments Control grazing Renovation.
	b-Bottomland too wet for cultivation	Pasture-seed to canary grass	Control grazing.

Land Class	Type of Land	Suggested Rotation	Suggested Practice
Pasture	a-Bottomland with gravelly deposition	Pasture	Control grazing
	b-Upland too steep for cultivation, severely eroded or stony	Pasture	Control grazing
Woodland	Rough broken land	Woodland and Wildlife	Protect from fire and grazing selective cutting.

The Committee's Recommendations For Controlling Soil Erosion:

In brief, these are covered together with recommended rotations in the two preceding charts on land use recommendations.

A brief explanation of recommended erosion control practices follows:

1. Strip cropping consists of strips of hay alternately with strips of corn or grain. The hay strips break with the slope, slows and spreads the water. The hay strip also tends to match the soil from the corn or grain strip above. Vigorous growth of grass and also waterways are important.

   Contour or level strips are more effective than contour farming alone and should be used whenever possible.

   Strips will vary from 50 feet on the steeper slopes to 100 feet on the more gentle slopes.

2. Buffer strip cropping consists of strips of sod a rod or more wide on the contour and placed 50-100 feet apart. In some instances this type of strip cropping may prove useful and practical.

3. Terraces are an effective method of control on slopes up to about 10% where the topography is fairly uniform and the soil quite deep. Terraces consist of extra large furrows which are just a little off the level so that the water will be caught and allowed to slowly run off to one end. Here a sod draw is necessary to allow the water to go safely down the hill. Farming terraces should normally be done with the terraces.

4. Contour fencing in connection with a contour strip cropping system is advisable. This consists of rearranging fences to follow major contour field divisions. This eliminated odd corners, point rows and serves as a permanent marker for contour lines. Major field lines between cropland and pasture can often be planted to a row of cedar for use as a future fence line and for wildlife cover.

5. Pasture renovation as per recommendations of the College of Agriculture should be carried out on the steeper slopes that should be left in permanent hay or pasture. Lime and fertilizer requirments should be determined by soil test. The lime is applied and the sod thoroughly disked or spring toothed in early spring. The fertilizer should also be worked into the soil and the seeding misture of legumes and grasses applied. For seeding rates we suggest the advice of the county agricultural agent. Avoid overgrazing at any time.

6. Steep land having slopes over 30-35%, light soil, with low fertility, badly eroded land, odd irregular corners or wasteland should be protected from fire and grazing, and planted to trees to provide income and guard against erosion. Recommendations of the College of Agriculture and Conservation Department should be followed.

7. Gully Control. The farmer who wishes to keep his fields free from gullies must give consideration to conservation practices on areas that contribute run off to gullies. Diversions, sod flumes, and sod hump dams and planting with protection from grazing will often control gullies that do not have large drainage areas. Others may require permanent structures. Protection alone will often cause gullies to become inactive.

8. Grassed waterways should be left in all draws of sufficient width to prevent gullying. They should be left wide enough so that a hay crop can be harvested from them. They should be left with uneven edges to prevent side gullies.

9. Streambank cutting can often be controlled by protection alone or this supplemented with willow plantings at critical points. In some instances cribbing rip rap, or wing dams may be necessary.

10. Shelterbelts for windblown soils should be placed at right angles to the prevailing direction of the wind. In areas of severe wind erosion shelterbelts might well be 40 rods apart. A shelterbelt should consist of three rows spaced eight feet apart and six feet apart in the row. Either Jackpine or Norwaypine should be on the inside row. Scotchpine is well suited to outside rows or Whitepine, if used, should be on the windward row. Young trees respond to cultivation.

11. The use of a winter cover crop on land subject to erosion on both light and heavy soils is highly recommended. Rye is one of the most common crops used for this purpose since it is a good soil builder and also furnishes supplementary pasture.

12. The use of green manure is recommended on both light and heavy soil.

13. The committee recommends that farmers in the county who are troubled with an erosion problem should contact the supervisors of the Juneau County Soil Conservation District, the District Office or the County Agent.

Cost Of Improving Class C Land (Colored Red)

1. Light Soil Area

Committees have estimated the cost of improving the fertility on the poorest land in this area to be approximately $14.80 per acre. This out of the pocket cost would include:

200 pounds of commercial fertilizer	$4.50
4 ton of lime	$7.30
10 lbs. of alfalfa seed	3.00
Total	$14.80

It is believed that on a good farm having 40 acres or less of this type of land the expenditure of $14.80 per acre for soil improvement would be practical. On poorly managed farms having more than 40 acres of poor class C land the advisability of such an expenditure would be questionable. Present buildings, machinery, and ownership should be also considered.

2. Heavy Soil Area

Experience of the committee in securing increased yields after applying lime and fertilizer would warrant an expenditure of approximately $13.00 per acre on much of the land in this area. The committee agreed that money could best be spent as follows:

2½ tons of lime	$5.00
250 pounds of Commercial fertilizer	$5.00
10 lbs. of alfalfa seed	$3.00
Total	$13.00

An out of the pocket cost of $13.00 should put much of this land in good productive condition.

3. Poorly Drained Soils

Most Class C Land that is poorly drained should be used for pasture. Reed Canary Grass is suitable for much of this land. Expenditure for fertilizer on this land would be questionable.

Recommendations For Class B Land (Colored Green)

Thirty-four percent of the entire area was classified as land not now in farms and which should not be used for farming. Much of this area is marsh, forests, andwaste land. Approximately 7,000 acres of land under forest crop law is in this area and owned by Juneau County. Approximately 47 percent of the county forest land in Juneau County has been entirely planted. The county committee unanimously recommended that Juneau County continue the program as in the past of taking tax deeds after five years of delinquency, that such lands be placed under forest crop law, and that in so far as funds are available plantings be continued.

Recommendations For Class A Land (Colored Blue)

Community and County committees both agreed that the best land use for land in Class A (Colored Blue) and much of the land in Class B (Colored Green) would be a game refuge. The importance of this recommendation was considered from an economic as well as from an esthetic view point. In recent years there has been an increase in the number of hunters but a decrease in game. Hunting is without a doubt one of the major forms of recreation and is also one of the attractive features in Juneau County.

Enviromental conditions for wild life naturally divides Juneau County in two parts; the northern plain region and the southern agriculture region, mostly south of the Lemonweir River. The northern region is already well populated with game and a large portion of it is a game reserve. The southern agriculture region has excellent possibilities for game propagation, shelter and resting ground. Game birds of this area are mainly pheasants, partridge and quail. The unanimous recommendation of the committee is as follows:

1. Small game refuges be established on farms in southern Juneau County. These refuges to be from 20 to 40 acres in size. Most farms would have a small area of land suitable for this purpose.
2. Planting of small patches of food bearing plants such as wild millet, buckwheat or corn in these small game refuges to aid the birds in securing food.
3. Sportsman and sportsmens clubs should promote through 4-H clubs or farmers organizations the use of sheltered feeding stations. Small feeders should be made available to farmers or 4-H club boys who are willing to look after them during winter months. While stress has been on releasing pheasants in the past, more stress should be placed on the care of the birds during winter months in an effort to keep them within the area in which they are released.

Recommendations for Class D Land (Colored Orange)

Approximately one percent of the land area in Juneau County was classed as land not now in farms but which is suitable for future development. The committee would recommend the develop-

ment of this area under the following conditions:

1. That it be made a part of an existing farm unit.
2. That sufficient labor already be available on these farm units.
3. That farm units affected by this area have ample machinery and buildings to warrant the development of more land.
4. That its location be such that it would be adjoining existing fields already under cultivation.

GENERAL

FARM CROPS AND SOILS RECOMMENDATIONS

1. The services of the soil tester should be continued in the county and that farmers become better acquainted with services available. The soil chemist should be under the supervision of the county Agriculture Agent and more funds be made available for a soil chemist for three reasons:
   a. So that more of the soil testers time be available for soil testing and soil mapping work each month. Present WPA regulations do not permit a full time working schedule for each month. Because of the interest shown, the present work schedule does not permit the proper handling of the large number of soil maps and soil tests that have been requested.
   b. Present wage scale regulations do not encourage the type of personnel that the job requires.
   c. An appropriation is necessary to faciliate expenses necessary in collecting soil samples.
2. A pasture improvement program should be given more emphasis. Renovation, new and improved varieties, and importance of

pasture feed should be demonstrated at the County Farm by the County Agriculture Agent.

3. TVA demonstration farms should include pasture improvement demonstrations, erosion control demonstrations, rotations, and shelter belts in connection with the fertilizer demonstration. Demonstration farms should be located near well traveled highways and on farms typical of the community.
4. Farm Security Administration farms should utilize the principles of cropping, proper use of fertilizer, shelter belts and take yield samples on crop in cooperation with the County Agent.
5. Use the County Farm for demonstrating pasture improvement, good land use, weed control, erosion control, livestock improvement, and improved varieties of grains and legumes, and in the nature of an experimental farm for the county. It is further recommended that an annual Field Day be held at the County Farm to show the above practices and results of experiments.
6. The 1942 AAA program should further encourage the use of lime and fertilizer, and payments be increased on lime sludge to a point where it would compare with the payment now given on lime. As many farmers prefer to use sacked lime rather than bulk lime, thepayment should be increased on sacked lime.
7. An investigation be conducted and experiments be set up with the cooperation of the college on the use of soybeans as a cash crop, using improved varieties, and determining the best variety for seed and hay for this locality, keeping in mind they are not adapted for poor hilly land, where they present an erosion problem.

SIZE OF FARMS

1. On Light Soil

The committee would recommend a family size farm of 160 to 200 acres which should have 80 to 100 acres of cleared crop land. At least half of the crop land should be in alfalfa or clover at all times. On this farm there should be 10 or 12 good milk cows and not more than 20 head of cattle including young stock, 100 to 150 hens, and 2 or 3 litters of pigs each year. Farms should be so planned that hired help would be unnecessary, was the advice of the committee.

2. On Heavy Soil

The committee agreed that farms should be somewhat larger than in the past for the following reasons:

1. Farmers already have necessary equipment to conveniently handle more land.
2. The cost of living has increased with the use of the automobile, improved roads and schools, telephone, and electricity.
3. Farm prices have not advanced in accordance with the cost of living. In some instances they have decreased.
4. Because of fertility problems and erosion, crop yield in some cases have decreased.
5. The farmer is entitled to the same standard of living as people living in the city.

Due to the variation in topography it is difficult to determine the correct farm size for this entire area. Generally, however, a 160 acres farm with 80 to 100 acres of crop land would be most suitable.

This farm should have 15 to 20 good cows, 10 head of young stock, 150 to 200 hens and two litters of pigs each year. The practice of hiring year round help is questionable on most farms.

YOUTH

Youth interested in farming should be given an opportunity for education along this line by parents and schools. 4-H club work has been playing an important role in this regard. Lack of funds, however, has been cause for insufficient leadership which curtails a more rapid expansion of this splendid program.

Farm youth interested in mechanical skills need more actual job experience. The National Youth Administration job training program has greatly aided youth in obtaining actual experience in their chosen line of work.

The committee would further recommend:

1. Schools
    a. Planning a guide program by parents and teachers to develop better understanding.
    b. Improving transportation facilities.
    c. Home Economic training and Hot Lunch programs.
    d. Use of the High School Gymnasiums at certain specified times for rural groups.
    e. Rural electrification in schools.
    f. Active and better citizenship training
        1. Older youth should serve on community or town committees and offices.
2. Recreation
    a. Use suspended and abandoned schools as community buildings.
3. Home Agent and club leader to assist with education and recreation in Juneau County.

FEDERAL PURCHASE PROGRAM

The town of Armenia, located in northeastern Juneau County, has an area of approximately 49,201 acres. With few exceptions, the soil is very sandy. Drought has been a limiting factor in the production of small grains. The 1930 census showed 35% of the area as cropland, much of which is idle at the present time. Evidence of short lived soils is shown by the abandonment of entire farm tracts. It hasbeen estimated that 27.6% of the total area has been abandoned. In 1938 there were 13,860 acres tax deliquent.

Because of these factors, and the problem of water control on land near the rivers and streams, both local and county land use planning committees recommend that the town of Armenia be purchased by the Federal Government.

DRAINAGE DITCH CONTROL

Class E land (Colored yellow) in the town of Necedah is endangered by sugishness of drainage ditches in this area caused by lack of cleaning and dams built by beavers. The committee recommends that, first, the ditches affecting this area be cleaned as soon as possible and, secondly, the State Conservation Department take action in controlling the beavers in this community.

TENANT LEASES

Many tenants on farms in the water erosion area of Juneau County have not used proper soil conserving practices. In many instances the cooperation between tenant and owner has been unsatisfactory.

In an effort to remedy these conditions the committee would recommend the practice of using a three to five year lease. A five year lease would encourage the tenant to adopt recommended practices that to be effective must be carried out more than one year.

PUBLIC WELFARE

While the expenditure required at present for public welfare does not give cause for alarm, it has in recent years, and may become a major problem in the future. During the fiscal year 1938-39 it has been estimated that almost one half million dollars was spent for this purpose in Juneau County. Of this amount, Juneau County paid over $54,000. Public assistance would have amounted to $4.09 per acre of farm crop land in Juneau County during this 12 months period or $24.50 per person living in Juneau County.

At present there are 200 on WPA payrolls in Juneau County. Many of these lack experience and are unable to secure other work. Because of the more attractive wages they secure and fewer hours required to work, farmers cannot secure their help even in rush periods on the farm.

The committee recommends that in the future no public assistance be given unless:

1. Those that are physically able to help themselves do so by:

    a. Growing a garden and preserving food for winter use.
    b. Keeping livestock when possible, such as poultry, a cow, or pigs.
    c. Securing odd jobs or attempting to find private employment.

The committee further recommends to the Wisconsin and Federal employment agencies that:

Farmers on poor Class C land (Colored Red) and those living on Class A (Colored Blue) be given preference in obtaining employment with the present Defense program or on new Defense Projects that may develop in or near Juneau County.

INDIAN SITUATION

There are approximately fifty Indian families in Juneau County mostly of the Winnebago tribe. For years they have displayed their skills in cranberry harvesting, planting trees, and basket weaving. It is recommended that they take a more definite place in society and be given more opportunity to work at the tasks they are most skillful in doing. An Indian Cooperative where they could sell their handicraft articles themselves may do much to increase their income, if properly supervised.

SUMMARY OF RECOMMENDATIONS

1. Crop Land and Pastures.
   a. At least half of the cultivated land should be in legume hay or pasture. Rotations on light soil should include a green manure crop such as sweet clover, and a cover crop such as rye.
   b. Water and wind erosion are a problem in Juneau County. There is a need for soil conserving practices such as strip cropping, longer rotations, contour tillage, controlled grazing, terraces, and shelter belts.
   c. More emphasis should be placed on the lime and fertilizer program. At the present rate of liming it

will take approximately 35 years to lime the crop land in Juneau County once at the rate of 3 ton per acre.

d. The county farm should be used for demonstration and experimental purposes. Pasture renovation, new and improved varieties, erosion control practices, and lime and fertilizer plots should be shown at an annual field day. TVA farms should be used for similar purposes where practical.

e. Increase size of farms to utilize farm equipment and in an effort to increase the farm income. Livestock numbers should be increased on most farms.

f. Committees estimate the cost of improving land low in fertility to be $13 to $14 per acre. This would be the cost of lime, fertilizer, and legume seed.

2, Woodlands And Land In Farms That Are Not Suited For Farming.

a. Continue the program of taking tax deeds after five years of delinquency, placing such lands under forest crop law, and as funds are available plantings be made.

b. Game refuges be established on small tracts of such lands in the south part of Juneau County. Game management practices could well be encouraged, such as winter feeding and planting small patches of food bearing plants.

3. Federal Purchase Program.

Low fertility, drought, and lack of water control near rivers and streams have been factors causing much of the town of Armenia to be futile for agriculture. It could well be put to other uses and purchase by the Federal Government is

recommended by both community and county committees.

4. Tenant Leases.

A three to five year lease be encouraged to promote the adoption of recommended farm practices by the tenant and more cooperation between tenant and owner.

5. Public Welfare.

Public Assistance amounted to $4.09 per acre of farm crop land in Juneau County for the fiscal year 1938-39. It is recommended that in the future a more ridgid policy be followed in that those receiving assistance be encouraged to have a grubstake of their own before assistance be given.

6. Youth.

a. More emphasis should be placed on parent-teacher cooperation in solving problems such as transportation, hot lunch program, electrification in rural schools, and more active citizenship training.

b. To encourage more rural recreation high school gymnasiums should be made available to rural groups at specified times. Suspended and abandoned schools should be used for community buildings.

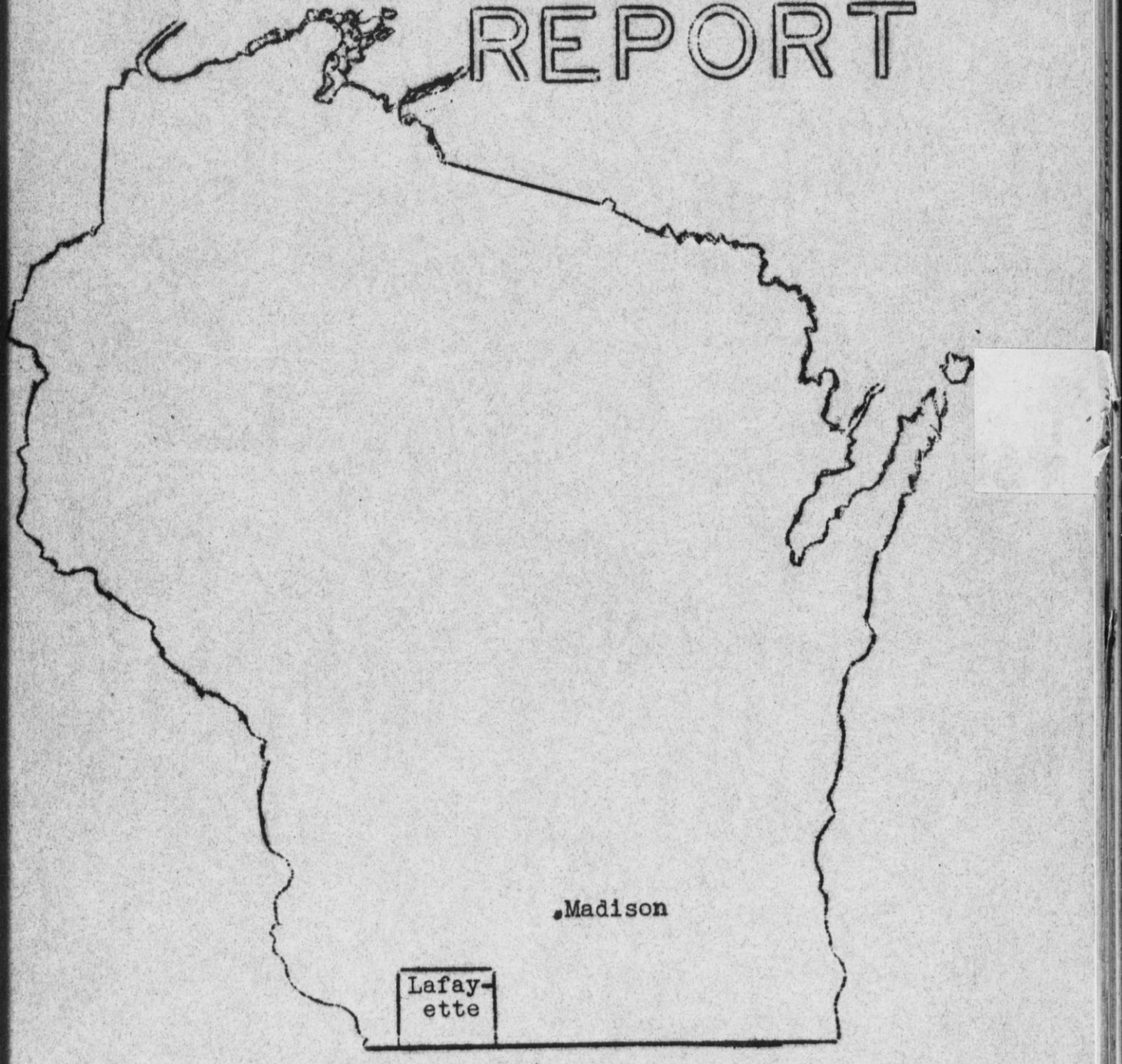
c. The services of a Home Agent and Club Leader would supply much needed leadership in education and recreation of rural youth.

7. Soil Testing.

a. Present WPA work schedules do not permit the proper handling of the large number of soil samples by the soil tester. Wage scale regulations do not encourage the type of personnel necessary for the work.

b. The soil tester should be under the supervision of the County Agriculture Agent and funds be made available for a full time working schedule and a higher wage scale.

LAND USE PLANNING REPORT

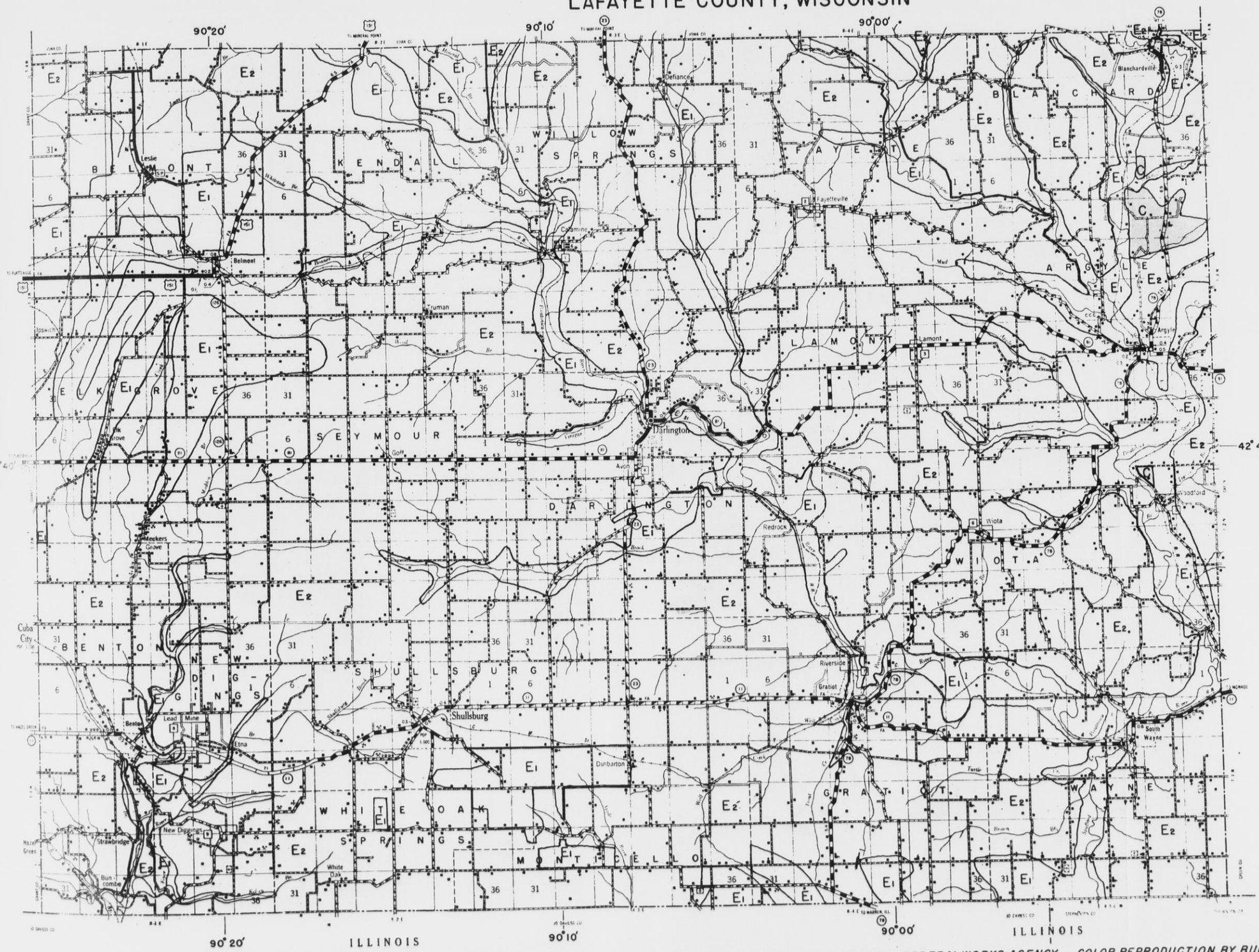


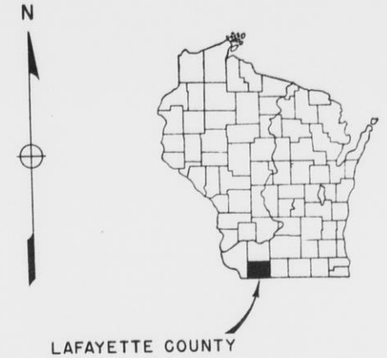
LAFAYETTE COUNTY
WISCONSIN

1940

LAND USE CLASSIFICATION

LAFAYETTE COUNTY, WISCONSIN





SCALE : MILES

1 0 1 2

ROAD TYPES

- UNIMPROVED ROAD
- GRADED AND DRAINED EARTH
- SOIL SURFACED ROAD
- METAL SURFACED ROAD
- BITUMINOUS SURFACED ROAD (LOW)
- PAVED ROAD

C

Now in farms but questionably suited for farming

NOW IN FARMS, SHOULD REMAIN IN FARMS.

E1

Soil erosion slight and is little or no problem.

E2

Soil erosion is a problem and there is need for soil erosion control practices.

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY. COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS, U.S.D.A.



FOREWARD

This report is the result of work done by community and county land use planning committees of Lafayette county. The Agricultural Committee of the county board of supervisors, who plan the extension program for the county, voted to include land use planning as part of the program of work this year. They felt that the judgment and recommendations of over one hundred farm men and women and other county folks would be valuable help in formulating the program of work in the future. They thought this would result in the coordination of the work of the action agencies of the county on a unified program based on farmer opinion.

The assistant agent, V. W. Peroutky, who has given us invaluable help, was employed by the U. S. Bureau of Agricultural Economics through Agricultural Extension to work with the county agricultural agent in helping him with regular duties for the extra time he devotes to the land use program, to obtain basic information for use at planning meetings, and to help in preparing the final report.

County representatives of state and federal agencies cooperated with the Agricultural Committee on this project and they acted on the county land use committee. We appreciate the assistance in the organization and direction of this work given by B. F. Rusy and W. A. Rowlands, Supervisors of Agricultural Extension, and L. G. Sorden, State Representative of the U. S. Bureau of Agricultural Economics.

W H Cayers

Chairman, County Planning Committee

Leroy Reese

Secretary, County Planning Committee

TABLE OF CONTENTS

Page

Organization

County Committee 2
District Committees. 3

Procedure

Background Information 4
First County Committee Meeting 6
First Series of District Meetings 7
The Township Meetings. 7
Second and Final Series of District Meetings 8
The Second County Committee Meeting. 8
Final Recommendations Formulated 8

Description of County

Location 9
History. 9
Area 10
Topography 11
Soils. 12
Climate. 12
Farm Income. 13

Present Land Use Areas 20

Major Problems of Lafayette County 20

Land Use Classification. 21

Recommendations

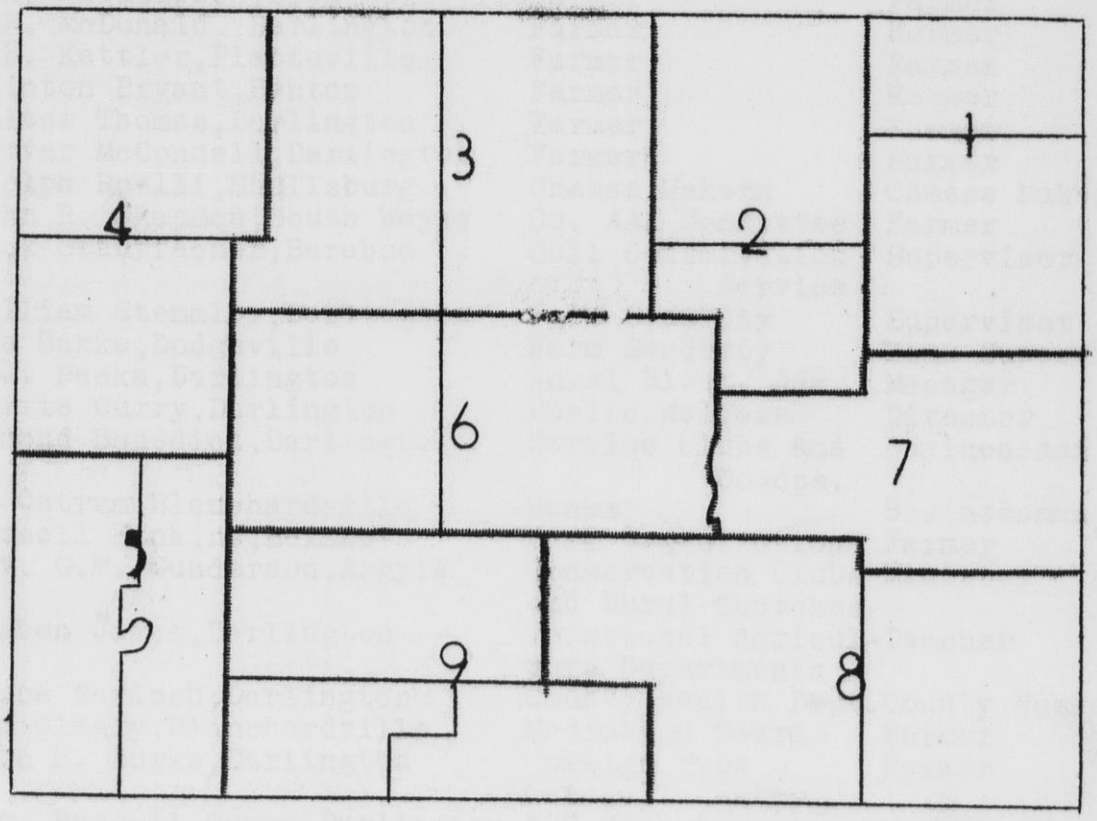
Land Use Areas and Soil Erosion Control. 23
Evidence of Soil Erosion. 24
Recommendations for Controlling Erosion 27
County Soil Conservation District 31
Farm Tenancy 32
Dairy Improvement. 34
Soil Fertility 35
Weeds. 36
Farm Buildings 38
Farm Credit. 39
Farm Labor and Public Welfare. 41
Farm Woodlot Conservation. 43
Schools and Agricultural Agencies. 45
Beautification of Grounds. 45
Health 46
The 1942 Agricultural Conservation Program 47
General. 48

Summary. 50

@@@@ ORGANIZATION @@@@

The land use planning program was requested and is sponsored by the Lafayette County Agricultural Committee. This committee first met jointly with the Green County Agricultural Committee in July, 1940. At this meeting, the land use project was explained to the committees by state representatives. The project was adopted and organization work relative to the accumulation of statistical data was started the latter part of July, 1940. In December, 1940, the Agricultural Committee divided the county into nine districts, believing this plan would facilitate the organization and procedure. The districts outlined in Figure 1 were formulated on the basis of central meeting places, soil classes and topography.

Figure 1 - Land Use Districts



The Agricultural Committee next named the county land use committee which is composed of farmers, farm women and county representatives of educational, state and federal agencies. In a few cases, state and federal agencies, upon request, named their own representatives to act on this committee. To make the selection of this committee most democratic, it was voted by the Agricultural Committee that they recommend the chairman of each township to act as temporary co-chairman for his township and that he be empowered to name or designate at

least two others besides himself, with one or more women, to act for the township. Township committees selected by the town chairmen at their first joint meetings within their districts elected their district chairmen who are automatically members of the county land use committee, and each district chairman is the one representative on this committee from his district.

The personnel of the county committee is as follows:

Name and Address	Representing	Occupation
W.H. Ayers, Chr., Gratiot	Agr'l. Committee	Funeral Director
Will Curry, Darlington	Agr'l. Committee	Farmer
Wesley Mullen, Shullsburg	Agr'l. Committee	Farmer
Kathryn A. Cullen, Darlington	Agr'l. Committee	Supt. Schools
Charles B. Dugdale, Platteville	Agr'l. Committee	Farmer
O.E. Phillipson, Blanchardville	Farmer	Farmer
C.W. McDonald, Darlington	Farmer	Farmer
O.H. Kettler, Platteville	Farmer	Farmer
Clinton Bryant, Benton	Farmer	Farmer
Walter Thomas, Darlington	Farmer	Farmer
Grover McConnell, Darlington	Farmer	Farmer
Adolph Roelli, Shullsburg	Cheese Makers	Cheese Maker
John R. Chapman, South Wayne	Co. AAA Committee	Farmer
Dick Stauffacher, Baraboo	Soil Conservation Service	Supervisor
William Stemmler, Darlington	Farm Security	Supervisor
Ida Bakke, Dodgeville	Farm Security	Home Supervisor
E.J. Paska, Darlington	Rural Elect. Adm.	Manager
Carrie Curry, Darlington	Public Welfare	Director
Ormond Benedict, Darlington	Service Clubs and Co-ops.	Businessman
H. Ostrum, Blanchardville	Banks	Businessman
Russell Hinkins, Belmont	Farm Organizations	Farmer
Rev. G.M. Gunderson, Argyle	Conservation Clubs and Rural Churches	Minister
Reuben James, Darlington	Vocational Agriculture Departments	Teacher
Irene Narloch, Darlington	County Health Dept.	County Nurse
Tom Cleary, Blanchardville	Mediation Board	Farmer
John H. Burke, Darlington	Foreign Type Cheese Industry	Farmer
Mrs. Russell Curry, Darlington	4-H Club Organization	Homemaker
Roy N. Carter, Madison	Forestry Department	Extension Forester
F.A. Whalen, Mineral Point	Federal Farm Loan Association	Secretary
K.S. Daley, Dodgeville	Production Credit	Secretary
Leroy Reese, Sec'y., Darlington	Agricultural Extension	Co. Agr'l. Agt

The following district committeemen were selected:

District I

Argyle Twp.	Blanchard Twp.
A.O. Gunderson, Blanchardville	O.E. Phillipson, Chr., Blanchardville
Roy Simpson, Sec'y., Argyle	James Mohr, Sec'y., Blanchardville
Mrs. A.O. Gunderson, Blanchardville	Jacob Syftestad, Blanchardville
Frank Nall, Argyle	Mrs. Ben Strommen, Blanchardville
Wm. Buckingham, Blanchardville	Elmer Hanson, Blanchardville
Laura Nelson, Argyle	

District II

Lamont Twp.	Fayette Twp.
Will Curry, Chr., Darlington	Guy VanMatre, Mineral Point
Mrs. Vivian Barnes, Sec'y., Darlington	Mrs. Matt Helm, Sec'y., Darlington
Vivian Barnes, Darlington	Ralph Vinger, Argyle
	Geo. Bredeson, Darlington
	Henry Karlen, Darlington

District III

Kendall Twp.	Willow Springs Twp.
P.W. McDonald, Chr., Darlington	Edwin Stauffacher, Calamine
Mrs. Francis Fitzsimons, Sec'y., Darlington	Mrs. Merle Chambers, Sec'y., Darlington
S.P. Byrne, Belmont	Merle Chambers, Darlington
Joe Palzkill, Mineral Point	Wm. McCarville, Darlington
John Bradley, Belmont	Paul Ruf, Darlington
	Henry Switzer, Mineral Point

District IV

Belmont Twp.	Elk Grove Twp.
Charles Dugdale, Platteville	O.H. Kettler, Chr., Platteville
Mrs. Graydon Todd, Sec'y., Belmont	Mrs. Geo. Todd, Sec'y., Belmont
Walter Steinhoff, Belmont	Geo. Todd, Belmont
Will Martin, Belmont	Martin Adickes, Belmont
Arnold Bluemke, Belmont	

District V

Benton Twp.	New Diggings Twp.
Clinton Bryant, Chr., Benton	Chester Peacock, Cuba City
Mrs. Walter Calvert, Sec'y., Benton	Mrs. James Ayer, Sec'y., Cuba City
Walter Calvert, Benton	James Ayer, Cuba City
A. Sampson, Benton	John Robbins, New Diggings
Fred Temple, Benton	
Leo Laird, Cuba City	

District VI

Seymour Twp.

Frank Gough, Darlington
Mrs. Emil Pehrson, Sec'y., Shullsburg
Emil Pehrson, Shullsburg
Ed Klott, Darlington
Russell Hinkins, Belmont

Darlington Twp.

Walter Thomas, Chr., Darlington
Mrs. Arthur Peterson, Sec'y., Darlington
Homer Kilkelly, Darlington
Nathan Benedict, Darlington
Reuben James, Darlington

District VII

Wiota Twp. (Only)

Grover McConnell, Chr., Darlington
Mrs. Geo. Engebretson, Sec'y., South Wayne
Geo. Engebretson, South Wayne
Mrs. Clara Monson, South Wayne
Chas. Hicks, Darlington
Dennis McConnell, Darlington
Albert Johnson, South Wayne
Geo. Atter, Argyle

District VIII

Gratiot Twp.

Adolph Roelli, Chr., Shullsburg
Mrs. John Doyle, Sec'y., Gratiot
Chas. McGinnis, Darlington
Alvin Russell, Apple River, Ill.

Wayne Twp.

~~Seargent~~ Georgent Hoffman, South Wayne
Mrs. ~~Seargent~~ Georgent Hoffman, Sec'y., South Wayne
Roy Sargent, South Wayne
Mrs. Roy Sargent, South Wayne
Frank Crotty, South Wayne

District IX

Shullsburg Twp.

Wesley Mullen, Chr., Shullsburg
Mrs. R.D. Teasdale, Sec'y., Shullsburg
R.D. Teasdale, Shullsburg
Will Fitzgerald, Shullsburg
J.P. Baker, Shullsburg
John Stanton, Shullsburg

Monticello Twp.

Vernon Scott, Apple River, Ill.
Mrs. August Stiefel, Sec'y., Apple River, Ill.
August Stiefel, Apple River, Ill.
Mrs. Arthur Youle, Shullsburg
Arthur Youle, Shullsburg

White Oak Springs Twp.

C.R. McCoy, Shullsburg
Alfred Heller, Sec'y., Shullsburg
Lorenzo Andrews, Shullsburg
Harry Magee, Scales Mound, Ill.

@@@@ PROCEDURE @@@@

BACKGROUND INFORMATION

Prior to the time of the first county committee meeting and the district meetings, the agricultural agent, with the assistant, accumulated background statistics which would be a definite factor in realizing the major problems and in recommending solutions. It was through the splendid cooperation of

the following agencies that this information was made available: County A.A.A. Association, Soil Conservation Service, Farm Security, Federal Farm Loan Association, Production Credit Corporation, Public Welfare, Rural Electrification Administration, members of the county board of supervisors and others. Without their assistance and suggested recommendations, this program would have been impossible.

The following information was prepared and used:

1. A large Wisconsin map showing the counties in which the land use program had been adopted.

2. A large Wisconsin map showing soil conservation districts.

3. A large county map showing the land use districts as set up by the county Agricultural Committee.

4. Soil profiles obtained in three foot steel trays showing the soil layers from eroded and non-eroded areas.

5. Large charts pertaining to farm management with figures providing the following management factors:

    a. Effect of number of crop acres on labor income
    b. Effect of butterfat sales per cow on labor income
    c. Effect of value of crops on labor income
    d. Effect of feeding efficiency on labor income
    e. Effect of diversity on labor income
    f. The effect of having several factors above average on labor income

6. Other charts showed relationship of farm size to crop acres per man; analysis of investments in Wisconsin agriculture; labor income compared to farm land, farm homes, machinery and other property.

7. An information folder containing the following charts:

    a. Soil classification by townships
    b. Soil test requirement per acre by townships
    c. Soil erosion data based on Soil Conservation Service maps of 22 farms
    d. Soil erosion survey - a two mile survey in New Diggings township and a like survey in Monticello township.
    e. Percent slope on 22 Soil Conservation Service farms
    f. Land use suggestive rotation and suggestive practices computed on a study of 22 Soil Conservation Service farms
    g. Sources of gross farm income - Lafayette county.
    h. Lafayette county grain and hay acreages
    i. Individual graphs for each township including trends in all major crops and livestock

j. County livestock trends
k. Total cheese and creamery butter production
l. Yearly rainfall recorded at Darlington
m. Average monthly precipitation
n. Butterfat production of Lafayette county dairy cows
o. Production, feed cost and investment over feed cost in producing milk
p. Lafayette county tenancy study on a township basis showing the number of farms, number of tenants, percent of tenants, number related to landlord, percent related, number directly related, percent directly related, approximate number of movers in 1939, number paying cash rent, percent paying cash rent, number renting on 50-50 share, percent renting on 50-50 share, number renting on 40-60 share, percent renting on 40-60 share, number renting on other share, and percent renting on other share.
q. Charts of information on township basis showing farm population; area (in acres); rating; number of farms; average acreage per farm; crop acreage per farm; permanent pasture and woods per farm; percent of farm in cropland; permanent pasture and woods and cropland in hay (%); value per acre; total cropland in A.A.A.; soil conserving cropland; tons of lime spread; pounds of phosphate and potash spread; A.A.A. payments and percentage of farms participating.

FIRST COUNTY COMMITTEE MEETING

The first meeting of the Lafayette county land use committee was held in the county board room of the Court House on December 13, 1940. Town chairmen, representatives of action agencies, and other county committeemen attended this meeting. The meeting was called to order by Chairman W. H. Ayers. County Agent Leroy Reese told of the action taken thus far by the Agricultural Committee pertaining to land use. Assistant Agent V. W. Peroutky briefly told what background information had been collected thus far. B. F. Rusy explained how district committees will function and how district chairmen to act on the future county committee would be selected. L. G. Sorden told what land use planning is and how it has functioned in other Wisconsin counties. A discussion followed, led by Chairman W. H. Ayers, and by M. P. Andersen, Rural Sociologist of the College of Agriculture. A suggestion was made to the town chairmen that in naming their committees they keep in mind those who are familiar with problems of the town and those who may have been or are now acting on a A.A.A. committee who are assessors, or the like. At the close of this meeting, the county agent arranged a schedule of meetings with the town chairmen, indicating the date and place of the first district meetings. District meetings were arranged, beginning on January 6, 1941. It was mutually agreed that the town chairmen send to the county extension office, not later than December 21

1940, the list of names with addresses of those who had been selected to act on the township committees. In turn, the county agent's office sent notices of the place and date of the first district meeting to each committeeman within the respective districts.

FIRST SERIES OF DISTRICT MEETINGS

These district meetings were held in town halls in either afternoon or evening sessions, and most of them during the week of January 6. Where table space was available, the group seated themselves around the table; and in every case, in a circle or semi-circle so that discussion was encouraged. The county agent and assistant explained briefly the object of the program and what had already been done. The committee then elected their chairman and discussed briefly problems which they felt needed study and which required recommendations to improve the agriculture of their district, the county, the state and the nation. The assistant agent recorded the minutes of the meetings; but each town chairman appointed a secretary, a woman on his committee, to record recommendations during the next meeting. The next work was that of classifying the land according to the described areas. Committeemen used the pencils themselves in coloring in the land areas. Each township group of the district committee then made arrangements for their next meeting. These township meetings were held in homes, at school houses, and at town halls. The date was usually within one week of this first district meeting. Each committeeman was then presented with an information folder which had been prepared by the agents. After briefly discussing the folders' contents, it was suggested to the committeemen that they use these at their township meetings for information on some of their problems. The Lafayette County Statistical Bulletin, Number 202, was included in the folder. The date for their next and final district meeting was set by the entire committee before adjournment.

THE TOWNSHIP MEETINGS



Proof of the results of these township meetings is in the written minutes made by their appointed secretaries. It is apparent that the committees felt free to discuss and recommend, for their recommendations were usually neatly written with ink. The basis of practically all the recommendations came from secretaries' reports of their township meetings conducted, usually, in a member's home. The agents were not present at any meeting of this series. No Notices were sent for these meetings. Often lunch was served, and an informal type of meeting was held.

SECOND AND FINAL SERIES OF DISTRICT MEETINGS

A letter was sent to each committeeman, reminding him of the place and date of this final district meeting as set up by his own committee. These meetings were usually held in the same place as the first district meeting; all meetings were again attended by the agent and the assistant. The following procedure, with slight variations, was used: discussion of questions relative to the planning program; final approval of land use and erosion areas as outlined by the committee. (All town maps were stapled on a large cardboard so that a picture of the entire county could be seen.) Recommendations were recorded by the assistant for the best farming practices on each outlined area; problems which had been brought up in the first district meeting were reviewed; a report of the township meeting was given by the township committee secretary; a discussion followed, and recommendations which were approved by the entire district committee were recorded; the agents explained what course would be taken with the land use map and their recommendations.

THE SECOND COUNTY COMMITTEE MEETING

After all the recommendations made by district committees were classified, the county committee again met in the Court House at 10:00 A. M. on Friday, March 28. W. H. Ayers, Chairman, called the group to order. The object of the meeting, as explained by Mr. Ayers, was to act on the recommendations as read by the secretary, Leroy Reese. The recommendations were to be approved, additions were to be made prior to approval, or the recommendation was to be rejected. During the forenoon, the land use classification map, with the land use and erosion control recommendations, were discussed and finally approved. At noon, the entire group adjourned to the hotel's private dining room where the meeting continued after the meal. Considerable interest was manifested, as the meeting did not adjourn until 5:45 P.M. W. A. Rowlands, B. F. Rusy, and L. A. Salter of the Agricultural Economics Department of the College of Agriculture, made suggestive comments at this meeting, based on their experiences in other counties of the state.

FINAL RECOMMENDATIONS FORMULATED

Following this second county land use committee meeting, the final recommendations were grouped according to the major problems evident in the county. The Agricultural Committee believed it would be advisable to have a third county committee meeting prior to the publication of the report. Because of the busy spring season of farm work, it was decided that this would not be feasible at present, but that a typed copy of the final recommendations classified by problems would be sent to each member of the county committee. An enclosed letter explained that each member had the privilege to make any additions or corrections and that he would be granted one week for such a reply.

After this one week approving period, the recommendations were added to the body of the final Lafayette County Land Use Report. On about June 1, 1941, the report was completed and ready to be approved by the state land use committee. The report is to be presented to this state committee, with seven other county land use reports, probably during the month of June, 1941.

@@@@ DESCRIPTION OF COUNTY @@@@

LOCATION

Lafayette County, Wisconsin, is located in the southwestern part of the state on the Illinois boundary. The western border of the county is only ten miles from the Mississippi River, while the eastern boundary is almost one hundred miles from Lake Michigan. Darlington, the county seat, is about forty-five airline miles southwest of Madison. Three Wisconsin counties form the borders within the state -- Iowa county on the north, Green on the east, and Grant on the west. Jo Daviess and Stephenson, two Illinois counties, form the southern boundary. (Refer to cover page.)

HISTORY



There is evidence that the Winnebago, most primitive of the Indian tribes in Wisconsin, had been in southwestern Wisconsin for a long time. Mounds built, it is believed, by their ancestors are common throughout this region. Bands of this tribe were mining lead in a very crude manner when the first American miners came into this lead country in 1823-24. Traders operating on the Mississippi and Wisconsin rivers continued to barter for lead and furs after the withdrawal of the Indians. Mining was the primary motive which brought the first white people into Lafayette county; men with money and also adventurous laborers seeking work and all gambling on the possibility of sudden wealth. Many of them had been members of the American's military force sent to Prairie du Chien in 1816. The newcomers were largely from the upper south. A few even brought slaves which were freed after a few years.

The early lead miners are credited as establishing the nicknames of the two states, Wisconsin and Illinois. The miners who came into Wisconsin during the summer from Galena and other Illinois settlements and returned to Illinois in the winter were called "Suckers" after the fish by that name which migrate up and down streams with the seasons. Those who remained in Wisconsin during the winter often lived in cave-like homes cut into the sides of the hills whereupon

they were called "Badgers".

Besides the native born of Kentucky, Missouri and nearby states, the population was soon increased by miners from Europe -- Irish, Welsh, and English. Among the earliest comers was Jesse Shull after whom Shullsburg is named. Noted settlers of Lafayette county were Governors Nelson and Washburn, and Dunn, the first Chief Justice of Wisconsin.

As returns from mining began to decrease some of the miners entered land claims and began farming.

This region was one of the first parts of Wisconsin to be surveyed into townships and sections (Survey of 1832). It was organized into a county in 1846. A United States land office was opened at Mineral Point in 1834, and this gave prospective settlers easy access to information on where to look for farm land. Until the Wisconsin territorial boundary was finally established to include both the Green Bay and Lake Michigan waterfronts, Lafayette county was relatively the center of the white population and the first territorial capitol was located at Belmont.

Four years after the county was established, there were 11,531 inhabitants, according to the United States Census. The peak of population was reached in 1870 when the census reported 22,659 persons, while in 1880 it had declined to 21,279. The following Figure 2 shows the population trends. Lafayette county was tied for forty-third in total population per square mile in 1930 with 29.0 persons, which is considerably below the state average of 53.2 persons.

Figure 2 - Population of Lafayette County, 1850-1940

Year	Total	
1850	11,531	
1860	18,134	(According to the Census,
1870	22,659	all of the population in
1880	21,279	each year was classed as
1890	20,265	rural since there were no
1900	20,959	cities of 2,500 or more
1910	20,075	persons in the county.)
1920	20,002	
1930	18,649	
1940	18,695	

AREA

With a total land area of 401,339 acres, Lafayette county has about 1.14 percent of the total area of the state. The

county is forty-seventh among the 71 counties of the state, being slightly smaller than Waushara county and about 20,000 acres larger than Manitowoc, which ranks forty-eighth. Lafayette county is smaller than either Grant or Iowa of the adjoining counties, but is larger than Green county.

The eighteen civil towns in the county vary greatly in size. Gratiot is the largest town with 33,816 acres followed by Wiota, 33,623 acres, and Willow Springs with 30,583 acres. White Oak Springs has only 10,570 acres which is less than half a government township. Blanchard is the second smallest town with 11,508 acres.

TOPOGRAPHY

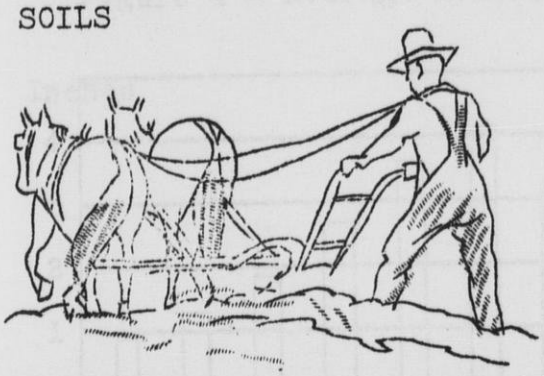
With the exception of a small portion of the southeastern corner, Lafayette county lies entirely within the great Driftless Area of Wisconsin, Illinois, Minnesota, and Iowa. Rolling topography is typical throughout. There are considerable areas of rough, hilly land and several level areas, but rolling or undulating land is characteristic of the greater part of the county. The region of which Lafayette county is a part is a dissected upland or plateau formed upon Galena-Black River limestone and sloping rather gently to the south. Upon this plateau are located several mounds or hills which are remnants of much higher formations now eroded away. The surface features of the Driftless Area are those produced primarily by stream erosion. The areas between the creeks and rivers are usually broad and rolling. Stream valleys are cut rather deeply into the upland, often as much as 200 to 300 feet below the general level, but are very narrow compared with the interstream areas. Rock outcrops often separate the uplands from the valley bottoms especially in the tributary valleys where they form perpendicular rock walls just at the base of the upland.

The glaciated southeastern corner of the county closely resembles the Driftless Area. It lies within the region known as the "Old Drift" -- an area which was glaciated but not covered by ice during the last advance of the ice. The region contains none of the features usually considered characteristic of northern and eastern Wisconsin, which was glaciated by the Wisconsin ice sheet -- the last of the ice sheets. Lakes, swamps and moraines are absent. The slopes are somewhat more gentle and the valleys generally wider in the "Old Drift" region than in the Driftless Area.

Located on the aforementioned ridge in the central part of the town of Belmont are the Platte Mounds. These mounds, and the mound near White Oak in the southern part of Lafayette county, are capped with Niagra limestone which has been entirely removed by erosion elsewhere in the county. The local relief is not great -- the mounds varying from 180 to 300 feet above the surrounding country. The lower slopes of these

mounds developed on Richmond shale, a weak rock formation, are gentle, but the upper slopes are abrupt, even precipitous on Platte mound. They range from 1,200 to 1,400 feet above sea level.

SOILS



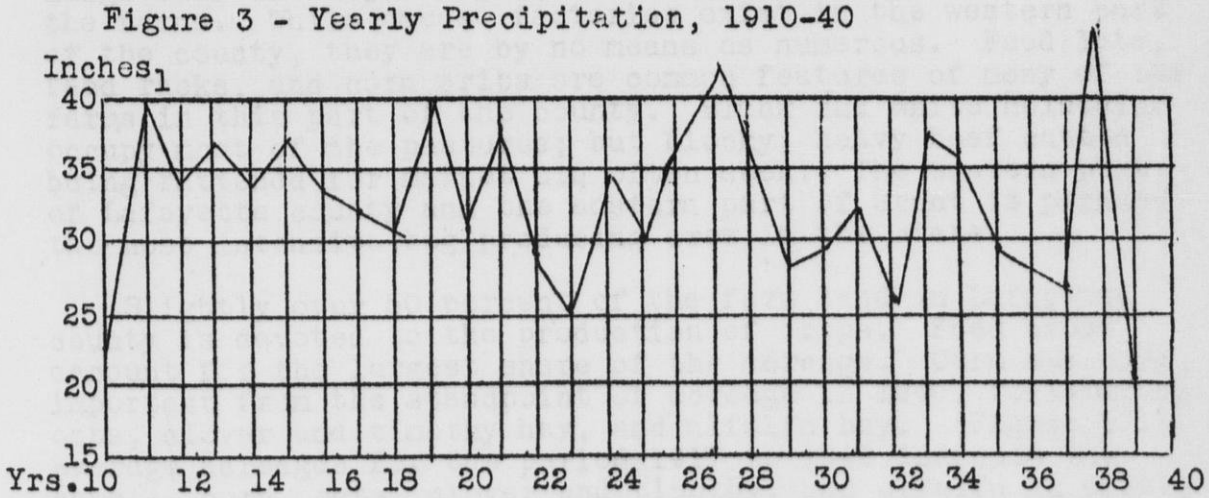
The soils of Lafayette county are largely residual, that is, derived from the weathering of the underlying bedrock or bedrock which has now been eroded away. There are also loessial, or windblown soils; and alluvial, or stream-transported soils; and colluvial or soils washed down from the hillsides. There has never been a detailed analysis of the soils in Lafayette county. The general soil map of Wisconsin indicates the three main classes within the county are Knox silt loam, prairie soils, and rough, hilly land.

According to estimates, the following townships have a large percentage of silt loam soils: Blanchard, Darlington, Fayette, Kendall, Monticello, Wayne and White Oak Springs. The following townships have a large percent of prairie soils: Belmont, Gratiot, Lamont, Seymour and Shullsburg. The following townships have a large percent of rough land: Argyle, Blanchard and New Diggings.

CLIMATE

Rainfall records have been kept by the U. S. Weather Reporting Service stationed at Darlington. The average yearly rainfall is 31.3 inches. (Figure 3).

Figure 3 - Yearly Precipitation, 1910-40

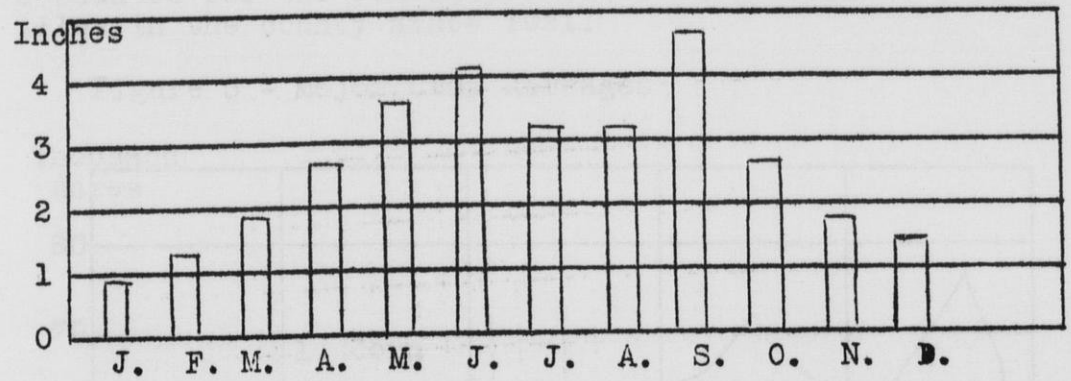


[1]Ten inches of snow is equivalent to one inch of rain.

There is little correlation between yearly rainfall and crop yields because in years of excessive rainfall, usually

one or two heavy rains arrive too early or late to be of benefit to crops. The average monthly precipitation is shown in Figure 4.

Figure 4 - Average Monthly Precipitation



Lafayette county has an average growing period of 140-150 days. Over a twelve year period, the last killing frost has been between May 10-20; and the first killing frost, between September 15-20. Hybrid corn of 115 or 120 days is generally recommended.

FARM INCOME

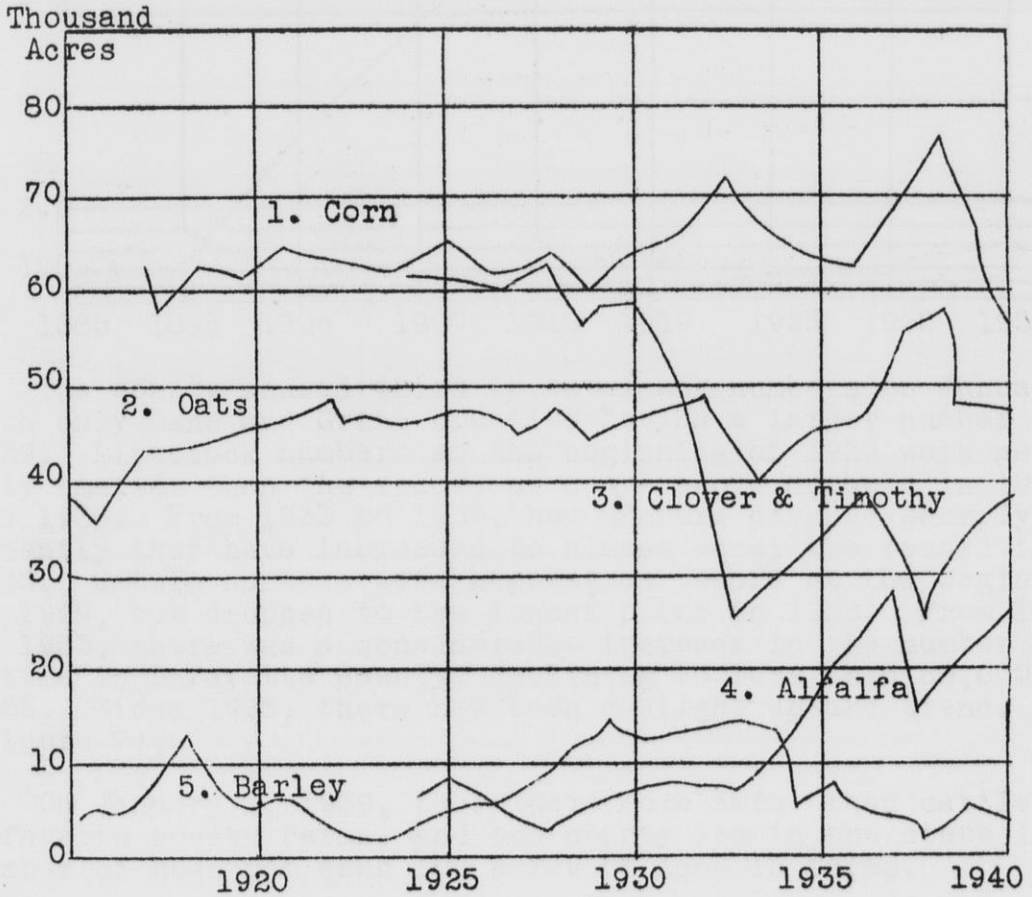


The county is a transition zone between an intensive dairy area and the corn-belt type of agriculture. In the eastern section, dairying predominates, with the emphasis on the production of foreign cheese. Here the cheese factory located at the crossroad is a common sight. The large barn and adjoining silo are characteristic of most of the farms. While cheese factories exist in the western part of the county, they are by no means as numerous. Feed lots, feed racks, and corn cribs are common features of many of the farms in this part of the county. Black and white Holsteins occupy most of the pastures; but blocky, heavy beef cattle being fattened for market are often seen. The western part of Lafayette county and the eastern part of Grant is perhaps the most intensive hog producing area in the state.

Slightly over 50 percent of the farm land in Lafayette county is devoted to the production of crops. Feed crops account for the largest share of the acreage. Corn was most important from the standpoint of acreage in 1940, followed by oats, clover and timothy hay, and alfalfa hay. (Figure 5). Average acreages for the period 1917 to 1940 indicate the same -- corn, oats, clover and timothy, and alfalfa in order. In the years 1930-1938, approximately 67 percent of the corn grown in the county was utilized for grain which is very different than the averages from the state as a whole. Silage,

the chief manner in which the corn crop of the state is utilized, was only 21 percent of the total in Lafayette county. Other uses of corn including hogged off, fed green, and fodder accounted for the remainder. There have been at least 1,000 silos in the county since 1921.

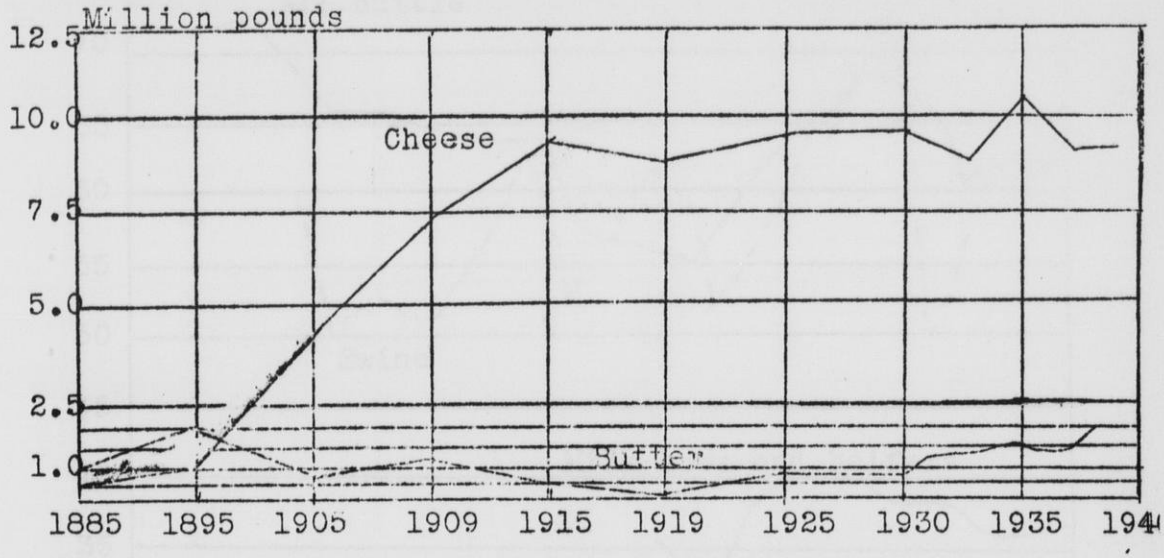
Figure 5 - Major Crop Acreages



Records showing milk shipped from the county to points outside the state indicate that shipments vary much from year to year with no shipments reported by dairy plants in a number of the years. Shipments of cream have varied less than milk with some reported for every year since 1927.

Many more pounds of cheese than that of any other dairy product have been made in Lafayette county dairy plants since 1905. In 1885 and 1895, more butter than cheese was reported. Compared with other counties in 1938, Lafayette ranked second in the production of Swiss cheese, sixth in limburger, seventeenth in brick and Munster, thirty-first in American cheese, and sixteenth in total cheese. (Figure 6). The county ranks seventh in the number of cheese factories licensed as of May, 1938, having 87 factories listed at that time. There were 4 creameries and 16 receiving stations.

Figure 6 - Cheese and Creamery Butter Production



The county ranked third in total hog numbers on January 1, with only Dane and Grant counties having a larger number in 1939. Livestock numbers at the beginning of 1939 were generally smaller than the record or near-record numbers in 1932 and 1933. From 1933 to 1935, hog numbers dropped sharply but recently they have increased to almost equal the record in 1933. Cattle numbers were highest on record at the beginning of 1919, but dropped to the lowest point in 1928. From 1928 to 1933, there was a considerable increase in the number of cattle in Lafayette county, declining to less than 60,000 in 1935. Since 1935, there has been a slight upward trend. (Figure 7).

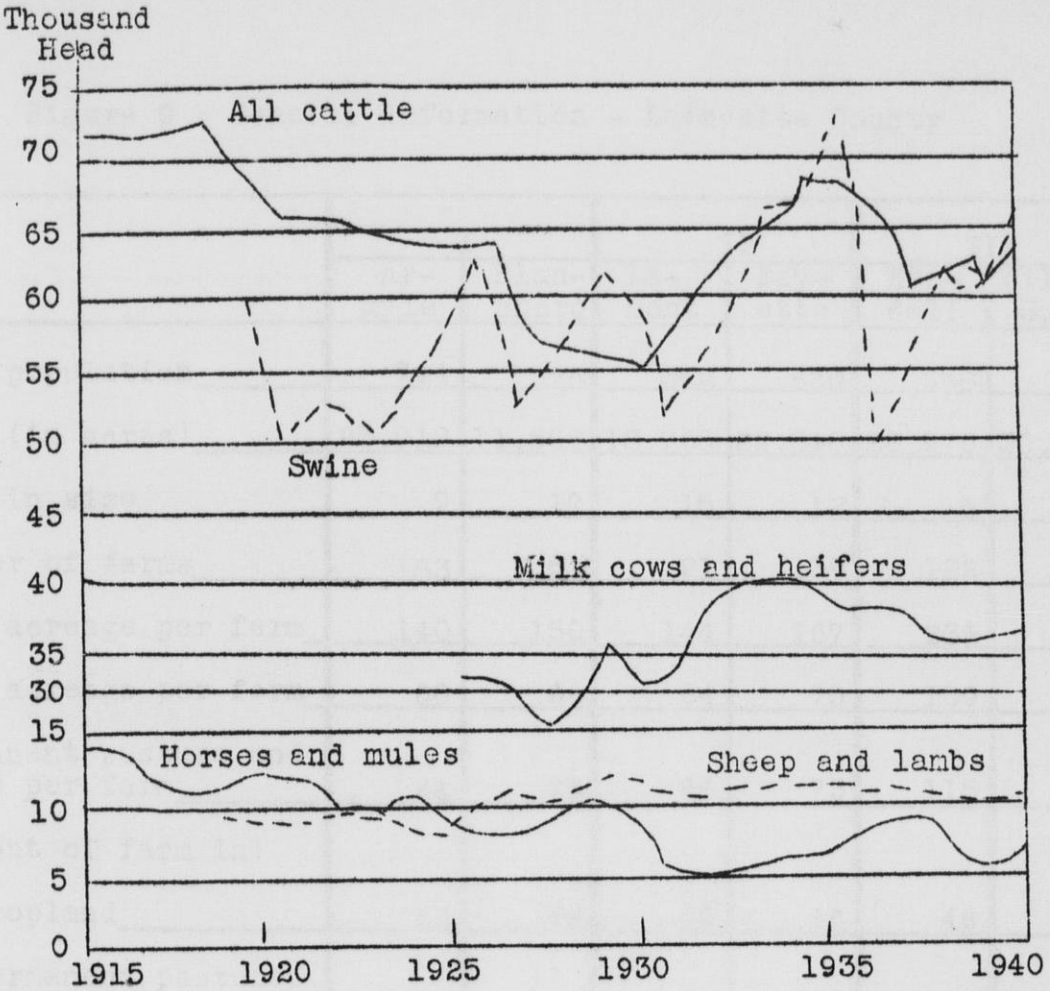
On January 1, 1939, there were more swine than cattle on Lafayette county farms, and the county led in the state in the number of hogs for each 100 acres of land in farms.

The importance of agriculture to Lafayette county is apparent in the gross farm income. It was estimated at $6,187,573 in 1936 which was more than twice the value of all products manufactured in the county in 1937, and almost twice as much as the total in 1935.

Lafayette ranked second to Green in percentage of income derived from livestock.

Lafayette is almost equally divided between dairying and the corn-belt type of agriculture which is shown by the fact that milk accounted for 38.4 percent of the total and swine, for 37.4 percent.

Figure 7 - Livestock on Farms



The following tabulation shows the important sources of gross farm income in 1927 and 1936, compared with the state. (Figure 8).

Figure 8 - Farm Income - Lafayette County vs. State

	Lafayette County		State
	1927	1936	10 year average
	Percent	Percent	Percent
Milk	43	38.4	50.2
Hogs	30	37.4	11.5
Cattle and calves	12	10.5	11.3
Poultry and eggs	8	7.1	9.8
Other items	7	6.6	17.2
	100	100.0	100.0

Township information grouped as to land use districts is set up in Figure 9. This data was obtained through the cooperation of the A.A.A. office, from assessors' reports and from Bulletin Number 202.

Figure 9 - General Information - Lafayette County

	I		II		III	
	Argyle	Blanchard	Lamont	Fayette	Kendall	Willow Spr.
Farm population	744	378	362	630	568	833
Area (in acres)	23,018	11,508	12,765	22,848	26,979	30,583
Rank in size	9	17	15	12	5	3
Number of farms	183	81	91	139	122	200
Avg. acreage per farm	140	150	144	167	238	176
Crop acreage per farm	60	66	64	75	109	77
Permanent pasture and woods per farm	64	74	66	73	115	81
Percent of farm in:						
Cropland	43	44	45	46	46	44
Permanent pasture and woods	45	49	46	45	48	46
Cropland in hay (%)	39	40	33	36	34	33
Value per acre (Dollars - 1935)	44	43	57	46	36	39
A.A.A.						
Total cropland in A.A.A.	9,270	5,035	6,534	14,980	12,190	14,980
Soil conserving cropland	5,710	3,275	3,629	9,104	7,618	9,104
Tons lime spread	1,723	1,101	955	1,633	3,044	3,864
Pounds phosphate and potash spread	48,500	899	9,835	8,205	46,562	43,836
Percent of farms participating	88	89	95	94	92	89

Figure 9 (Cont'd.) - General Information-Lafayette County

	IV		V		VI	
	Bel-mont	Elk Grove	Ben-ton	New Digg.	Sey-mour	Darl-ington
Farm population	635	682	566	444	605	931
Area (in acres)	26,617	23,064	18,439	16,157	23,051	29,992
Rank in size	6	7	13	14	8	4
Number of farms	142	152	151	139	153	220
Avg. acreage per farm	214	161	155	151	168	135
Crop acreage per farm	113	92	79	74	104	66
Permanent pasture and woods per farm	41	28	32	33	27	28
Percent of farm in:						
Cropland	54	58	52	49	62	49
Permanent pasture and woods	40	30	40	45	26	42
Cropland in hay (%)	28	25	57	29	24	30
Value per acre (Dollars - 1935)	48	62	50	39	57	57
A.A.A.						
Total cropland in A.A.A.	14,478	13,103	7,564	5,394	16,834	15,689
Soil conserving cropland	7,117	6,589	4,139	2,786	8,818	8,940
Tons lime spread	3,125	2,121	2,350	1,618	3,156	2,700
Pounds phosphate and potash spread	38,834	25,290	0	11,240	57,605	37,370
Percent of farms participating	90	71	66	78	91	91

Figure 9 (Cont'd.) - General Information-Lafayette County

	VII	VIII		IX			
	Wiota	Gra-tiot	Wayne	Shulls burg	Monti-cello	White Oak Sp	County Totals
Farm population	1,145	907	682	649	252	244	
Area (in acres)	33,623	33,816	22,962	22,940	12,401	10,570	401,339
Rank in size	2	1	10	11	16	18	
Number of farms	250	226	154	154	62	50	2,075
Average acreage per farm	143	163	155	173	205	207	164
Crop acreage per farm	165	88	78	98	116	117	83
Permanent pasture and woods per farm	21	31	27	28	33	34	32
Percent of farm in:							
Cropland	47	54	52	57	57	57	51
Permanent pasture and woods	40	35	36	30	28	27	39
Cropland in hay (%)	32	29	32	23	23	25	30
Value per acre (Dollars-1935)	47	48	60	50	56	52	49
A.A.A.							
Total cropland in AAA	17,216	22,500	16,209	11,713	6,713	4,092	209,707
Soil conserving cropland	9,901	12,843	9,218	5,982	3,409	2,037	117,004
Tons lime spread	1,614	4,689	2,368	2,314	914	480	39,828
Pounds phosphate and potash spread	63,225	50,861	51,142	17,394	0	0	510,801
Percent of farms participating	89	93	97	77	88	68	81

@@@@ PRESENT LAND USE AREAS @@@@

The basis of land classification is its present land use. This may not be in accord with its natural adaptation, however. Many steep slopes would be better unplowed and some would be best left with its original cover, trees. According to land inventory, Lafayette county has 93% of its area cleared for agricultural purposes, 6% woodland, 0.17% marshland, and 0.85% for special uses. There being no lakes, very little of the surface is covered by water.

General types of agriculture are practiced throughout the county. There are areas, however, which specialize more in some enterprise. Elk Grove, Willow Springs and Kendall townships raise peas for canning; swine are more concentrated in Belmont township, with less dairying in that area; beef and swine are raised considerably in Belmont, Kendall and Elk Grove townships; Monticello raises more corn and small grain compared to livestock. Because of the lead mines in Benton, New Diggings and Shullsburg townships, farmers have devoted some of their time to mining. This has resulted in smaller farms in that area, and also it has resulted in lower total income per family.

@@@@ MAJOR PROBLEMS OF LAFAYETTE COUNTY @@@@



It is recognized by the land use committee that Lafayette county has many agricultural problems. The Agricultural Committee, in the past, has attempted to include the major problems in the county agent's program of work. This Committee, believes, however, that there are possible problems which, in the past, have not but should have been included. The committee lists these as the major agricultural problems, and their personal recommendations are classified on this basis:

1. As 81.3% of the land in Lafayette county is classified by the local committee as subject to soil erosion, the county committee definitely decided this to be the first major problem. Soil erosion control, then, is the big land use planning problem in this county.

2. Tenancy in this county is the highest in the state. It brings about problems in the establishment of soil erosion control practices, maintenance of soil fertility, farm credit and many others.

3. The butterfat produced per cow is not as high as it should be, and better quality products could be produced if better milk were brought to the milk plants.

4. Soil tests indicate that there is a soil fertility problem that must be considered if the present standard of production is to be maintained.

5. Canada thistles and field bindweed are a severe menace to the productivity of Lafayette county farms.

6. Farm buildings and machinery make up a large part of the investments of our farms. Up-keep and maintenance of these items are higher than some farms can afford.

7. Youth finds it difficult to establish themselves on farms.

8. There is a definite farm labor problem. Large numbers of young men from the farms are being drafted. Few people understand the relationship of the Public Welfare Department to the labor situation.

9. Farm woodlots in Lafayette county are small. More are needed.

10. There is need of a unified program for agriculture worked out each year with farm representation and the various agricultural agencies. This could be used as a guide for the Agricultural Committee in planning the extension program of work.

11. The schools, particularly rural schools and vocational agriculture departments, can cooperate in the carrying out of this agricultural program of the county.

12. The beautification of home, school and factory grounds needs encouragement.

13. Many folks of our rural areas do not make use of our excellent home-grown products to improve their health standards.

14. Some sections of the present Agricultural Conservation Program are not very applicable to the Lafayette county farmer.

15. General problems of the county require local recommendations for practicability.

@@@@ LAND USE CLASSIFICATION @@@@

This land classification involves the classification of each designed land use area. An area in this program consists of not less than one farm nor less than 150-200 acres. The land use areas have been carefully outlined by the committeemen themselves.

The standard classifications as used in all counties is as follows:

A. Areas Now In Farms Which Are Not Suited For Farming And Should Be Put To Some Other Use.

B. Areas Not Now In Farms And Which Should Not Be Used For Farming.

C. Areas Now In Farms And Which Are Questionably Suited For Farming.

D. Areas Not Now In Farms But Which Are Suitable For Development.

E. Areas Which Are Now In Farms And Which Should Remain In Farming.

The Agricultural Committee decided that it was an advantage that the "E" area be sub-divided and that the division be based on erosion. There was no margin indicated on the land use map, Figure 10, between river bottom land, flat land and level high land; nor was any margin indicated between slope percentage, as one slope may contain various classifications and degrees of erosion.

The final land use classification as used in Lafayette county is as follows:

C. Areas Now In Farms And Which Are Questionably Suited For Farming. Two townships have small areas. Color red.

E. Areas Which Are Now In Farms And Which Should Remain In Farming. Color yellow.

E_1 - Areas in which soil erosion is little or no problem. It may be either: (Light yellow).

(a) Flat land other than river bottom

(b) River and creek bottom land

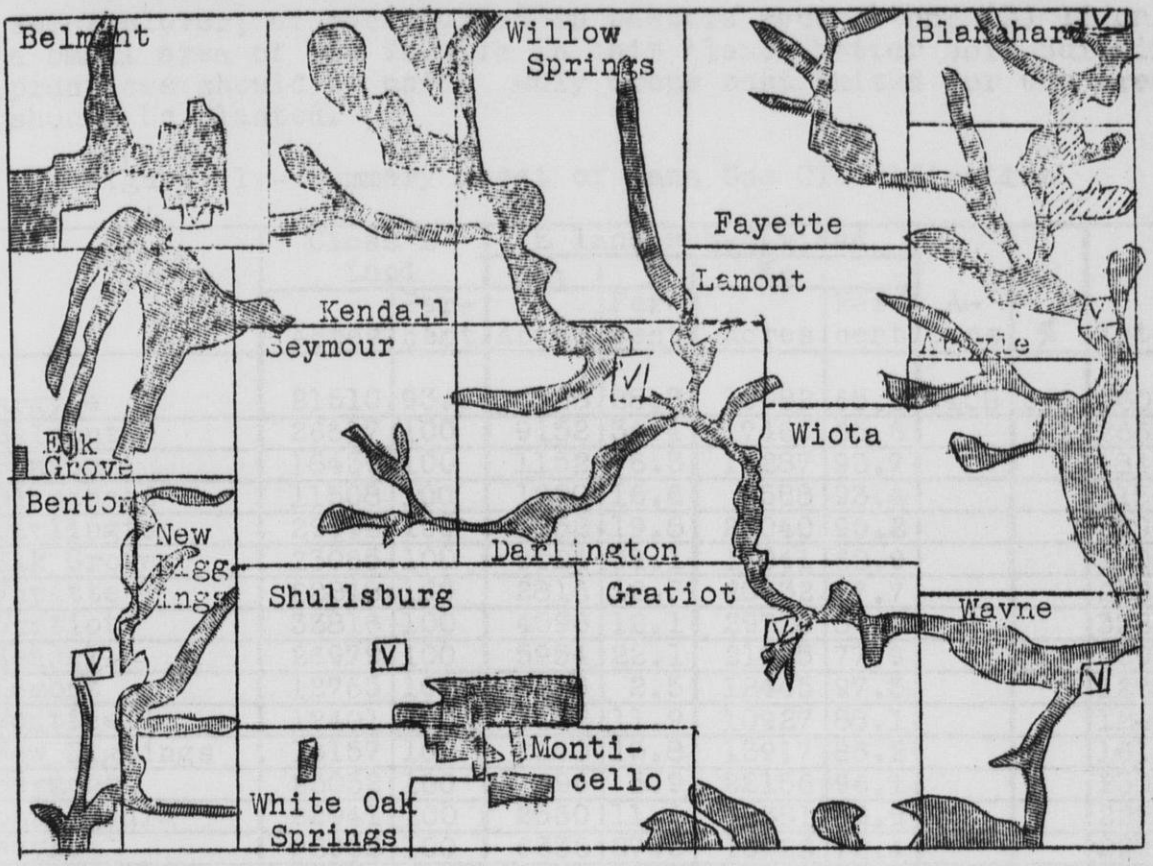
E_2 - Areas in which soil erosion is a problem and in which there is need for change in cropping practices if controlling practices have not already been put into effect. It may be classed as: (Dark yellow).

(a) Gentle slopes, slight to moderate erosion

(b) Medium slopes, moderate to severe erosion

(c) Steep slopes, too steep or shallow for safe cultivation or severely eroded

Figure 10 - Land Use Classification Map



@@@@ RECOMMENDATIONS @@@@

LAND USE AREAS AND SOIL EROSION CONTROL

Class C Land (Red)

This land area is questionably suited for farming because of unproductive, light or sandy soils that have been badly eroded in some cases. There are only two small areas of C land in the county, 1408 acres in Argyle township, 6.1% of the town, and 64 acres in Wiota township, .2% of the township area. (Figure 11). This equals a total acreage of 1472 acres in the county and only .4% of the total area, and is, therefore, not a serious condition. Various recommendations from committee members are as follows: (1) It is best suited for woodland; it should be thus protected from fire and grazing with selective cutting; (2) Sections or parts of such farms should be retired from cultivation and seeded to permanent pasture with

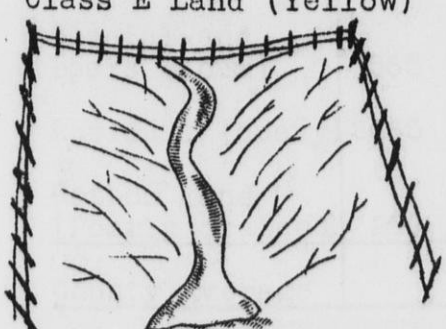
sweet clover, as recommended in pasture renovation; (3) If only a small area of the farm is in this class, better soil building practices should be used. Only crops best suited for the area should be planted.

Figure 11 - Summary Sheet of Land Use Classification

	Class E Land		E land sub-divided						
			E_1		E_2				
	Acres	Per-cent	Acres	Per-cent	Acres	Per-cent	A-cres	%	Total
Argyle	21610	93.9	6528	28.3	15082	65.6	1408	6.1	23018
Belmont	26617	100	9152	34.4	17465	65.6			26617
Benton	18439	100	1152	6.3	17287	93.7			18439
Blanchard	11508	100	1920	16.6	9588	93.4			11508
Darlington	29992	100	5952	19.8	24040	90.2			29992
Elk Grove	23065	100	9024	39.1	14041	60.9			23065
Fayette	22848	100	2816	12.3	20032	87.7			22848
Gratiot	33816	100	4096	12.1	29720	87.9			33816
Kendall	26979	100	5954	22.1	21025	77.9			26979
Lamont	12765	100	320	2.5	12445	97.5			12765
Monticello	12401	100	1472	11.9	10927	88.1			12401
New Diggings	16157	100	2240	13.8	13917	86.2			16157
Seymour	23052	100	896	3.9	22156	96.1			23052
Shullsburg	22941	100	2560	11.1	20381	88.9			22941
Wayne	22962	100	6336	27.6	16626	72.4			22962
White Oak Spr.	10570	100	960	9.1	9610	90.9			10570
Willow Springs	30583	100	4416	14.4	26168	85.6			30583
Wiota	33559	99.8	6514	19.4	27046	80.4	64	.2	33623
TOTAL	399864	99.6	72308	18.2	327556[1]	81.3	1472	.4	401336

[1] Of the total farm land, 327,556 acres, or 81.3%, is subject to soil erosion.

Class E Land (Yellow)



Evi nce of Soil Erosion

Cultivation and pasturing have removed protective plant cover. Man, with the axe, the plow and his livestock, has destroyed a large portion of the natural plant cover that originally protected their landscape from the destruction by erosion. Erosion losses are increasing. Each year, cultivated crops remove or destroy a part of this plant or organic matter so abundantly present in the virgin soil. We have what is called a continental climate with heavy, hard rains, in contrast with the climate of northern Europe which is markedly influenced by their closeness to the sea. Changes in temperature are more gradual; and while the total rainfall may be even greater than ours, their storms are gentle, the rains come slowly, and there is almost no soil washing. There is a saying in western Wisconsin that one hard storm in a season

washes away more soil than all of the other rains of the year. Because of the erosion problem, one of Lafayette county's major problems, the land use committee divided Class E land on the basis of soil erosion.

Our erosion problem is evident from several sources. The College of Agriculture classifies soil erosion in Lafayette county as slight to moderate, with occasional gullies. The extreme northwestern and the northeastern corners of the county is subject to more serious gullying. Several surveys pertaining to the seriousness of erosion have been made in the county.

The following tables are based on a summary of 22 Lafayette county farms which are under agreement of the Soil Conservation Service. Some of these farms are located in the eastern part of the county which were in the Argyle C.C.C. camp area, and other farms under Soil Conservation Service planning are in the Platteville C.C.C. camp area. Measurements of maps of these 22 farms were used to arrive at the data shown, and they report a total area of 3,319 acres, an average of 151 acres per farm. There are 1,419 acres in permanent pasture and woods, an average of 64 acres per farm (42% of the farm). The cultivated area represents 1,761 acres, an average of 80 acres per farm (53% of the farm). Figure 12 shows the percent of the " horizon" which is eroded on these 22 Lafayette county farms. The "A horizon" is a productive layer having more organic matter, being more granular, and being of a darker color.

Figure 12 - Soil Erosion: Percent of "A Horizon" Eroded**

Soil Class	Total A. in Survey	% of Total A.	No Apparent Erosion	"A Horizon" Eroded				
				0-25% Gone	25-50% Gone	50-75% Gone	Over 75%	Recent Deposit
Glacial and loess (loam)	565	17.0	1.0	36.0	39.2	23.8		
Residual (heavy)	2465	74.2	2.8	28.0	27.6	37.3	4.3	
Bottom land (Poorly drained)	289	8.8	16.6	8.9				74.5
County Average			6.8	24.3	22.3	20.4	1.4	24.8

**Gullies prevalent in some areas.

Soil profiles were obtained in three sections of the county. These profiles were secured in steel trays which were three feet long, six inches wide and one and one-half inches deep. They were obtained of Dubuque, Dodgeville and Tama soils, showing, in each case, the depth of the "A" and "B" soil layers in eroded and non-eroded fields. The "B" soil

layer is below "A" and is referred to as sub-soil which is rather clayey, compact, lighter in color than "A" (top soil), which contains little or no organic matter. These trays of soil profiles were taken to all the land use meetings of the series to show the actual soil layers.

To further emphasize the seriousness of erosion, two-mile surveys were taken in New Diggings and in Monticello townships. A soil auger was used to find the depth of the "A" and "B" soil layers in virgin soil compared to areas every few rods during the two miles. Summarizing these surveys, reference is made to Figures 13 and 14. Figure 13 shows the results of the survey in New Diggings township.

Figure 13 - Soil Erosion (2 mile survey in New Diggings township). Virgin soil 18" to B^1

2% of land was level			
2% " " had 3% slope - 15" to B^1			
15% " " " 4% slope - 14" to B^1			
5% " " " 5% slope - 16" to B^1			
19% " " " 6% slope - 11" to B^1			
16% " " " 10% slope - 16" to B^1	- 16" to B^- rock		
9% " " " 12% slope - 9" to B^1	- 6" to 14" rock		
1% " " " 25% slope -	8" rock		
31% " " " rough - no tabulation			

The following Figure 14 indicates the results of the survey in Monticello township. The greatest difference between this survey and the one made in New Diggings township is that bedrock was of a greater distance from the surface in the latter.

Figure 14 - Soil Erosion (2 mile survey in Monticello township). Virgin soil 12" dark soil, 24" to B

2% of land had 2% slope,	12"	dark	soil,	21"	to B^1
8% " " " 6% slope,	9-3/4"	"	"	16"	to B^1
5% " " " 7% slope	8"	"	"	11"	to B^1
50% " " " 8% slope	7"	"	"	13"	to B^1
9% " " " 9% slope	7"	"	"	13"	to B^1
9% " " " 10% slope	6-2/3""	"	"	12½"	to B^1
6% " " " 12% slope	12"	"	"	16"	to B^1
11% " " " waste or level land or roads					

A planimeter was used to measure the area of various percentages of slopes drawn on maps by the Soil Conservation Service. Hand levels were used to determine the percentage of slope which was indicated on these maps. Summarizing the findings on 22 of these farm maps, we note that 75% of the land has a slope of 3% to 20%. Reference is made to erosion

control practices following in this report. (Figure 15).

Figure 15 - Percent Of Slope
(on 22 S.C.S. Farms)

16.3%	of land had slope of 0-3%
27.6%	of land had slope of 3-8%
26.6%	of land had slope of 8-12%
21.3%	of land had slope of 12-20%
8.2%	of land had slope of 20-30%

The following Figure 16 summarizes the land use recommendations made by the Soil Conservation Service on these same 22 Lafayette county farms.

Figure 16 - Land Use Recommendations By Soil Conservation Service

Percent of Land	Land Use	Suggested Rotation	Suggested Practice
11.9	Cropland Short Rotation	C-G-H	None
30.5	Cropland Medium Rotation	C-G-H-H-H-H	Field strips or buffer strips, contour strips
42.7	Cropland Long Rotation	C-G-H - 6 years hay or pasture	Field strips, buffer strips or contour strips
10.5	Hay or pasture		Plowed only for reseeding and soil treatment. Controlled grazing, renovation
2.6	Pasture		Strict management, renovate when practical
1.8	Wood and wildlife		Protect from fire and grazing. Selective cutting.

The Committee's Recommendations For Controlling Soil Erosion

Local committees have outlined the area which is subject to erosion; this area comprises 81.3% of the county. They

believe erosion control practices are feasible and practical. The following areas have been outlined on the map, Figure 10.



The following are definitions and recommendations made by the committee:

E_1 - Land in which soil erosion is little or no problem. The total acreage in the county in this classification is 72,308, or 18.2% of the county land. It is divided into:

(a) Flat land other than river bottom with a slope of 0-3% and is subject to slight erosion.

(b) Flat river bottom land.

(a) The committee generally recommends a short rotation, consisting of corn, grain and hay, or two years of corn. Alfalfa is occasionally advisable and it may be desirable to leave as a hay crop until the crop thins. Timothy should be added in alfalfa seed mixtures. Clover and timothy may be substituted for alfalfa. Strip cropping may be an advantage in large areas. On level land not subject to erosion a rotation which consists of one-third or more of sod crops is required to maintain fertility. It is evident that a soil low in fertility, badly eroded or just naturally unproductive, requires a longer rotation or higher percentage of sod crops to build up or maintain fertility. The plowing under of a good crop of clover or alfalfa may be more advantageous than if the crop is fed or sold for cash. A field with a good stand of hay or grass will lose very little soil or moisture.

(b) On the flat river bottom lands, the committee is of the general opinion that a short rotation would be desirable in this area, with corn as a major part of the rotation where the area is not frequented by floods. In areas subject to flooding, blue grass pasture is probably the best crop. If experience has proven pasture is best, it should be kept in pasture. Alfalfa is not recommended because of the difficulty in haying and likelihood of poor drainage in low land. Such areas as these should be used for crops classified as soil depleting by A.A.A. if not subject to flooding. Seeding should be done occasionally to choke out weeds. If the hay area is only a narrow strip, it should be left as pasture. Barley is recommended for the grain crop in a rotation; red clover, alsike, red top or timothy will be best as a hay crop. Reed's canary grass is suggested for trial if an area is flooded for quite a portion of the year.

E_2 - Land in which soil erosion is a problem and in which there is need in change in cropping practices, if controlling practices have not already been put into effect. All land in this class is colored a darker shade of yellow, and this class is divided into the following sub-classes:

(a) Gentle slopes

(b) Medium slopes

(c) Steep slopes

The committee made the following recommendations:

(a) Gentle slopes of 3-8% having slight to moderate erosion. A medium rotation with corn one year, grain one year, and seeded to hay. The length of time the hay crop remains in this rotation depends on the type of hay crop and its length of life. The shorter the rotation, the greater stress must be made on soil erosion control practices.

Generally, field strips are recommended. In some cases, contour strips are preferred, especially with cultivated crops such as corn.

A strip cropping system consisting of strips of hay alternating with strips of corn or grain. The hay strips spread the water evenly, preventing it from concentrating and forming gullies. The hay catches the soil from the corn or grain strips above.

Contour strips or contour cultivation is recommended where practical and the washing is more serious. Contour cultivation is farming where all plowing and cultivating is on the level rather than up and down the hill. It is the general belief that this practice gives all the protection needed on gentle slopes. Contour strip cropping is a system recommended where 50 to 125 foot strips of hay alternate with equal width strips of corn or grain. This type of strip cropping is most frequently used because it provides more effective erosion control and easier field operation. Hill dropping of corn with contour rows is suggested in place of checking.

In areas of gentle slopes where contour stripping is not practical, especially in smaller fields, buffer strips are suggested. Buffer strip cropping is a type of strip cropping where strips of sod a rod or more wide are left every 75 feet to 125 feet down the slope. This strip should be left on the contour. Such buffer strips may be decidedly practical where the slopes are very irregular.

On a short rotation on a gentle slope, terracing may be done. This consists of extra large furrows that are

just a little off the level, on a contour. The water is caught in this furrow and is allowed to slowly run off to one end. Here a sod draw allows it to go safely down the hill. Terracing should not be done in shallow soils. We recommend to anyone wishing to have terracing done, that it be done only upon the advice of experienced assistance.

(b) The committee recommends that medium slope areas receive the same general practices as the gentle slopes, with hay crops encouraged to form a longer rotation. There is a greater need for contour strips, terracing and other erosion control practices.

(c) In most cases, it is generally recommended that steep slopes in cultivation be put into permanent pasture or hay. It should be plowed only for reseeding and soil treatment; and when areas are plowed, rye is suggested for broadcasting prior to last cultivation. Prominent dead furrows should never be allowed. Plowing around the hill on a contour is recommended. If cropland is limited and these slopes must be cropped, the suggestions listed under gentle slopes are to be considered.

Many farms in the county have some land that is better suited to the growing of trees than for any other purpose. Steep land having slopes over 30-35 percent, light soil with low fertility, unused irregular areas or wasteland, and badly eroded land are the most common cases. It is recommended that these areas be protected and planted to trees to provide some income and guard against erosion. Reference is made to recommendations in woodlot conservation.

General Recommendations For All Erosion Areas In General Or Extreme Conditions In Any Of The Above Classes

In connection with the establishment of a strip cropping or contour strip cropping system, it is advised that rearranging the fences so that they run on a contour may be a time saver. By so doing, odd corners and point rows can be done away with and the fence serves as a permanent marker for contour lines.

Pasture renovation is recommended in pasture areas. This practice is especially recommended on steeper slopes that should be left in permanent hay or pasture. In pasture renovation, the soil should first be tested to determine the lime and fertilizer requirements for the successful growth of legumes. The lime is applied and then the sod is cut up thoroughly with a disc or spring tooth. This should be done early in the spring, before oats seeding time. If a fertilizer drill is not available, the fertilizer can be spread separately or with the lime and worked into the soil in the preparation of the seed bed. The seeding mixture recommended should consist primarily of legumes; and for details relative for seeding mixtures, we suggest the advice of the county agricultural agent.

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If there is a fairly good sod, the seeding may be made without a nurse crop. A light nurse crop will help to check weeds. The renovated portion should be fenced and livestock kept out that year unless a good growth prevails. If such is the case, it may be pastured from August 1 to September 15. It should be left from September 15 to October 15, so the young plants may store food.

Relative to gully and stream bank control, the farmer who wishes to keep his fields free from gullies must give first consideration to proper land use and conservation farming on areas that contribute run off to gullies. Along with the adoption of proper land use, it is necessary to heal the old erosion scars by the best and cheapest means available. Sod hump dams can be successfully used in healing small gullies with small drainage areas. Sod flumes may be successfully used to lower the water safely in gullies with heads less than ten feet and drainage areas less than twenty-five acres. In many cases, it may be advisable to construct a plank or earth diversion dike around the head of a small gully and slope the head and seed it. Gullies having large drainage areas or bank cutting on large streams will usually require permanent structures. A combination of brush and rock wing dams and willow plantings will usually control stream bank cutting. All such areas should be protected from grazing. Most farmers find it pays to leave sod of sufficient width to prevent gullying in all drainage ways. These grass water ways should be at least ten feet wide or wide enough for a hay crop to be harvested; this prevents weed growth and improves the sod. They should be left with an uneven edge to prevent side gullies.

Soil erosion control methods are good practices to be stressed by teachers of vocational agriculture in their teaching programs. Levels and tapes for laying out field strips and the like are available through the county agent's office. It was recommended that the agricultural extension service help individual teachers, upon request, with the use of this simple equipment, in order that agricultural teachers may instruct their students relative to the use of tapes and levels.

Reports have been made where culverts were installed under a highway, allowing silt, sand, gravel and rock to be washed on to the surface of rich alluvial soil in low lands. It is recommended that the highway department, town, county or state, take into consideration these conditions prior to such installation and road construction. We suggest that all parties concerned (farmers; town, county and state government representatives; highway officials; and the Soil Conservation Service) meet to discuss the best methods of procedure.

Lafayette County Soil Conservation District Recommended

The evidence of a soil erosion problem in Lafayette county has been based on the judgment of committeemen and statistical information. General land use recommendations have been out-

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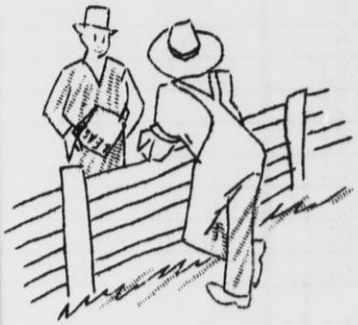
lined by us. The county committee on land use planning believes the county could be greatly benefited with the aid of experienced soil erosion agents who would be available if Lafayette county were a soil conservation district.

It is understood that there are nineteen districts in Wisconsin at present (May 1, 1941); that the local Agricultural Committee of the county board are the supervisors in each district; that farmers living within districts are given an opportunity to enter a cooperative agreement with the County Agricultural Committee, by which the farmer agrees to follow recommended erosion control practices on their land in return for planning assistance in establishing these practices. The farmers themselves make their own farm plans with the aid of erosion specialists, and farmers may execute these plans as they see fit.

In conclusion, we recommend to the county board of supervisors that Lafayette county be established as a soil conservation district through passage of a resolution by that body. (Note - The Lafayette county board of supervisors, at the May 7th session, 1941, passed the resolution as recommended by the land use committee, making Lafayette county the twenty-first county to become a soil conservation district within the state. Juneau county was twentieth, added since the last county committee land use meeting.)

FARM TENANCY



Tenancy is typical of the corn-belt type of agriculture such as is characteristic in Lafayette county. Lafayette county ranks first in farm tenancy in Wisconsin. As early as 1880, the tenancy was 18.3%; and this was doubled by 1920, and nearly tripled by 1941. The following Figure 17 shows the tenancy from 1880 to the present time.

Figure 17 - Tenancy Trend in Lafayette County

Year	Tenancy
	Percent
1880	18.3
1890	21.3
1900	27.6
1910	30.4
1920	36.2
1925	43.4
1930	48.2
1935	49.7
1940	54.0

A tenancy survey was made by the county extension office, county A.A.A. office and land use committeemen. (Figure 18).

This survey shows 54% of all farms are operated by renters. White Oak Springs leads the townships with 78%; and Monticello, with 71%, runs a close second. According to this survey, Lamont, Benton and Belmont are also comparatively high.

Figure 18 - Tenancy Study

Town	Total No. Farms	No. of Tenants	% of Tenants	No. Related to Landlord	% Related	No. of Direct Relation	& of Tot. Dir. Rel.	Appr. No. Movers, 1939
Argyle	153	85	55.5	26	30.58	17	20.0	7
Belmont	142	86	60.6	29	33.72	26	30.23	5
Benton	151	93	61.6	32	34.40	27	29.03	6
Blanchard	81	34	42.0	11	32.35	11	32.35	3
Darlington	220	130	59.1	18	13.84	15	11.53	17
Elk Grove	152	83	54.6	35	42.16	25	30.12	10
Fayette	139	74	53.2	36	48.78			9
Gratiot	226	128	56.6	30	23.43	23	17.96	12
Kendall	122	63	51.6	25	39.68	21	33.33	9
Lamont	91	57	62.6	21	36.84	21	36.84	11
Monticello	62	44	71.0	4	9.09	4	9.09	9
New Diggings	139	70	50.4	22	31.42			4
Seymour	153	81	52.9	25	30.86	20	24.69	5
Shullsburg	154	93	60.4	30	32.25	25	26.88	3
Wayne	154	95	61.7	25	26.31	25	26.31	6
White Oak Sp.	50	39	78.0	11	28.20	11	28.20	5
Willow Spr.	200	97	48.5	23	23.71	19	19.58	4
Wiota	250	74	29.6	36	48.64	36	48.64	15
County	2,639	1,426	54.0	439	30.7	390	27.2	140

It is significant to note , however, that in spite of the county's 54% tenancy, 30.7% of all tenants are related. There are 27.2% that are directly related, such as father and son, father and son-in-law, mother and son, and the like. The number of annual movers estimated at 140 is not great.

About 37% of renters are on a cash rent basis, while about the same number are on a 50-50 basis. The remaining tenants are on a 40-60 or some other percentage basis.

Long term leases are available in offices of education and action agencies of the county, and the committee recommends that landlords and tenants make more use of flexible lease forms. Agencies working with farmers are likewise advised to more fully recommend the use of these forms.

Whereas the tenancy in Lafayette county is the highest in the state, the committee recommends that the extension office contact the Department of Agricultural Economics, College of Agriculture, in order to secure assistance in conducting needed research on this tenancy problem. (Note - As a result of the above recommendation, at the last meeting of the county land use planning committee, L. A. Salter explained to the committee that the College of Agriculture, in cooperation with the state land use planning committee, would assist Lafayette county in making a detailed study of the tenancy problem. There is no problem where tenancy is 30% including relationships, but tenancy of 40% to 50% is a serious situation. If the ownership of land is going to non-resident people, the problem may be more serious. The erosion problem will be more serious under those conditions today. The college has not studied the ownership side of this problem. The committee recommends that its chairman, with the county agent, name a sub-committee to assist in the organization and procedure for this research project. It was suggested that the mail address of rural routes be checked at the post offices of the county and also that the number of movers be checked with A.A.A. files.)

DAIRY IMPROVEMENT



Annual county butter and cheese production are indicated graphically in Figure 6. Milk cattle and heifer numbers are also shown graphically in Figure 7. The 1940 census shows that on 2,156 Lafayette county farms reporting, there were 38,238 cows and heifers two years old and over, on January 1, 1940. Of this number, 35,716 were kept mainly for milk production. There were 20,501,345 gallons of milk produced in 1939.

The dairy information presented in this report emphasizes the importance of this project. The quality milk program is endorsed by the committees and factories are encouraged to cooperate 100%. This program should be permanent. (Note - The quality milk program was voted in by farmers and factory operators in April, 1941.)

According to our best information, the average dairy cow in our county produces only 175 pounds of butterfat per year. (Figure 19).

Figure 19 - Butterfat Production of Lafayette County Dairy Cows

	Average Cow of County	Average DHIA Cow	Increase of DHIA Cow Over Average Cow
Milk	5,200	7,114	1,914
Test	3.38	3.60	.22
Total Butterfat	175.7	256.5	80.8

If butterfat is selling at [illegible] the increased income by herd culling would be worth $20.20 or a profit of $18.95 per cow. (The average cost per cow to belong to a testing association is $1.25.) At this rate of increased profit, one cow would pay for a sixteen cow herd. In order that more herdsmen may efficiently cull their herds, thereby raising butterfat averages, the committee recommends the owner-sampler method of milk testing be introduced into this county. The committee believes this would give herd efficiency results at the lowest cost to the farmer. If owner-sampler method of milk testing develops in Lafayette county, whereby milk samples are collected and tested in a central laboratory, it is our recommendation that W.P.A. and N.Y.A. labor be used where ever possible and practical.

Disasterous experiences have resulted from the use of so-called stock yard bulls peddled by truckers, and others to farmers in some sections of the county. It is recommended to the Wisconsin Legislature that laws be enacted to require a license for those who practice peddling stock yard bulls; also that the present laws relative to Bang's disease and the transfer of animals (over six months of age) into other herds be strictly enforced.

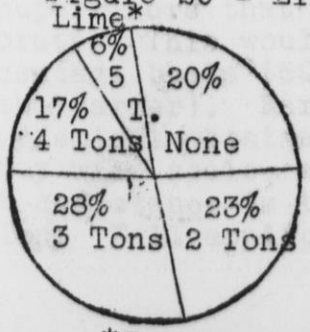
SOIL FERTILITY

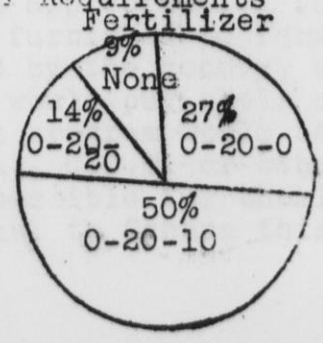


Lafayette county soils have produced heavily in the past 75 years; and if replacements of plant food are not made, high yields cannot be expected in the future. This fact is emphasized by a summarization of 2,170 soil samples tested in 1940. (Figure 20.) 74% of these samples require 2 ton or more of lime per acre, 91% require phosphate, and 64% require potash.

The average results of fifteen grain fertilizer plots installed on farms in 1940 are as follows: check plots yielded 49.7 bushels, 0-20-0 applications yielded 66.9 bushels, while 0-20-10 applications yielded 68.3 bushels. These results check well with the 2,000 soil tests which indicated that 94% need phosphate and 63% need potash.

Figure 20 - Lime and Fertilizer Requirements





*Tons per acre.

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The committee recommends the continuation of the W.P.A. soil testing and soil survey project. By May 1, 1941, 1500 samples had been tested this year for acidity, for phosphate and for potash. Farm surveys have been made on twenty-five farms, wherein soil testers take samples and, in turn, prepare colored maps of the farm showing detailed fertilizer requirements in all sections of each field.

Through the W.P.A. lime grinding program of 1940, 22,803 tons of limestone were crushed and distributed to 484 farms. Thirty-two quarries were used and eight operators did the crushing. The following Figure 21 indicates the trend since 1935.

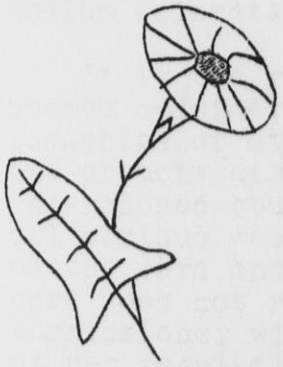
Figure 21 - W.P.A. Limestone Crushed in Lafayette County

Year	Farms	Tons
1935	843	34,412
1936	414	22,778
1937	631	25,605
1938	578	25,683
1939	584	31,279
*1940	484	22,803
**1941	652	28,000

*Considerably more lime could have been crushed by W.P.A. labor in 1940, had it not been for a shortage of W.P.A. funds to finance labor for this project.

**The 1941 figures are estimates. Besides this amount, over 3,000 tons of lime have been crushed and distributed to farmers on the A.A.A. program, with about 5,000 tons remaining to be crushed, delivered and spread.

WEEDS

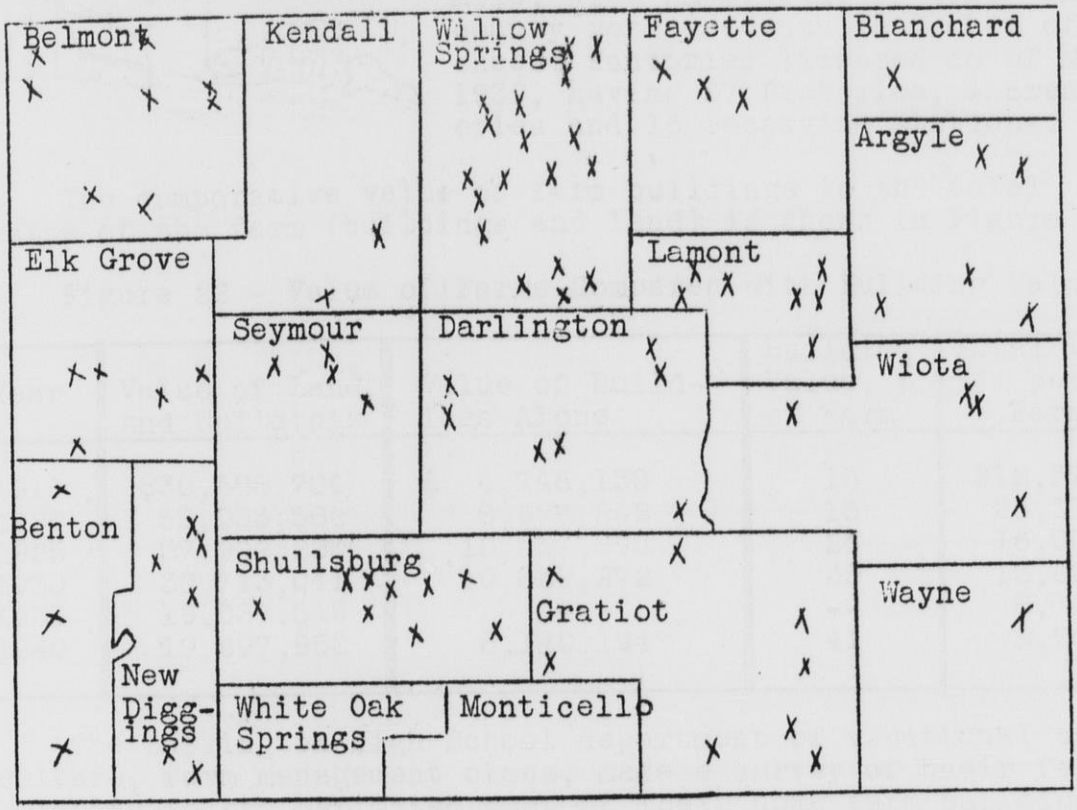




Weed eradication is becoming a major problem in Lafayette county, especially field bindweed (creeping jenny) and Canada thistle. A survey made by town assessors, weed commissioners and by A.A.A. committeemen located nearly one hundred patches of creeping jenny. (Figure 21.) Undoubtedly, there are many patches undiscovered or unknown by farm operators. This committee recommends to the county board of supervisors that they consider an appropriation for sodium chlorate. This would be bought and furnished to farmers on a percentage basis (50-50; or 40% paid by the county, 60% paid by the farmer). Farmers interested would pay their share of the chemical obtained. An efficient program would be on a county-wide scale; and W.P.A., N.Y.A., C.C.C. or other government assistance is to be used when possible for chemical application. Fall applications of chemical to Canada thistle and

field bindweed are recommended as the best time for control.

Figure 22 - Location of Patches of Field Bindweed in Lafayette County

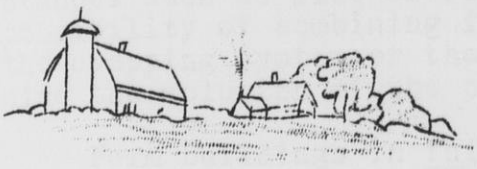


On town and county roadsides, where weeds are a public nuisance, it is recommended that W.P.A. labor be used for weed destruction. The town would be responsible for supplying a sodium chlorate sprayer when used on such public property.

It is the recommendation of this committee that township boards consider the weed control plan successfully operated in townships of other counties, whereby the town is divided into two or more districts. The town chairman sends a letter with an enclosed stamped card. When the card holder has destroyed all noxious weeds according to law, he gives this information on the card and mails it to the district chairman. If the card does not return within a limited time, the district commissioner will make a personal call and carry out his duties as per regulations of the state weed law.

In crop land where thistles are a problem, it is suggested that alfalfa be seeded as a smother crop. If there is difficulty in establishing a good stand, lime and fertilizer should be used. It is advisable to clip the nurse crop, too; as it prevents thistles from seeding and insures a good stand of alfalfa.

FARM BUILDINGS



The county ranks low in the number of occupied houses per square mile, with an average of 4.2. The county ranks seventh in number of cheese factories licensed as of May, 1939, having 87 factories, 4 creameries and 16 receiving stations.

The comparative value of farm buildings to the total value of the farm (buildings and land) is shown in Figure 22.

Figure 22 - Value of Farms Compared With Building Values

Year	Value of Land And Buildings	Value of Buildings Alone	Building Value, % of Farm	Total Value per Farm
1910	$30,688,704	$ 4,746,130	16	$12,572
1920	55,033,582	8,698,242	16	23,319
1925	37,902,233	10,557,895	28	16,006
1930	30,743,041	10,829,272	35	13,639
1935	19,037,549	-------	--	8,118
1940	19,697,952	8,140,194	41	8,701

The Darlington High School department of vocational agriculture, farm management class, made a survey of their farms relative to the estimated cost of their home farm buildings other than the house. Although the summarization of this survey shown in Figure 23 may not be a county average, a general idea can be pictured. The average size farm in this survey is 200 acres.

Figure 23 - Average Yearly Building Costs (house not included)

Depreciation	$ 93
Interest	180
Paint	33
Repairs	17
Taxes	117
Insurance	38
Miscellaneous	100
TOTAL	$578

In view of the fact that the farm buildings comprise the major investment on many farms, the committee realizes there are outstanding problems dealing with this factor.

Buildings are depreciating faster than repairs are made in many cases in this county, seemingly due to lack of finances. Farm buildings in poor condition should be: (1) completely renovated; (2) let go and used as long as they will stand; or (3) constantly improved by adding little repairs. The circumstances such as size of farm, local markets, crops raised, possibility of combining farms, and the possibility of changing the cropping system or the type of livestock raised will determine the solution of the problem by the individual operator.

Farm buildings in fair condition: (1) could be neglected for the time being; (2) could be maintained periodically; or (3) could have new additions made. Again, the solution depends considerably on local factions.

For farm operators with good buildings, to be most practical and economical, the committee seriously recommends constant up-to-date maintenance.

The committee's recommendation for the present is that farm owners and operators, regardless of the present condition of his farm buildings, prior to repairing or rebuilding, should first use their good judgment based on all of the factors listed above; we suggest that their good judgment be combined with the advice of agricultural engineers of our state college and other institutions.

A local survey substantiates the fact that repairing of old farm buildings and building of new farm structures is a decided financial problem; the lack of most economical and practical building methods and plans is also a problem. It is recommended that the state college do more research work to discover the most economical methods of repairing and rebuilding on the farm.

FARM CREDIT



The problem of how good farm boys and girls can be soundly established in the business of farming (rather than having them migrate to other fields) has been noted by the committee. Federal agencies such as the Farm Credit Administration, through the Farm Loan Association, and the Production Credit Association and the Farm Security Administration, through the rural rehabilitation and tenant purchase programs, have helped materially in this problem. The committee feels that these and other agencies making credit available to farm folks should make available, particularly to the youth groups, the conditions under which they make loans and the methods that are used in paying them off. The committee recommends the continuance of the aid given by some agencies in the matter of farm management and suggest that, where possible, others work out such a program. Farm management should be a part of the program of all agricultural educational agencies;



for if sound management practices are followed, prompt payments of loans can be made.

The extent of loans granted by some of the federal agencies is shown in Figure 24.

Figure 24 - Summary Sheet of Farm Credit Agencies

Township	Production Credit		Farm Security		Land Bank
	No. of Loans	Amt. of Loans	No. of Loans	Amt. of Loans	No. of Loans
Argyle	10	$ 8,585	5	$ 5,538	22
Belmont	3	6,512	2	2,101	8
Benton	2	394	3	3,827	15
Blanchard	12	13,528	3	3,508	8
Darlington	22	21,754	11	11,182	17
Elk Grove	6	8,360	1	1,121	11
Fayette	15	12,016	10	8,867	13
Gratiot	6	4,468	6	5,781	18
Kendall	12	20,553	11	15,338	29
Lamont	9	4,245	6	9,932	8
Monticello	2	1,949	1	1,476	10
New Diggings	3	1,073	4	2,737	6
Seymour	17	19,787	5	3,443	23
Shullsburg	9	12,392	4	6,691	10
Wayne	1	1,207	3	3,818	5
White Oak Springs	3	2,490	2	2,226	9
Willow Springs	18	21,912	10	12,094	21
Wiota	14	10,425	11	10,783	27
TOTAL	194	$171,650	1/ 98	1/ $110,463	2/ 260

1/ Added to this number of 98 F.S.A. loans are thirteen tenant purchase farms in the county, with a total value of $127,245.00.

2/ As of December 31, 1939, the Land Bank had 272 loans in Lafayette county totaling $2,007,000.00. This represents about 12% of all the real estate loans in Lafayette county, according to a report from their office.

The land use committee recommends that the Farm Security Administration continue: (1) to make special effort to assist farmers in the purchase of lime and fertilizer to standard rehabilitation loans; (2) to continue aiding farmers in the purchase of machinery, livestock and tractors and necessary home equipment on the farms where the farm and home plan will show the advisability of these purchases. It is of interest to note that of the Farm Security borrowers, two-thirds of the group are less than forty years of age. The Farm Security office files show that twenty-four percent of their borrowers are in the twenties; forty-three percent are in the thirties; sixteen percent are in the forties; ten percent are in the fifties; and seven percent are between the ages of sixty and seventy-six. The average farm comprises 161 acres, including 87 acres of crop land.

The land use committee recommends that all credit agencies continue to offer credit to farmers in this area; that they refuse loans to farmers who are living on land not classified as good agricultural land; and that farm credit supervisors apply the land use classification map with suggested farm practices as suggested by local committees living in the definite land use areas. Leases of more than a one-year term should be encouraged. Community group service financed by farm credit sources is urged; also this same source of credit should be more available for medical care. This committee requests the continued cooperation of the P.C.A. and F.S.A. in helping our vocational agriculture students in financing their projects, which will, in many cases, aid these young men in becoming established in farming.

There may be need for some debt adjustment in all credit agencies as there are many high per acre loans in Lafayette county. The committee recommends that very serious encouragement be given by farm groups to the members in Congress, in order that the present rate of interest on Federal Land Bank and Land Bank Commissioner loans may be made permanent. This would assist in bringing about a lower rate of interest by all lenders. Also, it is suggested that the credit agencies cooperate with the land use planning committee in carrying out these recommendations.

FARM LABOR AND PUBLIC WELFARE



The land use committee expressed considerable concern over the farm labor situation and its correlation with public welfare organization. Figure 25 shows, by years, the number working on W.P.A. and those waiting for certification. The figure also indicates the number of cases receiving surplus commodities and the number receiving direct relief.

Figure 25 - Public Welfare Data

	Jan. 1939	Jan. 1940	Jan. 1941	April 1941
W.P.A. working	341	237	220	214
W.P.A. waiting	88	75	33	15
No. receiving surplus commodities	416	377	*48	*18
No. receiving direct relief	145	139	156	158

*On January 1, 1941, there were 48 cases receiving clothing in the county and 18 cases receiving clothing on April 1, 1941. Beginning in October, 1940, the food stamp plan was

put into operation, replacing the direct delivery of food commodities to the homes of needy families. The total cases involved in the stamp plan was 212 on January 1, 1941, and 237 cases on March 1, 1941. These total cases include those classed under social security, W.P.A. and direct relief. All townships have a relatively equal distribution of relief cases, with the exception of Benton and New Diggings townships which have a larger number of cases than any other township, due to the fact that the mines are not being operated.

An educational program is presented by the public welfare office in connection with the food stamp plan for the purpose of stimulating food stamp purchases and moving the surplus foods off the market. This program might also include discussions of surplus foods for school lunch projects, for the farmers producing the foods, for the merchants selling the produce and for the families eligible to participate in the food stamp program. Everyone interested would be invited to attend such meetings.

Farmers have complained that because of the W.P.A. program, they are unable to hire men for farm labor. In this connection, a complaint is often made by individuals seeking employment at the public welfare department that farmers do not pay regular wages and a man with a family is unable to meet his household expenses unless he can depend on regular wages. There is another complaint that a man with a family cannot live on an occasional day's farm work; he must know that he will be employed for a definite period of time in order that his wages will meet his budget. The matter of housing the family of the worker on the farm is another problem.

Closer cooperation between the local Farm Security Administration and the public welfare department is suggested. In view of the fact that many potential farmers are now unemployed, a basis for cooperative farm planning for relief families might be established. Garden planning for public assistance families is suggested, including seed supplies and supervision of canning and caring for food reserves. No aid should be granted if local town officials indicate no effort has been made in such a project by the client.

Cases have been reported in which people on W.P.A. have been offered full time work but refused to accept jobs offered because of fewer hours with probably equal wages on W.P.A. It is recommended that local town or village officers appoint someone to act as consultant, who is to forward information to the public welfare department relative to the eligibility of applicants for W.P.A. certification. Local people should accept local jobs when offered. The "line" waiting for certification may be long. Unmarried people may be in this line, maybe those who are less deserving than those who have dependents. Local officials would know local conditions and could give valuable aid to the public welfare department on these matters.

The committee recommends that the public welfare office send forms to each town chairman and village clerk to be filled in by him for an applicant prior to certification, to assist the welfare supervisor in proper classification of the client.

The committee believes there is a need for a closer co-operation between the farmers needing farm help and the public welfare department where men are registered as available for employment. If a man is qualified for farm work, it would be of advantage to the department in helping him to find that type of work if farmers needing men would register with that office. The department, serving as a contact agency, could also assist the farmer in locating needed help.

Because of the seriousness of obtaining farm labor, the committees in one section of the county believed the selective service program has been a definite factor. It was the recommendation that the draft board should be drawn from distributed communities in order that all areas of the county are equally represented on this local board. It was suggested at the county committee meeting that members of the selective service draft board serve for a five-month period, and that one new member replace a former member at the end of each five-month period. It was further suggested that these members be selected from representative parts of the county in so far as possible; and that each member of the county board of supervisors nominate one man from the area he represents and the members of the draft board be selected from this list. The above suggestion received the unanimous approval of the entire committee.

FARM WOODLOT CONSERVATION



Practically the entire area of woodlands of Lafayette county is of the oak-hickory type. There is little timber that averages over twelve inches in diameter.

Assessors' reports show that 44.4% of the farm land of Lafayette county is in pasture land. Of this pasture land, 13.2% is wooded, or 5.8% of the total farm land. In 1939, there were 923 farms reporting woodland (1940 census) and a total of 17,681 acres. (There is a direct relationship between soil conservation and woodlot conservation in the opinion of the committee.)

Of the 923 farms in Lafayette county which have woodlots, though detached from the main farm, many have been used primarily as a source of fuelwood, fenceposts and construction materials and have contributed considerable savings to the owners. Some of these woodlands have been depleted by grazing and by over-cutting. It is recommended that woodlands in these areas originally set aside for timber production be maintained as forest lands through protection from grazing by using more

desirable lands for pasture and pasture improvement. Selective cutting practices should then be used and new plantings made so that a constant supply of wood could be maintained.

One of the biggest woodland problems in Lafayette county is "How to keep cows off steep slopes and out of the woods". It is recommended that steep lands grow a crop of trees and that all woodlands be kept unpastured to permit growth and reproduction and assure continuous tree crops. To offset pasture loss from lands kept ungrazed, pasture improvement of old bluegrass or removing timber from the slight slopes to make better pasture from part of the woodland is recommended.

It is recommended that farmers having unpastured woodlands take advantage of the provisions in the Wisconsin woodlot tax exemption law.

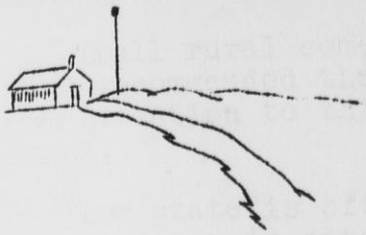
Woods fires and destructive cutting practices have caused much damage and poor quality timber in the woodlands of this county. It is recommended that farmers protect woodlots from fire and follow better cutting practices. Recommended cuttings that remove mature trees should be combined with improvement cuttings which remove over-mature, dead, deformed and diseased trees along with others that crowd or overtop thrifty young saplings or interfere with the growth of "final crop" trees.

Falling water tables, wind and water erosion and severe drought have resulted mainly from this break down of a natural balance between forest and prairie. Planting trees on all available waste land with windbreaks around farm homes as well as some roadside planting will prevent excessive water runoff and evaporation, wind and water erosion and will serve as snow fences and give food and protection to wild life.

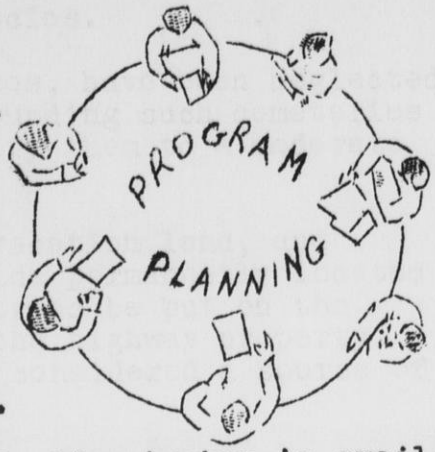
Woodlot management, windbreak and shelterbelt planting demonstrations have been conducted in parts of the county through the extension office and the college of agriculture. It is recommended that these educational demonstrations continue, when requested, in areas where requests are made and the need is justifiable.

Stream banks could be better protected if trees were planted there. This would aid in maintaining game as well as forest preserves. Low land areas not conveniently drained should be left as a game refuge. It is the belief of the committee that schools might cooperate more in tree planting on the school grounds and on adjacent land. Such projects could be easily adopted by Arbor Day programs. The Ranger Mac radio program of the college of agriculture is to be locally encouraged with more schools listening in.

SCHOOLS AND AGRICULTURAL AGENCIES



Due to much needed woodlot and wild game conservation, the land use committee suggests that schools teach more conservation, that an Arbor Day program be formulated in each district which would result in beautifying the school grounds and encouraging students to participate in conservation projects.



All rural schools, where an electric line hookup is available, should be electrified. The committee believes the state superintendent of schools should urge school districts: (1) to improve their lighting; (2) to have their pupils partake in radio programs; and (3) to provide hot lunches.

It is hoped that the fine cooperation between the teachers of vocational agriculture, farm agency leaders, and the agricultural agent will be continued. We understand that each year, the Agricultural Committee of the county board outlines the program of work for the county agricultural agent. The committee suggests that agriculture teachers, with representatives of agricultural agencies of the county, meet regularly with the agent at a date agreed upon to discuss the county agent's and other farm agencies' programs as outlined and to acquire a better understanding of these various agencies. All agricultural programs should closely coincide; they should strive, in general, for the same goals.

Our youth should be encouraged to participate in fair exhibits, and they are especially encouraged to make larger exhibits at the Wisconsin junior state fair.

The New Diggings school district consists of only six sections. Taxes are to the limit. It is recommended that the Race Track school district be added to New Diggings, making a twelve section district. The Race Track, with its present low enrollment, would then be closed. This recommendation is made to the New Diggings town board.

BEAUTIFICATION OF GROUNDS



The rural school beautification project has been carried out in the Darlington and Belmont areas, including twenty-five participating schools. There are thirteen schools in the Wayne area planning a like program.

Grounds about some homes, schools, churches and factories are

untidy. It is recommended that more stress be placed on the above ground beautification by farm agencies.

Small rural cemeteries, in some cases, have been neglected. It is recommended that communities surrounding such cemeteries give attention to this ground and beautify them to a moderate extent.

Our state is often referred to as vacation land, and tourist trade is outstanding. On our wide permanently located highways, it is recommended that more stress be put on the planting of trees within the limits of the highway property. Where practical, W.P.A. labor should be considered a source of labor for this project.

HEALTH





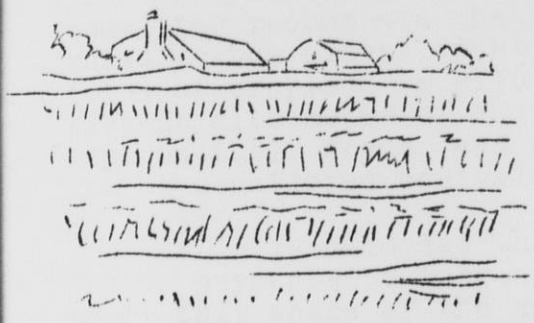
Garden projects are now carried by over fifty 4-H boys and girls of the county. Hot lunches have been available in about 75% of the rural schools. These are factors for better health. Regardless, the committee realizes that dental and physical defects are often caused from lack of proper food. This does not mean that the children do not have food, but, rather, that they do not use the food that is available to them in this county - such as dairy and garden products. Because of these facts, we suggest that an intensive educational program be carried on in the school by the county nurse, with the help of the teachers and interested groups in Lafayette county, to show need for using the dairy products that are so necessary to health. There should be encouragement in the use of garden space to raise as many vegetables as possible for family consumption. Hot lunches in the schools may help to educate the child in planning healthful meals and show a definite improvement in the health of a child.

The committee recommends that the land use chairman, with the county agent, the supervisor of the public welfare department, and the county nurse, name a sub-committee to act under the land use committee to study the possibility and practicability of the grub stake plan now used in some other counties of the state.

There are a number of children who need care by a physician or dentist, but whose parents cannot always obtain the medical attention needed due to lack of finances. We suggest the cooperation of all agencies concerned to assist in educating parents to concentrate on the healthful training of the preschool child in the prevention of defects. A child upon entering school should ideally have proper eating habits, cleanliness, immunization and vaccination. This can be accomplished with a minimum of expense if all these preventive measures are taken before school age. In the purchase of glasses and tonsillectomies, contact lay groups, such as women's clubs, P.T.A.'s,

etc., to learn if they have any suggestions for the care of these conditions in their community. Relief agencies may be of assistance.

RECOMMENDED CHANGES FOR THE 1942 AGRICULTURAL CONSERVATION PROGRAM



Since corn acreages under the A.A.A. are not adequate to supply both silage and grain requirements on Lafayette county farms, it is recommended that consideration be given those farms using corn for silage. Additional allotments should be granted providing a cover crop is seeded that same fall after the corn has been removed for silage. This crop should be classified as general depleting and it should be granted on a percentage basis with a maximum limit of five acres. This additional acreage must be used for silage.

Lafayette county farmers receive about 40% of their income from dairying. We recommend that dairy products be declared as a basic commodity and a national program be devised for dairy products.

In this area, it is more practical to use commercial fertilizer on a seeded hay crop with the nurse crop harvested for grain in place of hay. The committee recommends a change whereby credit be given toward soil building payments where fertilizer (phosphate and potash) is applied to a grain crop when such crop is used as a nurse crop for new seeding.

At present, for a county to be in the commercial corn area, it is necessary to have an average farm production of 450 bushels of corn and an average yield of 4 bushels per acre of farm land. Recommendations are that any county having an average of 3 bushels per acre of farm land be placed in the commercial corn area.

This committee recommends that pork, eggs and other farm products not under the A.A.A. program be placed in the A.A.A. program to assist market stabilization.

Since Lafayette county is subject to considerable soil erosion, substantiated by state and local surveys, it is recommended that farms in the A.A.A. program be given more credit for soil conserving practices such as tree planting, strip cropping, buffer strips, earth fill dams and the like.

This committee encourages the continuation of the equalization of corn allotments, compared with four other farms.

Our recommendation is that a program similar to that of 1939 be adopted whereby corn sealing is under agreement for a

STATE HISTORICAL LIBRARY

one year loaning privileges in place of the present two-year period agreement.

Whereas the main objectives of the A.A.A. are the reduction of surplus farm production, the finding of new uses for these surpluses and the conservation of soil resources, this committee recommends that farmers who are using horses and mules to the extent of at least one adult animal for each 25 acres of cropland be allowed a two-acre increase in their present allotments of soil depleting crops per horse or mule kept on their farms, and that two animals under two years of age be considered equivalent to one adult.

It is recommended that the agricultural conservation and parity payments be increased in order that farmers receive their fair share of the national defense funds; also an increase in the soil building allowance for pasture renovation, an increase in the soil building allowance for the use of red clover and potash (this is now lower than phosphate). Keep the administration of the programs in the hands of the dirt farmers, with a closer tie-up between all federal agencies.

Extend the conservation materials program to include legume and grass seed and sodium chlorate to be used in the control of Canada thistle and creeping jenny; grant county and community committees more leeway in the establishment of allotments for individual farms; increase the loan value of corn if quotas are voted in; make available more educational moving pictures (sound) for use in the committee and farmers' meetings; farmer committees be appointed to control farm imports; the land use committee approves the principles of the A.A.A. program and recommends its continuance.

GENERAL



This committee recognizes the seriousness of the tax problem. They recommend further study of taxation, with the county agent arranging meetings with land use groups for drawing up possible solutions, particularly as it affects improvements and real estate property in urban areas.

It is believed that legislation is most effective where proposed legislation is backed by organization. To receive better results in our legislatures, it is recommended that all farmers should be urged to belong to at least one national farm organization.

This committee is opposed to the diversion of highway funds; because if such funds are entirely used for highway purposes, there would be no necessity of local unit real estate taxation for that source of revenue.

ILLINOIS MEMORIAL LIBRARY

Our farm women in Lafayette county do not have leadership for educational homemaker programs. It is recommended that home economics teachers and F.S.A. home supervisors within their districts and state extension workers be made available for demonstrations, especially in regard to the use of the "pressure cooker".

Where vacancies occur in industry, farming, and educational fields, it is recommended that preference be given to youth rather than to married women whose husbands are employed.

Because all but one manufacturer do not make their discs so that they can be pulled out of the soil when crossing a ditch, we recommend this change be adopted by all farm machine companies.

As farm income from swine projects is of major concern, we recommend all agricultural agencies concerned place particular emphasis on economical swine production.

A suggestion is that the county land use planning committee meet early to discuss major agricultural problems of the county; the Agricultural Committee may use their suggestions in drawing up the annual agricultural extension program.

STATE HISTORICAL LIBRARY

SUMMARY OF RECOMMENDATIONS MADE BY

THE LAFAYETTE COUNTY LAND USE PLANNING COMMITTEE

Land Use Areas and Soil Erosion Control

The county land use planning committee recommends that:

(1) The 1,472 acres of class C land which is questionably suited for farming should be converted to woodlot and protected from fire and grazing. Parts of farms in this area should be retired from cultivation and seeded to permanent pasture. If any of this area is to be cropped, better soil building practices should be used with only most suitable crops planted.

(2) As 18.2% of the county's land is subject to little or no erosion, recommendations are based, first, on flat land other than river bottoms. Suggestions are for a short rotation of corn, grain and hay, or two years of corn. Alfalfa is occasionally advisable, and timothy may be added to hay mixtures. Large areas with very slight but long slopes may be benefited by strip cropping. Sod crops should be kept in a longer rotation in unproductive soils, and green manuring is a good practice.

On flat river bottom land, short rotations with corn as a major crop is desirable if the area is not frequented by floods. Bluegrass pasture is best in flooded areas. On such areas, alfalfa may be difficult to harvest and poor drainage is probable. Seeding may be done to choke weeds; narrow or irregular strips should be left as pasture. Barley may be seeded in a rotation with red clover, alsike, redtop or timothy. Reed's canary grass is suggested for trial if portions of the area are flooded a part of the year.

(3) Because about 81.3% of the land is subject to soil erosion, there is need of a change in cropping practices if controlling practices have not already been put into effect. On gentle slopes of 3-8%, recommendations are for a medium rotation with corn, grain seeded, and hay. Generally, field strips are recommended. Contour strips are preferred with cultivated crops where soil washing is more serious. In smaller fields where slopes are irregular, buffer strips are suggested. With a short rotation on a gentle slope, terracing may be done; terracing should be done only upon the advice of experienced assistance.

Medium slopes require the above outlined practices with hay crops making up a higher percent total cropland. Contour strips are recommended.

Steep slopes now in cultivation are generally recommended to be seeded into permanent hay or pasture, with plowing only for this crop or for soil treatment. Rye is suggested for broadcast prior to last cultivation. Plowing on a contour is recommended; if these areas must be cropped, gentle slope recommendations are suggested.

For slopes of over 30-35%, light soil of low fertility, waste land or badly eroded areas, tree planting is suggested with recommendations included in farm woodlot conservation.

(4) In connection with general erosion control problems, fences may be rearranged so as to be on a contour, and pasture renovation is recommended in pasture areas. Where gullies have started, consideration should be given to proper land use in the gully drainage area. Sod hump dams and sod flumes are recommended; a plank or earth diversion dike may be used; brush and rock wing dams or willow plantings may be successful on stream bank cuttings; grass waterways of at least ten foot width, with uneven edges, are effective.

Teachers of vocational agriculture are recommended to stress the above outlined practices in their supervised practice program. Extension service is recommended to assist agriculture teachers, upon request, in laying strips on student farms.

Prior to culvert installation on a highway, where washing may result on low fields, the recommendation is that all parties concerned meet to discuss best methods of procedure.

We recommend to the county board of supervisors that Lafayette county be established as a soil conservation district through passage of a resolution by that body. (Note - Resolution was passed on May 7th at the county board session.)

Farm Tenancy

(1) Because the county ranks first in farm tenancy in Wisconsin the erosion control practices, soil fertility maintenance and farm credit problems become outstanding. Recommendations are that landlords and tenants, as well as all farm agencies, make more use of flexible lease forms. The committee recommends that the extension office contact the Department of Agricultural Economics, College of Agriculture, to secure assistance in conducting needed research on this tenancy problem. Further, recommendations are that the county land use committee chairman, with the county agent, name a sub-committee to assist in the organization and procedure for this research project. (Note - A survey is being made at present in one township used as a county sample. The survey is being conducted under the direction of the land use chairman, the county agent, a sub-committee, and the Department of Agricultural Economics.)

Dairy Improvement

(1) Because 38.4% of the county's farm income is derived from milk, quality milk would increase the profits from milk by farmers and factory operators. The committee recommends the quality milk program. (Note - The quality milk program was voted in by farmers and factory operators in April, 1941.)

(2) In order that more herdsmen may more efficiently and economically cull their herds and thereby raise butterfat averages, this committee recommends the owner-sampler method of milk testing be

introduced into the county. W.P.A. and N.Y.A. labor is requested for testing where possible and practical.

(3) Since disasterous experiences have resulted from so-called stock yard bulls, the recommendation is to the Wisconsin Legislature that laws be enacted to require a license for those who peddle such bulls. The law relative to Bang's test for transfer of animals (over six months of age) should be strictly enforced.

Soil Fertility

(1) Because soil tests show that about 74% of the tested samples require two tons or more of lime, 91% require phosphate and 64% require potash, the committee recommends the continuation of the W.P.A. soil testing and soil survey projects. The fertilizer test trial plot program should be continued to demonstrate the effectiveness of fertilizer.

(2) The continuation of the W.P.A. lime grinding program is recommended.

Weeds

(1) Since weed eradication is becoming a major problem, especially so with creeping jenny and Canada thistle, the committee recommends to the county board of supervisors that they consider an appropriation for sodium chlorate for chemical weed control; and it is suggested that farmers pay 50 or 60% of the cost for the chemical when purchase is made. A county-wide program should be considered with W.P.A., N.Y.A. and C.C.C. labor used when possible for chemical application.

(2) W.P.A. labor is suggested for roadside weed destruction; the town should finance a sprayer or spreader where such is used to destroy weeds on public property.

(3) The committee recommends township consideration of a weed control program whereby the town is divided into two or more districts; stamped cards could be sent to each farmer, with the weed law stated; the returned card which could be sent to the district weed commissioner could indicate whether or not noxious weeds are destroyed. The district commissioner would carry out duties as stated in the weed law.

(4) Alfalfa is recommended as a weed smother crop, particularly good for control of Canada thistle in cropland.

Farm Buildings

(1) Farm buildings comprise the major investment on many farms. Buildings are depreciating, in many cases, faster than repairs are made, due primarily to a lack of financing. The solution for this problem varies according to the size of the

farm, local markets, crops raised, the possibility of combining farms under one homestead, or the changing of crops or livestock enterprises. The committee's recommendation for the present is for farm owners and operators, prior to repair or rebuilding, to first use judgment on all factors, combined with the advice of agricultural engineers of our state college and other institutions.

(2) It is recommended that the state college do more research to discover the most economical methods of repairing and rebuilding on the farm.

Farm Credit

(1) Because it is difficult for youth to become established in farming and because financial help and farm management guidance is a farm credit agency contribution, the committee recommends all farm loan agencies to more generously advertise their programs in order that young people will acquaint themselves with these organizations.

(2) The Farm Security Administration should continue: (1) to make special effort to assist farmers in purchase of lime and fertilizer to standard rehabilitation loans; and; (2) to continue aiding farmers in the purchase of livestock, tractors, other farm machinery and necessary home equipment.

(3) All credit agencies continue to offer credit to farmers in this area. (Pages 40 and 41.)

(4) Enccuragement be given by farm groups to members of Congress in order that present rate of interest on Federal Land Bank and Land Bank Commissioner loans may be made permanent.

(5) Credit agencies cooperate with the land use planning committee in carrying out these recommendations.

Farm Labor and Public Welfare

(1) Because there are some people who do not understand the relationship of the public welfare department to the farm labor problem, all people should be invited to attend educational meetings pertaining to the food stamp program. Garden planning for the public assistance family is suggested.

(2) Closer cooperation between the local Farm Security Administration and the public welfare department is suggested.

(3) No public aid should be granted if local town officials indicate no effort has been made in a garden or canning project by the client.

(4) There is a need for a closer cooperation between the public welfare office in the county and farmers needing farm help.

(5) Local town or village officers may appoint someone to act as consultant, who is to forward information to the public welfare department relative to the eligibility of applicants for W.P.A. certification. Local officials may be better qualified to know these conditions.

(6) The public welfare office may send forms to each town chairman and village clerk to be filled in by him for an applicant prior to certification, to assist the public welfare supervisor in proper classification of the client.

(7) Because of the seriousness of obtaining farm labor, the committees in one section of the county believed the selective service program has been a definite factor. It was the recommendation that the draft board should be drawn from distributed communities in order that all areas of the county are equally represented on this local board. It was suggested at the county committee meeting that members of the selective service draft board serve for a five-month period, and that one new member replace a former member at the end of each five-month period. It was further suggested that these members be selected from representative parts of the county in so far as possible; and that each member of the county board of supervisors nominate one man from the area he represents and the members of the draft board be selected from this list. The above suggestion received the unanimous approval of the entire committee.

Farm Woodlot Conservation

(1) Because farm woodlots contribute considerable savings to owners in fuel, fence wood and construction material, and as woodlands have been depleted by grazing and over-cutting, it is recommended that these areas be maintained as forest areas through woodlot management, selective cutting practices, and new plantings.

(2) Steep lands should grow a crop of trees and all such slopes should be protected from grazing to encourage tree reproduction.

(3) Farmers having unpastured woodlands should take advantage of the provisions in the Wisconsin woodlot tax exemption law.

(4) Farmers should protect woodlots from fire and follow better selective cutting practices.

(5) Windbreak and shelterbelt planting demonstrations are to be conducted where requested, and farmers plant trees as windbreaks and shelterbelts in areas where justifiable.

(6) Trees should be planted along stream banks and low land areas; if not conveniently drained, should be left as game reserves.

(7) Schools may cooperate in more tree planting projects.

(8) The Ranger Mac radio program of State Radio Station WHA is an effective educational program on conservation. More schools are encouraged to listen in.

Schools and Agricultural Agencies

(1) Because of much needed woodlot and wild game conservation, schools should teach more conservation and an Arbor Day program should be formulated in each district.

(2) The state superintendent of schools should encourage all school districts to electrify their school buildings.

(3) Agriculture teachers, with agricultural agencies of the county, should meet regularly with the agent at a date agreed upon to discuss agricultural problems of the county. Agricultural problems should closely coincide, and they should strive for the same general goals.

(4) More youth should be encouraged to exhibit at county and state fairs.

Beautification of Grounds

(1) More stress might be placed on factory, church, school and home yard beautification by the various agricultural agencies.

(2) Communities surrounding rural cemeteries should give attention to beautifying these lots.

(3) More trees may be planted within the limits of the permanent highway property, and W.P.A. labor should be considered a source of labor for this project.

Health

(1) Because of dental and physical defects of youth, caused from lack of proper food, an intensive educational program should be carried on in the school by the county nurse, with teacher cooperation, to show need for using dairy products and home produced vegetables. School hot lunches are encouraged.

(2) The grub stake plan should receive study by the land use chairman, county agent, county nurse, public welfare supervisor and their sub-committee, to determine the practicability of such a program in this county.

(3) The cooperation of all agencies concerned is suggested to assist in an educational program relative to the necessity of pre-school child health problems. Credit agencies may be of assistance where the need arises.

Agricultural Conservation Program

(1) Because of inadequate corn acreages provided in the Agricultural Conservation Program, consideration should be given those farms using corn for silage; allotments should be granted providing a cover crop is seeded that same fall after the corn has been removed for silage. This crop should be classified as general depleting and granted on a percentage basis, with a maximum limit of five acres. The crop must be used for silage.

(2) Dairy products should be declared as a basic commodity and a national program should be devised for dairy products.

(3) Credit should be given toward soil building payments where phosphate and potash fertilizer are applied to a grain crop when such crop is used as a nurse crop for hay.

(4) Any county having an average yield of three bushels per acre of farm land should be placed in the commercial corn area.

(5) Pork, eggs and other farm products not under the A.A.A. program should be placed there to assist market stabilization.

(6) Farms in the A.A.A. program should be given more credit for soil conserving practices such as tree planting, strip cropping, buffer strips, earth fill dams and the like.

(7) Encouragement is given to the continuation of the equalization of corn allotments compared with four other farms.

(8) Corn sealing should be under a one-year agreement loaning privilege.

(9) Farmers who use horses and mules to the extent of at least one adult animal for each twenty-five acres of cropland should be allowed a two-acre increase in their present allotments of soil depleting crops per horse or mule kept on their farms, and two animals under two years of age should be considered equivalent to one adult.

(10) It is recommended that the agricultural conservation and parity payments be increased in order that farmers receive their fair share of the national defense funds; and, (1) increase the soil building allowance for pasture renovation; (2) increase the soil building allowance for the use of red clover; and, (3) increase the soil building allowance for the use of potash (this is now lower than phosphate); include in the conservation materials program (1) legume and grass seed; and (2) sodium chlorate to be used in the control of Canada thistle and creeping jenny. Grant county and community committees more leeway in the establishment of allotments for individual farms; increase the loan value of corn if quotas are voted in; make

available more educational moving pictures (sound) for use in the committee and farmers' meetings; farmer committees be appointed to control farm imports. The administration of the program should be kept in the hands of the dirt farmers, with a closer tie-up between all federal agencies.

The land use committee approves the principles of the A.A.A. program and recommends its continuance.

General

(1) Because of the apparent tax problem, the future study of taxation should be made, with the county agent arranging meetings with land use groups for drawing up possible solutions, particularly as it affects improvements and real estate property in urban areas.

(2) It is believed that legislation is the most effective where proposed legislation is backed by organization. All farmers should be urged to belong to at least one national farm organization.

(3) Opposition is given to the diversion of highway funds.

(4) Home economics teachers and the F.S.A. supervisor within their districts and state extension workers should be made more available for demonstrations.

(5) Where vacancies occur, preference should be given to youth rather than married women whose husbands are employed.

(6) All farm machinery manufacturers should make their discs so that they may be pulled out of the soil when crossing a ditch.

(7) All agricultural agencies should place particular emphasis on economical swine production.

(8) The county land use planning committee should meet early to discuss major agricultural problems of the county; the Agricultural Committee may use their suggestions in drawing up the annual agricultural extension program.

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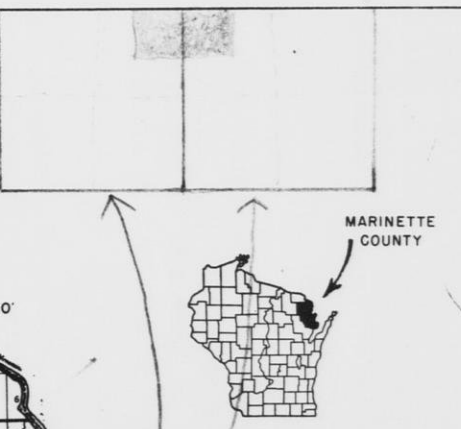
LAND USE CLASSIFICATION

MARINETTE COUNTY, WISCONSIN



CLASS-A

Areas now in farms—not suited for farming.

CLASS-B

Areas not in farms-should not be used for farming.

- B1. *Goodman timber area*
- B2. *Coleman Lake recreational area*
- B3. *Northern forest area*
- B4. *Central sand area*
- B5. *Peshtigo River recreational area*
- B6. *Silver Cliff area*
- B7. *Athelstane prison camp area*
- B8. *High Falls, Thunder Mountain area*
- B9. *Lake Nocquebay area*
- B10. *Nocquebay Forest area*
- B11. *Island Lake area*
- B12. *White Rapids Forest area*
- B13. *Beecher-Amberg Forest area*
- B14. *Pembine-Niagara Forestry area*
- B15. *South Peshtigo-Cedar School area*
- B16. *Green Bay recreational area*
- B17. *Wausaukee Club recreational area*
- B18. *Chalk Hills-White Rapids recreational area*

CLASS-C

Areas not in farms-questionable for farming.

- C1. *Light sandy area*
- C2. *Stony area*
- C3. *Lowland area*
- C4. *Silver Cliff area*

CLASS-D

Areas not in farms-suitable for farming.

- D1. *Goodman area*
- D2. *Niagara area*
- D3. *Dunbar area*
- D4. *White Rapids area*
- D5. *Wausaukee-Middle Inlet area*
- D6. *McAllister area*
- D7. *Kirby Hills-Reeds Hill area*
- D8. *Banaszak area*

CLASS-E

Areas now in farms-should remain in farms.

ROAD TYPES

- PRIMITIVE ROAD
- TOWN ROAD
- COUNTY TRUNK HIGHWAY
- STATE AND FEDERAL HIGHWAY

SCALE: MILES

2 0 2 4

BASE MAP BY MAINE STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

SHEET NO. 1 OF 2

U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

LAND USE PLANNING REPORT
MARINETTE COUNTY, WISCONSIN
1939

ORGANIZATION:

The Land Use Planning project was started in Marinette County in February, 1939, when the Agricultural Committee of the Marinette County Board of Supervisors met and appointed a county advisory land use planning committee, on which were appointed representatives of the various agencies, groups, organizations, and associations of the county. The county committee appointed are as follows:

Henry Strehlau, Peshtigo, Wisconsin	Chr. Agricultural Committee
Charles Wunderlich, Beaver, Wisconsin	Member, Agricultural Comm.
Earl Patraw, Goodman, Wisconsin	Member, Agricultural Comm.
Jens P. Jensen, Athelstane, Wisconsin	Member, Agricultural Comm.
Christine Christensen, Marinette, Wis.	Member, A gricultural Comm.
Louis E. Ness, Crivitz, Wisconsin	Land and Conservation Comm.
Clarence E. Rowe, Porterfield, Wis.	Agricultural Conservation
James Hovind, Wausaukee, Wisconsin	Area Forester
S. T. French, Marinette, Wisconsin	Fed. Farm Loan Assn.
Neal Peck, Peshtigo, Wisconsin	Farm Organization
Roy Rabe, Peshtigo, Wis.	County Bankers' Assn.
Richard Deerwester, Crivitz, Wis.	County Sportsmen's Assn.
Mrs. John Ramsay, Peshtigo, Wis.	Homemakers' Clubs
Mrs. Herman Giese, Coleman, Wisconsin	County P.T.A.
John Nettleton, Marinette, Wisconsin	Farm Security Admn.
Fred Smith, Dunbar, Wisconsin	Farmer
Robert M. Patton, McAllister, Wisconsin	Farmer
Fred B. Hoffman, Pound, Wisconsin	Farmer
Amos Grundahl, Wausaukee, Wisconsin	Smith-Hughes
Wayne Nettleton, Marinette, Wisconsin	Ass't. County Agent
Charles B. Drewry, Marinette, Wisconsin	County Agricultural Agent,Sec.

The County Committee, at their organization meeting in March, decided to divide the county into six areas because of size and similarity of agricultural and land use conditions.

One meeting was held in each area with as many of the county committee attending as possible, to acquaint the people of the county with the land use project and to get their suggestions and recommendations as well as their opinions on determining areas. These meetings and committees that assisted in mapping are as follows:

Pembine	William Dixon
	Max Groy
	Oscar Reed
	Alex Cretton

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Amberg	Lewis S. Holmes
	Dewey Bayless
	William Petryk
	James Flaws, Jr.
Crivitz	Charles R. Gorman
	Roberto W. Fairchild
	Joe Kahles
Schneider's Grove.....	
Beaver	August Neshek
	Phillips Augustine
	Claude Kelsey
	Aristide Gibeault
Peshtigo	Oscar Dahl
	Ralph Staudenmaier
	Fred Sweningson
Walsh	Clarence E. Rowe
	Finnan D. Maloney
	Herman Behrens

All meetings were well attended with a good deal of interest and discussion taking place. A ll recommendations were written into the community reports and were later discussed by the county committee. Township plats on a scale of two inches to the mile were colored by the county agent according to the best knowledge of the committees. Later these township plats were transposed to a county map one inch to the mile, and from this map, together with all other information, the county committee determined the areas according to work outline No. 1. The County Committee held five meetings with the final meeting in August to complete this report.

MARINETTE COUNTY - IT'S LOCATION, PEOPLE, DEVELOPMENT AND SOILS

Marinette County, located in northeastern Wisconsin, has an area of 905,360 acres and is the third largest county in the state. The population of the county, according to the 1930 census, is 33,530 people with the largest concentration in the city of Marinette, the county seat, of 13,734 people. The county population shows a steady increase until 1900 and since then has remained fairly constant. The rural population of the county is 14,868 and the balance of the people live in villages and cities. In the past thirty years the population has decreased in the cities and villages and increased in the rural areas, due to development of farms and reduction of manufacturing in the cities.

Marinette County was originally covered with a very productive growth of timber, most of which was white and Norway pine, with some northern hardwoods and swamp timber. Because of the location of Marinette on the Menominee River and Green Bay, it logically became the scene of an extensive lumbering industry. From 1880 to 1900

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Marinette and Peshtigo were famed for the sawmills and lumber industries, but since that date there has been a gradual decline until today there are no sawmills left in Marinette or Peshtigo, but in their place are paper mills and box factories employing only a fraction of the men that the old sawmills employed. One sawmill remains in the county at Goodman, which is now operating on a selective logging basis.

As a natural sequence the plow followed the ax and as lands were cleared of timber the farmers followed to clear the lands. Early settlements were made in the south and eastern part of the county, and later spread to the north and westward. Land clearing was slow and a tedious job among the pine stumps, but as long as there was a job in a nearby mill or forest, the early farmer made a living and cleared up his farm. During the decade of 1910 to 1920 the biggest influx of settlers was made. This was the period when land prices in Iowa and Illinois soared to high levels, and settlement was prompted by aggressive land colonization companies. It was also a period of high prices for farm products. U. S. figures of census, regarding number of farms are as follows:

YEAR	NO. OF FARMS	SIZE OF FARMS	PERCENT OF LAND IN FARMS
1880	293	105 Acres	3.4
1890	614	95 "	6.5
1900	1300	97.1 "	13.9
1910	1919	114 "	24.2
1920	2531	108.9 "	30.5
1930	2307	112.9 "	28.8

According to our 1939 Agricultural Conservation listing sheets, there are now 2758 farms in the county, which comprise about 32 percent of the total land area of the county.

Following the decline of farm prices after 1920 together with high land clearing costs, many families were forced to abandon their farms and return to their former home. However, in later years, more came back and with increased clearings the total crop land in the county has increased. However, demand for cut-over lands declined and as the result land owners quit paying taxes and large acreages of land reverted to the county through tax delinquency. Marinette County has taken tax deed to over 350,000 acres of land in the past 15 years of which 200,000 acres have been entered under the State Forest Crop Law and in established county forests. A total of 85,000 acres are now scattered throughout the county outside of county forests and the balance has been sold by the county to new land owners.

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Soils in Marinette County vary widely, from heavy loams in the south and northwest to a very light sandy soil through the central part of the county. The predominating soil is sandy loam varying in productivity depending upon subsoil and water holding capacity. This area extends through the central and northern portions of the county. These soils are fairly well adapted to northern Wisconsin general dairy farming, provided soil fertility is maintained or improved.

The loam soils are in the southern third of the county and are the most producing of any soils. About 75 percent of the soils will grow alfalfa or sweet clover, but the addition of phosphate fertilizers is usually a paying proposition. This is the oldest settled area of the county, farms have the high cleared acreage per farm, from 40 to 50 acres, and all are general dairy farms with potatoes as the main cash crop.

Marinette County is faced with a distinct land and local government problem because of the large area of tax delinquent lands which comprise one-fourth of the area of the county. In addition, new farming areas are facing adjustments due to changing conditions, and the older areas are faced with depletion of soil fertility, lower yields, and need for crop adjustments.

These problems have been carefully considered and discussed by the community and county committees and are discussed according to the areas where the problems are present.

AREAS IN FARMS NOT SUITED TO ARABLE FARMING

CLASS A. AREA:

Marinette County, through it's active land committee of the county board of supervisors, has in the past five years carried out a carefully planned program of purchasing isolated farms on cut-over lands. In all cases the lands purchased have been those which represent the most pressing cases of isolation, high governmental costs and low farm income. In addition the county has purchased and exchanged scattered blocks of undeveloped land to consolidate with the present county forests to prevent future sale and unwise agricultural development. Accordingly, there no longer remains in the county any areas of land now in farms, which should not be in farms. However, there are scattered isolated farms in the forest area which should be purchased either through county forest funds or through the Federal Settler Relocation Project. Practically all of these farms have very low incomes, due to small acreage of cultivated lands, poor soil and long distances from markets. There are usually high governmental costs here because of long mileages of roads to maintain in summer and to plow

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snow in the winter. In many cases there is also the necessity of either providing a school or transportation for children. Most of the farmers involved realize their difficulties and are anxious to move to more desirable locations where they can support themselves. With but a few exceptions, the settlers on these lands have already requested that their lands be purchased.

When such lands are purchased they will be included in the present county forests and if necessary, be replanted to provide a future forest growth. As most of these lands are of low fertility they can only be replanted to jack and Norway pine.

AREAS NOT NOW IN FARMS AND WHICH SHOULD NOT BE USED FOR FARMS

CLASS B AREA:

A study of the Class B area in Marinette County will show that the greater part of this area is in the northern and western part of the county; lands which have been most recently cut over for timber, and which are remote as far as marketing facilities are concerned; that is, absence of good roads and railroads. The soils are predominately sandy, although in the western and northern portions some good loam soils are prevalent in small areas. As far as stoniness is concerned the land varies all the way from no stoniness to a high degree of stoniness with distinct rock outcroppings in other portions. This land originally has all grown a good crop of timber, which with but one exception, has been harvested and is now in all degrees of forest regeneration. In some areas successive forest fires has reduced most of seed trees and young growth. In these areas future plantings will have to be made.

The entire forestry area is drained through the Menominee or Peshtigo river basins on which both rivers dams are located for the generation of electric power. Future development and conservation of forest growth in here will be a distinct help to the future generation of power. Scattered throughout the area, primarily as the result of logging operations, are isolated farmers, some of whom made some attempt towards farming and others have been content to do outside work to make a living. Road and school facilities are poor due to the number of settlers and the expense of providing governmental services. In most of the forestry areas, the high taxes, together with the impossibilities of land sales has caused a high rate of tax delinquency. In other words, land owners no longer see an opportunity to get their money out of the land and have ceased to pay taxes. Accordingly, as increasing numbers of land descriptions became delinquent, the county, in order to protect itself, has taken tax deeds on these properties and later entered them under the state forest crop law. As a result of this policy there are in Marinette County today approximately 200,000 acres of county-owned land entered under the Forest Crop Law. These entries are fairly well distributed over most of the areas designated as Class B.

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Marinette County has also felt the need and necessity of reducing high governmental costs for isolated settlers and since 1936 the county has been working on a plan of purchase through the use of forest crop funds in forest crop areas--the lands of settlers that are most isolated and present the highest governmental cost. The Taylor Rapids settlement in Town 35 North, Range 17 East was the first large purchase in which an entire community was bought out, a school district dissolved and other governmental costs reduced accordingly.

In the fall of 1938 the Settler relocation project of the Soil Conservation Service optioned a number of farms south and west of Dunbar on which, no doubt, purchase will be completed within a short time. The county has also been interested in buying other lands to block with their holdings where it is possible.

The people of Marinette County are fully in accord with the Isolated Settler Relocation Project and farmers present at all of the meetings recommended a continuation of the policy. The question of retaining the lands of isolated settlers for forestry purposes as far as the state is concerned will be governed by several important policies which already have been put in force by the county. When land is once entered under the Forest Crop Law a contract with the state is entered into for a fifty-year term, or until a forest is grown and this definitely places the land in the forestry class.

In addition, a large part of the forest area was zoned in 1934 to prohibit future agricultural development and settlement. As a result of the community meetings it is interesting to note that increases were recommended in a number of towns by community committees. In no case was there a definite request to change the boundary lines of present zoned areas to allow some of the land to be used for agricultural purposes. As increasing work will be done in the future in these forestry lands, and as increasing tree growth makes the land more valuable there will be a less demand in the future for the land to be returned to agricultural purposes, than there has been in the past.

In addition to the forest development the county has also several areas that are highly developed for recreational purposes. These are large clubs or resorts. Several have large holdings as far as land is concerned and practically all of them have high investments in buildings and improvements. As these clubs continue to improve and to enlarge their properties for recreational purposes, any likelihood of their developing a part of their land for agricultural purposes will be greatly reduced.

The people of Marinette County every year are becoming more publicly minded as far as conservation and preservation of wild life is concerned. There is in the county, a very active sportsmen's organization which is doing a great work in formulating people's opinions

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towards the preservation of wild life and wild life areas throughout the county. To better understand the picture of Marinette County forest areas, they have been subdivided into several groups or classes according to present and future uses.

B-1 GOODMAN TIMBER AREA:

This area comprises the only large area of commercial timber left in the county. It is owned by the Goodman Lumber Company and is adjacent to their mill on the north at Goodman. This area is well covered with an excellent growth of northern hardwood and hemlock which were selectively logged about 10 years ago, and which is being retained by the Goodman Lumber Company to be logged successively as growth and maturity of the forest demands. Soil is a fertile loam well adapted for the growing of hardwood and in an area which is rolling and rather easy to log. If the present plans of the Goodman Lumber Company materialize this area will continue as a potential supply of logs for the maintenance of the mill at Goodman.

B-2 COLEMAN LAKE RECREATIONAL AREA:

Coleman Lake is practically all owned by the Coleman Lake Club, an old organization of sportsmen who have developed on their property a large resort, together with numerous cabins and summer homes for their members. They also have a fish hatchery in the northern part of their property, hatching the fish for stocking the streams within their property.

The taxes paid by this recreation property is a distinct help to the town in which it is located. Because of the high values that have already been placed on this property, there is very little question whether any other use besides forestry and recreation will ever be practiced. The club has been active in improving their lands by planting trees to increase good timber growth; likewise they have been very careful about the cutting of any timber or allowing forest fires to burn within their properties. Practically all of this land has sandy soil, parts of which are very rough and rolling.

B-3 NORTHERN FOREST AREA:

The northern forest area is primarily covered with a fair to good second growth of small hardwoods and pine; soil is sandy to fairly good loam although rock and rock outcroppings are rather prevalent throughout the area. It is practically unfit for farming, although one or two small farms are located on the boundary. Little of the land is open and very little will be needed to be planted providing forest fires do not destroy the present growth. Some of the present growth is of such size that within a few years pulpwood, boxwood, excelsior wood and the like can be cut. Most of this area is inaccessivle to good roads. A large part of it is county owned land and is now entered under the State Forest Crop Law.

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B-4 CENTRAL SAND AREA:

This large area extends through practically the entire length of the central part of the county from the southern boundary of the northern area just described, to the county line in the southern part of the county. Generally the area is composed of sandy soil, most of which is too poor to support agriculture successfully. The region is remote from good roads and markets. Numerous attempts have been made to farm parts of it, but as the original soil fertility was exhausted the farms were abandoned and today there remain very few farms, probably less than two percent of the area is now in farms. None of the farms can be considered economical units of operation, nor do they supply sufficient income to maintain the families in livable conditions. Parts of the central sand area have been burnt so badly that tree planting will be necessary. Planting was started here several years ago by the Dunbar C.C.C. camp and this spring with W.P.A. crew. This year Marinette County will plant in this areapractically three million trees.

B-5 PESHTIGO RIVER RECREATIONAL AREA:

The Peshtigo River has for a long time, enjoyed a reputation as being one of the famous trout streams of the United States. In order to perpetuate the value of the stream for recreation use the county has been active in promoting a recreational park area along the river, primarily in the area which is owned by the county. In Town 37N, Range 17 E the county owns all the river frontage with the exception of about one-half a mile. It has already developed Strong Falls, Goodman Park zand McClintock Park.

The Goodman Park was developed by the Dunbar C.C.C. Camp and on it's location is a large log Recreational building, together with another smaller lodge, a caretakers house, fire places and all other facilities for handling large groups of people. It is open to the public at all times at no charge.

The McClintock Park area has located on it, numerous small cottages of the open shelter type and also has facilities of fire places, tables, toilets, etc. Further down on the Peshtigo are located commercial resorts with the greatest intensification in the High Falls area which will be treated as a separate area.

B-6 SILVER CLIFF AREA:

This area differs from the central sand area in that the soil is predominately loam and the growth is mostly hardwood instead of pine. The northern portion has been burned so often that the present growth is small and parts of it have been replanted to spruce. The southern portion is very well covered with an excellent stand of hardwood, some of which is of sufficient size to be ready to cut. This vicinity was the scene of a large cattle ranch operation which was unsuccessful after a year or two of operation. The land will support and grow excellent grass, but the problem of keeping the brush out and cleared for ranching purposes is prohibitive.

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B-7 ATHELSTANE PRISON CAMP AREA:

This smaller area consists of about 3880 acres of state-owned land on which is located a state prison camp. The men in the camp devote their full time to developing forests on this land. They are also available for fighting fires in the vicinity in case of severe danger. The soil here is primarily sand with a fair cover of jack and Norway pine, although some planting has been done in the open areas. The entire 3880 acres is established as a state game refuge. A state transplant nursery is maintained by the camp with a capacity of about 500,000 trees, most of which will be available for planting in the county.

B-8 HIGH FALLS, THUNDER MOUNTAIN AREA:

In this area is located two power dams, Caldron Falls and High Falls, both of which have large bodies of water that provide a recreational base for a large number of people. A county park is located at Twin Falls above High Falls and there are numerous other commercial resorts on the reservoirs and in the immediate territory adjacent to other lakes and streams.

Within this area is also located Thunder Mountain, a scenic spot which is one of the highest points in the state. The Thunder Mountain Ranch, a privately-owned recreational enterprise is located at the foot of Thunder Mountain. The soil here is primarily sand and although there are a few farms, most of the owners are dependent upon resorts and their summer guests for additional income to provide a livelihood.

B-9 LAKE NOCQUEBAY AREA:

Lake Nocquebay with Lake Mary and Lake Julia are fairly well developed resorts, summer homes, and cabins. These lakes have an excellent reputation for being good fishing lakes and the resort owners, although some have farms, get their largest share of their income from recreational services which they offer to the public.

B-10 NOCQUEBAY FOREST AREA:

The Nocquebay Forest is adjacent to Lake Nocquebay and fulfills a good purpose of a forest adjacent to a well developed recreational area. Parts of it are rather swampy, but several spots support good swamp timber. The balance shows an excellent growth of aspen, pine and some hardwoods. Soil is primarily loam. There are only one or two farms in this entire forest.

B-11 ISLAND LAKE AREA:

Island Lake is primarily the property of Dr. Rich who is developing Island Lake and the surrounding territory as a summer resort mainly for himself and his guests. The land is very rough; the soil a sandy loam and with considerable stone. There are no farms in the area and practically all lands are owned by Dr. Rich, except for a few descriptions now owned by the county.

B-12 WHITE RAPIDS FOREST AREA:

The White Rapids Forest consists of almost all county owned forest crop lands. They are now covered with a fair to good second growth of hardwoods and pine. Some of the soil is sandy and the balance is fair to good loam with some rock outcroppings. The area is remotely located. This isolation together with the rough topography and poor soil indicates that it will probably never be used for agricultural purposes.

B-13 BEECHER-AMBERG FOREST AREA:

This area is mainly forest land most of which is now owned by the county, and most is also entered under the forest crop law. Soil is fair to good loam and supports a good second growth of hardwood with some pine and hemlock scattered throughout. Some of the timber is of sufficient size now to warrant improvement cutting in the stands. With a W.P.A. project this last year considerable work has been done followed by some spot planting of spruce in the best areas. Because of its fairly close proximity to settled areas, the land here is easily worked and the by-products in the future will have an excellent market. There are many rock outcroppings and swamps which will prevent any future agricultural development. Less than one percent of the land is in farms.

B-14 PEMBINE-NIAGARA FORESTRY AREA:

This northern-most area is primarily county forest land, scattered over several survey townships. It varies in topography and soils. The western part is so rough and rocky that tree growth is the only use that the land can ever be put to. The eastern part is so sandy that it will not support agriculture, though at one time numerous farms started to operate but later all were abandoned. Tree growth varies from jack pine, Norway and white pine to hardwoods in the western part where soils are somewhat heavier. Less than one percent of the area is in farm lands. Because of soil topography and inaccessibility, most of it will never be used for agricultural purposes. In the eastern part of this area at Kremlin a roofing company has recently started mining operations for trap rock and has now let contracts for constructing a $260,000 plan which when it gets into operation, will be a distinct help in providing work for residents in the northern part of the county

B- 15 SOUTH PESHTIGO-CEDAR SCHOOL AREA:

This is a small area on the edge of Green Bay which is flat and poorly drained. The soil is primarily muck, supports a fair to good stand of wood such as aspen, maple, but will never support a good forest growth because of high water table and poor soil. Agricultural development possibilities are very poor with only a farm or two in the area and the owners of these are not making a decent living.

B-16 GREEN BAY RECREATIONAL AREA:

This area, south of Marinette along Green Bay, is highly developed for recreational purposes with summer homes, cabins, resorts and a golf course. The close proximity to Marinette makes it valuable for recreational purposes and will continue to be used as such.

B-17 WAUSAUKEE CLUB RECREATIONAL AREA:

The Wausaukee Club has made extensive improvements on their properties of summer homes, hotel resort, golf course, etc. The club also owns some property on several rivers for trout fishing. It provides seasonal employment to local people as well as being an important factor in local tax assessments.

B-18 CHALK HILLS-WHITE RAPIDS RECREATIONAL AREA:

This area is adjacent to the White Rapids and Chalk Hills power dams on the Menominee River. Development of land for recreational purposes has been included in the power company's plans and some extensive work has been done in building roads, trails and a few cabins. The Four Seasons Club, a private club located on the north end of the Chalk Hills Reservoir has extensive buildings, a golf course and many other recreational facilities and improvements.

In recommending the developing of as large an area to forestry, recreation and allied industries the Marinette County Land Use Committee realizes that the future of these lands is uncertain, but as long as they cannot be used, or should not be used for agricultural development, the only other possible use is that of forestry, recreation and the development of water power.

Therefore, we feel that it is important that there be a proper understanding by all citizens in Marinette County towards forestry, conservation, recreation and fire prevention as the only salvation for this part of Marinette County. Increased production of other products at some time in the future may mean the introduction of new industries in the county, but for the time being or for the next twenty or thirty years, the production of wood products in the county will tend to keep in operation the sawmill located at Goodman, the Niagara Paper mills located at Niagara, Marinette and Peshtigo, the box factory located at Marinette, the Excelsior Factory located at Marinette and the present local saw outfits, shingle mills, etc.

The future supply of wood products for those industries means that the cities and villages of Marinette County will benefit along with the people out in the county. As far as the development and introduction of other industries are concerned, this will depend primarily upon timber growth, quantities and future market trends, although when

there becomes a large enough supply of raw materials to attract industries there is no question but that industries will take advantage of the opportunity of large supplies of readily available wood products of good quality.

The continued development of the county forests will provide an opportunity for some employment in tree planting, timber stand improvement, work on selective logging and other types of forestry work such as construction of fire lanes, roads, etc. These, for the time being, will not be large but as the forests increase in productivity there will be an increasing amount of employment available to the people adjacent to the timber.

The future continuation of the Civilian Conservation Corps, providing they continue in promoting forestry work as they have done in the past, will be a great help towards the development of forestry and recreation within Marinette County.

The W.P.A. program will also be of aid in a smaller way on specific jobs such as tree planting, timber stand improvement work and the like.

AREAS NOW IN FARMS AND WHICH ARE QUESTIONABLY SUITED FOR ARABLE FARMING

C-1 LIGHT SANDY AREA:

Scattered throughout Marinette County, but following fairly closely the light sandy soils, are cut-over lands which are questionable for use as farm lands. These light sandy areas, C-1 on the map, have never been high in soil fertility, and after the original humus was taken from the soil through cropping, the water holding capacity was reduced accordingly. With a combination of low fertility and low moisture holding capacity, the farmers who continued to crop these lands extensively simply had to quit farming or else find some other source of income.

These marginal sandy lands were cleared and farms started usually because land clearing was easy, quick and inexpensive. Under these conditions it did not take long for a man to have a sufficient acreage under cultivation to make a farm. However, in the process of land clearing, the first cleared lands were so heavily cropped to soil depleting crops to provide an income for the farm family, that the lands were worn out by the time the entire farm was cleared.

In practically all these areas at some time or other, large scale potato farms were started. The first crops were usually good and if prices were fair some profits were made, but as successive crops were planted, yields were reduced because of low fertility and many failures resulted.

Crop acreage per farm varies on the average of ten to twenty-five acres per farm by towns. However, in each of the various towns some of the farms are large having a hundred or more crop acres. The majority of farms that are well managed seem to return sufficient income to afford a good income for a farm family. The application of lime to correct soil acidity and the application of super-phosphate to establish good stands of alfalfa and clover are absolutely necessary on these marginal lands. Dairy farming with at least 60 percent of the crop land in legume hay and pasture and with at least 100 acres of crop land under cultivation are recommended for self-supporting family farms in these areas.

C-2 STONY AREA:

Besides the sand areas, there are several large areas with rock outcroppings that tend to classify them as marginal. These are shown on the map as C-2. These lands are most prevalent in the towns of Amberg and Pembine. Soil here is usually a good sandy loam, but the large amount of field stone and rock outcroppings makes the cultivation of farm lands a very difficult problem. In addition, farms are usually some distance apart, fields are small and very irregular, and land clearing exceptionally costly.

Crop acres per farm averages less than 20 acres per farm and unless the farmer can get outside employment, farm income is very low. The quarries in the vicinity of Amberg provide employment to a number of farmers in that vicinity as well as the paper mill at Niagara. A few farmers have intensified their operations by growing raspberries and strawberries and if these can be sold to good advantage, a fair farm income can be maintained. Several years ago, poultry was extensively tried to increase farm income, but lack of a good market for poultry products together with high feed cost discouraged poultry raising as a specialty.

Due to the fact that land clearing is expensive and in many places cannot be done at all due to rock outcroppings, increasing crop lands to make an economical farm unit is almost an impossibility. Therefore, unless outside employment can be secured, the farmers and settlers in this region must depend on relief or W.P.A. to provide much of their income.

C-3 LOWLAND AREA

Lying between Marinette and Peshtigo and extending north and south is a combination of lowland muck, sand and some loam soils, which are marginal lands most of the time. Lands in this area vary from poorly drained marshes that can only be used for pasture in dry seasons, to sand ridges that are too light for any possible farming purpose. About one-fourth of the area was drained about twenty-five

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years ago by an open ditch drainage system and parts of this area are well developed for dairy and truck farms. However, wet springs tend to seriously retard planting in the spring, and early frosts in the fall are always a problem.

The better sandy loam soils and well drained mucks are well adapted for strawberry growing and in the past few years a big increase in acreage has resulted. These strawberries come into the markets late and since a cooperative shipping association was organized several years ago, the market for strawberries has been good because shipments are made to large metropolitan centers either by car lot or truck shipments. Strawberry acreage can be increased provided the growers produce only good quality strawberries. Thus far the shipping association had no trouble in selling strawberries at a good price provided they can deliver in car lot quantities.

Most of the farms in this territory are dairy farms and being close to Peshtigo and Marinette, some of the farmers sell their milk direct on a city milk route while others sell direct to the city dairies thus realizing more for their product. The introduction and growing of canary grass on the low lands has been a distinct help in getting these lands into profitable crops. Truck crops are also grown, and possibly could be expanded if an outside market could be developed.

About one-third of the area is in farms, with an average of about thirty acres of cropland per farm. Some additional croplands can be added to individual farms but there is not much opportunity for increasing the number of farms. Because of nearness to Marinette and Peshtigo the opportunity to secure additional employment is the best in the county.

Because of favorable moisture conditions for tree growth, control of fires, some remarkable second growth of pines and softwood have been made in the vicinity of the Peshtigo River. In the course of a few years this forest growth will provide revenue and employment for the farmers in the winter. Many farmers can market their wood products in Marinette or Peshtigo at the Paper Mills, Box Factories, etc. If fires can be controlled practically all lands not now in farms will grow a good second growth of pines and softwoods and this should be encouraged by land owners whenever possible.

C-4 SILVER CLIFF AREA:

Silver Cliff is remote from markets and is an expensive region for local government to service with roads, schools, relief and public health services. Farms have a very small amount of crop land and soil ranges from light sand to loam with rather rough topography. Unless additional outside work can be secured the most of these farmers will be dependent upon governmental aid for some time in the future.

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AREAS NOT NOW IN FARMS BUT WHICH ARE SUITABLE FOR DEVELOPMENT INTO PART-TIME OR FULL-TIME FARMS

CLASS "D" AREA

Scattered throughout Marinette County are areas of cut-over land on which farms are being developed. These farms are now in all stages of development, from the new settler to highly developed dairy farms. However, adjoining these farms are cut-over lands, most of which are suitable for some type of agricultural development, and which, no doubt, will be developed in the future. These areas are well serviced with roads and schools and governmental costs are not excessive. Such undeveloped lands, in the opinion of the county committee, offer good possibilities for future agricultural development in Marinette County. As these areas vary rather widely, each will be discussed separately.

D-1 GOODMAN AREA:

This area joins the lumber mill at Goodman and is distinctly a part-time type of farming. This mill is on a selective logging basis and offers year round employment to those farmers who can work part-time, or to their sons who can work full time and assist in maintaining the household. Soil is an excellent sandy loam but inclined to be too stony in small areas to make land clearing feasible. Farms are usually small with about an average of 15 acres per farm of cropland. These farms are gradually being increased in size by clearing more cut-over lands and evidently should be independent farming units. For the next fifteen or twenty-five years, it is expected that most of the farmers will be dependent upon the lumber mill for part-time employment.

D-2 NIAGARA AREA :

This area presents the two extremes of agricultural development. Three or four sections along the main highways and near Niagara have very well developed dairy farms and joining are farms in all stages of development. Nearness to Niagara and Iron Mountain provides a good market for milk and other farm products, and also a source of employment to those farmers who are just starting. Farms average about 30 acres of cropland, and soil ranges from sandy loam to loam. Most of the farms can raise alfalfa and sweet clover without liming. Dairy farming is well established with several good herds which provide a source of well bred cattle for the community. Some milk is sold for fluid milk to the Iron Mountain market which provides additional income. A few farmers have well developed truck farms, but future developments can only be made as markets develop.

D-3 DUNBAR AREA:

This area might possibly be questioned to be included in this classification, but most of the farms in the area has sufficient cleared land to be self-supporting, and in addition are near enough to

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markets and have good road and school facilities. Soils range from light sandy loam to loam, but most of the land is fairly level. A few rock-out croppings are present but are not large enough to be serious. Dairy farming is the principal source of income with potatoes the major cash crop. Because of the nature of the soil and past cropping history, serious consideration must be given to building up soil fertility through liming and fertilization, and also by improving the humus content by plowing under green manuring crops.

D-4 WHITE RAPIDS AREA

This area has a fertile loam soil and is well adapted to general dairy or stock farming. There are a few rock outcrops in the area and some field stone but not enough to hinder development. Within the last twenty years considerable progress in settlement has been made; and with present improved methods of land clearing, namely the caterpillar bulldozer, additional lands can be cleared at a low cost. The White Rapids Community is well serviced with roads and schools. Future development will be encouraged especially if the Chalk Hills White Rapids recreational area is developed, since this will provide a market for farm produce during the summer season.

A number of farmers had good success in raising sheep. The soil promotes a good pasture growth and sheep have been effective as good brush killers. As farms are cleared of stumps increasing numbers of farmers will become independent and farming will continue to expand.

D-5 WAUSAUKEE-MIDDLE INLET AREA

This is the largest potential farming area in the county with farms in varying degrees of clearing. All of the land must be cleared of stumps before it can be farmed. Some farms have cleared up to 100 acres, others are just beginning with a few cleared acres. The average clearing is about 35-40 acres.

Soil is predominating sandy loam to loam, although there is considerable variation, some poor sandy soils can be found but they are in the minority and are surrounded by areas of good soil. These smaller acreages can be used for pasture or farm woodlots.

There are some fairly large swamp areas but these are being added to existing farms for woodlots. They are a source of employment and revenue for the individual farmers in that territory. The type of farming is mainly dairy farming with potatoes, canning beans, and cucumbers as the main cash crops. Within the last ten years the growing of canning beans has been enlarged considerably and it now provides a source of employment for all members of the family. This is especially true on some large acreages where a large income per acre can be realized with a maximum amount of human effort. This is also true of cucumbers although cucumbers are not as sure a crop nor are they contracted for every year. This territory is very well serviced with roads, schools, railroad facilities and other market outlets and without question will

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continue to increase in importance as an agricultural area. More lands should be cleared per farm in order to increase the cash income.

D-6 McALLISTER AREA:

This area has good loam soils underlaid with limestone and most of it can grow alfalfa or sweet clover without liming quite successfully. Part of the farms have been settled for some time and are occupied by older people, who worked in the logging camps and settled along the river as the logging declined. As these farms are being taken over and operated by new owners or the younger generation the agriculture in this territory will be increased and more income will be realized from the farms. The territory is well serviced by roads and schools and because it is fairly close to Marinette, it is possible to sell some farm and wood products to Marinette from this territory, There might be a possibility of recreational development along the Menominee River, which will reflect upon this area and provide some markets during the summertime for farm products.

D-7 KIRBY HILLS-REEDS HILL AREA:

These two areas are treated as one as type of soil and farming is practically the same. Both areas are loam soils and with rather rough topography. A good part of it can be used for cultivated crops but a considerable part is too steep to cultivate and accordingly must be used for pasture or woodlot purposes. Some care must be taken to prevent soil erosion in this area by not keeping fields in cultivated crops too long. The soil is very well suited to general dairy farming and raises good quality potatoes. Most of the farmers in this area have sufficient land cleared and farms are of sufficient size so that they are independent in that they do not have to seek other income for a living.

D-8 BANASZAK AREA:

This area is somewhat similar to the Reeds Hill area except that land is more level and the soil is somewhat sandier. This is an older settlement. Farms are of good size, but within the area there is considerable land yet to be cleared, and it eventually will be cleared. In the past, this area has grown considerable quantities of cash crops, namely potatoes, grain and at present, canning beans, cucumbers and canning corn. There has been a tendency for farmers to deplete their soil of fertility as the ratio of soil depleting crops to soil conserving crops is rather high. Increased dairying, use of commercial fertilizer and lime should be practiced to increase the amount of legume crops and maintain the increased soil fertility.

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AREAS NOW IN FARMS AND WHICH SHOULD REMAIN IN FARMS

CLASS "E" AREA

This area extends through the southern portion of the county and contains the best agricultural land in the county. There are some variations between communities, but as a whole the entire area is similar and will be treated as such although individual statistics will be given by towns.

Land clearing began here about 1870 and has continued up to date with the greatest activity from 1900 to 1920. The soil is primarily an excellent sandy loam although there are spots in it that are sandy and other portions that are low and on which nothing but swamp timber will grow. However, these areas are relatively small and are all being used for agricultural purposes such as farm woodlots, pasture land and swamp timber. The cleared crop land varies from fifty acres in the town of Grover to forty acres in the towns of Porterfield and Lake.

This low average crop acreage per farm can be accounted for by the fact that there are located in this area a fairly large number of forty acre farmers, which tends to pull down the average for the community. However, there are farms even in this locality which can still well afford to clear up good agricultural lands for farming purposes in order to make an efficient operating farm unit. Possibly farms should also be increased in size by combining several smaller farm units and in a few localities this has already been done. The farms are all primarily dairy farms with from nine to eleven head of milk cows per farm. This lower average can also be explained by the same explanation given for low crop acreage; and that is, a large number of small forty acre farmers.

There are at present too few dairy cows to make an efficient farming unit. The land use planning committee feels that a family sized farm in this area should at least have twelve to fifteen cows on the farm. Moreover, the number of cows need not materially be increased as the quality of the cattle can be improved. The butterfat average of the herds in this area is about 220 pounds per year, but with the introduction of more proved sires and with the wider use of dairy herd improvement facilities, the dairy cattle can be improved in quality and milk production to the point where they would be more economical to keep and more profitable to the individual farmer. It is also important that farmers of the county consider at an early date carrying through the area test for Bang's disease for the county. The T.B. test was made in the county some years ago and the county is now an accredited area. To complete the work of a health program, the area bangs test should be given consideration by the dairymen. Already about 35% of the herds are individually tested in the county, but the entire county should be tested as a whole in order to provide protection for all of the farmers.

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It is also possible for farmers in this area, providing they have sufficient help to do so, to increase their farm income by diversifying their crops a little more. Introduction of such crops as canning corn, canning beans, cucumbers and strawberries would be good as a local market has now been established for these products. Within the area in the past few years these products have added materially to the farm income especially when the dairy prices were on the decline.

Some consideration has been given towards introduction of other livestock such as hogs, and sheep to supplement and replace the dairy income. Farmers agree that year in and year out the grain crops are not sure enough to promote good hog raising and pasture and dog problems have not encouraged sheep raising. A few farmers have some fair sized flocks of sheep, but for the general farmers to sell cows and replace them with sheep is a question which the committee does not feel that it wants to make any definite recommendations on.

In considering the percentage of present cultivated lands which should remain in farms, the committee is unanimous in stating that practically 100 percent of the land in this area already cultivated and in farms should continue to remain in farms. As has been stated previously there is some opportunity to increase the amount of cleared land in present farm holdings. It is possibly interesting to know that within the last two years the greatest amount of land clearing, that is, the total number of cleared acres was greater in this area than any other area of like size in the county.

Farmers have found that wild pasture among the stumps is not a reliable source of feed for the summer season, especially for dairy cows. They know that if the stumps are removed and the land broken and planted to tame pasture, they can increase the number of head of livestock on the farm. Moreover, these farms have sufficient income to go ahead with land clearing which is not always the case in the newer localities.

The committee recommends for this area that approximately twenty-five percent of the crop acres should be in intertilled crops. This might possibly vary from year to year as climatic and price conditions influence the planting of crops.

The committee also recommends that small grains should be grown on about thirty percent of the crop land. Small grains as a commercial crop are not especially profitable if sold; but if fed to livestock especially dairy cows, increased income is afforded the farmer. Small grains are also used to seed down hay crops such as alfalfa, clover, sweet clover and the like. The tendency has been to increase the value of and productivity of grain crops by using fertilizers and thus decrease the total number of acres in grain crops.

The committee recommends that forty-five percent of the cropland be in grasses, legumes and hay crops. In a system of dairy farming, the legume hay and legume pastures are a very necessary and

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essential part of a feeding program. Farmers have been urged to increase their legume crops to provide cheaper feed for dairy cattle and increased profits for themselves. Through improved soil practices, alfalfa, sweet clover and red clover or mixtures of same can be grown on most any farm in this area. For that reason the committee feels that a large percentage of the land should be in legume hay or pasture.

With the introduction of hay silage, it is very likely that the percentage of hay might even be increased and grains and intertilled crops be decreased.

Potato raising is the most important single cash crop in this area, but unfavorable weather, low prices and attitudes of farmers have so materially lowered the quality of potatoes in the county that it is doubtful if farmers can continue to stay in the potato game without improving their potato raising methods. It is a well known fact that unless the quality of the potatoes is improved through better seed, better fertilization and better care, the farmers who only raise an average crop of poor quality potatoes simply cannot continue in the potato business. Marinette County in the past, has had a reputation for good quality potatoes, and at one time shipped out many cars of certified seed for seed purposes. However, they cannot boast of that honor today, nor can the boast of high quality table stock. Unless the individual farmers improve their methods the quality of Marinette County potatoes will continue to decline. Farmers are urged to restrict potato acreage to individual capacity. They should consider the introduction of new varieties of potatoes to increase quality. Furthermore all potatoes should be carefully graded and only U. S. No. 1 grade sold in normal years.

The question of summer fallowing for the control of weeds and moisture is not generally recommended for the county, nor is it generally practiced. There are possibly a few exceptions where weed infestations are very bad, where summer fallowing might be necessary; but if good cultural practices are followed as a part of the general farm program, it is not necessary to summer fallow.

In studying the soil conserving practices that should be carried out in this agricultural area, the committee is very positive in their recommendations that the original soil fertility of this area has not been maintained. It is necessary in order to build up the soils, that additional soil building practices be adopted. The committee recommends that at least 50 or 60 percent of the farms in this area will profit by the addition of ground limestone to improve the quality of the legume hays and pastures now being raised on them. Possibly some of these soils will not show material increases with the application of ground limestone, but as a program for soil improvement, the addition of ground limestone will do much to maintain and increase the crops year in and year out.

The application of phosphate and particularly superphosphate is more generally needed throughout this area than even lime,

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since many soils are potentially low in phosphate and between 80 and 90 percent of the farms will be materially benefited by the application of phosphates especially on the grain and hay crops. Fifteen years ago the extension service found that phosphate was the limiting factor in raising good legume hay and ever since have been advising the use of phosphates on new seedlings with fall applications. Use of phosphates at time of seeding grain increases the grain crop as well as insuring a good stand of seeding.

Problems of erosion do not apply to this territory except in very extreme heavy rainfalls. There is no general need for terracing or strip cropping. Special fertilization for individual crops such as potatoes , canning beans, canning corn, and the like are to be recommended where the maximum yield per acre and maximum quality is to be maintained. Most profitable use of commercial fertilizers can be made on these crops.

In considering the annual practices that might be followed to improve soil fertility or soil conservation, the growing of green manure crops to be plowed under is to be recommended especially for corn or potatoes. The usual practice is to plow under the second crop of clover or alfalfa late in the fall or a crop of sweet clover late in the spring and then plant it the same year to corn or potatoes. The addition of green manure improves the water holding capacity of the soil as well as increasing its fertility.

Possibly one of the most serious problems that must be considered in connection with soil fertility is the control of weeds, Since the number, kind and variety of weeds seem to be steadily increasing. Farmers must be made aware of the fact that unless they follow systematic weed control year in and year out that weeds will tend to get the better of them. The majority of farmers are fully aware of this fact, but it seems that a few indifferent neighbors make ineffective the present weed laws.

To promote the most economical use of pasture lands they should be cleared of stumps and brush as soon as possible and be reseeded to tame grasses, primarily legumes. Practically none of the pasture lands need to be reforested and after permanent pastures have been established and incorporated into the farm, successful fertilization through top dressing with manure and superphosphate will be necessary to maintain fertility.

The proper management of farm woodlots in this area is important. The committee feels that all woodlots should be fenced especially those that are primarily maintained for woodlot purposes, and in a combination of woodlot and pasture, cull trees, especially aspen and birch should be thinned out. In young hardwood woodlots improvement cuttings can be made when trees are of sufficient size to warrant it. Some late plantings might be made in hardwood areas where farmers desire to obtain some soft wood such as pine, although practically all of the land will reseed itself to hardwoods if livestock is kept out. Maple groves in a few areas provide an additional source of income through sale of maple syrup, although this is limited to a relatively few farms. There is very little mature maple suitable for making maple syrup in this area.

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The committee has carefully considered recommendations of the various community committees regarding the ideal size of minimum family farm for the area. They feel that a minimum farm should consist of 80 to 120 acres with about 70 to 80 acres in crop land and the balance in native pasture and woodlot. The number of dairy cattle on the farm to be from 12 to 15 cattle (milk cows) and 6 to 8 head of young stock. Number of hogs about 1 sow to farrow to raise sufficient pork for the family and possibly sale of either a few young pigs or mature pigs depending upon conditions. Each farm should also have a flock of chickens varying from 100 to 200 laying hens to provide meat and eggs for the family and also some income from sale of eggs and sale of meat. All family farms should have a large garden producing fruits and vegetables sufficient for their needs.

RECOMMENDATIONS

The Marinette County Land Use Planning Committee recommends the following:

FORESTRY:

1. Those areas not now in county forest that contain over 50 percent of county-owned lands should be entered under the forest crop law, provided such areas are of sufficient size, and located near other forest lands so they can be properly administered.

2. Expand and promote through C.C.C., W.P.A., or any other agencies an active program of tree planting on all county lands where tree planting is essential to good forestry development.

3. Encourage and support a long-time forestry program by county, state and federal agencies whereby local people will be given a chance of employment, and potential forests be developed.

4. Retain and enlarge, if possible, the present activities of the Civilian Conservation Corps as it now applies to forestry development.

5. Improve present recreational areas, and promote new areas where advisable.

6. Refuse to sell to private individuals county-owned lands adjacent to streams, rivers and lakes.

7. Endorse the Isolated Settler Purchase project of the Soil Conservation Service and further purchases until all isolated farmers or individuals who are a financial burden to local government are removed from the forest areas.

8. Continue to purchase lands that block with present forest holdings, provided they can be purchased at a fair price.

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9. Continue to refuse to sell any County lands within the present forest areas, or any other areas that might be included in a county forest in the future.

10. When timber is ready to be sold from county forest lands, it should be sold on bids, such bids approved by the county board, and cutting selectively be done under supervision of the District Forester of the Wisconsin Conservation Department.

11. Encourage both private and public interest in development of all recreational facilities with special emphasis on enlarging the tourist trade.

AGRICULTURAL CONSERVATION

1. That the soil building payments be increased and allotment payment decreased, thereby giving the small farmer a better chance to participate and receive a payment on the same scale as the larger farm.

2. No limit be placed on any farm for soil building practices. In other words, payment for all soil building practices that a farmer may perform.

3. That no payments be made to farmers in a zoned area, that is, an area restricted against Agricultural use.

4. That arrangements be completed whereby a farmer can borrow money for seed, lime and fertilizer, similar to the program in effect this spring.

FARM SECURITY

1. Endorse and encourage the present program of the Farm Security Administration in all class D and E lands.

2. Make no farm security loans to those farmers living in zoned areas.

3. Make no farm security grants to farmers in the zoned areas except when they will agree to resettlement when the opportunity is given them.

4. Recommend the extension of long-time credit of farm security clients who show ability to become farmers.

5. Encourage the employment of farm security clients in part-time work in order that they have sufficient income to properly support their families.

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6. Give first consideration to those farmers who have lost or are about to lose their farms through mortgage foreclosure in making loans, in view of the fact that it is more practical to continue these farmers rather than to start a new man on the same property.

7. Hasten procedure to move isolated settlers by loaning them up to 75 percent of option.

8. That a foreclosed farmer be given first chance to redeem farm at sale price.

ZONING

1. That present zoning boundaries be extended to include lands recommended by community committees with the approval of town boards.

2. That individuals be encouraged to report any violation of present zoning ordinances to town and county officers.

AGRICULTURAL

1. That any further land settlement should take place in existing rural communities, which are now serviced by roads and schools, and on lands that will support agricultural development.

2. That farms should be increased in size until sufficient land is cleared to make them economical to operate and to support a farm family.

3. That farmers should study possibility of increasing farm income by diversifying crops and livestock.

4. That all farmers should plan to raise all the alfalfa or legume hay or pasture that they need. Every effort should be made to retain and improve soil fertility through liming, fertilizing, and green manure.

5. That the production of quality potatoes offers the best possibility for Marinette County farmers to stay in the potato raising game.

6. That rural electric lines be extended into territories not now serviced as fast as it is possible to do so.

7. That an area test for Bang's Disease be started as soon as feasible.

8. That dairymen be urged to test their herds for production through private test or joining a dairy herd improvement association in order to eliminate low producers, and to intelligently improve their herds by breeding better dairy cows.

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9. That all farm families be urged to grow all vegetables, fruits, and meat sufficient to maintain the family.

10. That all W.P.A. employees living in the county be urged to grow a garden sufficiently large enough to provide all vegetables for home use.

SUMMARY SHEET .....MARINETTE COUNTY

ITEMS	AREAS E.1.
ercentage of Presnt Cultivated Cropland to e continued in cultivation.	100%
pproximate number of acres of land in the rea to be continued in cultivation	106,080
ercentage of Recommended Cultivated creage to be in:	
1. Intertilled crops	25%
2. Small grains and other close grown crops	30%
3. Grass and Hay crops	45%
ercentage of Recommended Cultivated ropland Acreage Needing Soil Conserving ractices:	
1. Strip Cropping	none
2. Lime-phosphate application, or other fertilizer	55%
3. Terracing	none
4. Winter cover crop for green manure	15%
5. Summer cover crop for green manure	15%
6. Contour cultivation	none
7. Other	none
pproximate Acreage Recommended for Pasture	30,000
Percentage of Recommended Pasture creages Needing Soil Conserving Practices:	
1. Lime-Phosphate application	60 %
2. Reseeding	40 %

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George S. Wehrwein



OCONTO COUNTY

LAND USE

PLANNING

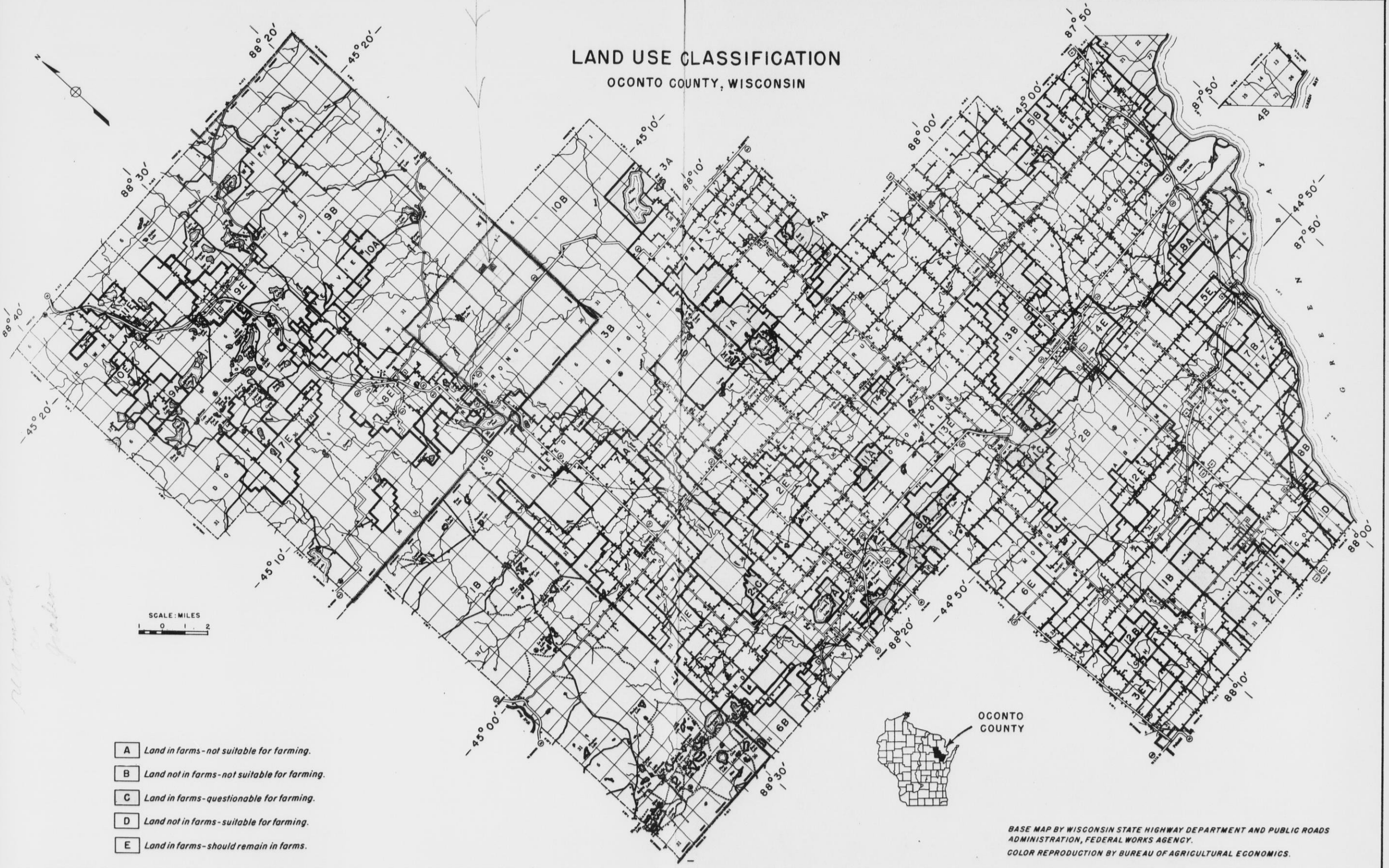
REPORT!

1 9 4 0

OCONTO COUNTY LAND USE PLANNING COMMITTEE
Oconto, Wisconsin.
June - 1940

LAND USE CLASSIFICATION

OCONTO COUNTY, WISCONSIN



A *Land in farms - not suitable for farming.*

B *Land not in farms - not suitable for farming.*

C *Land in farms - questionable for farming.*

D *Land not in farms - suitable for farming.*

E *Land in farms - should remain in farms.*

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

TABLE OF CONTENTS

I. FOREWORD 1

II. LOCATION OF THE COUNTY 2

III. ORGANIZATION AND PROCEDURE 3,4,5,6,7

IV. DESCRIPTION OF THE COUNTY 8,9

V. COUNTY SOIL GROUPS AND QUALITY 10

VI. RECREATION ANDTYPE OF FARMING 11

VII. LAND USE CLASSIFICATION

Class A - Farm Land to be Retired 12

Class B - Forest and Swamp Land 13,14,15,16

Class C - Questionable Farm Land 16

Class D - Land which can be developed 16

Class E - Arable Farm Land 17,18,19

VIII. GENERALIZED LAND USE CLASSIFICATION 20

IX. RECOMMENDATIONS

Government and Taxation 21

Public Acquisition of Land and Roads 22

Education and Zoning 23

Settler Relocation and Forestry 24

Recreation and Farm Security Administration 25,26

Wisconsin Conservation Department, Relief and WPA . . . 26,27

Federal Land Bank Loans, Agricultural Adj. Admin. . . 27

General Agricultural Recommendations 28

X. SUMMARY SHEET (Crop Farming Areas) 29

XI. MAJOR PROBLEMS OF THE COUNTY 30

XII. COMPARATIVE DATA (Northern and Southern Areas) 31

XIII. GENERALIZED LAND USE CLASSIFICATION (map) 32

FOREWORD

About fourteen years ago the people of Northern Wisconsin began to realize that they were losing their apparent security. Lumbering, the original industry in the North, was rapidly coming to an end. Unchecked forest fires added to the vast areas of denuded and cut-over land. Countless unemployed woods workers sought to use these lands for farms and in many instances invested their meager savings only to learn too late that the soils were generally unproductive.

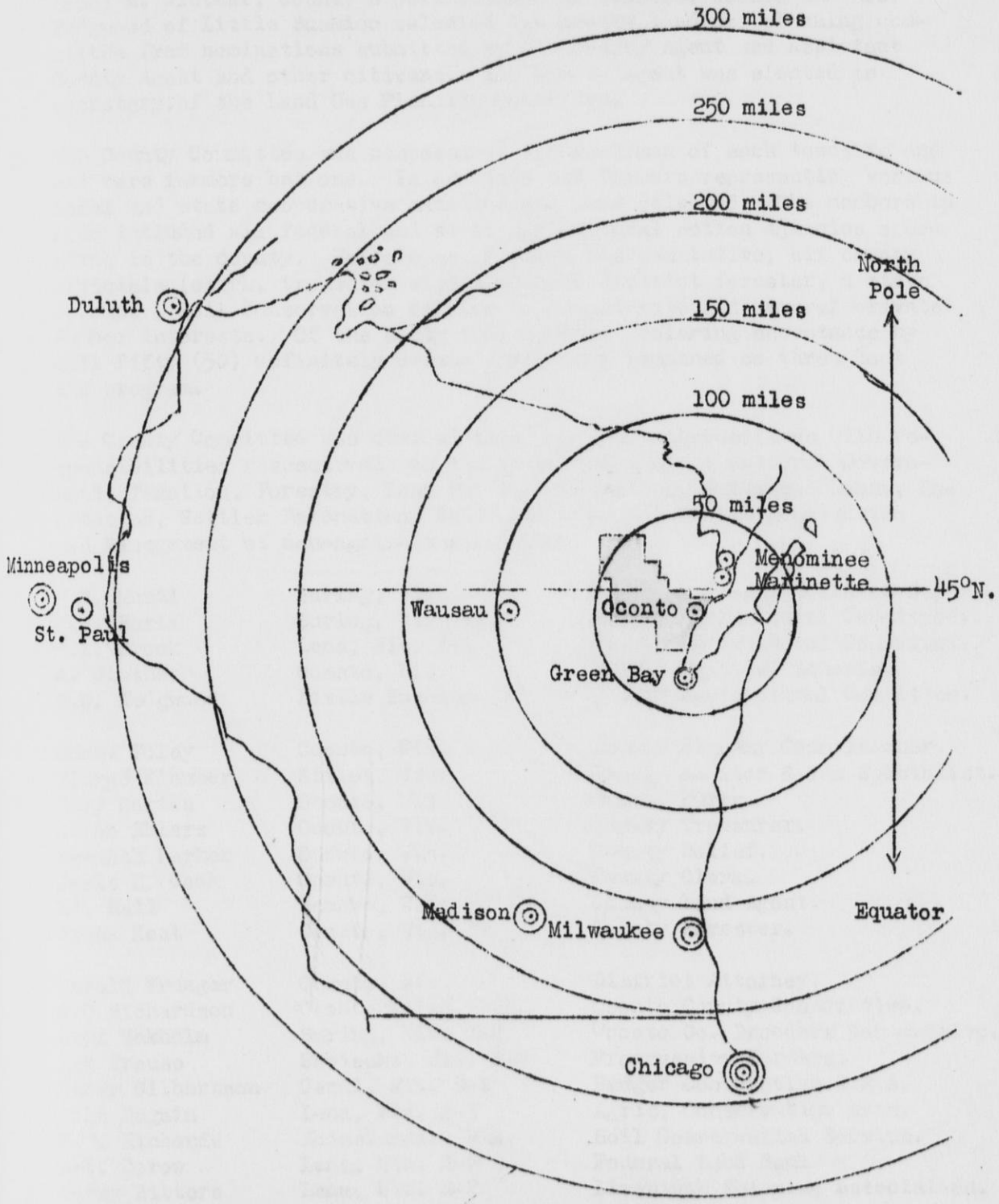
Confronted with this widespread economic and social problem there appeared little for the people to do but to seek temporary relief and other governmental assistance. Prompt help through federal and state aid did keep most of the weaker civil units within the counties operating. Through the support of numerous educational agricultural and financial agencies great strides were made toward rehabilitation and reforestation. However, the people realized that before a return to a self-supporting economy could be brought about, something besides out-side help would be necessary. The people of Oconto County, therefore resolved to do something themselves to put their own house in order.

Oconto County is typical of other counties in Northern Wisconsin and has taken some steps along the road to recovery through local action. In 1930 the County Board of Supervisors prevailed upon Congress to purchase thousands of acres of non-agricultural lands within its boundaries in order to relieve the tax-delinquency situation in its northern area. This resulted in the establishment of the Nicolet Forest which promises to give employment to hundreds of people and a valuable future forest crop in which the county will share.

Again, in 1934 a County Zoning Ordinance, involving thousands of acres of land and restricting further unprofitable agricultural development, was unanimously enacted by the County Board of Supervisors. In 1935 the county acquired through tax-deed an additional 64,000 acres of land much of which has since been placed under the Forest crop law. Many farmers and private owners are planting trees and practicing selective logging and better farm woodlot management. In the fall of 1939 the County Agricultural Committee sponsored the Land Use Planning Program and has assisted many of its various committees in discussing their major problems and developing specific programs for agricultural improvement.

The farmers and citizens in Oconto County have taken a very active interest in this recent program and do understand their basic county problems much better than ever before. This work has proved to be a fascinating task and one that should be fruitful of results. The judgment of several hundred representative farmers, with respect to present and future land use and government adjustments, is presented in the following pages of this report.

H.E. Muehl, Chairman
Land Use Planning Committee.



Location of Oconto County, Wisconsin

Distances to Market Points

ORGANIZATION AND PROCEDURE

Organization

1. The County Agricultural Committee composed of H.E. Muehl, Chairman of the County Board of Supervisors, Suring; J.H. Bartz, Suring; M.L. Brock Lena; A. Winther, County Superintendent of Schools, Oconto and R.O. Wedgwood of Little Suamico selected the county land use planning committee from nominations submitted by the County Agent and Assistant County Agent and other citizens. The County Agent was elected as secretary.of the Land Use Planning Committee.

2. The County Committee was composed of the chairman of each township and all were farmers but one. In addition six farmers representing various local and state cooperative associations were selected. The membership also included all federal and state agricultural action agencies operating in the county, Welfare and Pension representative, six county officials (clerk, treasurer etc) a federal district forester, a state forester, Soil Conservation Service representative and several private lumber interests. Of the sixty (60) members declaring acceptance by mail fifty (50) definitely became active and remained so throughout the program.

   The County Committee was divided into ten (10) subcommittees with responsibilities respectively on the following subject matter:- Government, Taxation, Forestry, Land Use Classification, Soils and Roads, Recreation, Settler Relocation, Zoning Schools and Public Acquisition and Management of non-agricultural lands.

3.

H.E. Muehl	Suring, Wis.	Chairman County Board of Sup'rs.
J.H. Bartz	Suring, Wis. R-1	County Agricultural Committee.
M.L. Brock	Lena, Wis. R-1	County Agricultural Committee.
A. Winther	Oconto, Wis.	County Supt. of Schools.
R.O. Wedgwood	Little Suamico, Wis.	County Agricultural Committee.
Chas. Foley	Oconto, Wis.	County Highway Commissioner.
Eldred Klauser	Stiles, Wis.	County Auditor & Tax Specialist.
Mary Norton	Oconto, Wis.	County Nurse.
Allan Ehlers	Oconto, Wis.	County Treasurer.
Kenneth Parker	Oconto, Wis.	County Relief.
Josie M. Cook	Oconto, Wis.	County Clerk.
Ed. Hall	Oconto, Wis.	County Land Agent.
Frank Kent	Oconto, Wis.	County Forester.
Harold Krueger	Oconto, Wis.	District Attorney.
C.O.Richardson	Oconto Falls, Wis.	Oconto County Cooperative.
Carl Makholm	Suring, Wis. R-2	Oconto Co. Breeders Cooperative.
Art Krause	Sobieski, Wis. R-2	Progressive Farmers.
Oscar Gilbertson	Cecil, Wis. R-1	Badger Cooperative-R.E.A.
John Magnin	Lena, Wis. R-3	Agric. Conservation Assn.
C.N. Richards	Rhinelander, Wis.	Soil Conservation Service.
Art. Dorow	Lena, Wis. R-2	Federal Land Bank
Harry Bitters	Lena, Wis. R-2	Livestock Shipping Association.
Art Alsteen	Lena, Wis. R-3	Production Credit Assn.
James Thielke	Suring, Wis. R-2	Production Credit Assn.
C.W. Carlson	Oconto, Wis.	Agric. Conservation Assn.
J.P. Anderson	Oconto, Wis.	Farm Security Administration.
Ruth Thomas	Oconto, Wis.	Farm Security Administration.
Mrs. Belle McMahon	Suring, Wis.	Parent Teachers Federation.

James Hovind	Wausaukee, Wis.	Wisconsin Conservation Comm.
P.M. Kihlmire	Lakewood, Wis.	Federal District Forester
Forrest Peters	Abrams, Wis. R-1	Abrams Town Chairman
P.F. Johnson	Mountain, Wis.	Armstrong Town Chairman
Arthur McMahon	Suring, Wis. R-2	Bagley Town Chairman
James Soukup	Coleman, Wis. R-1	Brazeau Town Chairman
Otto C. Gohr	Sobieski, Wis. R-1	Chase Town Chairman
August Klingbeil	Mountain, Wis.	Doty Town Chairman
Harold Reed	Gillett, Wis.	Gillett Town Chairman
W.H. Bortz	Lena, Wis. R-2	Lena Town Chairman
Frank Zimmerman	Oconto, Wis. R-1	Little River Town Chr.
L.S. Whitcomb	Little Suamico, Wis.	Little Suamico Town Chr.
Chris Nelson	Gillett, Wis. R-1	Maple Valley Town Chr.
Emil Birr	Oconto Falls, Wis.	Morgan Town Chairman
George Bell	Oconto, Wis. R-2	Oconto Town Chairman
Albert Anderson	Oconto Falls, Wis.R-1	Oconto Falls Town Chr.
Fred Krueger	Oconto, Wis. R-2	Pensaukee Town Chairman
Frank Blazek	Oconto Falls, Wis.R-1	Spruce Town Chairman
Barney Fredrickson	Lena, Wis. R-5	Stiles Town Chairman
J.J. Schalz	Townsend Wis.	Townsend Town Chairman
Chas. Natzke	Underhill, Wis. R-1	Underhill Town Chairman
George Bauers	Lakewood, Wis.	Wheeler Town Chairman
Phil Wanner	Mountain, Wis.	Riverview Town Chairman
Wm. Flynn	Breed, Wis.	Breed Town Chairman

4. Three Community Committees each consisting of three County Board Members were elected at special meetings covering the respective Northern, Central and Southeastern Town Groups. These committees were vested with the responsibility of encouraging interest and activity on the part of town committees.

5. Northern Community Group Committee - G. Bauers, Hal Hamlin, Peter Johnson
Central Community Group Committee - J. Bartz, H. Reed, Albert Anderson
Southeastern Community Group Comm. - F. Zimmerman, F. Peters, L. Whitcomb.

6. Initial public meetings were held in town halls of each of the twenty three townships of the county for the purpose of introducing the program and to form township committees composed of five members. In addition to appointment of the town chairman, town assessor and one Agricultural Conservation Association member, by the County Agricultural Committee, two additional farmer members at large were elected by the group at these meetings. County Board members were appointed as chairman of these committees and secretaries were elected by the committee members themselves.

7. <u>TOWNSHIP COMMITTEES</u>

<u>ABRAMS</u>
Forrest Peters, Chairman
R.E. Wiedenhaft, Abrams, Sec'y.
H.E. Steinkraus, Abrams
T.G. Delano, Abrams
D.J. Baudhuin, Abrams

<u>ARMSTRONG</u>
P.F. Johnson, Mountain, Chairman
Wm. G. Fosick, Mountain, Sec'y.
C.W. Bauerfiend, Mountain.
Dewey Anderson, Mountain.
Ole Velton, Mountain.

BAGLEY
Arthur McMahon, Suring, Chairman
James Peterson, Suring, Sec'y.
P.J. Champeau, Suring
Louis Suring, Suring
Louis Stix, Suring

BRAZEAU
James Soukup, Coleman, Chairman
Gust Meetz, Coleman
Bert Couvillion, Pound
Wenzel Kust, Pound, Sec'y.
Wenzel Pivonka, Pound

BREED
Wm. Flynn, Breed Chairman
Floyd F. Tate, Suring, Sec'y
Harry J. Smith, Suring,
Henry Klawitter, Suring
J.C. Hamberg, Suring

CHASE
Otto C. Gohr, Sobieski, Chairman
Henry Wyszynski, Sobieski, Sec'y.
Stanley Komisarek, Sobieski
Leo Schwartz, Sobkeski
Mike Perinovic, Sobieski

DOTY
Aug. Klingbeil, Mountain, Chairman
L.M. Hill, Mountain, Sec'y.
I.C. Clark, Mountain
Hal Hamlin, Mountain
Herman Leeftink, Mountain

GILLETT
Harold Reed, Gillett, Chairman
Harris Kasten, Gillett, Sec'y.
A.S. Bartelt, Underhill
Wm. H. Penfield, Gillett
Wm. Gandt, Gillett

HOW
J.H. Bartz, Suring, Chairman
Elmer Pethke, Suring, Sec'y.
Louis Deede, Suring
Otto Pethke, Suring
Arnold Krueger, Suring

LENA
W.H. Bortz, Lena, Chairman
Herman Imig, Lena, Sec'y.
A.E. Alsteen, Lena
Wilford Masson, Lena
Chas. Koslowski, Coleman

LITTLE RIVER
Frank Zimmerman, Oconto, Chairman
Ed. Nerenhausen, Oconto, Sec'y.
Ed. F. Cisar, Oconto
Wm. Kehl, Oconto
Oliver Shallow, Oconto

LITTLE SUAMICO
L.S. Whitcomb, L. Suamico, Chairman
Mike Wanick, Sobieski, Sec'y.
Sylvester Nowicki, Sobieski
Stanley H. Golik, Sobieski.
Frank Peters, Little Suamico

MAPLE VALLEY
Chris Nelson, Gillett, Chairman
James Thielke, Suring, Sec'y.
Herbert Buseman, Oconto Falls
Ed. Johnson, Suring
Zach Stewart, Suring

MORGAN
Emil Birr, Oconto Falls, Chairman
Henry Trapp, Oconto Falls, Sec'y.
Robert Harteau, Sobieski
Peter Larson, Oconto Falls
Wm. Schlorf, Oconto Falls.

OCONTO FALLS
Albert Anderson, Oconto Falls, Chr.
G.T. Tuttle, Oconto Falls, Sec'y.
Paul Wudke, Oconto Falls
Andrew Loberger, Oconto Falls
Henry Larson, Oconto Falls

PENSAUKEE
Fred Krueger, Oconto, Chairman
Ed. E. Delano, Oconto, Sec'y.
Ernest C. Johnson, Abrams
Gaius Nichols, Oconto
Basil LeFevre, Oconto

RIVERVIEW
Phil Wanner, Mountain, Chairman
John Marsh, Mountain, Sec'y.
J.J. Bloomer, Mountain
Carl Shabow, Mountain
Gust Elbe, Mountain

SPRUCE
Frank Blazek, Oconto Falls, Chr.
M.H. Kesler, Oconto Falls
Clifford Rice, Oconto Falls
Arthur Dorow, Lena
Everett Piper, Oconto Falls, Sec'y.

STILES
Barney Fredrickson, Lena, Chairman
Cecil D. Black, Lena, Sec'y.
Chris Kenney, Lena
A.F. Schroeder, Lena
Emil Luisier, Lena

UNDERHILL
Chas. Natzke, Underhill, Chairman
Harry C. Heiden, Underhill, Sec'y.
Ben Bergner, Underhill
Paul Wasmund, Underhill
H.C. Weber, Underhill

TOWNSEND
J.J. Schalz, Townsend, Chairman
O.A. Schreiber, Townsend, Sec'y.
Glen Cole, Townsend
L.C. Bowman, Townsend
D.J. Seeman, Townsend

WHEELER
George Bauers, Lakewood, Chairman
Wesley Jackson, Lakewood, Sec'y.
G.J. Challoner, Lakewood
John Challoner, Lakewood
F.H. Smythe, Lakewood.

INDIAN RESERVATION (Menominee)U.S. Dept. of Interior, Local Sup't. Keshena

PROCEDURE

I. Meetings

a. Since individuals of the county agricultural committee were made chairmen of the county subcommittees dealing with the most controversial subject matter, no special meetings of the County Committee was deemed necessary.

b. Meetings of the county committee consisted of one (1) for initial organization and also a final meeting for consideration of soil, classification and recreation maps and adoption of recommendations. Only two county committee meetings were held because thru membership on subcommittees all members were well informed.

c. Community Committees representing three groups of towns in the county met once to give an oral report as to town committee interest and activity.

d. Town committees in addition to the initial organization meeting met once every three weeks in their respective community. The County Agent and assistant agent attended five out of seven meetings held in each town.

e. Each township committee was furnished with a detailed town soil map, a county platbook, blank township maps, a ten-year crop statistical sheet by county and town, a recreation map, seven special agricultural bulletins an "Outline for County Land Use Planning in Wisconsin", four weather bureau maps, and highway maps.

f. Seven special district public meetings were held thruout the county just prior to the final county committee executive session. The meetings were held for the purpose of acquainting farmers with the map and recommendations prepared by their land use planning committees and to get a general crystalized opinion on subject matter involved.

g. Attendance

All township committee meetings averaged 80 per cent of the membership. Community committee meetings averaged 100 per cent of the membership. Public and County subcommittee meetings estimated as fair to good. County Committee meetings averaged 85 per cent.

II. Correlation of Material

a. Present and recommended land use classification maps were prepared by each township committee. These were then examined by the county subcommittees, assembled and copied onto the authorized large-scale map and presented for adoption by the county committee.

b. Recommendations involving all phases of land use planning subject matter were made by the separate township committees, subjected to the scrutiny (for correction, additions, etc;) of the county subcommittees and finally presented to the county committee for consideration and adoption.

III. Special Assistance

a. Federal, State and College Specialists attended several township meetings, all district public gatherings and the final county committee executive session.

b. Interest on the part of the County Agricultural Committee, sponsors of the program, was exceptional as was evidenced by both their keen interest, activity and good average attendance at the various meetings held in all parts of the county.

IV. Limitations

a. It has been definitely impressed upon local authorities and local extension workers that more intelligent and efficient work could have been accomplished if committee township members would have been selected and appointed instead of elected.

b. Farmer committeemen having been accustomed to getting compensation for attendance at A.A.A. meetings and securing commodity surplus relief with comparative ease, have become prone to figure only in dollars and cents. This attitude limits the possibility in advancing a program which, though of inestimable value, must present argument for self-help in competition with other meetings where compensation for attendance is made.

c. It has been the local policy to prevent politics in conducting the land use planning program but in such subjects as government, schools and roads sound recommendations often do not get the support they deserve. Reticence due to political diplomacy on important findings may never permit carrying into action recommendations adopted by the county committee. For this reason the program in this county has emphasized the major problems for local action, about which individuals and smaller groups of farmers may proceed.

d. There are several external problems requiring community and public action and facilities for following these may be limited but are not impossible to attain if county contacts, with outside authorities, are kept alive through some plan of follow-up.

DESCRIPTION OF THE COUNTY

LOCATION, BOUNDARY AND POPULATION

Oconto County comprizes 713,474 acres of land, 70,000 of which is part of the Menominee Indian Reservation. It is located in the northeastern part of Wisconsin and borders Green Bay for a distance of about twenty five miles in the east. In the north and east it is also bounded by Marinette and Forest counties; in the west by Langlade and Shawano counties; and in the south by Shawano and Brown counties. The population is approximately 27,000, nearly half of which is composed of farm families.

SETTLEMENT

The first settlement was started in 1829 at Pensaukee through the influence of lumber interests. From here in all directions farming followed the ax. The present predominating nationalities in order of numbers includes Canadian French, Germans, Poles and Irish with some Scandinavians. The first and last mentioned nationalities are more or less concentrated in the cities and villages. During the past ten years the population has been fairly constant with slight increases in the cities.

INDUSTRY

The first sawmill was erected in the city of Oconto in 1835 and in Oconto Falls in 1846. The county was originally covered with a very productive growth of timber most of which consisted of white pine, mixed hardwood and hemlock. Selective logging was unknown and only the very best timber was used. Incendiary fires and carelessness which followed early logging operations resulted in large areas of denuded areas. The first charter granted for a railroad right-of-way in 1856 was not executed until 1870 when it reached the city of Oconto. In time the plow followed the ax as the frontier advanced toward the north. Sawmills are now vanishing and much of the land of lowest value for farming purposes has reverted to the county through tax-delinquency. During the past five or six years a considerable amount of this land has been purchased by the Federal Forest Service and together with what remains in the hands of the county is rapidly being developed for timber production.

TOPOGRAPHICAL FEATURES

The surface features are characteristic of a glaciated region and vary from level to rolling and hilly. Ridges in the form of terminal and recessional moraines frequently broken with more level ground moraine basins and numerous swamps and lakes dot the county. The terrain assumes a general direction from northeast to southwest. Regardless of soil productivity, land too rough to be developed agriculturally is comparatively small in area. With the exception of a few isolated small areas in the southern half of the county, most of this type of land is either located in the Federal Nicolet Forest area or in restricted use district under the County Zoning Ordinance.

CLIMATE

The length of the growing season in Oconto County varies in the direction of northwest to southeast and ranges from 110 to 150 days. Corn, potatoes and other crops affected by light frosts have a shorter growing season in the north generally, but small grains, grass and root crops have a growing season more nearly equal to that in the southern part of the state. The difference between the average temperature (57°) for this area and the southern (59.5°) is slight according to the Wisconsin Geological and Natural History Survey. Generally the last killing frost is around May 10th and the first killing frost during the first week of October with slight variations from south to north.

The local distribution and total amount of rainfall varies from year to year and averages thirty inches. This area is fortunate in that half of the precipitation comes in May, June, July and August and nearly seventy per cent from April to September inclusive. The climate influence of Green Bay is confined to a belt of from five to ten miles in width extending a distance of about twenty-five miles from north to south. The growing season of the southeastern half is much like that of southwestern Wisconsin.

SOILS

Soils in Oconto County vary widely, from heavy loams in the northwest and western portion (Kennan silt loam and Superior Loam) to sand soils such as Plainfield most of which are located in the extreme south and east central parts of the county.

The predominating soil is fine sandy loam varying in productivity depending upon the water-holding capacity, subsoil and cropping. The sandy soil area, consisting of Superior, Miami and Fox fine sandy loam extends as a belt two and one half townships wide from the extreme west becoming better in quality until it approaches Oconto where a large percentage is composed of Miami loam.

Coloma fine sand and loams are found in small patches interspersed in the south half of the county. The Vilas series from fine sand and loam to stony sand is confined to a central strip in the northern seven townships. It is also in this area that much Kennan soil of the rough and hilly phase is found.

About twenty per cent of the county area is composed of poorly-drained soils, most of it being peat and muck and found in patches scattered throughout the county. In the extreme southeastern part of the county is an area of Poygan fine sandy loam comprising about 2,000 acres. It is possible to drain this area for farming purposes but under present economic conditions not advisable.

COUNTY SOIL GROUPS AND QUALITY

BETTER QUALITY		FAIR TO POOR QUALITY		
Heavy Soils	Fine Sandy Loams	Fine Sand & Sandy Loams	Sand Soils	Poorly Drained Soils
Kennan Silt Loam	Kennan Fine Sandy Loam	Plainfield Fine Sand	Vilas Stony Sand	Clyde Loam
Superior Loam	Fox Fine Sandy Loam	Plainfield Sandy Loam	Plainfield Sand	Poygan Fine Sandy Loam
Superior Clay Loam	Superior Sandy Loam	Superior Fine Sandy Loam		Peat
	Miami Loam	Coloma Fine Sandy Loam		Muck
	Miami Sandy Loam	Coloma Sand		
		Vilas Sandy Loam		
		Vilas Sand		
3.3 %	47.7 %	25.7 %	3.6 %	19.7 %
51 %		49 %		

Soils With Sandy Base

77 %

SOIL TESTS

Fourteen hundred (1400) samples of soil collected through twenty three land use planning township meetings and twelve hundred (1200) gathered through other means, representing approximately three hundred seventy (370) farms were tested for available fertilizer constituents. Results of these tests demonstrate that about 75% of the soils in the county are seriously low in phosphorus, 40% medium low in lime; and 25% are moderately low in potash. Since little alfalfa and other legumes are included thus far in the average rotation and nitrogenous fertilizers seldom used, the nitrogen content is generally deficient. About 2% of the farmers follow the practice of green-manuring. Soil building and soil conservation definitely are two of the major problems in land use in Oconto County.

RECREATION

The people of the county, particularly those in zoned and forest areas are rapidly becoming conscious of the dual value of recreational development. The northern townships having lost nearly fifty per cent of their assessed valuation and containing soils more or less unproductive, now appreciate that recreation is a means by which the tax base may be greatly increased. The income of both farmers and village people can be increased, providing better facilities for a larger influx of tourists and resorters. The people now raalize the value of local regulations in aiding the development of summer homes, club camps and recreational activities. Many dams have been recommended for the purpose of raising the water-levels of the numerous lakes and streams. Golf courses, to be owned by the county, are being considered and conservation and wildlife refuge areas are being established in addition to the programs of the Federal Government.

TYPE OF FARMING

General farming with dairying as the major income-producing occupation is universal in the county. There is considerable diversification of farm income with the chief cash crops being pickling cucumbers, potatoes, peas and beans. Truck crops are not grown extensively but the progress being made by one or two enthusiastic farmers has clearly demonstrated the possibility of further expansion. All stages of disintegration of muck can be found in the county sufficient in area to warrant greater effort toward profitable utilization of this type of soil for this purpose.

About fifty-two (52%) per cent of the land in the county is in farms. These farms average one hundred five (105) acres in size. Very little land remains which could be profitably broken for farm use. Fifty-two per cent of the land in farms consists of cropland and fortunately erosion in any form is relatively unimportant. Eighteen per cent of the cropland is used for small grains and corn; seventeen per cent for clover, alfalfa, timothy and mixed hay; and the remainder is in rotation pasture. Most of the farmers have additional swamp and woodland pasture and little, if any of this is improved.

Most of the land not in farms (by far the greatest percentage) in the northern area comprising five towns and totaling 184,320 acres is owned by the Federal Government and designated as the Nicolet National Forest. With the exception of probably ten per cent in the possession of private owners, the remainder of the land not now in farms is owned by the county. A conservative estimate places seventy-five per cent of all land not now in farms and owned both by the federal and county governments, as reverted land due to tax-delinquency. Only a very small part of this land (most of it in widely scattered sections) could be used for profitable agriculture to-day. The entire area mentioned here is rapidly being reforested and recreational development is interspersed where feasible.

AREAS NOW IN FARMS NOT SUITED FOR ARABLE FARMING

CLASS A -

This area consisting of eleven different locations widely distributed in as many townships covers about 30,000 acres, one half of which is in farms. The soils are generally poor and even in instances where they are better, it is either too wet, swampy or rough for farm use.

CLASS A - 1, & 3 to 11 incl.

The problems in these areas are taken in aggregate simply because they are very much alike in most respects. With the exception of two minor areas most of them are contiguous with lands already zoned and all are recommended for restricted non-agricultural use through zoning. There are a few good farms but these are more or less isolated and it will be difficult to even encourage relocation, first because in many cases the settlers are satisfied with their present low standard of living and secondly because they look to opportunity for partial employment in tree-planting and other activities. The wild pasture available will furnish (and offset the low crop acres) cheap feed for young stock, horses and sheep.

Tax-delinquency will, over an extended period eliminate and help to relocate some settlers in these areas. There is little possibility of the county purchasing lands and relocating settlers since its financial status will not permit an increased burden. Probably fifty per cent of the farmers living in these areas are receiving relief in some form. Many families have strained their borrowing power to the limit. Unless assistance for relocation is forthcoming through some federal relocation project, little can be accomplished in change from present use.

If these area are zoned and the county gradually obtains possession thru tax deed the areas will be planted to trees. People of the type living in these areas are generally not prone to accept better agricultural ideas and in the long run it may be best that all agencies concerned discourage farming.

CLASS A - 2

This area comprising 10,000 acres, nearly half of which is poorly drained, consists of Plainfield fine sand. It is subject to wind erosion and inherently very unproductive. The remainder is largely Coloma fine sand and is very little more productive than the Plainfield fine sand. With special attention to proper management farms may be operated but they will never provide a decent living, much less produce an income sufficient to meet average expenses. So long as these people are satisfied with their present low standard of living and no relocation project is in view there isn't much that can be done for them. This area has been recommended for zoning against agricultural use.

AREAS NOT NOW IN FARMS AND WHICH SHOULD NOT BE USED FOR FARMING

CLASS B -

Including 70,000 acres of the Menominee Indian Reservation this area comprises 350,000 acres or practically one half of the total land area of the county. Three-fourths of this area is located in the northern part of the county making up the Nicolet National Forest and several county forests. Of this total area about 90% has been zoned since 1935 and the committee recommends another 70,000 acres composed of "A" - "B" and "C" classes of land.

The soils are generally poor in quality and much of the land is hilly, rough and traversed with swamps, studded with brush and a low grade of second-growth timber. Although there are some good loams prevalent in small areas the soil is predominantly sandy. The land varies all the way from no stone to a high degree of stoniness with distinct outcroppings, particularly in the northern portion. This land originally grew a good crop of timber but has been reduced to cut-over and waste through logging operations and successive fires. Most of the area is drained by the Oconto River basin on which are located several dams for power generation. Present and future reforestation will be a distinct help to rebuild a type of watershed which will insure future generation of power.

Scattered throughout the area are a number of isolated farmers, some of whom have made attempts to farm and others who do outside work to make a living. Roads are ample for the area at present and little building is anticipated in the future. Schools at Townsend, Lakewood and Mountain are sufficiently large but poorly equipped and financed. A materially reduced assessed valuation of both town and school districts and a declining average daily attendance, makes imperative a high tax rate. The county committee has recommended prompt consolidation of schools and consolidation of towns or some form of governmental reorganization.

High taxes and impossibilities of land sales have caused a high rate of tax-delinquency during the past ten years. During the first five years of this period the county took tax-deed to thousands of acres in the northern area and then sold much of the land to the Federal Government. But today there is still, though in much lesser degree, land reverting to the county. During the past five years some of this land has been placed under the forest crop law providing some income to the towns in lieu of taxes. Over 80,000 acres of land have been set aside as county Forest and 30,000 acres are now under the forest crop law.

Settlers, particularly in the northern towns, are distant from markets and generally their products do not measure up to the quality desired. Conveyance equipment is poor at best requiring frequent repair and roads are not being developed. Settlers who formerly were woods workers do not understand the problems of good farm management. Lack of finance, poor soil and education often has hampered these people and they subsist only because of partial relief and occasional outside work. The committee feels that there are but two avenues for escape,- the first, a settler relocation project and the second, encouragement and guidance in seeking employment in other fields.

Supported through appropriations by the county board of supervisors and volunteer donors, recreational development has been advanced in the Machickanee Forest. Areas fit for recreation are chiefly located in class "B" land which is dotted in the north with many lakes and streams. To maintain the water levels no less than six dams have been recommended and approved by the county committee. Certain of these dams have been proposed in order to promote wildlife refuges. Sportsman's clubs have been and are becoming more active in moulding the minds of people toward the value of recreation, wildlife maintenance and the preservation of natural resources.

To sum up the facts relative to this area, the Federal Forest Service controls about 200,000 acres; the County Land Committee owns over 80,000 acres; the Menominee Indian Reservation involves 70,000 acres; and these figures together with proposal of an additional 70,000 acres to be zoned leaves about 293,000 acres for agriculture in the county. Uses to which class "B" area should be put involves reforestation, recreational development, conservation of wildlife and adjustments needed include relocation of settlers, consolidation of schools and towns.

B -1 MENOMINEE INDIAN RESERVATION

The reservation is largely uninhabited and the soils are poor, consisting of unproductive Vilas and Kennan sandy types. The entire area is covered with second-growth timber and brush with the exception of small commercial tracts of coniferous timber. The county authorities are not cognizant of any particular human problems here. If these did exist, they would of necessity be taken care of by the local Federal Supervising Agency at Keshena in Shawano County.

B -2 MACHICKANEE COUNTY FOREST

Comprising nearly 17,000 acres and isolated in the south central part of the county, this area presents problems little different from those found in "B" class. In 1937 about 1,250,000 trees were planted and each year more are planted in this area. There are very few settlers here and all of these lived in the area before the county was zoned in 1935. The soils will support only timber growth.

B - 3 - 10 - 15 SOUTH BRANCH AND PESHTIGO BROOK COUNTY FORESTS

This is a continuation of the Nicolet Forest on the south and east, but it is owned by the county and comprises about 63,000 acres. One third of the area is very wet and most highland is unfit for farming, consisting of Vilas and Coloma fine sand, peat and muck. The areas contain a scattered stand of immature timber and much brush. This spring 1,000,000 trees were planted and each year additional planting will be done. There are very few settlers in these areas and these do not present a serious problem since most of them receive employment by the county in Forestry work.

B - 4 - 6 BAYSHORE AND BERRY LAKE COUNTY FORESTS

These lands have been zoned by the county in 1935 and consist of about 11,000 acres. The soils are poor consisting of Plainfield and Coloma fine sand interspersed with peat and muck. The forest growth is sparse and covered with poplar, willow, tamarack, cedar, scrub oak and much brush. There are no settlers and reforestation is the future plan.

B - 5 LITTLE RIVER

This area consisting of about 1,600 acres is largely muck soil and contains a fair growth of fuelwood. Most of the land is owned by the neighboring farmers, some of which is used for pasture purposes. There are no settlers.

B - 7 OCONTO-PENSAUKEE BAYSHORE

There are a few farms in this area and about fifty per cent of them are receiving relief. Those not on relief are engaged in fishing which supplements their part-time farming operations. The 5,000 acres consisting of plainfield fine sandy soil is very unproductive. Here again the problem is one of settler relocation.

B - 8 LITTLE SUAMICO BAYSHORE

As the name suggests, this land consists of a strip about one mile wide and ten miles long on the shore of Green Bay. It is composed almost entirely of Poygan fine sandy loam and while productive it is too wet for cultivation.

B - 9 NICOLET FEDERAL FOREST

Much has already been said relative to this area but its relation to recreation is important since it embraces most of the land to be put to this use. Most of this land originally reverted to the county through tax-delinquency and was then sold to the federal government for reforestation. At the time of transfer there was very little timber of merchantable value and the few spaces left for grazing are now being reforested. In addition to the 180,000 acres the government is continuing to purchase land to block their holdings for reforestation purposes.

There are still some settlers scattered throughout the area and contacts made within the past three years through the Soil Conservation Settler Relocation Project have not resulted favorably because of difference or disagreement on price of land. There is little voluntary migration and unless a concerted effort is made by all units of government , little can be expected in the way of relocation.

There are private recreational areas such as the Holt Lumber Company property, consisting of three sections of land and embracing Archibald Lake; four sections belonging to the Green Bay Rod and Gun Club including many lakes; and one section belonging to Wayne King bordering Waubee Lake on the north. None of these, altho excellent areas, have been developed to any appreciable degree for recreation. In addition there are a number of other smaller parcels bordering lakes and streams on which little development has taken place within the past five years. All that can be done to hasten development of these properties is to encourage sales to individuals.

The county owns several parks located at Waubee Lake and Chute Pond which have been more or less developed. It is the policy of the county land committee not to sell its holdings along lakes and streams but to develop them for the public. Several dams have been built; one at Reservoir Pond and one at Chute Pond.

There are approximately one hundred and fifty lakes in this area ranging in size from five acres to as much as two sections and all with few exceptions are drained by the Oconto River basin. Lakes are restocked with fish and the trout streams are the equal of any in Northern Wisconsin. This area has exceptional possibilities for recreational development. Most of the recreational lands are not under government ownership but local people are, however, often assisted by the Federal Forest Service through road maintenance and fire protection. The county land use planning committee has repeatedly urged the further development of recreational resources in this region.

B - 11 - 12 CHASE TOWNSHIP

These areas comprising about 5,700 acres consist of poorly drained Plainfield fine sand, Superior sand, peat and muck and are worthless for agricultural use. Both areas have a cover of poor second-growth timber and brush and the lands on the borders are used for grazing when not too wet. The land is largely owned by neighboring farmers who use it mostly for fuelwood. This land together with 2A area which is contiguous and aggregating about 15,000 acres has been recommended for zoning and may within the next few years become a county forest.

B - 13 - 14 STILES SWAMP

This area consisting of approximately 5,000 acres and largely swamp is really a part of a north and south belt six miles wide and extending eighteen miles long including A, B and C land. It is intercepted by two agricultural strips each about a mile wide and running from east to west. Were it not for these two strips of better land this area should have been a part of the Machickanee County Forest. The committee felt that this might be accomplished only if production control should become far more necessary than at present. The entire area is swamp and sandy with minor exceptions. Settlers in area B - 13 are on relief. B - 14 is a 700 acre isolated area, is owned by the neighboring farmers and used for fuelwood.

AREA NOW IN FARMS BUT QUESTIONABLE FOR ARABLE FARMING

C - 1 - 2 OCONTO FALLS, & UNDERHILL

These two areas comprise about 3,000 acres and both are drained by the Oconto river. The soils are composed of Coloma and Superior fine sand, neither being very productive. The land is somewhat hilly and swampy in places. The Underhill portion has been recommended for zoning. Settlers do not present a problem since proximity to city and village affords opportunity for extra income to supplement farming.

AREA NOT NOW IN FARMS BUT WHICH IS SUITED FOR ARABLE PART TIME OR FULL TIME FARMING

D - 1 LITTLE SUAMICO LAKESHORE

Unfortunately this is the only area in the county which might, with proper drainage, be used for the reestablishment of settlers from forest lands. The soil composed of Poygan, Miami and Coloma fine sandy loam is productive. At present the land is owned by neighboring farmers who use it for fuelwood and grazing.

AREAS NOW IN FARMS AND WHICH SHOULD REMAIN IN FARMS

This area is about fifty per cent of all the land in the county and is well established in farms averaging one hundred five acres per farm. It contains the best soil including Miami, Fox, Superior and Kennan loams and fine sandy loams. There are many small patches of swamp scattered throughout the area and these are being used as part of farms for fuelwood and partial grazing. There is no human problem and income is as good as can be expected under present economic conditions. The chief problems are deficiency in soil organic matter and a serious lack of phosphate.

E - 1-2-3-4-6 & 12 HOW,ABRAMS,MAPLE VALLEY,CHASE,STILES,MORGAN

These areas separated one from the other and located at different places within the chief agricultural part of the county have much in common. The soils vary somewhat consisting of Miami, Superior and Coloma fine sandy loams, with considerable Plainfield fine sand of the poorly drained phase in area 12. The acreage in each varies from 1500 to 7000 acres and productivity of the soil, while varying one from the other, is from 10 to 25% lower than that of the general "E" class of soil. Farmers in these areas are satisfied with their lower standard of living, classed as fair, but the average income is only sufficient for this living with mortgage amortization, at the expense of the farm buildings, being more or less universal. Generally the problems consist of soil building thru green manure and frequent application of fertilizer and manure and in area 12 including tile drainage.

E - 5 NORTHEASTERN PENSAUKEE

The soil of this area consists largely of Plainfield fine sand and is bordered on three sides by land recommended for forest. Farms are not producing incomes sufficient for even a fair living but with fishing supplementing their earnings the people manage to get along but not without some form of relief. Since there are no available funds for the purchase of these lands, there isn't much that can be done in changing the present use of the land.

E - 7 to 11 incl. NORTHERN OCONTO COUNTY AREA

These areas comprising in the aggregate about 15,000 acres have not been zoned; are situated along the State Highway 32 in more or less separated settlements; and are located within the general area of the Nicolet National Forest. The soils consist of Kennan, Vilas, and some Plainfield fine sandy loams, silt loam and sand with stony sand, peat and muck interspersed. The farms are scattered and the average income is considerably lower than that for the county. But occasional employment of these farmers by the Federal Forest Service adds to their income and this together with different forms of relief apparently keeps them satisfied with their lower standard of living. At present the population is practically constant and public services are not being improved. In fact, these people are not in position to maintain their schools and roads because the assessed valuation of the towns has dropped within the last fifteen years to about one half the original. The farms in the areas require better management and should be increased in size. Town consolidation has been recommended by the county committee.

The average number of dairy cows per farm is nine but the committee feels that a family-sized dairy farm should have twelve with five head of young heifers for replacements. Farmers should join the Oconto County Breeders Cooperative because the service is fully as cheap as maintaining a bull and herd improvement far more positive. To gain the most benefit in an artificial insemination ring, farmers should also belong to a Dairy Herd Improvement Association in order to check properly the results of the former and at the same time file valuable production and feeding records. At present the average production of butter fat per cow is less than 200 pounds per year and this is too low to realize a profit. It is also necessary that an area test for Bang's Disease be conducted in the county. Occasional tests on scattered farms will not afford the protection necessary to stamp out the disease which is more or less prevalent in the county.

In view of the price situation for dairy products and the apparent increase in supply together with a lowered demand farmers should be encouraged to diversify their crops in order to maintain their present income or even increase it. More canning peas, beans, beets and cucumbers, strawberries, onions, sugar beets and further development of truck and vegetable crops would help materially to augment income. Markets are available not only in the county but in the immediate neighborhood. Metropolitan centers are nearby.

It may not be wise in this area to increase hog production, especially since prices for several years have been low and grain crops do not do well here but every farmer should at least have one sow to farrow in order to supply his family and possibly have a few pigs to sell. In spite of the dog menace, flocks of sheep ranging from fifty to one hundred or more should be considered by those farmers whose situation warrants it.

Soil conserving practices such as application of lime, phosphates and potash are very essential in this area. Phosphate fertilizer should be made available through the A.A.A. program. Since this element is the limiting factor (outside of lime) in growing legume hay it is advisable to make applications to new seedings in the fall. Plowing under a second crop of alfalfa or turning under sweet clover will assist very much to keep a balance of humus. Soybeans, Buckwheat and Vetch can also be used.

Farmers should not depend too much upon the type of swampland pasture obtainable here but should give better care to their tame pastures by occasional renovating with a spike-toothed harrow and light applications of fertilizer.

Woodlots have not been given much attention in past years but farmers recently have begun to practice selective cutting and giving the areas protection for natural seeding. It has been recommended by the committee that each farmer should have at least 10 to 15% of his farm acreage in woodlot. Woodlots should be fenced first, because the pasture afforded is usually insufficient for milk production and secondly, because woodlots will not reseed if livestock is permitted.

E - 13 INTENSIVE FARMING AREA

This area occupies four fifths of all the land in class "E". It is the most intensively farmed area and contains the best soils in the county. The average income per farm is above those in any other part of the county. As a whole the chief agricultural problem appears to be better management of sandy soils with emphasis on legumes (alfalfa, clover and soybeans), the use of green manuring crops and application of fertilizer, chiefly phosphate.

There are one hundred fifty-one farms per town as against but forty three per town in the northern seven townships. Nearly ninety per cent of the land in this area is in farms whereas in the north the percentage is much lower. The percentage of cropland in this southern area varies from 39 to 64 with an average of 54 per cent per farm as against an average of but 30 per cent for the northern area. The county committee definitely believes that seventy five per cent of the farm acreage should be in cropland. On the acreage basis this would amount to about seventy six acres per farm. Twenty five per cent of the cultivated acreage should be in intertilled crops including corn, potatoes, cucumbers (pickling) sugar beets, beans, peas, soybeans and truck and vegetable crops. Twenty five per cent should be in small grains such as oats, barley, wheat, rye and emergancy crops sown broadcast. It is cheaper and more profitable to buy grains for feed rather than grow them in this county since production per acre is low in this section of Wisconsin. With the introduction of hay silage (alfalfa and clover, etc.) it is likely that more hay could be grown and the small grain acreage reduced.

Fifty-five per cent of the cropland should be in grass and hay crops equally divided to maintain sufficient pasture. Wild pasture is not the best at its best. Alfalfa acreage should definitely be increased. Unless fields of alfalfa show luxuriant growth during the third year of cropping, the first cutting should be done a little later than ordinarily and the second, after as much growth as possible, should be used as green manure. Organic matter and the resulting accumalation of humus is quite deficient in the sandy soils of Oconto County.

Relative to potatoes, it appears that this crop has dwindled in acreage during the past five years. The average farmer raises about one acre and there are a very few who specialize in this crop. Quality potatoes can be raised in this county. The chief potato growing section in the county is more or less confined to the towns of Oconto, Brazeau, Little River and Lena, all located together in the northeast. There is no particular reason why this crop could not be made one of the most important cash crops other than possibly occasional unfavorable weather, low prices or indifferent attitude of the farmer. Quality is essential and grading must be done. Better seed, adapted varieties, proper fertilization of the soil and good care together with treatment for scab and scurf and selling only U.S. No. 1 grade and certification, will do much to accomplish the desired results.

GENERALIZED LAND CLASSIFICATION

Oconto County, Wis.

LAND USE AREAS	QUALITY OF LAND						
	Better Areas		Fair to Poor Areas		Poorest Areas		Total Area
	Acres	%	Acres	%	Acres	%	Acres
IN FARMS Not suited for farming Class "A" (blue)	2680	8.3	10876	33.4	18964	58.3	32520
NOT IN FARMS Should not be in farms Class "B" (green)	21740	7.5	35350	12.3	230500	80.2	287590
IN FARMS Questionably suited for farming Class "C" (red)	10880	29.3	12060	32.5	14060	38.2	37000
NOT IN FARMS Suitable for farming Class "D" (orange)	3420	70.3	1200	24.4	240	5.3	4860
IN FARMS Should remain in farms Class "E" (yellow)	194800	69.5	58620	20.9	26770	9.6	280190
County Total	233520	36.3	118106	18.4	290534	45.3	642160

Above figures do not include cities and villages.
Menominee Indian Reservation not included.

RECOMMENDATIONS

GOVERNMENT

It is necessary to adjust the cost of public services to the present needs in areas where the land use and population pattern have been and are being changed. In general it is evident that some townships are not and will not for some time be self-supporting. In addition to the use of 100 per cent of all state and federal aids, these townships require increased finance to operate efficiently.

1. It is therefore recommended that the townships of Doty, Breed, Bagley, Wheeler, Townsend, Armstrong and Riverview, all within the Nicolet National Forest, County Forests and County Zoned Areas, should consider consolidation or reorganization. The township of Stiles located among well established self-supporting units might also consider consolidation.

The seven northern townships might be consolidated into two or three civil units and thereby make a saving to themselves and the county. Under governmental reorganization, the area of towns and type of government might be changed according to major land uses and only the vital public services provided. Each town could be provided with a substantial agricultural, industrial or urban taxbase and the forest land added to the several or all townships involved.

2. It is recommended that the Department of Agricultural Economics of the Wisconsin College of Agriculture, be asked to make a detailed study of consolidation for the townships above mentioned.

3. The committee recommends that the state legislature require that all candidates for town assessor and clerk pass a special qualification test.

Uniformity of assessment on all property throughout the county is essential. In the past town records and reports have not been accurate in many instances.

TAXATION

The property taxbase during the past ten years has declined approximately 50 per cent which has resulted in an increasingly strained local financial situation. The income-producing capacity of property determines its ability to contribute to the support of government. Farmers on cut-over sandy land with insufficient cropland acreage have a very low income and are unable to pay property taxes. The ratio of assessed to true value has materially increased thus making the tax rate on true value increase to a point where even the best farmer has difficulty to meet his taxes.

4. If general taxation can not be equitably based on net income instead of the present personal and real property then it is recommended that a revision of the present method be made with the provision that definite exemptions, up to a certain limit on assessed valuation, be granted to farmers and old people. This recommendation should be transmitted to the assemblyman and senator of this district.

PUBLIC ACQUISITION AND MANAGEMENT OF LANDS

Leniency before taking tax deed on unused cut-over tax delinquent lands and extended time granted for redemption results in a loss of revenue to the county and a lowered taxbase during the interim.

5. It is recommended that the County Board of Supervisors take deed to all tax delinquent lands at the earliest possible opportunity consistant with the Wisconsin Statutes. These lands should be placed at the disposal of the County Land Committee immediately so that their ultimate disposition as forest crop land, recreational development and woodlot or timber sales could be speedily effected.

To gain immediate revenue or profit there is a natural tendency to sell county owned tax-reverted agricultural lands without regard for the ultimate effect on town or county finances.

6. The County Board of Supervisors should exchange agricultural lands obtained through tax deed for isolated farms in county forests or those in present and proposed zoned areas.

ROADS

Many townships have antiquated or wornout highway equipment and are unable to repair or purchase new and needed machinery. Stub and intertown roads are often inadequately serviced. Necessity for retracing to get to other locations causes a waste of time and money. There is limited demand for county equipment on state roads. The public demands more efficient and prompt service.

7. The County Highway Department should be made a central agency for snow-removal and road maintenance of all town roads. The County Board of Supervisors in considering this recommendation should ask the Highway Department to furnish all facts and to develope a comprehensive plan for this operation based on its experience with the present volunteer town system.

Present serviceable town road equipment could be rented or purchased and conveniently placed throughout the county. Similarly, employees could be placed in these respective locations. Efficiency in service and the saving of money and time could be demonstrated within one years' trial through the volunteer towns that are now operating under the control of the Highway Department of the county.

8. The Town and County Boards of Supervisors should develop roads in areas where definite recreational facilities will improve the economic status of civil units.

A road connecting several lakes or streams is valuable even if there are no farms located on its course because convenience to resorters and tourists is essential to continued benefits for both town and county.

EDUCATION

Approximately thirty-eight school districts have an assessed valuation less than $100,000. Ten have an average daily attendance insufficient to meet state requirements for aid andabout as many more are borderline cases. The cost per pupil in all elementary schools in the county is above the average for the state. Rural schools are in slightly better position due to the fact that they sacrifice equipment and lose the benefits of efficient service. With a low tax base per teacher, a high tax rate per dollar of assessed valuation and a low average daily attendance, school cost per pupil is almost prohibitive.

It is therefore recommended:

9. That the County Superintendent of Schools present the complete situation to the State Superintendent of Public Instruction and recommend that prompt action be taken to consolidate or close schools consistant with good educational procedure.

10. Because present school transportation is more or less inefficient and costs somewhat excessive, it is recommended that a central supervising school transportation agency be established within the county to provide closer control over all routes for all schools. Operation should be made effective under the supervision of the State Highway and Public Instruction Departments.

11. That State Aid be provided for High School Transportation to obviate overlapping, reduce unjustified costs and prevent route conflict between High School, Elementary and Rural Schools.

12. The State Superintendent of Public Instruction should be asked to conduct a study of the school transportation system in Oconto County at his earliest convenience with the view to learn if savings and efficiency would result through a centralized transportation system.

ZONING

Three-fourths of the townships in the county have parcels of land recently classified as non-agricultural and designated by the land use planning committees as "A" and "B" areas. Settlers entering these areas eventually become public charges.

13. The County Board of Supervisors should make plans to amend the County Zoning Ordinance to include these areas with the approval of the respective town boards.

14. The County Board of Supervisors should promptly investigate present and proposed zoning areas, revise non-conforming use lists and present a summary showing compliance with the ordinance. It should further indicate any reversions of land to unrestricted areas and encourage individuals to report violations of the Ordinance.

RELOCATION OF SETTLERS

About fifty isolated settlers in present and proposed zoned areas are creating prohibitive governmental cost for public services.

15. It is therefore recommended that isolated settlers should be relocated on agricultural land in settlements already established where they have a good chance for success.

16. The County Board of Supervisors should actively solicit continued land purchases by the Isolated settler Purchase Project of the Soil Conservation. Likewise any available county owned agricultural land should be exchanged for farms of isolated settlers.

17. That Congress should provide that the United States Forest Service with more funds to enable more rapid and equitable purchase of isolated farms and forest lands in the federal forest.

This procedure would increase employment now, when needed and go far in assisting in bringing about governmental reorganization and town consolidation, particularly in the northern part of the county.

FORESTRY

A large part of the purchases of the Federal Forest Service consisted of three to five years tax-delinquent land which was unsuitable for agriculture. The purchases have not greatly reduced tax revenue in the county. Increased employment, increased income from recreational industry, fire-protection work on private lands and reduction in local costs of government where schools and roads are eliminated are important by-products of an active forest program. In addition to the 10% spent for construction and maintenance of roads and trails, the 25% allocation to the county of the gross receipts from sale of timber would be most effective if available now when the need is urgent. When sanction of the people was solicited for the purpose of establishment of Nicolet National Forest it was expected that a great deal of employment would be provided. Since relief and unemployment are still rampant, more employment is still needed.

18. It is recommended that the Federal Government thru the Forestry Service provide an advance annual acreage payment to the civil units involved. Payment should be operative until such time as the 25% gross forest income equals the amount paid in lieu of taxes.

19. It is recommended that the County Board of Supervisors urge the Federal Government through the Commissioner of National Forest Relations for Oconto County to make a grant to the Federal Forest Service and the State Forest and Conservation Agencies, as administrating agencies, for the purpose of a forest development program to aid the people to become economically independent. The sum of money to be paid over as a grant shall be taken out of WPA funds based upon what would have been to WPA the labor cost as established for that district of man hours required plus the percentage contribution per man month for material as permitted under WPA regulations. The administering agency shall proceed to do the project work under its own established procedure, and without restriction in employment as to employee status on relief or qualifications other than ability to do the work assigned to him.

20. It is also recommended that from 10 to 40 acres of land depending upon the size of the farm and per cent of non-agricultural land in the farm be set aside permanently for woodlot. These woodlands should be restricted from grazing and be protected from fire. It is urged that the county agent cooperate with the United States Forest Service and the Wisconsin Conservation Department in conducting several woodlot improvement demonstrations in Oconto county.

21. It is recommended that both the Federal and County Forests in the county be managed to provide the greatest good to the greatest number. Every acre should be put to its best use whether it be timber production, recreation, game cover, grazing or a combination of all. The aim should be to secure a sustained yield and when mature timber should be sold in the form of "timber sales" to reliable parties under supervision to prevent undesirable cutting practices.

RECREATION

Recreational facilities should be consistently improved since it not only rebuilds men but it also adds from 5 to 10 per cent to the tax base which has been subject to rapid decline in the areas best adapted for recreational development.

22. It is recommended that a good shore road be built along the border of Green Bay near the County Bay Shore Forest so that this large amount of shoreage will be open for recreational purposes.

23. In the Peshtigo Brook Area we have about 6,000 acres of idle land covered with grass and willow brush. Due to this area being dry during the late summer, water fowl have not used it extensively. A dam should be constructed in Section 21- Range 18, Township 30 through which water level could be raised and maintained south of State Highway 64.

24. Resorters in the Mountain and Lakewood area must travel beyond the confines of Oconto County to find a Golf Course. The county now owns an admirably suited tract of land one and one-half miles east of Lakewood which should be developed without delay.

25. Beach development for bathing is essential at Waubee Lake. It has a fine group of cottages and two resorts. Since private interests have made large investments here it is recommended that the town and county governments both should assist in improving public services.

26. There is a definite need along our main traveled highways for roadside tables and rest areas. Such spots when well chosen and used ease the strain on occupants of automobiles, thus preventing accidents and at the same time prove an excellent advertising medium for both county and state.

27. A dam should be built at the outlet of White Potato Lake to maintain water levels. A dam should also be built on the upper Peshtigo Brook to divert water to this lake to raise and maintain water levels and improve fishing. The lakeshore would be more desirable for summer cottages.

28. A dam should be constructed on the outlet of Crooked Lake to raise and maintain water levels. This lake has a well-developed summer colony and should be given every reasonable public service to keep people contented.

29. The Machickanee County Forest winter sports area should be further developed. It has advertised Oconto County very much during its first year of operation.

30. Both summer and winter sports should be encouraged more extensively in the northern or Nicolet National Forest Area. The Wheeler Dam will be doing its part in maintaining waterlevels.

FARM SECURITY ADMINISTRATION

Reasons why a certain group of farmers fall in the low-income class:- Poor soil, lack of credit, inadequate crop acreage, poor health, poor farm management, poor income management, over-sized families, excessive liens and excessive taxes.

It is therefore recommended:

31. That endorsement and encouragement be given to the present Farm Security Administration Program on all land classed as "D" and "E" by the county land use planning committee.

32. That no loans be given to those farmers living in zoned areas unless they declare their intention to relocate and will require aid only until such time as a satisfactory and reasonable relocation proposition becomes available and acceptable.

33. That first consideration be given to those farmers who have or are about to lose their farms through mortgage foreclosure. It is more practical to continue these farmers than to start a new man on the same property.

34. That the procedure to move isolated settlers by loaning them up to seventy-five per cent of the option price.

WISCONSIN CONSERVATION DEPARTMENT

35. Townships at the present time are not receiving the stipulated 10 cents per acre of forest crop land because appropriations have been cut and acreage purchase has been increased. It is more important to keep the price up than to increase the acreage if the plan is to receive the support of land owners. The department and the Wisconsin legislature are urged to continue the original payment of 10 cents per acre under the forest crop law.

36. Local farmers and citizens should cooperate more fully with the Conservation Department employees in the enforcement of game, fish and forest fire laws of the state. Violators should be reported promptly and individuals should realize it their duty as citizens of this state to report promptly all cases of vandalism.

RELIEF AND W.P.A.

37. It is recommended that a special township committee be authorized to certify to the WPA and Relief offices those people within their respective townships who may be eligible for aid.

38. Money appropriated for WPA should be distributed to the townships based on their needs and permit the town to hire its own labor and care for its own relief cases.

39. WPA workers living on land should be encouraged to become self-supporting instead of depending upon WPA as a year-around job. All families wholly or partially employed and living in the county should be definitely required to grow a garden sufficiently large to provide all vegetables for home use.

40. More rigid restrictions should be placed upon those receiving relief, surplus commodities or WPA work in order to encourage them to seek a status for self-support.

FEDERAL LAND BANK LOANS

The average gross income for all farms in Oconto County with Federal Land Bank loans is about $800 which is only enough to provide a living for the family. Any payments that are made are done so at the expense of the farm and living standards of farm families. As loans increase in size they often reach a point where loans exceed the present value of the farm.

41. It is therefore recommended that farms owned by the Federal Land Bank within the Nicolet National Forest, within County Forest and Zoned areas should not be sold for farms if classified as non-agricultural. The Bureau of Agricultural Economics of the United States should work out a financial plan whereby these farms could be sold to the Federal Forest Service and to the county for the purpose of reforestation.

42. Congress should continue the present policy of $3\frac{1}{2}$ per cent interest rates on all Federal Land Bank loans for farm mortgages. Commissioner loans at the rate of 4 per cent should be continued and possibly made permanent.

43. Old Federal Land Bank loans (written at interest rates above 4 per cent) should be re-written at interest rate of 4 per cent comparable to new loans as issued to-day.

44. It is also recommended that interest rates on Federal Land Bank farms acquired by them and resold to the public should be reduced from 5 to 4 per cent.

AGRICULTURAL ADJUSTMENT ADMINISTRATION

Very little new land remains in the county which can successfully be used for farming. Fifty per cent of the farms have too little cropland and many farmers are forced to buy large amounts of concentrates. About sixty per cent of the land in farms contains soils with a sand base. Seventy five per cent of the soils are seriously low in plant foods.

It is therefore recommended:

45. That soil-building payments be increased 25 per cent and soil depleting payments be reduced by a correspondingly proportionate percentage.

46. That application of fertilizer on depleting soils, where used as a nurse crop for new seeding, should be permitted and a fifty per cent soil-building payment be made thereon.

47. That a full-performing participant in the program be permitted to take up to eighty per cent of the entire anticipated payment for the purpose of applying fertilizer in soil-building practice.

48. That the dairy farmer be given parity payments so as to receive at least the cost of production for dairy products. Consideration should be given the dairy farmer just as other special-crop farmers are receiving on wheat, etc.

GENERAL AGRICULTURAL RECOMMENDATIONS

49. Under average farm conditions, particularly in consideration of the large percentage of sandy soils, it is necessary to have a minimum of 45 acres of cropland per farm.

50. Cheese production is the major industry in the county. Improved methods of distribution and sales can best be served through production of quality milk. Any program for quality milk must be extended over a period of years if it is to become effective.

51. Farmers should endorse the program of the Oconto County Breeders Cooperative to reduce cost and increase participation. Organization of more units would have the desired effect.

52. It is recommended that the College of Agriculture work out a simple and inexpensive method (centralized sampling and testing stations) so that Dairy Herd Improvement Association services would be available to the bulk of farmers in the county.

53. There is need for a good well-developed primary marketing center in the county. If natural cheese is the solution for a better and bigger market, then cheesemakers and farmers should interest themselves in a county central process, storage and marketing warehouse.

54. With most of the soils of the county more or less sandy it is recommended that the growing of legumes for green manure crops should be encouraged. This practice would increase the water-holding capacity and retention of readily available fertilizer applications of these soils.

55. Farmers and all agencies concerned with the problems of the farm are urged to follow the land use classification maps and foregoing recommendations in the guidance of their programs.

56. The county agricultural committee through the county agent representing the College of Agriculture should be contacted frequently in order that programs of various agencies aiming to assist farmers fit together for the common good of agriculture.

Summary Sheet - County Planning Project, 1939-40, for Crop Farming Areas.

ITEMS	COUNTY AVERAGE	
	Present	Recommended
Percentage of Present Cultivated crop-land to be continued in cultivation	97	95
Approximate number of acres of land in the area to be continued in cultivation	181849	178212
Percentage of Recommended cultivated Acreage to be in:		
1. Intertilled crops	15	25
2. Small grains and other close grown crops	22	20
3. Grass and hay crops	63	55
Percentage of Recommended Cultivated Cropland Acreage Needing Soil Conserving Practices:		
1. Strip Cropping	None	None
2. Lime-phosphate application or other fertilizer	5	75
3. Terracing	None	None
4. Winter cover crop for green manure	2	25
5. Summer cover crop for green manure	2	25
6. Contour Cultivation	None	None
7. Farm Woodlot (Improved)	5	75
Approximate acreage Recommended for Pasture (All Types)	150,000	100,000
Plowable acres of Pasture per cow	1	2
Percentage of Recommended acreage for Pasture Needing Soil Conservation Practices:		
1. Lime Phosphate Application	5	75
2. Reseeding	1	50

MAJOR PROBLEMS OF THE COUNTY

(Recognized by the Town and County Planning Committees)

I. SOIL FERTILITY

Fifty-one per cent of the land in farms in the county, consisting of Superior, Fox, Miami, and Kennan loams, is classified as better quality; 49% consisting of Superior, Plainfield, Coloma, Poygan sandy loams and sand together with Peat and Muck is classed as fair to poor quality soil. About 75% of these soils contain a decided sandy base. Production of small grains per acre is below the state average and below the average for the district. In all corn production it is but two-thirds of the state average and in potato production it just meets the state average. About 75% of these soils are seriously low in phosphate, medium low in lime and moderately deficient in potash. The majority of the land in farms is low or out of balance in organic matter.

II. HERD IMPROVEMENT

There is no one particular breed of dairy cattle predominant. With the exception of a very few herds all are decidedly mixed and pedigreed stock is the exception rather than the rule. The average production per cow is approximately 180 pounds of butter fat per year. In milk production per cow the county is 11.5% below the best state average for individual districts and is not in first place in its own district. There is but one Dairy Herd Improvement Association unit in the county and to complete its unit farmers from neighboring counties are members. Fortunately within recent months an artificial insemination cooperative has been organized which will do much, but additional units should be encouraged to give opportunity to a much larger percentage of the farmers.

III. TOWN CONSOLIDATION (See table-page 31)

Seven townships in the northern part of the county are having difficulty in financing public services. All of these have less than one-fourth of their total land area in farms and the soils are among the poorest in the county. Their location in reference to growing season and temperature is unfavorable to good farming. A shrinking taxbase, due to loss of assessed valuation through tax-delinquency and public exchange of land, has placed an additional burden on the towns and county. The relief load is out of proportion compared to the sixteen other townships in the county and schools require more than the present state aid. Cropland per farm is about thirty per cent less than the average for the county and much too low for good management. Tenancy is increasing and is 4% above the county average.

IV. AMENDMENT TO THE COUNTY ZONING ORDINANCE

Nearly 70,000 acres of land in fifteen different locations embracing land use classes A, B and C which are contiguous to present zoned areas should be zoned promptly according to the recommendation of the county committee. The lands are not suitable for agricultural use.

V. RELOCATION OF SETTLERS

No less than fifty farmers located within non-agricultural lands should be relocated. The relief burden and tax delinquency will both be appreciably lowered.

COMPARATIVE DATA

Northern Area

Doty - Townsend - Wheeler - Riverview - Armstrong - Breed - Bagley.

vs.

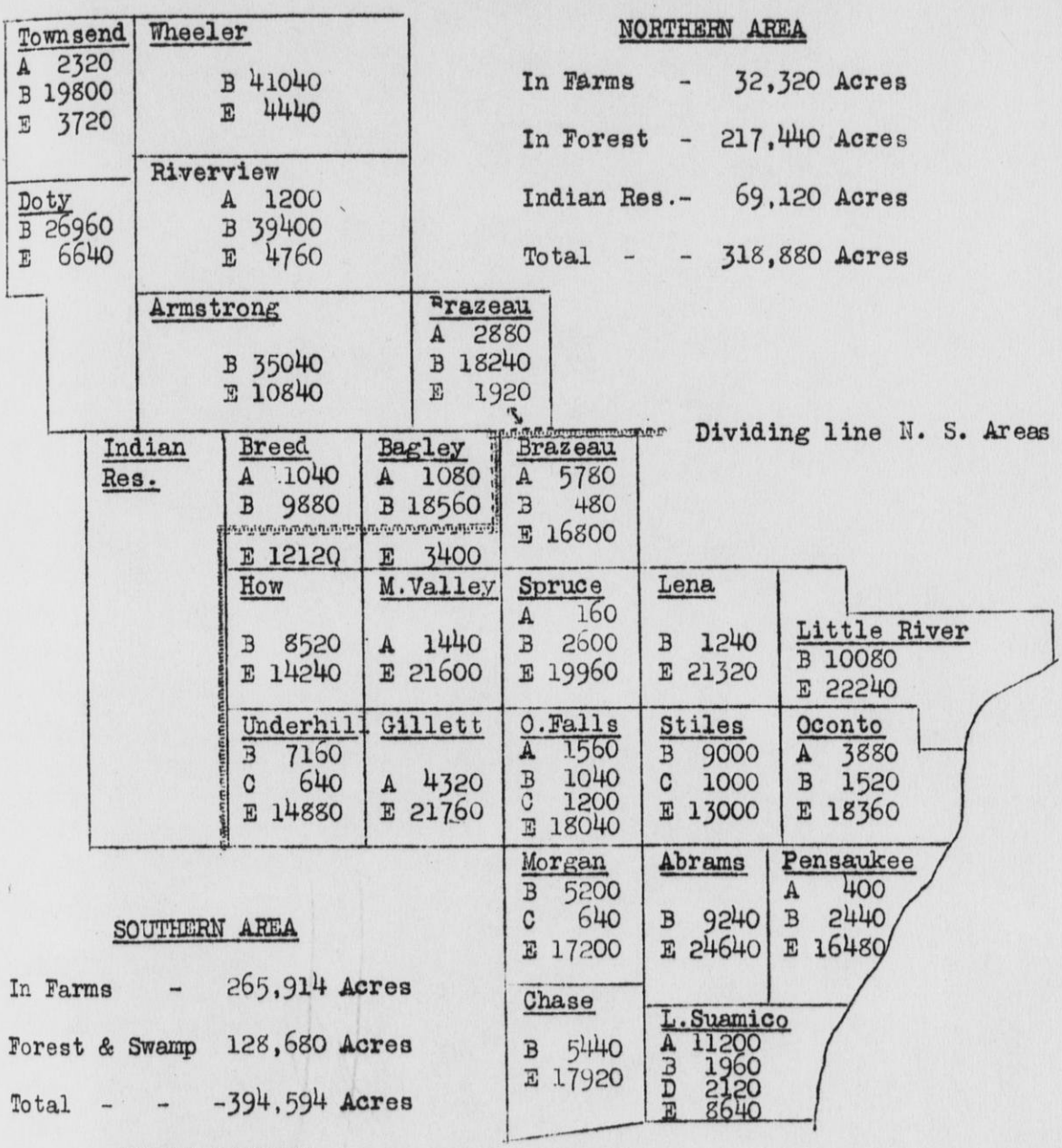
Southern Area

Brazeau - How - Maple Valley - Spruce - Lena - Little River - Oconto - Underhill - Gillett - Oconto Falls - Stiles - Morgan - Abrams - Chase - Pensaukee - Little Suamico.

TOWNSHIP AVERAGES	SOUTHERN	NORTHERN
Population Ratio	3	1
Land in Farms (Remainder unsuitable)	18,836	4,167
Number of farms	151	43
Acres per Farm	111	94
Cropland per Farm - Acres	54	30
Small Grains & Corn per Farm (Per cent)	20	12
Grass & Hay - Alfalfa, etc; (Per cent)	19	13
Potato Acreage per Township	227	55
Dairy Cows per Farm	10	6
Better Quality Land (percentage of area)	60	18
Tanancy (per cent)	20	24
Pension (20% Chargeback to Town per Farm)	21¢	$1.17
Welfare (Public Cost per Taxpayer)	14¢	21¢
WPA Cases per Township	9	24
FSA Subsistance (Basis-Cost for all Farms)	$44.00	$88.00
Tax Delinquency (Charge all Farm Basis)	$47.00	$152.00
Town & County Combined Gov't. Cost per Farm	$7.00	$23.00
Rural School Cost per Pupil (annual)	$58.00	$77.00
Co. Representation per unit of population	1	3

GENERALIZED LAND USE CLASSIFICATION - 1940

OCONTO COUNTY



NORTHERN AREA

In Farms - 32,320 Acres

In Forest - 217,440 Acres

Indian Res.- 69,120 Acres

Total - - 318,880 Acres

Dividing line N. S. Areas

SOUTHERN AREA

In Farms - 265,914 Acres

Forest & Swamp 128,680 Acres

Total - - -394,594 Acres

COUNTY CLASSES

Class A land - 37,240 Acres

Class B land - 337,354 Acres

Class C land - 1,840 Acres

Class D land - 2,120 Acres

Class E land - 334,920 Acres

Classes D & E - 337,040 Acres -47.2%

COUNTY LAND USE

In Farms - -	298,234	41.8%
Forest & Swamp -	346,120	48.5%
Indian Reservation -	69,120	9.7%
GRAND TOTAL - -	713,474 Acres	

February 20, 1941

THE CONSOLIDATION OF CERTAIN TOWNS OF OCONTO COUNTY

by

Geo. S. Wehrwein
University of Wisconsin

* * * *

The Tax Base of the Towns in Question

For purposes of comparison the town of Little River was selected because it is a well developed farming town with 184 farms in 1930 and also because it covers a larger area than a town of 36 square miles and therefore represents town government spread over more square miles than the usual town.

In Table I. the five towns in the Nicolet National Forest are grouped together, Breed and Bagley likewise, and Stiles and Little River are shown separately. The first important fact shown by this table is the large acreage of tax exempt land in the five northern towns and in Bagley. In so far as continued purchase by the federal government and the prompt taking of title to all tax delinquent land will no doubt further incrase the area of tax exempt land, the tax base (at least in area) will tend to shrink rather than increase in the future. The area of tax exempt land is much less in Breed than in other towns and least of all in Little River.

Table II. shows the tax base of these towns in terms of the assessed valuation by the five classes of real estate, personal property, and total property. One of the large sectors of the tax base in the five

* The township of Stiles was also suggested as a town "which might also consider consolidation."

Table I.

Area of Towns, of Tax Exempt and of Taxable Area,

and Acreage of Land in Farms and in Crops, 1940

	Area of Town 1/	Tax Exempt 2/	Area Taxable	Per Cent of Area Paying Taxes	Acreage in Farms 3/	Per Cent of Town in Farms	Acreage in Crops 3/	Per Cent of Town in crops
	Acres	Acres						
Armstrong	46,627	32,621	14,006	30.0	3,910	8.4	1,128	2.4
Doty	33,376	19,783	13,593	40.7	2,260	6.8	390	1.2
Riverview	46,633	30,184	16,449	35.3	3,680	7.9	922	2.0
Townsend	27,058	10,033	17,025	62.9	3,448	12.7	1,078	4.0
Wheeler	46,313	27,013	19,300	41.7	3,284	7.1	1,158	2.5
Total	200,007	119,634	80,373	40.2	16,582	8.3	4,676	2.3
Bagley	22,704	13,118	9,586	42.2	4,103	18.1	897	4.0
Breed	22,772	7,022	15,750	69.2	7,981	35.0	2,742	12.0
Total	45,476	20,140	25,336	55.7	12,084	26.6	3,639	8.0
Stiles	22,122	2,799	19,323	87.3	10,800	48.8	No report	-
Little River	33,240	2,001	31,139	93.7	26,039	78.3	10,417	31.3

1/ Wisconsin Blue Book 1935, p. 677-678

2/ Report of the Supervisor of Assessments for Oconto County 1940

3/ As reported by the Assessors to State Crop Reporting Service, 1940.

TABLE II

Assessed Value of Various Classes of Property in Certain Towns of Oconto County*

	A Residential	B Mercantile	C Manu-facturing	D Agricultural	E Swamp, Waste and Cut-Over	F Timber	Total Real Estate	Personal Property	total Property
Armstrong	$25,645	$12,655	$1,475	$42,025	$39,185	—	$120,985	$20,021	$141,006
Doty	26,295	—	—	9,210	48,994	—	84,499	4,180	88,679
Riverview	53,155	2,855	—	28,837	43,523	—	128,370	10,505	138,875
Townsend	26,050	5,335	570	39,595	46,633	3,870	122,053	17,929	139,982
Wheeler	46,015	22,175	2,180	61,906	59,823	1,400	193,499	20,548	214,047
Total	177,160	43,020	4,225	181,573	238,158	5,270	649,406	73,183	722,589
	24.5	6.0	0.6	25.1	33.0	0.7	89.9	10.1	100.0
Bagley	6,400	—	—	22,690	27,630	1,020	57,740	9,275	67,015
Breed	8,855	2,390	3,700	111,880	37,020	2,140	165,985	26,367	192,352
Total	15,255	2,390	3,700	134,570	64,650	3,160	223,725	35,642	259,367
	5.9	0.9	1.4	51.9	24.9	1.2	86.2	13.8	100.0
Stiles	9,545	18,451	23,030	327,755	39,885	—	418,666	45,204	463,870
	2.1	4.0	5.0	70.6	8.6	—	90.3	9.7	100.0
Little River	5,575	8,350	7,120	817,015	23,695	11,470	873,225	122,830	996,055
	0.6	0.8	0.7	82.0	2.4	1.2	87.7	12.3	100.0

* Report of the Supervisor of Assessments of Oconto County, 1940

northern towns is the residential property, largely recreational and resort property, which, according to the Supervisor of Assessments report of 1940, was assessed at $177,160 in these towns as compared with only $5,575 in Little River. This form of property was also more important in Breed, Bagley and Stiles, than in Little River. Mercantile property totalled over $43,000 in the five towns in the Nicolet Forest but only $8,350 in Little River. It is of small importance in Breed and Bagley but fairly valuable in Stiles. Manufacturing property is of considerable value only in Stiles.

Considering the original source of taxable wealth, namely, timber, it will be noted that this is an insignificant item in all the towns. Furthermore, the agricultural town of Little River has more than twice the amount of timber in terms of assessed valuation than the five towns in the Nicolet Forest, and Breed and Bagley together have more than half as much as the five "forest" towns put together.

It is an important fact that $238,158 of the tax base of the five towns in the Nicolet Forest consists of swamp, waste and cut-over land, the land incapable of yielding an income in its present condition and much of it in unstable ownership, and together with the timber (as soon as this is cut) likely to revert to public ownership. Fully 33% of the value of all taxable property of the Nicolet Forest towns is in the "E" classification, i.e. swamp, waste and cut-over. It should be noted, however, that the Supervisor of Assessments reports that this form of property is considerably overassessed, whereas the other forms of land are usually underassessed.

Agricultural land is the basic resource of unincorporated areas in all but a few highly developed recreational areas of Wisconsin. In Little River $817,015 of taxable wealth is represented by the "D" class, i.e. agricultural land or 82% of the entire tax base. This is somewhat less than the value of all land in farms since within the line fence there may also be timber, and swamp, waste, and cut-over land. In the five towns in the Nicolet Forest agricultural land totalled only $181,573 or 1/4 of all taxable wealth, in Breed and Bagley together, $134,570, or about 52% of total property values, while Stiles has $327,755 of assessed value or 71% of total property in the farm land classification.

The trend in agriculture, in the forest towns, judged by the number of farms, has been steadily downward since 1935, at which time the number in the Nicolet Forest towns was higher than in 1930. (Table III.) This seems to be true also of Bagley, whereas Breed and Stiles have about held their own. Little River has more farms today than in 1930 or 1935 according to the reports of the town assessor.

In general, the census figure for the number of farms is higher than the figure reported by the assessors. There is a confusing variation from year to year depending upon the way in which the term farm is defined, as well as changes due to the actual number of farms. It is not easy to tell whether a tract of land with a house on it and little or no cultivation is a bona fide farm or not. The trend rather than the number for a given year is important.

Turning from the number of farms to the acreage of farm land, we note from the last two columns of Table I. that only 16,582 acres of

the 200,000 acres in the Nicolet Forest towns or 8.3% is in farms, and of this only about one-fourth is in crop land. In contrast, in Little River, 78.8% of the town is in farms and of this area about 40% is in crop land.

If the recommendation to relocate 50 isolated settlers, and "the more rapid and equitable purchase of isolated farms and forest land in the federal forest" are carried out the number of farms will continue to decrease and the agricultural tax base will decline even more in the "forested" towns.

So much for the present and prospective tax base. Agriculture, timber and cut-over land will continue to decline in area and in value in the Nicolet Forest towns and less perhaps in Bagley, but recreational lands and properties may increase. Can these towns continue separate town governments economically and efficiently? What can be saved if they consolidate? For the purpose of discussion let us assume that the five towns in the Nicolet Forest consolidate and that Bagley is joined to Breed.

What is the Economical Size of a Town?

In the bulletin The Cut-Over Region of Wisconsin certain minimum requirements for towns are stated. 1/ The minimum area of 36 square miles is easily met in the north. A minimum of 200 electors is set in order that there may be a reasonable equality of representation

1/ Wisconsin State Planning Board, Bulletin #7 (Jan. 1939), p. 108.

on the county board of supervisors. In 1940 the town of Little River with 1,011 people had no more representatives on the board than Doty with 125 people. However, the minimum is set in terms of electors and total population is not easy to translate into legally eligible voters. Table IV. shows the number of votes cast for president or governor in the elections of 1932 to 1938, inclusive. If these figures are taken as the basis, only Little River, Stiles and Armstrong are well above the minimum of 200 electors, Townsend, Wheeler and Breed are near the standard, while Bagley, Doty and Riverview are below the 200 voter minimum.

The third requirement of $400,000 assessed valuation is based upon the fact that school districts with less than $200,000 of taxable property qualify for equalization aid and twice this amount is not unreasonable for a town. Using this as a basis all the towns with the exception of Stiles and Little River fall below the minimum, especially Bagley which has only $67,015 of assessed valuation. Doty had only $88,679. Bagley and Breed together fall below this minimum and the combined five Nicolet Forest towns had $270,000 less assessed valuation than Little River. (Table III.)

The Costs of Town Government

Table V. shows the principal outlays which towns make for governmental services, i.e. general government, highways, charities and corrections, debt payments and "other" which includes education. In considering the possible effect of consolidation on the cost of government, it must

TABLE III.

Number of Farms as Reported by the U. S. Census and the Town Assessors To the Wisconsin Crop and Livestock Reporting Service, 1930-1940

	Armstrong	Doty	Riverview	Townsend	Wheeler	Total	Bagley	Breed	Total	Stiles	Little River
Census 1930	43	12	33	44	60	192	20	72	92	107	184
1930	50	13	44	43	63	213	20	72	92	98	195
1931	54	13	44	43	71	225	32	75	107	108	184
1932	45	17	51	41	64	218	30	78	108	110	194
1933	54	21	55	44	68	242	37	81	118	107	195
1934	63	22	50	46	67	248	41	74	115	113	194
Census 1935	72	23	53	50	73	271	50	87	137	141	205
1935	50	19	50	48	55	222	50	79	129	112	186
1936	38	20	47	40	50	195	52	83	135	104	188
1937	46	19	47	44	41	197	43	82	125	108	186
1938	48	17	38	41	39	183	46	75	121	111	178
1939	38	17	40	45	42	182	44	73	117	105	184
1940	42	13	42	37	34	168	42	72	114	110	198

TABLE IV.

Number of Votes Cast at Elections of 1932 to 1938 in Selected Towns Of Oconto County and Population 1930 and 1940.

		Armstrong	Doty	Riverview	Townsend	Wheeler	Bagley	Breed	Stiles	Little River
1932	President	221	68	116	147	160	61	148	268	402
1934	Governor	202	56	129	165	190	56	194	255	469
1936	President	265	84	111	203	204	83	210	311	499
1938	Governor	209	49	83	162	141	66	199	272	452
1930	Population	546	66	271	386	411	156	462	738	1076
1940	Population	572	125	243	409	360	242	537	806	1011

be recognized that some of the items are present irrespective of the size of the town. Highways will cost just so many dollars per mile to build and maintain whether in large or in small towns, except for the economies of administration. Table V. shows that from 1/3 to 2/3 of the total disbursements of the towns listed in the table were spent for highways (1927-1936) With $65 a mile state aid for town roads, the local people are relieved of most, if not all, of their road costs. "Charities and corrections" likewise are independent of the size of the towns and represent only a small proportion of total disbursements. The main item which will be affected by consolidation is general government which took less than 11% of the town's outlays in Stiles and Little River but 23.4% in the combined Nicolet Forest towns and 18.5% in Breed and Bagley taken together.

One of the difficulties in dealing with costs of government is revealed by this table and Table VI. For instance, the average cost of "running" Bagley from 1927 to 1936, inclusive, was only $2332 per year, whereas Doty with fewer farms and smaller population spent $3254, presumably for the same services. In Table VI. "general government" is broken down into the constituent items for 1932-1936, a shorter period it should be noted than the one used in Table V. The economical expenditures of Bagley and Breed are even more evident in this table.

In considering the cost of government services economy or "low cost" is only one part of the picture. The taxpayer should also consider the quantity and quality of the services he gets for his dollar. This cannot be shown by a set of statistics. For instance, the town of

TABLE V.

Average Annual Disbursements by Purpose for Selected Towns of Oconto County
Fiscal Years 1927-1936*

	Total	General Govern-ment	Highways	Charities and corrections	Debt payments	Other	Percentage Distribution					
							Town	Gen Gov't	High ways	Char & Correct.	Debt pay ments	other
Armstrong	3,324	900	1,138	762	28	496	100	27.1	34.2	22.9	0.9	14.9
Doty	3,254	877	1,582	45	94	656	100	27.0	48.6	1.3	3.0	20.1
Riverview	5,245	1,070	1,992	391	1,157	635	100	20.5	38.2	7.5	22.1	11.7
Townsend	5,865	1,236	3,046	843	—	740	100	21.1	51.7	14.5	—	12.7
Wheeler	6,289	1,518	2,796	247	757	971	100	24.1	44.3	4.1	12.0	15.5
Total	23,977	5,601	10,554	2,288	2,036	3,498	100	23.4	44.0	9.5	8.5	14.6
Bagley	2,332	522	1,365	264	7	174	100	22.4	58.5	11.3	0.3	7.5
Breed	4,762	788	2,307	285	649	733	100	16.5	48.4	6.0	13.6	15.5
Total	7,094	1,310	3,672	549	656	907	100	18.5	51.8	7.7	9.2	12.8
Stiles	9,545	1,002	3,152	1,287	1,280	2,824	100	10.5	33.0	13.6	13.3	29.6
Little River	11,052	1,214	7,344	487	243	1,763	100	10.9	66.4	4.4	2.2	15.9

* From data obtained by the Public Land Inventory and Finance Study, Wisconsin State Planning Board.

Doty spent $131 on the average for the assessment of its properties which in 1940 totalled $88,679; in Bagley $62 was spent to assess $67,015 of taxable property, and in Little River $150 to assess $996,055 of real and personal property. The assessor had to see 13 farmers in Doty, 42 in Bagley and 198 in Little River. Unfortunately the data at hand do not show how many resorts, stores, residences, factories and other non-farm properties the assessor had to visit, so complete and fair comparisons cannot be made. Nevertheless, one wonders how adequate a job an assessor can perform for $62. It may be that the town that spends $130 a year is getting more for its tax dollar than the one that spends $60 for assessment. The same must be said for most of the other functions and officers. Some towns have spent as little as $2 a year on their town halls, others as high as $164; whether these sums are wisely spent and carefully administered cannot be told until the purposes are examined and the work appraised.

The cost of town government can be compared best if the cost is shown in terms of $1,000 of assessed valuation. Since the cost of government for the towns was presented for the years 1932-1936, in Table VI., the assessed valuations as found in the Supervisor of Assessments reports were averaged for the same years, but 1937 was added to broaden the average by one year in Table VII. Compared with the same value figure, in Table II. for 1940, it will be noted that the valuations for 1932-36 were higher than in 1940 for the forest towns, including Bagley. Taxable values were down in Breed and Little River. In other words, the ability of the forest towns to pay for

TABLE VI.

Average General Government Expenditures in Selected Towns, Oconto County
By Purpose of Expenditure for the Fiscal Period, 1932-1936 1/

	Total General Govt.	Town Board	Town Clerk	Assessor	Treasurer	Board of Review	Elections	Town Hall	Property and Liability Insurance	Police Protection	Health and Sanitation	all other 2/
Armstrong	983	239	172	129	142	39	74	64	23	42	41	18
Doty	940	326	146	131	137	43	52	5	20	48	16	16
Riverview	1,186	342	200	163	196	56	75	2	33	38	78	3
Townsend	1,347	199	187	139	154	64	76	164	89	37	81	157
Wheeler	1,600	351	267	173	248	98	64	128	128	40	42	61
Total	6,056	1,457	972	735	877	300	341	363	293	205	258	255
% Distribution	100.0	24.1	16.0	12.1	14.5	5.0	5.6	6.0	4.8	3.4	4.3	4.2
Bagley	546	128	117	62	99	18	55	8	24	17	9	9
Breed	958	119	148	105	148	51	93	67	120	43	44	20
Total	1,504	247	265	167	247	69	148	75	144	60	53	29
% Distribution	100.0	16.4	17.6	11.1	16.4	4.6	9.9	5.0	9.6	4.0	3.5	1.9
Little River	1,169	307	186	150	236	43	92	24	15	20	62	34
% Distribution	100.0	26.3	15.9	12.8	20.2	3.7	7.8	2.1	1.3	1.7	5.3	2.9
Stiles	1,119	218	203	173	224	53	97	10	6	79	37	19
% Distribution	100.0	19.5	18.1	15.5	20.0	4.7	8.7	.9	.5	7.1	3.3	1.7
All Towns % Distribution	100.0	22.6	16.5	12.4	16.1	4.7	6.9	4.8	4.7	3.7	4.2	3.4

1/ From data obtained by the Public Land Inventory and Finance Study, Wisconsin State Planning Board.
2/ Consists of Law, Payments to State Deposit Fund, and "Other".

TABLE VII.

Cost of General Government of Selected Towns of Oconto County
Per $1,000 of Assessed Valuation, 1932-1937*

	Average Assessed Valuation 1932-1937	Average Cost of General Government	Cost per $1,000 of Assessed Valuation
Armstrong	185,262	983	5.30
Doty	114,082	940	8.24
Riverview	162,463	1,186	7.30
Townsend	259,830	1,347	5.18
Wheeler	246,007	1,600	6.50
Total	967,644	6,056	6.26
Bagley	77,840	546	7.01
Breed	190,630	958	5.02
Total	268,470	1,504	5.60
Stiles	481,050	1,119	2.33
Little River	943,399	1,169	1.24

* Average assessed valuation as reported in the Supervisor of Assessments reports or in the files of the Tax Commission; average cost of general government from data obtained by the Public Land Inventory and Finance Study, Wisconsin State Planning Board.

government was greater some years ago than it is today and less in the two agricultural towns.

The second column of Table VII. shows only the costs of general government—the chief item to be affected by consolidation—the third column shows the cost per $1,000 of assessed valuation. From this table it would seem that the property owners of Little River paid only $1.24 for general government upon 1,000 of property, in Stiles $2.33 but in the towns in the Nicolet Forest the minimum was $5.30 and in Doty $8.24. Even in economical Bagley the tax payer with $1,000 of assessed valuation paid an average of $7.01 per year for this item of government. The advantage of living in a town with at least $200,000 of assessed valuation is evident.

Can these costs be reduced by consolidation? While the figures for any one town or any one year may be erractic, we may assume that using the average tends to "average out" unusual figures as between towns and years. If Breed and Bagley were consolidated their combined assessment would be only $268,470, which is only a little more than Wheeler or Townsend and much less than Little River. It would seem reasonable that the cost of operating the general government of the combined areas should not be more than that of Little River. Certainly one town board, one clerk, one treasurer, and one town hall should cost less than two and the cost of elections and board of review should be materially reduced. Since the work of assessment is not decreased by consolidation not much saving can be made here if the same efficiency is maintained after consolidation as before.

It cannot be expected therefore that costs will be cut in half. But using the cost of general government of Little River as a guide--$1,169--with $268,470 of taxable value "back of" this cost the cost per 1,000 of assessed valuation would be $4.35, a worth while reduction from $5.02 and $7.01, the present costs in these two towns.

The same possible reductions can be expected if all the towns of the Nicolet Forest area were consolidated. Because of the size of the area, however, the town board might need more than the sums expended by the present town board of Little River. However, many of the other items such as treasurer, clerk, board of review, elections and town hall could be reduced to 1/4 or 1/5 of the present total expense. One-third of assessed valuation consists of swamp, waste and cut-over and this should reduce the work of the assessor, as well as the fact that only 40% of the area is taxable at all. Assuming that it will cost twice as much to operate this large town as it does the town of Little River the cost per $1,000 would be reduced from the present $6.26 to $2.41

Reducing the number of towns will not only save costs of town government but also the cost of county government. The seven members of the county board representing the present towns would be reduced to two with more than proportionate savings in per diem and mileage for county board attendance since these towns are those farthest from the county seat.

The final consideration is the question of convenience of the people in attending town meetings, going to elections, paying taxes, etc. Of course the distances are greater in large towns then in the usual 36

square mile towns. However, Breed and Bagley combined are not larger than Brazau, Armstrong, Riverview or Wheeler are now, and not much larger than Little River or Little Suamico. However, the road system of the towns in the Nicolet Forest is such that practically all residents can reach a county or state trunk highway after a short trip over town roads after which it is easy to reach any central place where the new town hall might be located.

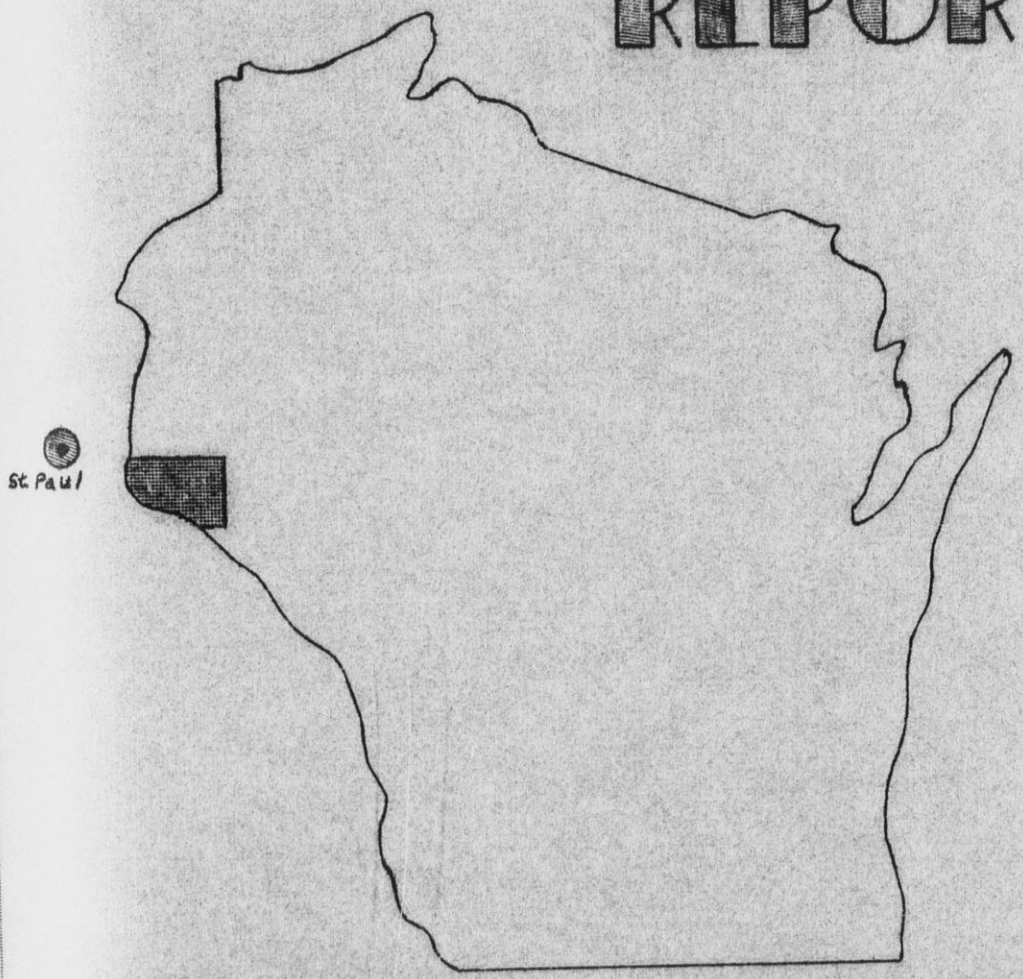
The above does not exhaust the possibilities of combinations. The lay-out of the roads in Bagley suggests that combining with Maple Valley would be more convenient for the residents of Bagley than consolidation with Breed. Likewise wiping out all town lines in the Nicolet National Forest and drawing a line so as to create two new towns based upon the present road system, distribution of taxable property and of farms might result in a satisfactory arrangement, though savings no doubt will be greater if only one town were created.

However, the present road system should not be permitted to determine the town set-up. Town government will be modified by the excellent suggestions made in the Land Use Planning report on roads, education, public acquisition and management of public lands, etc. Perhaps the most forward looking recommendation is made on page 21 "Under governmental reorganization, the area of the towns and <u>the type of government might be changed according to major land uses and only Vital public services provided</u>." This recommendation recognizes that the form of government should fit the needs of the people as influenced

by their economy, occupations, and their natural resources. Unfortunately the Wisconsin constitution insists on uniformity in town, county and school district government irrespective of density of population, the basic industries or the taxable property of the area. In spite of the "uniformity clause" exception has already been made in the case of Milwaukee County, where the present form of local government was deemed to be "impracticable".

P

LAND USE PLANNING REPORT



PIERCE COUNTY

WISCONSIN

1940

LAND USE CLASSIFICATION

PIERCE COUNTY, WISCONSIN



A	*Areas now in farms which are not suited for farming and in which the lands should be put to some other use.*
B	*Areas not now in farms and which should not be used for farming because they are unsuited for this use either as full-time or part-time farms used in conjunction with existing dependable opportunities for nonfarm work.*
C	*Areas now in farms and which are questionably suited for arable farming.*
E	*Areas which are now in farms and which should remain in farming either with or without some changes of shifts in the size and type of farm, the cropping systems, and soil conserving practices followed, or other adjustments in the farming system.*

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

SCALE: MILES 0 1 2

U.S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

TABLE OF CONTENTS

	Page
Organization and Procedure	
Organization	1
County Committee Members	1
Community Committee Members	3
Procedure	4
Description of County	
Location	7
Area	8
Topography	8
Soils	10
Soil Erosion	11
Climate	13
Farm Income	14
Farm Tenancy	15
Home Management Survey Summary	16
Weeds	19
Crops	19
Dairy and Livestock	21
Agricultural Statistics	21
Land-Use Classification	25
Present Land-Use Areas	27
Recommendations for Land-Use Areas	
Class A Areas (Blue)	27
Class B Areas (Green)	28
Class C Areas (Red)	28
Class D Areas (Orange)	28
Class E Areas (Yellow)	29
Major Problems	29
Youth Survey in Pierce County	
Objectives	30
Organization	30
Procedure	30
Recommendations of the Pierce County Land-Use Planning Committee	
Soil Improvement and Erosion Control	R-1
A. Crop Land and Pastures	R-1
B. Woodland and Odd Areas	R-2
C. Gullies	R-3
D. General	R-4
Specific Recommendations for Action Agencies	R-4
Dairying	R-8
Agricultural Credit and Tenancy	R-9
General	R-10

FIGURES

Figure Number		Page
1.	Soil Fertility Requirements per Acre by Towns, Pierce County.	12
2.	Average Monthly Precipitation in Pierce County.	13
3.	Yearly Rainfall vs. Corn Yields, 1920-1939.	14
4.	Sources of Gross Farm Income, 1936.	15
5.	The Total Number and Size of Farms and the Percentage Tenant Farms are of Total Farms, 1900-1935.	16
6.	Average Production of Food for Family Consumption Compared with the Amount Needed for Good Nutrition, by Size of Family.	17
7.	Barley and Oats Acreage	20
8.	Rye and Wheat Acreage	20
9.	Alfalfa, Clover and Timothy Hays Acreages	22
10.	Creamery Butter Production 1885-1938.	22
11.	Number of Livestock on Farms as of Januaryl.	22
12.	Pierce County Agricultural Statistics, Jan. 1, 1940 . .	23
13.	Pierce County Agricultural Statistics , , , , , , , , ,	24
14.	Soils Classification as Outlined by Land-Use Planning Committees for Pierce County.	25
15.	Summary Sheet of Land-Use Classification for Pierce County.	26
16.	Pierce County Summary Land-Use Planning 1939-1940 for Crop Farming Areas.	31

FOREWARD

The County Agricultural Committee of the Pierce County Board of Supervisors have included all evident major agricultural programs in their program of work as annually planned and outlined. The Agricultural Committee voted to adopt the land use planning work with the aim that the planning would create greater harmony between the agricultural agencies of our county, both governmental and educational; that a long-time agricultural program could be formulated which would coordinate in the county and on the farm; and that solutions might better be built on the recommendations of the people who would derive benefits.

The Chairman and Secretary of the County Land-Use Planning Committee wish to express their appreciation for the cooperation and interest shown by the Land-Use Planning Committees, as well as from agencies which supplied us information and help.

Cooperating with the Land-Use Committees, and assisting in the directing of the land-use planning work were: B. F. Rusy, W. A. Rowlands, Emil Jorgenson, Extension Supervisors; and L. G. Sorden, State B.A.E. Representative of the United States Department of Agriculture. They are to be commended.

/s/ Geo. G. Wild
Chairman, County Land-Use Committee

/s/ H. G. Seyforth
Secretary, County Land-Use Committee

ORGANIZATION AND PROCEDURE

Organization

The land-use planning program which was requested by the County Agricultural Committee was adopted and organized in Pierce County in October, 1939. The organization and procedure as conducted in other Wisconsin counties in which land-use planning work has been under way for some time was explained by state land planning representatives. In order to facilitate the planning procedure, the Agricultural Committee divided the county into seven districts or communities on a soil type basis, as mapped by the State Geological and Natural History Survey. The districts with towns included in each are as follows: District No. 1, River Falls, and Clifton; District No. 2, Martell and Gilman; District No. 3, Spring Lake, Rock Elm, and El Paso; District No. 4, Ellsworth and Trimbelle; District No. 5, Oak Grove and Diamond Bluff; District No. 6, Hartland, Isabelle, and Tronton; and District No. 7, Maiden Rock, Salem, and Union.

Following the division of the county into districts, the Agricultural Committee selected a County Land-Use Planning Committee composed of representatives of State and Federal agencies, Chairman of the district or community committees, and many farmers of the county. The selection of the members of each district committee was done by the Chairman of the district committee, who had been appointed by the County Agricultural Committee. The County Land-Use Planning Committee personnel is as follows:

Name	Agency Representing	Address
George F. Wild, Chr.	County Agricultural Com.	Elmwood
W. H. Tousley	" " ", Chr.	Spring Valley
Arthur Buettner	" " "	Bay City
M. L. Saxton	" " "	Ellsworth
	Co. Superintendent of Schools	

Name	Agency Representing	Address
Lars Florness	County Agricultural Com.	Bay City
F. E. McCue	Farmer	River Falls
Martin Solveson	Farmer	Maiden Rock
George Andrews	Farmer	Bay City
John Most	Farmer	Prescott
Jay Nelson	Farmer	Ellsworth
J. G. Seyforth	County Agric. Agent	Ellsworth
Edna M. Langseth	Co. Home Dem. Agent	Ellsworth
V. W. Peroutky	Ass't Co. Agric. Agent	Ellsworth
H. L. Shanks	Farm Security Admin.	Ellsworth
W. H. Rasmusson	Soil Conservation Ser.	Ellsworth
J. H. Jackelen	Soil Conservation Ser.	Ellsworth
Selmer Grant	National Farm Loan	River Falls
Ralph Condit	Production Credit	River Falls
Mrs. Ellen Carlson	Central Application Bur.	Ellsworth
Mrs. F.M. Brookshaw	Farm Homemaker	Ellsworth
Mrs. Dewey Borowick	Farm Homemaker	Prescott
Mrs. Alvin Hurtgen	Farm Homemaker	Spring Valley
Mrs. Paul Baird	Farm Homemaker	River Falls
Audrey Peterson	Instr. Home Economics	Ellsworth
Kenneth Wall	Instr. Vo-Agriculture	Ellsworth
Norman Christianson	Instr. Vo-Agriculture	Prescott
Arthur Fischer	4-H Club Leader	Ellsworth
Melvin C. Melsby	Chr., County A.A.A.	Spring Valley

The Community Committees are as follows:

Name	Address
District No. 1	
F. E. McCue, Chairman	River Falls
Sam McKean	River Falls
B. Lovell	River Falls
John Haugh	River Falls
Mrs. B. Lovell	River Falls
Harry Merriman	River Falls
William Baird	River Falls
Mrs. Harry Merriman	River Falls
Mrs. Paul Baird	River Falls
Alfred Youngren	River Falls
Fred Lindenberger	River Falls
District No. 2	
Melvin C. Melsvy, Chr.	Spring Valley
Theodore Vanasse	Spring Valley
Henry Aasterud	Spring Valley
E. T. Ness	River Falls
Mrs. Henry Aasterud	Spring Valley
Paul Bjerking	Beldenville
Nim C. Anderson	Spring Valley
Mrs. Alvin Hurtgen	Spring Valley
District No. 3	
George Wild, Chr.	Elmwood
Mrs. George Wild	Elmwood
Carl Cooke	Spring Valley
Mrs Sylvester Cook	Spring Valley
A. C. Reinkey	Elmwood
Mrs. A. C. Reinkey	Elmwood
Alton Webb	Spring Valley
William Sanford	Ellsworth
William Butel	Beldenville
District No. 4	
Jay Nelson, Chr.	Ellsworth
Henry C. Anderson	Ellsworth
Kenneth LaGrander	Ellsworth
Mrs. Kenneth LaGrander	Ellsworth
John McAleavy	Ellsworth
Mrs. Reuben Melander	Ellsworth
Melvin Huber	Ellsworth
James Mallon	Ellsworth

Name	Address

District No. 5

John C. Most, Chr.	Prescott
Mrs. John C. Most	Prescott
John Steen	Prescott
Dewey Borowick	Prescott
Mrs. Dewey Borowick	Prescott
A. D. Carlson	Diamond Bluff
Edmund Staiger	Hager City
Charles Struve	Prescott

District No. 6

George Andrews, Chr.	Bay City
Arthur Buettner	Bay City
Mrs. Arthur Buettner	Bay City
Silas Johnson	Bay City
Lars Florness	Bay City
Emil Kind	Hager City
Mrs. Lorenz Lindquist	Hager City
Ted Hilden	Ellsworth
Enoch Peterson	Ellsworth

District No. 7

Martin Solveson, Chr.	Maiden Rock
Mrs. Martin Solveson	Maiden Rock
George Rhiel	Plum City
Mrs. George Rhiel	Plum City
Marshall Hoffman	Arkansaw
Lawrence Bjurquist	Maiden Rock
Theodore Gustafson	Maiden Rock
J. H. Shannon	Ellsworth
Joe Magnuson	Maiden Rock
Fred Sorenson	Maiden Rock

Procedure:

A meeting of the County Land-Use Planning Committee was held in November, 1939 at which time representatives of the State Agricultural Extension Service explained the objectives of land-use planning. The discussion which followed brought out the fact that some of the farm programs had been necessarily rather hastily created since there had not always been time enough or sufficient information to permit detailed planning prior to starting the program. As a result of this, much emphasis must be given to the coordination of the programs especially when the administration comes down to the individual farm or farmer.

Even if the programs had been set up more slowly, it would still be necessary to make sure that these programs are in harmony with operations in the county. This is one of the most important jobs that the County Land-Use Planning Committee's work is attempting to do; to help each of these programs to tie in with all the others; and to form an agricultural program that is well coordinated when it reaches the county, the neighborhood, and the farm.

In November, 1939, the chairmen of the community committees appointed their community committee members. A month later when community committee meetings were held, a member of the County Extension Office attended each meeting and explained the purpose and objectives of the land-use planning work. At this meeting they started on their land classification phase of the work by mapping their individual communities on county plat maps, and coloring the various classes as instructed in Work Outline No. 1. The plat maps were later copied on a county map of a one inch to the mile scale which had been supplied by the State Agricultural Extension Department. At this same meeting, the committee asked for background information on a county and town basis to be used in studying their problems. Members of Homemaker Clubs, who were on the committee, met with the Home Demonstration Agent to discuss information they desired which would enable them to contribute to the planning work.

A second series of the land-use planning community meetings were held in the month of May, 1940. A state land planning representative was present at each meeting of this series. In addition to the presentation of the completed land-use classification map by the County Agent, many other charts and maps showing other conditions of the county by towns were presented to the committees. Among these maps and charts, the following information was presented at each meeting of the series: (1) a map showing the loca-

tion of owner-operated and tenant-operated farms taken from Agricultural Conservation Association records, thereby designating the tenancy problem in the county; (2) a map showing the location of farms having Farm Security Administration loans, Federal Land Bank loans, giving the date and amount of the original loan, the present amount of the loan, and reporting any delinquency; (3) a map showing the location of a few farms owned by insurance companies as recorded in the office of the Register of Deeds, and also the small number of farms having severe tax delinquency as reported by the County Treasurer; (4) a map showing the location of the Soil Conservation Service demonstration farms in the county; (5) a map showing the location of the users of the lines of the Rural Electrification Administration and the Northern States Power Company; (6) a map showing the location of fertility grain trial plots which are being worked by the County Extension Office and with the help of the Soil Conservation Service; and (7) a map showing the lime, phosphorus, and potash soil requirements per acre by townships as determined by 8,000 soil samples from 1,000 Pierce County farms.

In addition to these maps other information from the Central Application Bureau showed the location of W.P.A. workers, the amount of expenditure by the local units for these projects, and also the location of recipients of surplus commodities. The Dean of Men from River Falls Teachers College provided weather data compiled from records of the U. S. Weather Reporting Service. A Soil Conservation Service representative who attended each meeting of the second series of meetings contributed much in the way of information on erosion problems and their controls and soil fertility problems. Two reports were also distributed to the members of the community committees, one was a Pierce County Agricultural Statistical

Bulletin prepared by the Wisconsin Crop and Livestock Reporting Service, and the other was a similar bulletin on a township basis prepared by the County Extension Office. After the presentation and discussion of this material, recommendations were made which were recorded by the County Agent to be presented to the County Land-Use Planning Committee.

In June, 1940 the County Land-Use Planning Committee met and reviewed the recommendations of the community committees as well as adding many of their own. It was requested that these recommendations and a description of their problems of the county be put into report form to be presented to the State Land-Use Planning Committee for their action.

DESCRIPTION OF COUNTY

Location

Pierce County is located on the west-central border of Wisconsin, bordered on the south by the Mississippi River which forms Lake Pepin, and a small part of Pepin County. The western border is formed by the Mississippi River and Lake St. Croix, while St. Croix County forms the northern boundary, and Dunn and Pepin the Eastern. Ellsworth, the county seat of Pierce County, is about 30 airline miles from St. Paul, Minnesota, and it is about 185 airline miles from Madison, Wisconsin.

At one time Pierce County had a large number of livestock shipping associations located at Maiden Rock, Hager City, Prescott, River Falls, Ellsworth, Spring Valley, and Elmwood. The one located at Elmwood was the largest in the state, but now there are no such associations chiefly because of the change in mode of transportation from railway stock cars to trucks. This was possible since the market is located in south St. Paul.

Area

Pierce County with a land area of 370,448.22 acres ranks fifty-second in size among the 71 counties of the state. It is considerably smaller than any of the surrounding counties except Pepin, and is almost exactly the same size as Green County in the southern part of the state.

There is considerable variation in the size of the 17 towns in Pierce County. The towns' range is from 30,731 acres in River Falls to only 6,773 acres in Isabells. Maiden Rock, with 26,318 acres, ranks second in size and is closely followed by Oak Grove with 26,104 acres.

Topography

In general, Pierce County is a well-dissected upland plain which slopes very gently to the south and southwest. Martí's "Physical Geography of Wisconsin" compares this region, and especially the area around River Falls with the Alleghany plateau in western New York state. The Lower Magnesian limestone upon which the plain is formed has been cut into narrow stream valleys which are sometimes 100 to 300 feet below the wide, gently rolling or rolling, interstream uplands. A few isolated hills and long ridges rise above the surface of the plain, especially to the north and northwest of Ellsworth. These hills and ridges are capped by resistant Galena-Black River limestone and are remnants of a higher plain which once covered this region. To the south and west the upland (about 1,200 feet above sea level) drops away to the river over bluffs, 200 to 500 feet high.

Pierce County was once covered by the great continental ice sheet. However, the county lies in what glacial geologists now call the area of "Old Drift" to distinguish it from the "Young Drift" -- the glacial drift resulting from the Wisconsin ice sheet. During the Glacial Period, there were successive advanced and retreats of the ice, the last advance which covered this section of the country, is known as the Wisconsin stage of

glaciation. The earlier advance of the continental glacier which covered Pierce County extended southeast as far as Alma. It is thought the ice in this area was relatively weak, since it represented almost the limit of glaciation, and it is probable that the ice did not remain over the region for a long period compared with areas to the north, east, and west.

As a result of the ice sheet the pre-glacial topography of Pierce County was considerably smoothed either by ice erosion, deposition, or both. There are none of the outstanding physical features of a glaciated area like those in northern Wisconsin to be found in Pierce County. The "Old Drift" is relatively thin and, because it has been exposed to the elements for longer periods than the "Young Drift", has been weathered considerably more. There are no lakes, but few swamps, and moraines are absent. In many respects it resembles the Driftless Area more than the regions of Wisconsin drift.

Lake Pepin, which forms part of the southern border of Pierce County, is formed by the damming of the Mississippi River by deltaic deposits from the Chippewa River. The lake is 1.0 to 2.5 miles wide and approximately 22 miles long. It has a maximum depth of 56 feet, but most of it is 20 to 35 feet, according to the "Physical Geography of Wisconsin". Formerly, the lake extended farther up the river toward Prescott, but the sediments dropped by the Mississippi as it entered the upper end of the lake have filled the valley downstream. Eventually, the continuation of those deposits will completely fill the lake.

Lake St. Croix is a smaller edition of Lake Pepin. This lake is caused by the Mississippi River deposits damming the St. Croix River at its mouth at Prescott. The width ranges from one-quarter to half a mile; the depth from $3\frac{1}{2}$ to 30 or 50 feet. The Kinnickinnic River has built a delta out into the lake.

Along the Mississippi River are several terraces which indicate the levels at which the river has flowed at various times. A series of four of these terraces extend from Bay City to Diamond Bluff at elevations of about 20, 40, 60 and 90 feet above the river. At Prescott there are three terraces, the lowest, upon which the city is situated, is approximate-95 feet above the river, and the others are at 155 and 235 feet. From the coarse nature of the deposits the uppermost of these terraces is thought to have been made during glacial times when the ice was nearby, and the lower terraces when the ice had retreated to the north.

Soils

Pierce County soils are, on the whole, good agricultural soils -- fertile, well drained and rather easily tilled. Because of the rolling nature of most of the land and the rough topography in some sections erosion has been, and still is, a problem in the county. The removal of the natural forest vegetation on the slopes has caused the gullying of some of the best land while some of the level upland areas have been subjected to considerable wind erosion.

Pierce County, according to the U. S. Soils Geological Survey, had 25 classes of soil. Seventy-one and nine tenths per cent of the soils of the county are classified as heavy and are found chiefly in the towns of Hartland, Ellsworth, Rock Elm, Gilman, and Martell. In these particular towns 80 per cent or more of their soil is of this type. Six and eight tenths per cent of the soils of the county are loam and fine sandy loam, comprising about 15 per cent or more of the towns of River Falls, Clifton and Trimbelle. About two per cent of the soils of the county are of a sandy nature, the town having the highest percentage of it being Isabelle with 22.7 per cent, and next in line is Trenton with 9.9 per cent. The remainder of the soils of the county are either

poorly drained soils or are of a miscellaneous nature constituting approximately 6.2 per cent and 11.1 per cent respectively for the county as a whole.

Over one-half, or 63 per cent, of the soils in Pierce County are acid; over three-fourths, or 83 per cent, are deficient in available phosphorous; and about one-fourth, or 27 per cent, are deficient in available potassium, according to the reports on over 8,000 soil samples tested prior to June 1, 1940 by a W.P.A. soil testing project. The information is shown in Figure 1.

In comparison with like figures for the state as a whole, Pierce County's acid and available phosphorous condition is about the average for the state, but in available potassium it is below the average. Further work of this type is being carried, and the results from a larger number of samples may be available at a future date.

Soil Erosion

In a recent survey conducted by the Soil Conservation Service at Camp Ellsworth it was shown that there has been a serious loss of top soil on the farms of Pierce County.

Soil surveys taken from cultivated land, pasture and woodland on representative farms chosen from different parts of the county show that:

On 11 Per cent of the land from none to 25 per cent of top soil is gone.

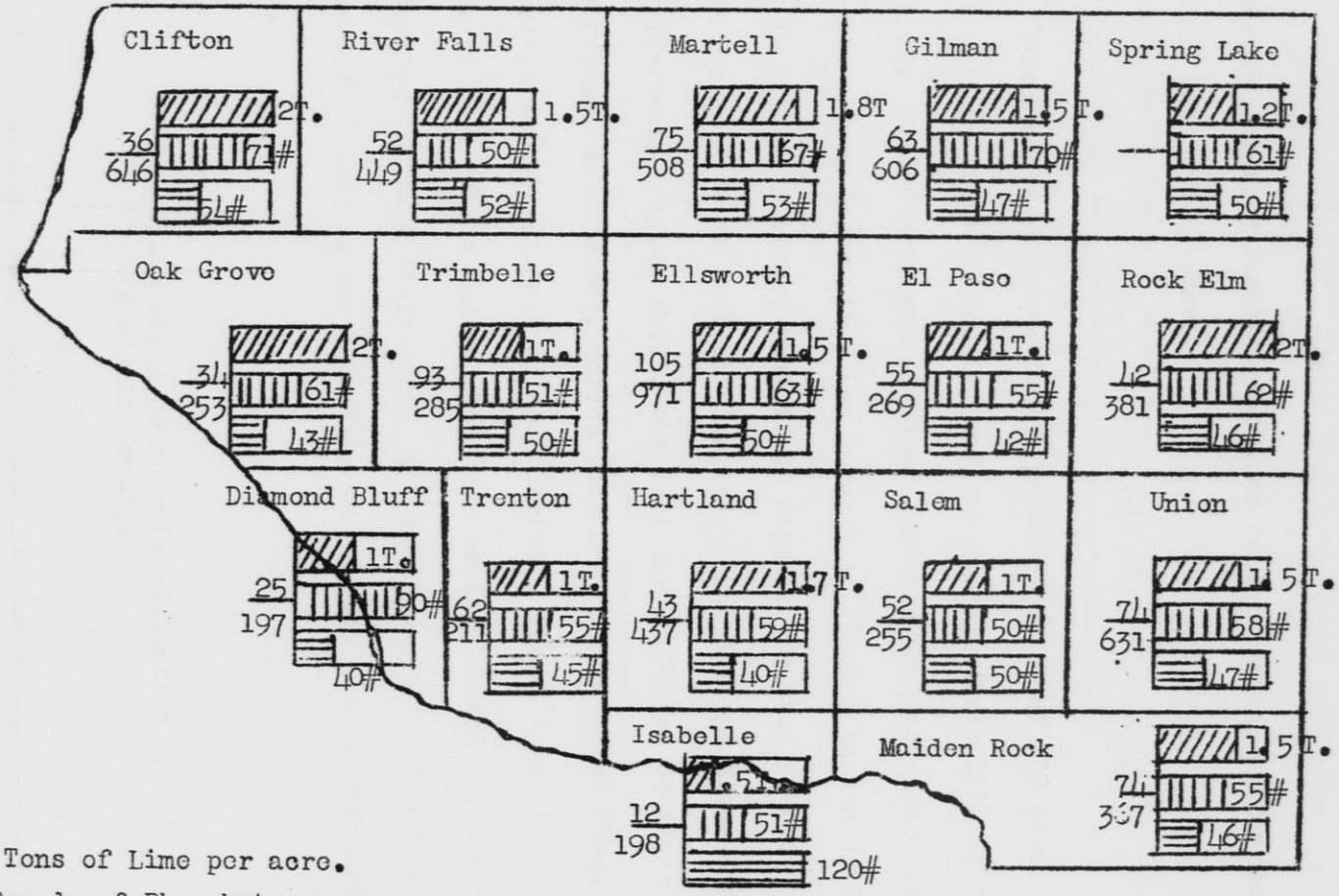
On 26 per cent of the land from 25 to 50 per cent of the top soil is gone.

On 17 per cent of the land from 50 to 75 per cent of top soil is gone.

This alarming loss represents a cross-section of the county, and it roughly illustrates the condition of the entire county. If the soil surveys had been taken on cultivated land only, the results would have shown a much greater percentage of land under the heavier-soil-loss classes.

This loss of the rich layer of soil in which crops are grown is due to

Figure 1 - Soil Fertility Requirements per Acre
by Towns, Pierce County.
January 1, 1940



County Average

(949)
Number of farms from which soil samples were taken

Number of soil samples tested.
(6969)

1.5 Tons of Lime per acre.
60 Pounds of Phosphate per acre.
46 Pounds of Potash per acre.

erosion caused by inferior farming practices on land which, at the maximum, has been farmed only ninety years.

Climate

Pierce County has a 13 year average growing period of 136 days. The average last killing frost is May 16, and the average first killing frost is September 29. On the average, Red Wing, Minnesota, located across the Mississippi River from Hager City, has an average growing season of 157 days. This is a growing season that is 21 days longer than Pierce County's average, and it is probably due to the Mississippi River and elevation differences. River Falls, the location of Pierce County's weather recordings, is 22 miles, aerial distance, north of Red Wing.

Our average annual snowfall is 45.8 inches. Figure 2 has been compiled from records at River Falls and it shows the average monthly precipitation in Pierce County. On an average of 93 days each year there has been a precipitation of .1 inch or more, whereas the annual average rainfall is 30.4 inches.

Figure 2 - Average Monthly Precipitation in Pierce County.

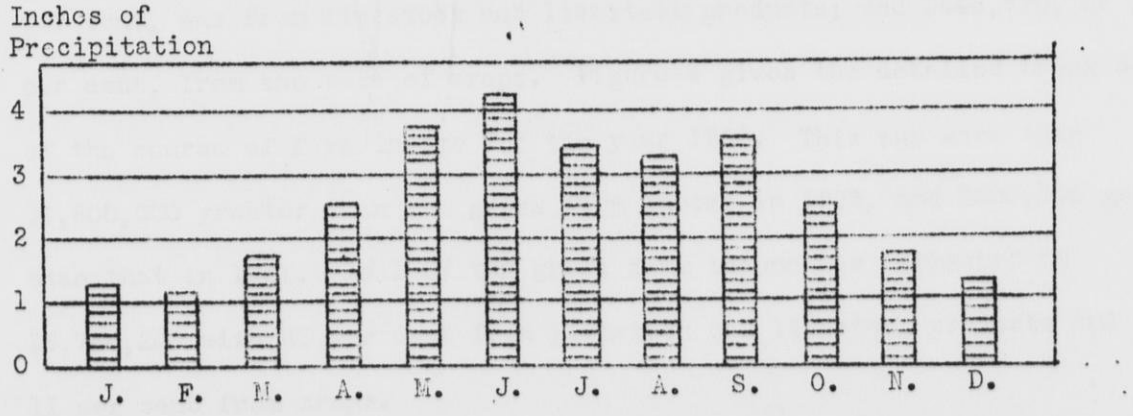
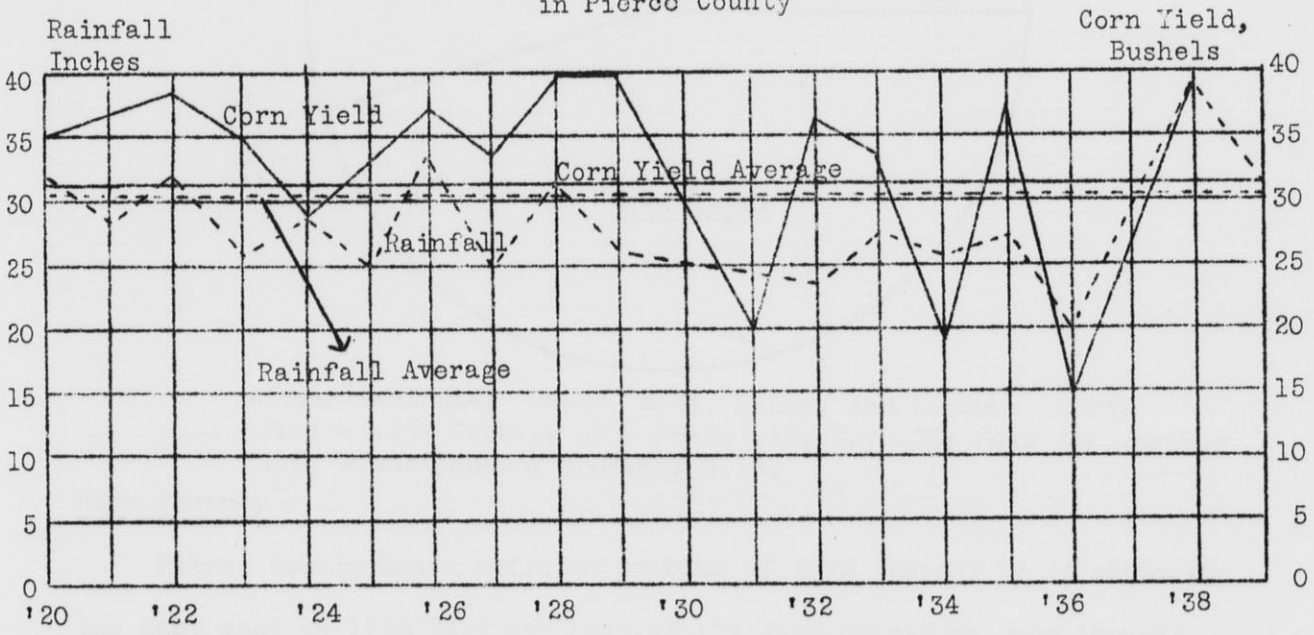


Figure 3 shows the average yearly rainfall since 1920. The average rainfall for the last 10 years has been well below the annual average of 30.4 inches. The data on corn yield has been placed on Figure 3 to show the comparative effect of rainfall on corn yield, although soil fertility is without doubt an additional factor.

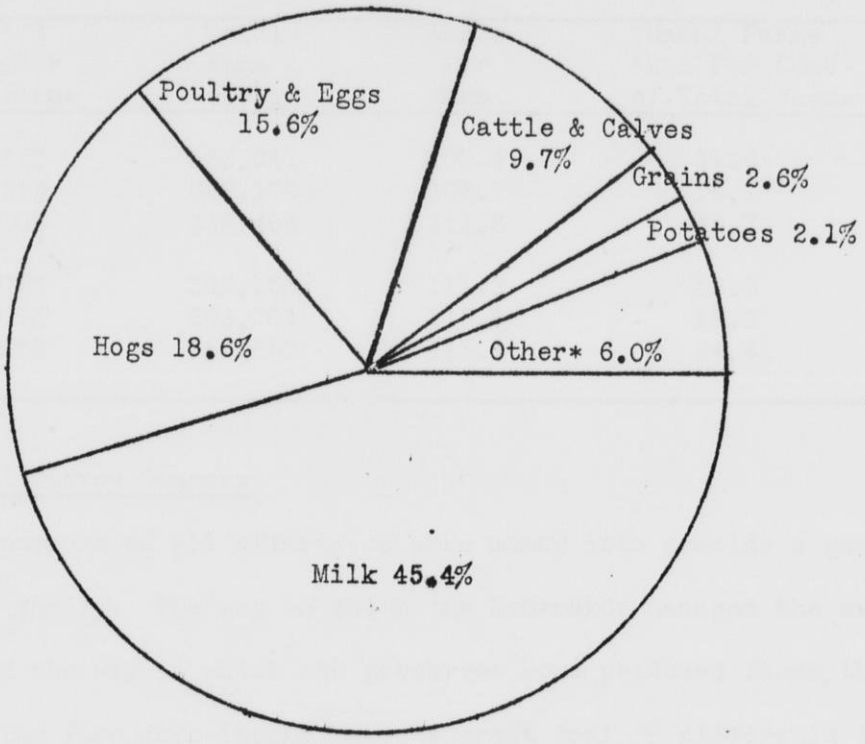
Figure 3 - Yearly Rainfall vs. Corn Yields, 1920-39 in Pierce County



Farm Income

The gross farm income of Pierce County in 1936, the latest year for which there is data available, was $4,949,761 of which $4,501,041, or 91 per cent, was from livestock and livestock products; and $448,720, or nine per cent, from the sale of crops. Figure 4 gives the detailed break down of the source of farm income for the year 1936. This was more than $1,800,000 greater than the gross farm income in 1933, and $800,000 greater than that in 1931. In 1927 the gross farm income was estimated at $6,744,200 with 80 per cent from livestock and livestock products and 11 per cent from crops.

Figure 4 - Sources of Gross Farm Income, 1936
in Pierce County



*Other includes: Sheep, Wool, honey, and beeswax, 1.8%; Fruits .4%; Cabbage .2%; Seeds .1%; Hay .3%; Peas for canning .1%; Miscellaneous products 3.1%.

Farm Tenancy

Pierce County has a definite problem of farm tenancy as is shown by the fact that in 1935, 24.4 per cent of its farm operators were tenants. Similar figures on tenancy for the towns of Pierce County are: in Oak Grove 28.4 per cent of its farm operators were tenants; in Clifton 36.6 per cent were tenants; in River Falls 28.9 per cent were tenants; in Salem 28.6 were tenants; in Trimbelle 28 per cent; in Hartland 27.7 per cent were; in Spring Lake 16.4 per cent were; and in Maiden Rock 19.9 per cent were tenants. Figure 5 shows the number of farms operated by tenants expressed as a percentage of the total number of farms in the county as reported by each census.

Figure 5 - The Total Number and Size of Farms and the Percentage Tenant Farms are of Total Farms in Pierce County, 1900-1935

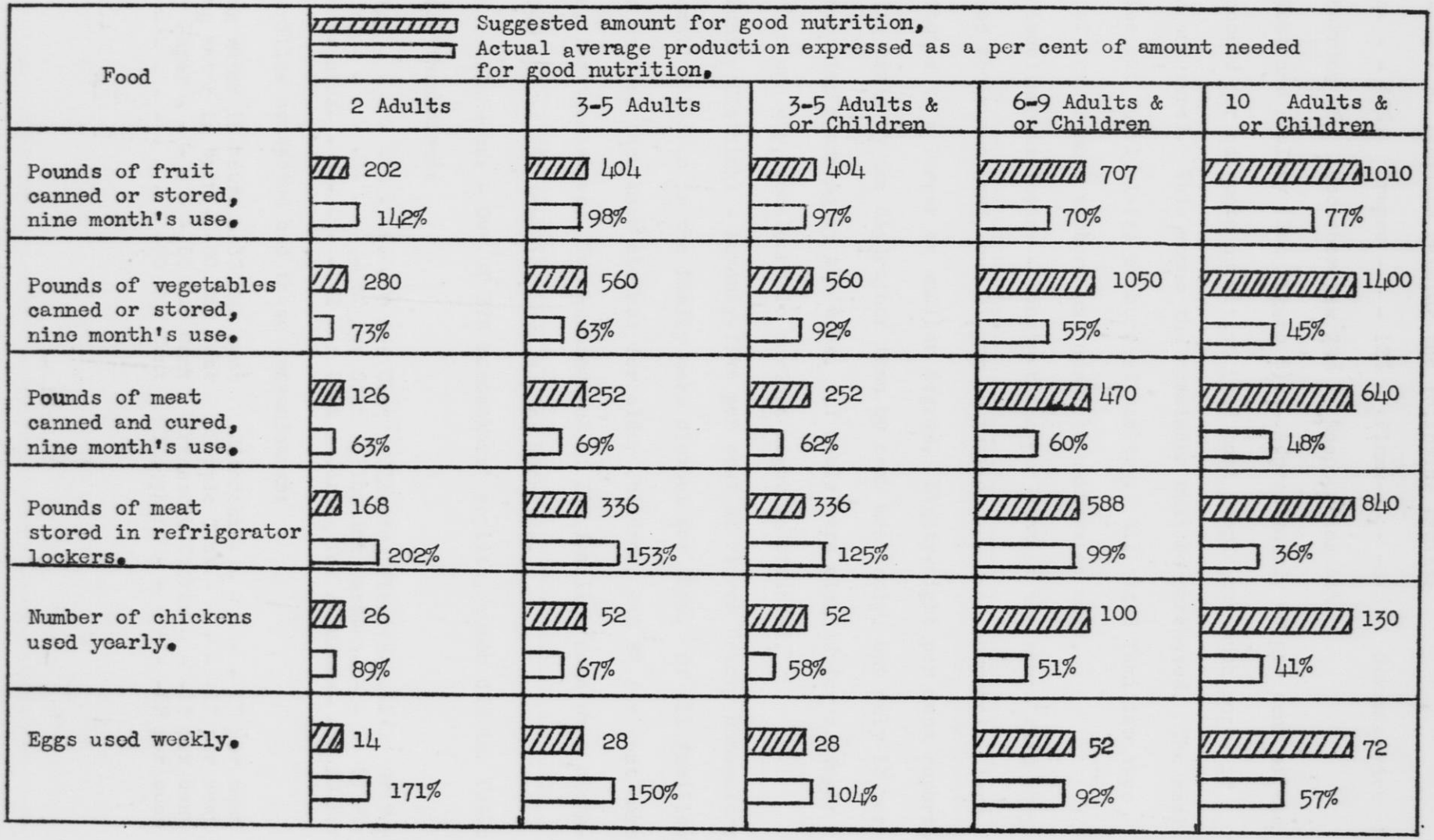
Year	Total Number of Farms	Total Farm Acreage	Acres Per Farm	Tenant Farms as a Per Cent of Total Farms
1900	3,323	333,641	100.4	11.6
1910	3,213	347,179	108.1	14.1
1920	3,105	345,468	111.3	16.7
1925	3,073	342,163	111.3	19.9
1930	3,013	343,004	113.8	22.3
1935	3,089	356,357	115.4	24.4

Home Management Survey Summary

The real purpose of all efforts to make money isto provide a good living for the family. The way in which the homemaker manages the available money, and the way in which she preserves home produced foods, thereby supplementing the farm cash income, makes a great deal of difference in the family standard of living. In a recent survey, a questionnaire on family living was answered by nearly 300 homemakers of the county. The following are some of the more significant findings.

The Family's Food -- Fruits and Vegetables.- About 90 per cent of the families in Pierce County have gardens. Of those, 40 per cent reported having serious troubles from insects or disease, usually on some specific vegetable. A number of these gardens evidently do not produce enough vegetables and fruits to provide for the family during the winter. (See Figure 6) Families with from two to five members are fairly well taken care of, but larger families either have to buy a large percentage of their fruits and vegetables or else they are getting a diet insufficient in these foods. The larger the family the lower the per cent of necessary amount of fruits and vegetables are canned or stored. Much of the fruit which is canned is purchased; more of it could be raised. Here are the

Figure 6 - Average Production of Food for Family Consumption Compared with the Amount Needed for Good Nutrition, by Size of Family. Pierce County



percentages of families raising the following fruits:

Apples- - - 47% Grapes - - - 12% Plums- - - -37% Strawberries 56%

Blackberries 9% Gooseberries 22% Raspberries 53%

Meat and Poultry (See Figure 6): - Approximately 58 per cent of the meat needed for adequate nutrition (and most people eat much more) is canned and cured. This means the remainder must be purchased. The smaller families eat fairly large numbers of poultry. All sized families save those of ten or more members use adequate numbers of eggs.

Miscellaneous Foods: - Ninety-three per cent of the women said they rendered their own lard, but 31 per cent said they used commercial lard substitutes to a larger or smaller degree. Eighty-eight per cent reported planning meals by the day rather than by each meal only, but only 13 per cent reported planning by the week. If meals were planned for a longer time than one day, considerable savings might be effected.

Family Clothing: - Seventy-five per cent of Pierce County homemakers with small children in the family make clothes for them. Of all families, 32 per cent of them make clothes for older children, and 88 per cent make clothes for themselves. Two hundred out of 243 families make over clothing, 249 out of 252 families have sewing machines.

Miscellaneous: - Out of 273 homemakers' replies, women did the following jobs themselves:

Painting - - - - - - - - - -70 Per Cent	Planting Flowers- - - - 87 Per Cent
Papering - - - - - - - - - - 42 Per Cent	Planting Gardens- - - - 81 Per Cent
Simple Repairs- - - - - - - 52 Per Cent	Caring for chickens- - - 66 Per Cent

The families contacted had these conveniences:

Running water in house - 32 Per cent	Bathroom - - - - - - - 17 per cent
Running water in barn - -30 Per Cent	Septic Tank - - - - -17 per cent
County Paper - - - - - - 64 Per Cent	Pressure Cooker - - -15 per cent
Radio - - - - - - - - - -90 Per Cent	Telephone - - - - - -52 per cent

Weeds:

Each year the weed problem is becoming more serious. Weeds are a constant source of expense in that they absorb soil moisture, use plant food, crowd out useful plants, increase the need for more tillage, interfere with regular rotations, often cause tainted milk, lower the market value of seed and feed, harbor insects and diseases, and are unsightly.

Of the noxious weeds in Pierce County, Creeping Jenny (Field Bindweed) is becoming one of the most serious. Infestations of Creeping Jenny have been found in the towns of Clifton, Martell, Spring Lake, Ellsworth, Oak Grove, Hartland, Isabelle, Maiden Rock, and Union. Most of the infestations were small, except the one in Hartland which consists of several acres and was found to have been there for nearly twenty years.

Crops:

With the exception of six years, oats has occupied the largest acreage since 1915. However, as shown in Figure 7 there has been an upward trend in barley acreage since 1927, and yields have declined in recent years. Corn ranks third in acreage, following oats and tame hay, while rye has declined since 1922 as is pictured in Figure 8.

In 1938 Pierce County ranked first in the state in wheat acreage and production. In that year the acreage was about half the record harvested in 1919. Since the record acreage in 1919, there has been almost a steady decrease until the early 1930's. More spring wheat than winter wheat was harvested in the county until recent years. Very little winter wheat was reported as harvested in 1934. Except in 1925 and 1926, winter wheat yields have been higher than those of spring wheat.

Alfalfa has become more important than clover and timothy as a hay crop. Acreages of both types of hay dropped sharply in 1934, but have been larger since that year. Figure 9 has been prepared in order that the acreage of alfalfa can be compared with that of clover and timothy.

Figure 7 - Barley and Oats Acreage
in Pierce County

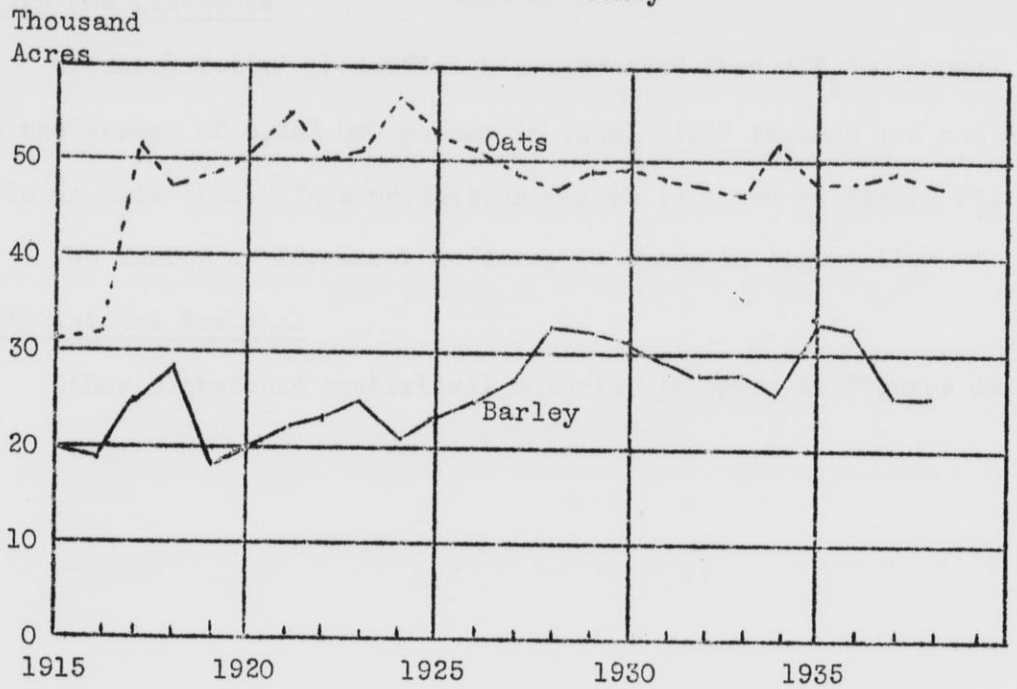
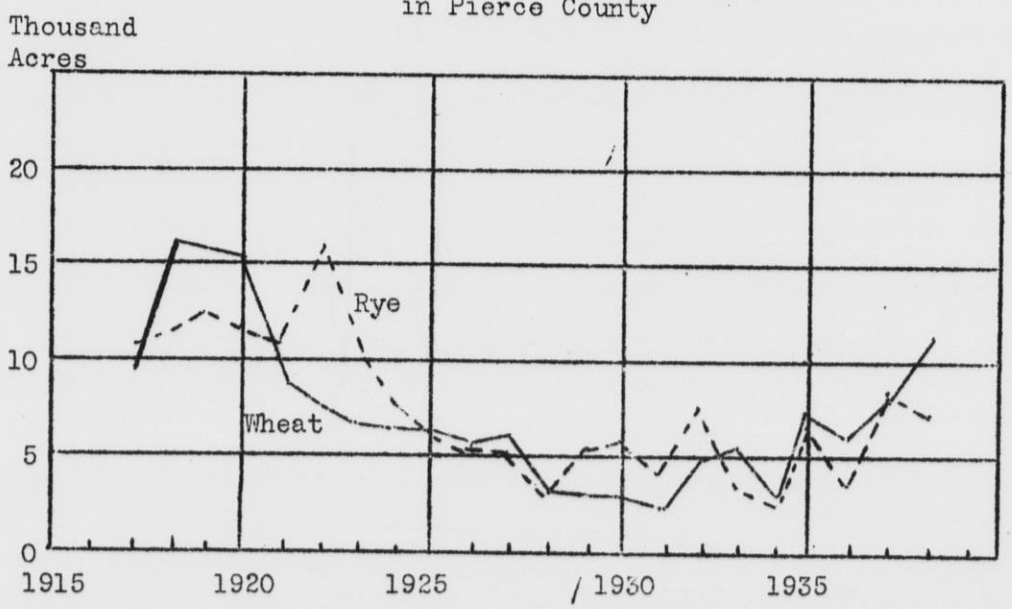


Figure 8 - Rye and Wheat Acreage
in Pierce County



A definite increase in alfalfa acreage is apparent as clover and timothy acreage has decreased.

Dairy and Livestock

Creamery butter production has increased from 472,000 pounds in 1885 to the record of 6,293,000 pounds in 1938. 1939 Figures are not available at this time. This production record is shown on Figure 10.

The number of livestock on farms is shown in Figure 11.

Statistical Material

Other background statistical material is shown in Figures 12 to 15.

Figure 9 - Alfalfa, Clover and Timothy Hays Acreages

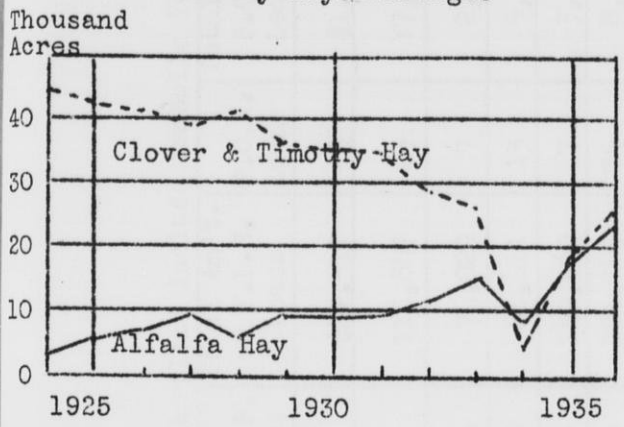


Figure 10 - Creamery Butter Production 1885-1938

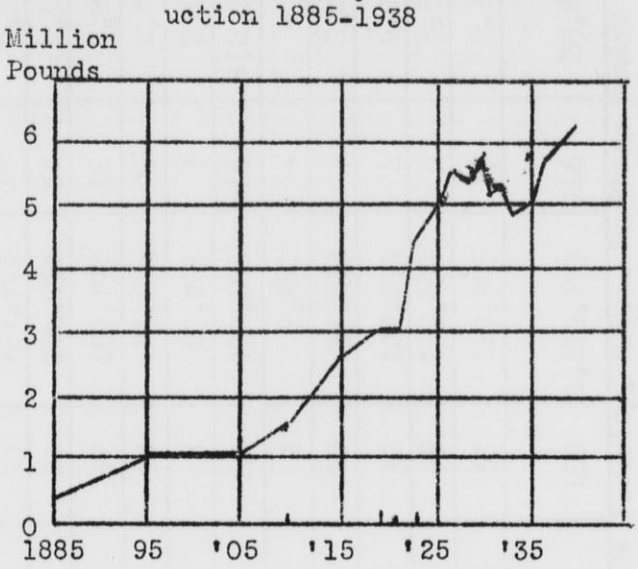


Figure 11 - Number of Livestock on Farms as of January 1

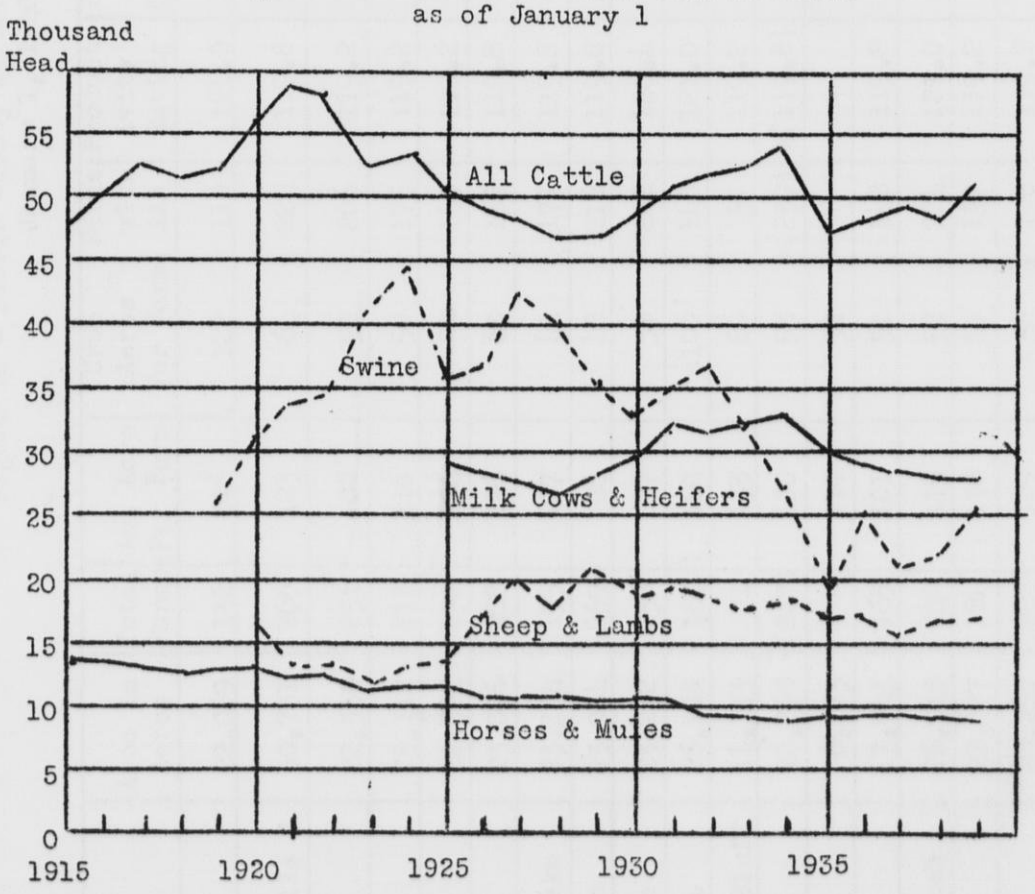


Figure 12 - Pierce County Agricultural Statistics
January 1, 1940

*(Figures for Hartland include Isabelle Town)

	Area in Acres	Total Farms	Av. Acre Per Farm	Crop Acres Per Farm	Farms with AAA	Productivity Rating	Percent Full Owners	No. of F.L.B. Farms	F.L.B. Loans	Total Am't. of F.L.B. Loans	P.C.A. Loans	Total Am't. P.C.A. Loans
Clifton	22,089	132	196	122	110	121.0	48.2	2	11	$47,517	3	$1,434
River Falls	30,731	265	123	64	224	119.8	54.8	3	31	113,847	23	17,137
Gilman	22,356	231	100	50	206	119.2	71.0	4	24	74,029	7	2,714
Martell	23,112	217	116	50	173	119.2	60.7	-	18	61,411	13	5,998
El Paso	22,591	192	126	58	163	119.2	58.5	5	39	149,960	7	3,417
Rock Elm	23,096	208	126	63	155	119.8	57.5	4	46	181,785	15	8,913
Spring Lake	23,134	195	107	45	177	119.8	62.0	2	33	121,212	10	8,384
Ellsworth	23,034	269	86	48	216	119.8	68.6	3	29	104,850	11	4,534
Trimbelle	23,232	256	97	55	222	120.4	56.4	3	37	139,192	12	7,211
Oak Grove	26,104	165	160	100	148	121.0	48.4	3	18	83,734	5	2,844
Diamond Bluff	11,133	71	133	69	57	119.2	61.5	1	8	27,033	3	2,137
Hartland	22,868	*(267)	100	53	*(239)	*(119.8)	62.4	1	40	152,686	*(6)	*(2,043)
Isabelle	6,773		119	52			61.4	-	2	2,882	-	-
Trenton	17,943	165	101	51	148	119.8	69.2	-	20	35,639	7	2,234
Maiden Rock	26,318	249	115	57	224	121.0	64.4	2	32	109,030	4	4,036
Salem	22,677	184	130	57	157	119.2	54.7	2	35	133,430	5	3,338
Union	23,241	222	109	52	196	119.8	64.8	-	35	140,905	15	9,308
Total or County Average	370,448	3288	120	61	2815	120.0	60.9	35	458	1,679,193	146	85,682

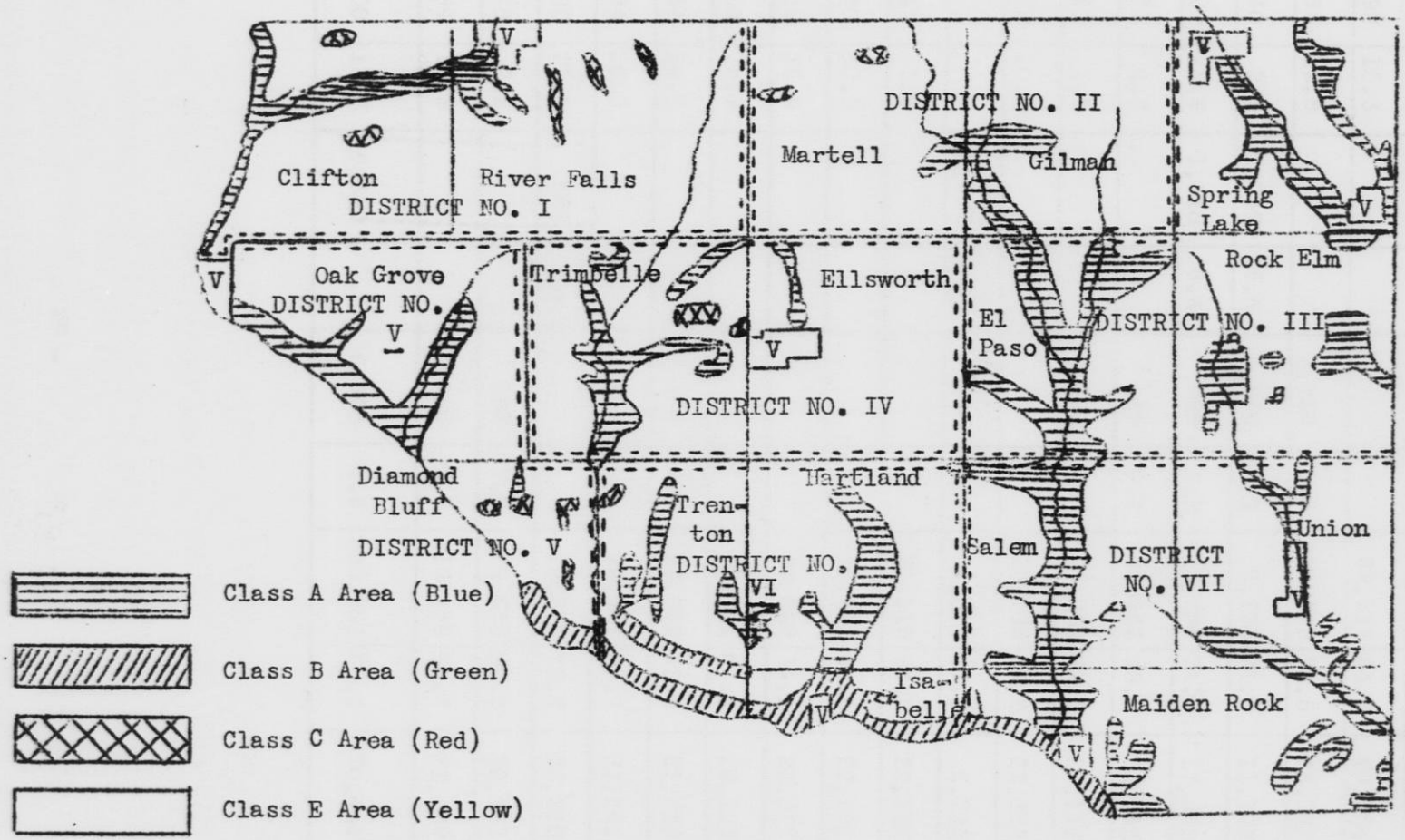
Data obtained from office of AAA, Federal Land Bank, Production Credit, Farm Security, R.E.A. Northern States Power Co., Public Welfare, Register of Deeds, County Extension, Weather Reporter at River Falls Teachers College, Soil Conservation Service, County Treasurer's Office and Bulletin 202.

Figure 13 - Pier County Agricultural Statistics

Township	Farm Security Loans	Total Amount Loans	No. R.E.A. Users	Northern States Users	Farms Soil Tested	Total Soil Samples	Demonstration Soil Plots 1940	Total paid Surplus Commodities '39	No. Rec. Surplus Comm.	No. on W.P.A. March 1, 1940	Tax Problem Farms
Clifton	7	$11,551	31	15	36	646	7	$383	3	1	2
River Falls	26	25,585	81	--	52	449	10	1,460	8	6	-
Gilman	12	13,754	21	28	63	606	3	406	8	10	1
Martell	10	10,121	93	--	75	508	5	343	6	7	-
El Paso	15	11,974	63	--	55	269	1	579	10	13	-
Rock Elm	11	11,084	5	56	42	381	9	615	11	12	1
Spring Lake	11	13,438	--	38	52	305	2	395	8	9	2
Ellsworth	14	12,578	98	5	105	971	8	949	10	14	1
Trimbelle	16	14,276	103	2	93	285	7	831	16	18	2
Oak Grove	7	7,924	46	17	34	253	3	143	2	2	-
Diamond Bluff	4	3,686	38	--	25	197	3	20	8	6	1
Hartland	10	9,461	84	2	43	437	10	336	7	4	-
Isabelle	4	3,116	10	--	12	198	2	---	3	2	1
Trenton	13	7,815	55	6	62	211	2	43	11	13	-
Maiden Rock	7	6,506	57	10	74	367	3	135	10	14	4
Salem	18	22,265	51	8	52	255	2	462	10	16	1
Union	10	8,225	2	51	74	631	2	355	9	12	-
Total or County Average	194	193,359	836	238	949	7918	79	**13,473	248	*288-C *258-W	16

*(288-C implies 288 were certified, 258 were working, March 1, 1940)
**Total of county includes that paid to villages, not listed in above column.)

Figure 14 - Soils Classification Map as Outlined by Land-Use Planning Committees for Pierce County



Note: V-Incorporated Village or City

Figure 15 - Summary Sheet of Land Use Classification*
for Pierce County

Town	Class A Land		Class B Land		Class C Land		Class E Land		
	Acreage	Per Cent	Acreage	Per Cent	Acreage	Per Cent	Acreage	Per Cent	Total
Oak Grove	3,993	15.3					22,112	84.7	26,104
Trimbelle	3,686	15.8			1,324	5.7	18,222	78.5	23,232
D. Bluff	240	2.1	1,747	15.6	1,160	10.4	7,986	71.9	11,133
Trenton	2,387	13.3	1,510	8.4	760	4.2	13,286	74.1	17,943
Ellsworth	971	4.2			30	0.1	22,042	95.8	23,043
Martell	243	1.5			200	1.0	22,669	97.5	23,112
Hartland	3,072	10.8					19,796	89.2	22,868
Isabelle			2,187	32.3	240	3.5	4,346	64.2	6,773
Gilman	1,241	5.5					21,115	94.5	22,356
El Paso	6,880	30.5					15,711	69.5	22,591
Salem	8,139	35.9					14,538	74.1	22,677
Spring Lake	3,003	12.9					20,131	87.1	23,134
Rock Elm	3,384	14.6			480	2.8	19,232	82.6	23,096
Union	3,794	16.3					19,447	83.7	23,241
Maiden Rock	5,596	21.2	896	3.4			19,826	75.4	25,318
River Falls	678	2.2			398	1.3	29,655	96.5	30,731
Clifton	2,494	11.3			456	2.0	19,139	86.7	22,089
Total	49,900	13.2	6,340	1.7	5,048	1.6	309,253	83.3	370,441

PRESENT LAND-USE AREAS

Generally, there is no definite type of farming for any particular area. Truck crops, however, are raised in the light soil areas of Trimbelle and Ellsworth. A large per cent of small grains is raised in Oak Grove, Clifton, Trenton, Diamond Bluff, and Hartland towns; all towns but Hartland bordering the west side of the county. Corn is raised in all sections, though slightly more is raised in Salem, Isabelle, Clifton, El Paso, Union and Ellsworth towns. In the majority of cases, potatoes are raised only for home use. Salem, Spring Lake, and Gilman lead in alfalfa acreages.

Soil erosion caused by running water is general throughout the county, with wind erosion in the neighborhood of Bay City, Hager City and River Falls.

RECOMMENDATIONS FOR LAND-USE AREAS IN PIERCE COUNTY

Class A Land (Blue)

Class A land, designated in blue, is land now farms which is not suited for farming and in which the lands should be put to some other use.

The land which comprises this area is mostly in pasture, woodland and odd areas, and is of a rolling nature. It contains 49,900 acres, or 13.2 per cent of the total area of the county. The removal of the natural woodland and the pasturing of the slopes has caused considerable gullying; and, therefore, it is recommended that this area be protected and planted to trees to provide some income and guard against erosion. Since only a limited amount of the areas should be pastured, and only odd corners and idle acres can be made into wildlife coverts, it is recommended that the hill sides be covered with vegetation as well as the lands bordering streams. Many of these areas contain streams; and if erosion is better controlled, streams will be cooler and cleaner for fish.

Class B Areas (Green)

Areas, designated as Class B and colored green, are not now in farms and should not be used for farming because they are unsuited for this use either as full time or part-time farms. Only 6,340 acres, or 1.7 per cent of the total area of the county, comprises this area which is not farmed because its bluffs along the Mississippi River are mostly limestone and the area is covered with water part of the year. Limestone quarries have been set up in several places along these bluffs, and the limestone is used for agricultural and road construction purposes. The low land area makes good hunting ground. It is, therefore, recommended that these areas be left as they are and that they be used as they have been in the past.

Class C Areas (Red)

Areas designated as Class C and colored red are now in farms and are questionably suited for arable farming. A few such small areas exist totaling 5,048 acres, or 1.6 per cent of the total area of the county, and is of a sandy soil nature. Since much of these soils are subject to wind erosion, it is recommended that general soil erosion methods be practiced on these farms; shelterbelts of coniferous trees be placed at right angles to the prevailing winds and at 40 to 50 or 60 rod intervals; and soil tests be made of these farms, to determine the advisability of their continuance in agriculture.

Class D Areas (Orange)

Class D areas are areas not now in farms but which are suitable for development into either part-time or full-time farming. The Land-Use Planning Committees found no such areas in Pierce County.

Class E Areas (Yellow)

Class E areas which are colored yellow are areas which are now in farms and which should remain in farming either with or without some changes or shifts in the size and type of farm, the cropping systems, and soil conserving practices followed, or other adjustments in the farming system.

There are 309,253 acres, or 83 per cent of the land of Pierce County, classified in this area. Farms in this area are best suited to diversification with livestock; and livestock products contribute the major part of the farm income. It is recommended that farmers in this area follow the recommendations as outlined in this report.

MAJOR PROBLEMS

As recognized by the county and community land-use planning committees, it was definitely evident that soil erosion is the major agricultural problem in Pierce County. Most of the land is of a rolling nature, natural forest vegetation has been removed on the slopes, gullies have developed and there is considerable wind erosion.

The major problems of the county can be summarized as follows:

1. Erosion control and soil improvement.
2. Herd improvement with educational work on Area Bang's Test.
3. Weed control.
4. Adjustments relative to agricultural credit and farm tenancy.

The committee's recommendations which follow in this report, are an all important phase of this planning work. These provide guidance and help to all public programs in agriculture. The planning committee's work does not end with recommendations, but extends into every field of agricultural action. It is the committee's task to keep its people informed of the recommendations made and of the reasons underlying them.

YOUTH SURVEY IN PIERCE COUNTY

A Youth Survey has been conducted in the county, and although the project has not been completed, brief mention is here made of the objectives, organizations, and procedure.

Objectives: This survey was undertaken by the young people of Pierce County to determine their ideas, interests, and future needs in regard to education, recreational, and occupational possibilities. It is a study of their own problems.

Organization: The County Youth Community was assisted by A. F. Wiledon and Martin P. Anderson, rural sociologists, State College of Agriculture, and J. D. McMurray, United States Department of Agriculture, Bureau of Agricultural Economics, V. W. Peroutky, Assistant Agricultural Agent, was elected chairman of the local committee. A youth leader was appointed in each selected school district to act as a leader in distributing and collecting the questionnaires.

Procedure: The committee decided to get a representative sample on the basis of school districts; and the key school districts, 24 in number, were selected by a random sampling method. The committee asked each person out of school between the ages of 14 and 27 years inclusive in these school districts to completely fill out a schedule. There are about 500 youth in this age group in these selected school districts.

Since this survey is being undertaken by a sampling process, it is important that we get as close to 100 per cent returns as possible on the questionnaires. About 85 per cent of the questionnaires have been returned to date (June 1, 1940). It is expected that 95 per cent of the questionnaires will be returned, and then the results can be tabulated. From this selected sample covering about 20 per cent of the county, the Youth Committee will get a good picture of the problems, interests and social needs of out of school rural young people of Pierce County.

Figure 16 - Pierce County Summary Sheet
Land-Use Planning 1939-40 for Crop Farming Areas

Items	County Averages
Percentage of Present Cultivated Crop land to be continued in cultivation	90.3 Per Cent
Approximate number of acres of land to be continued in cultivation	179,939 acres
Percentage of Recommended Cultivated Acreage to be in:	
1. Intertilled crops	26 Per Cent
2. Small grains and other close grown crops	32 " "
3. Grass and hay crops	42 " "
Percentage of Recommended Cultivated Crop Land Acreage Needing Soil Conserving Practices:	
1. Strip Cropping	78 Per Cent
2. Lime-phosphate application, or other fertilizer	75 " "
3. Terracing	28 " "
4. Winter cover crop for green manure	12 " "
5. Summer cover crop for green manure	5 " "
6. Contour cultivation	12 " "
7. Other	
Approximate Acreage Recommended for Pasture	127,063 Acres
Percentage of Recommended Pasture Acreage Needing Soil Conserving Practices:	
1. Lime-phosphate application	25 Per Cent
2. Reseeding	20 " "

RECOMMENDATIONS OF THE PIERCE COUNTY

LAND USE PLANNING COMMITTEE

Soil Improvement and Erosion Control

Pierce County is best suited to diversified farming with livestock and its products contributing the major part of the farm income. This type of farming dovetails well with soil and moisture conservation practices that are needed. In discussing the problems and recommendations four divisions are used, namely, crop land and pastures, woodland and odd areas, gullies, and general.

A. Crop Land and Pastures

Because of the rolling nature of most of the land and the rough topography in some sections erosion has been, and still is, a problem in the county. The removal of the natural forest vegetation on the slopes has caused the gullying of some of the best land while some of the level upland areas have been subjected to considerable wind erosion.

1. There is a general need for contour tillage, strip cropping, fertilizing, liming, and practices that will increase humus.
2. Contour tillage will provide sufficient control against erosion on small areas of moderate erosion, with slopes of four per cent or less, when good rotations and fertilizer practives are followed to maintain soil humus and fertility. On steeper slopes, longer rotation with more hay or strip cropping should be practiced along with contour tillage.
3. Hay crops should be rotated with other crops and more practices should be followed that would maintain or increase the humus content of the soil.

4. Broad base terraces are recommended for crop land on slopes ranging from 4 to 12 per cent where suitable outlets are available and where subsurface drainage is adequate.

5. Wind erosion is a problem on the sandy plains west of Bay City. Shelterbelts of coniferous trees placed at right angles to prevailing winds and at 40 to 60 rod intervals are recommended.

6. Pasture management and renovation is a definite need in Pierce County. Fertilizing, liming, and reseeding is recommended on the poor pastures. The use of grass or legume silage or rotational pasture to supplement permanent pastures are recommended to avoid over-grazing.

B. Woodland and Odd Areas

1. Many farms in Pierce County have some land that is better suited to the growing of trees than for any other purpose. Steep land having slopes of over 30 per cent, light soil with low fertility, and badly eroded land are the most common cases. It is recommended that these areas be protected and planted to trees to provide some income and guard against erosion.

2. One of the biggest woodland problems in Pierce County is the general practice of woodlot liquidation on lands primarily suited for growing timber. It is recommended strongly that the farmers protect these woodlots from fire and grazing and follow better cutting practices. Such cutting practices as removing the over-mature, dead, deformed, and diseased trees along with others that crowd or overtop thrifty young saplings or interfere with the growth of "final crop" trees are recommended. These practices will provide yearly tree crops and protection to erosion.

3. Odd corners, idle areas, and stream banks can be made into excellent wild life coverts. It is recommended that these waste areas be developed

to restore and develop a better supply of game birds and fish. Such practices as planting conifers for winter cover, leaving corn shocks for winter food, and planting willows along streams for protection against erosion, and for keeping the water cleaner and cooler, should be followed.

C. Gullies

Pierce County has gullies ranging from large ones that require much time and money to control to small ones that can be easily controlled by individual farmers.

1. Special emphasis should be placed on the small gullies which can be easily handled by individual farmers. These may be shoe-string gullies in fields, small gullies in drainage ways, or small gullies encroaching upon fields. It is recommended that these gullies be controlled by use of small check dams, diversion dikes, sloping and sodding, sloping and seeding, protection against grazing, planting to trees, or by combination of these practices. All natural waterways should be left permanently in wide sod strips.
2. In cases where large gullies are draining large areas it is recommended that all the farmers endangered contribute toward the necessary control measures. This is usually necessary in order to finance the project.
3. Pierce County has a serious highway erosion problem. In many cases farms have been damaged by erosion that started from highway drainage. It is recommended that highway drainage be properly handled at the time of construction. The highway departments of both town and county should cooperate with the farmers in areas where gullies are serious, and where bank erosion is prevalent, either because of natural erosion or erosion due to bank cutting. Such practices as sloping and seeding shoulders, cuts and fills; providing check dams in drainage ditches, providing drop inlets to culverts where necessary, and providing flumes where

necessary are suggested.

D. General

1. Many farms have suffered from erosion because tenants have been given only year to year leases. There is no incentive on the tenant's part to try to improve the land because he may not have the farm long enough to realize a return on his investment. It is suggested that longer leases be encouraged.

2. Legumes and grasses used for hay and pasture play an important role in soil and moisture conservation. Since cultivated fields are more subject to erosion, it is recommended that trials be made using grasses and legumes for silage.

Specific Recommendations for Action Agencies

1. Farmers in Pierce County should be encouraged to visit farms where demonstrations on erosion control have been set up by the Soil Conservation Service. Many farmers who have farms with some top soil erosion, and no gullies do not realize that soil is being lost by sheet erosion.

2. It is suggested that education on woodlot management be emphasized through demonstrations, contests, class instruction, and community meetings with visual instruction.

3. Since the future of our land depends on youth, the county land use committee recommends that instructors in vocational agriculture, working in cooperation with the county extension office, spend more time in class room discussion and field trips relative to soil erosion improvement project and soil conservation. Levels and steel tapes are available for use by students from the Soil Conservation Service through the County Extension Office. It is further recommended that the instructors teach their students how to use these levels in laying out stip crops.

4. Movie films on soil erosion in Wisconsin and in Pierce County or other soil erosion movie films and projector slides, should be shown at community meetings emphasizing erosion losses and erosion control measures.

5. A soil building program and a program of soil erosion prevention should be carried out wherever new loans are made or new farms are purchased with money furnished by government loans.

6. Phosphate is a costly fertilizer in this section, freight charges being an important part of that cost. It is recommended that chemical analysis be made by the Soils Department of the College of Agriculture of the green colored rocks in the Ellsworth vicinity for possible phosphate content. Deposits can be found in road banks on both sides of Ellsworth on Highway 10.

7. Sufficient emphasis has not been given to the soil building and erosion control provisions of the agricultural conservation program. It is recommended that more credit be allowed for the use of lime, fertilizer, and soil erosion control practices.

   a. Credits of soil building units are earned under the AAA program for carrying out soil building practices of seeding of grass seeds and the applications of lime, etc. Credit is given for the application of fertilizer to a seeding of grass or legumes provided no soil depleting crop is harvested from that acreage. It is recommended that the present soil building practices should be retained, and in addition credit should be given for the use of fertilizers when used with a soil depleting crop that is seeded with grasses or legumes.

   b. Credits for soil building units are earned for phosphate received under grants of aid when applied to, or in connection with, a

non-depleting acreage or a new seeding of grasses or legumes, provided no soil depleting crop is harvested from that acreage. It is recommended to allow credits for grants of aid, such as phosphate and potash used with a soil depleting crop that is seeded to grasses or legumes.

c. One unit of credit is given to alfalfa per acre, and $\frac{1}{2}$ unit per acre to each red clover and sweet clover. Since red clover has been grown successfully in Pierce County as well as has sweet clover it is recommended that equal credit to that on alfalfa be put on red clover and sweet clover.

d. Units of credit should be given and payments made for the construction of terraces in cultivated crops, sod earth or brush rock dams, and diversion dykes.

8. The administrative set-up of the A.A.A. Program provides payment to farm reporters for inspection work at a set rate per day. The result in some cases has been that the best reporters would not receive the credit due them for their efficient and accurate work as compared with an average or below average reporter. It is recommended that reporters working on farm inspection be paid on piece work instead of per day.

9. The bulletin NCR-401 or "Docket" has previously been made up for the entire North Central Region and contained regulations and practices which don't apply to Wisconsin. In order to avoid confusion and obtain greater simplicity, it is recommended that a separate Wisconsin docket be made up from the North Central Region docket so that it will apply to Wisconsin conditions only.

10. Farmers have carried out the practices of seeding legumes and application of lime and fertilizers without knowing the true condition or requirements of the soil on which these practices are carried out.

It is recommended that a provision be made for farmers to take soil samples to the County Extension Office and have their soil tested for lime, phosphate, and potash before credit be given for sowing of legumes and applying lime and fertilizers.

11. Many farmers have requested help from the Soil Conservation Service with erosion problems on their farms. Some objected to long term agreements; others have been unable to get assistance regardless of the agreement; some have objected to having the entire farm on the agreement when perhaps only one field on the farm is subject to erosion. It is recommended that shorter termed agreements be made where the erosion problem does not concern the whole farm. The length and details of the agreement should be elastic enough to meet the conditions of each farm. More farms should be given assistance even though it may be necessary to omit some details formerly stressed. It is further recommended that if only a field or a small section of the farm is eroded and other parts of the farm are not subject to erosion, then only the area subject to erosion should be considered under an agreement between the land owner and the Soil Conservation Service.

12. People of many communities do not know what work is being done by the Soil Conservation Service. Soil tests have been made on many farms and fertilizer grain plots have been seeded with fertilizers calculated to meet the specific soil fertility requirements. The Soil Conservation Service has established soil dams, spillway dams, and other constructions for controlling soil erosion on 104 farms in the county. It is recommended that roadside signs be posted by the Soil Conservation Service where erosion control practices have been developed. These signs would be an excellent method of advertising and informing the passers-by as to the location of these farms where Soil Conservation

Service projects have been set up.

13. The County Agent's program has been completely filled with work other than soil conservation work. With the advance of more serious erosion problems, it is recommended that an assistant to the County Agent be employed to care for these problems, and especially so since the soil conservation district has been organized.

14. Various agricultural groups have made tours through the La Crosse Erosion Experiment Station where much interest has been created. It is believed that the location of a soil trap device in Pierce County used for measuring soil run-off would create even wider interest in the problem of sheet erosion. It is, therefore, recommended that a soil trap device be set up in Pierce County by the Soil Conservation Service.

Dairying

1. Forty-five per cent of our income is derived from dairy products; and to further emphasize a dairy quality program, it is recommended that more intensive dairy herd improvement work be encouraged through the Extension Program.

2. Because 30 per cent of the farmers have tested their herds for Bang's disease, and because the Guernsey's Breeders Association has already urged the adoption of the Area Test for Bang's disease, the county land use planning committee feels that further educational work should be done to promote the adoption of the Area Test.

3. The present provisions of the A.A.A. program do not provide for allotment payments, or parity payments, for dairy farmers who carry out good practices of dairy farming. It is recommended that the dairy farmer should be given the same consideration as other special crop

farmers, such as corn and wheat, and should be given parity payments and have cow allotments for each county, thus providing a year-round stable price on dairy products.

4. All the creameries of Pierce County have signed up on a National Dairy Products Advertising Program. It is recommended that continued effort be made to stimulate greater consumption of dairy products.

Agricultural Credit and Tenancy

1. The debt load on Pierce County farms needs some adjustments. Some debt adjustment has been made in the last few years, but the load is still too heavy in many cases. It is recommended that in such cases payments should be extended over a longer period and a lower interest rate be made.

2. Improved leasing arrangements on tenant farms should be made whereby longer tenure could be secured. The tenant should be compensated for improvements to the farm and for crops remaining when the tenant moves. It is recommended that the flexible type of lease to be distributed shortly through the Extension Service be considered for use in Pierce County.

3. Federal loaning agencies should make loans only to those who are qualified for successful farming. Subsidies should not be made to those who are not qualified for farming.

4. During the past seven years the Farm Credit Administration, through its branch farm loan associations and the production credit associations, have been active in the field of long and short time credit to the farmers throughout the country. It has been necessary for the farmers who obtain service through these associations to purchase capital stock in proportion to the amount of the loans obtained. After their loan has been paid in full, farmers often desire to have their stock sold. In order for them to sell their stock in the pro-

duction credit association, it is necessary to either find a buyer whose loan has been approved by the association or list their stock with the association to be sold to new borrowers. Often there is a considerable delay in these sales. This procedure has in many cases worked hardships on the farmer and has had a tendency to influence farmers to invest in other loaning associations rather their own cooperative loaning associations. It is recommended that Congress revise the Farm Credit Act to permit loans without the purchase of capital stock. This would make the services of the organizations more attractive to prospective members.

5. The original owners of a Federal Land Bank farm should be given the first opportunity to rent or repurchase such a farm, provided, of course, that the farmer has demonstrated his ability as a farm operator. No one knows the farm better than the original owner, and the family has been a part of that community.

General

1. As a result of a survey among farm women in Pierce County, it is evident that there is not enough fruit produced on the home farm; lard substitutes are used to considerable extent; dairy products are not used sufficiently; and the two locker plants of the county are located too far away from the majority of farm homes to be of much value. It is, therefore, recommended that more small fruits and fruit trees be grown; larger gardens developed; lard be used in place of substitutes; both children and adults consume more milk; and that a frozen locker plant be constructed in Ellsworth. More meat should also be cured and canned on the farm.

2. It is evident that the purchasing power of the farmer is very low, partly due to the increased cost of production. To meet this situation

he must produce more products more efficiently, and to do this machinery is necessary. Since machinery costs are comparatively high, it is recommended that machinery used in controlling soil erosion, such as fertilizer drills, cultipackers, and grass seeders, etc., be purchased cooperatively. Cooperative ownership and use of soil erosion control and soil building types of machinery is particularly desirable.

3. Farm machinery and buildings constitute a considerable part of the investment in the farm. Because there are many changes in farm machinery constantly taking place, it is recommended that the College of Agriculture through the State Extension Service provide specialists who will assist farmers in obtaining a better understanding of the efficiency and economy of the various types of mechanical farm equipment.

4. There are many farms and part of farms in Pierce County which should be put to some other use. Since much of these areas have a slope of 30 per cent or more, it is recommended that farmers and assessors become acquainted with the woodlot tax exemption law(Section 70.11, subsection 40 of the Wisconsin Statutes).

5. Buildings on the farm are in need of painting and repair. It is recommended that some form of a federal government program finance farmers for the purpose of meeting this need.

6. The wheat crop insurance counties have done a large amount of work and have gone to considerable expense to carry out the crop insurance program in Wisconsin. This program has not been entirely satisfactory in Pierce County; one of the reasons being that the average wheat yield for the county has been established too low. It is recommended that the wheat insurance program in Pierce County be discontinued.

7. All of the worst perennial noxious weeds of Pierce County spread by an underground system of either creeping roots or of rhizomes. Creeping Jenny, Wild Morning Glory, and Canaian Thistle are examples. The perennials are a more serious problem than are the annuals. The perennial weeds spread in seed grains, grass seeds, hay, straw, animals, machines, and other means. Common weed control methods, such as summer fallowing, smother crops, and control measure outlines in the Wisconsin Weed Law, have been carried out to some extent. The County Land Use Planning Committee encourages the continuation of the control of Creeping Jenny along the highways in the county by the use of the chemical, sodium chlorate. It is recommended that the County Highway Department try to control perennial noxious weeds on state and county highways along cultivated fields in order to prevent spread to cultivated fields. It is also recommended that a small amount of sodium chlorate be tried on small patches of perennial noxious weeds. Farmers not acquainted with Creeping Jenny should acquaint themselves with the characteristics of the weed, and when such weeds are found it should be reported to the County Extension Office.

The planning committee's work does not end with the above recommendations. The county committee should continue to exert a direct influence on all activities dealing with agricultural and land use problems in the county. It is the committee's task to keep the people informed on the results in land use planning work. These recommendations will form the basis in planning all agricultural programs in Pierce County.

Land Use Planning Reports

Wisconsin Counties

Vol. I.

1. Outline for County Land Use Planning in Wisconsin
2. Adams
3. Ashland (Unified)
4. Ashland (Intensive)
5. Barron
6. Bayfield
7. Burnett
8. Door
9. Green

Vol. II.

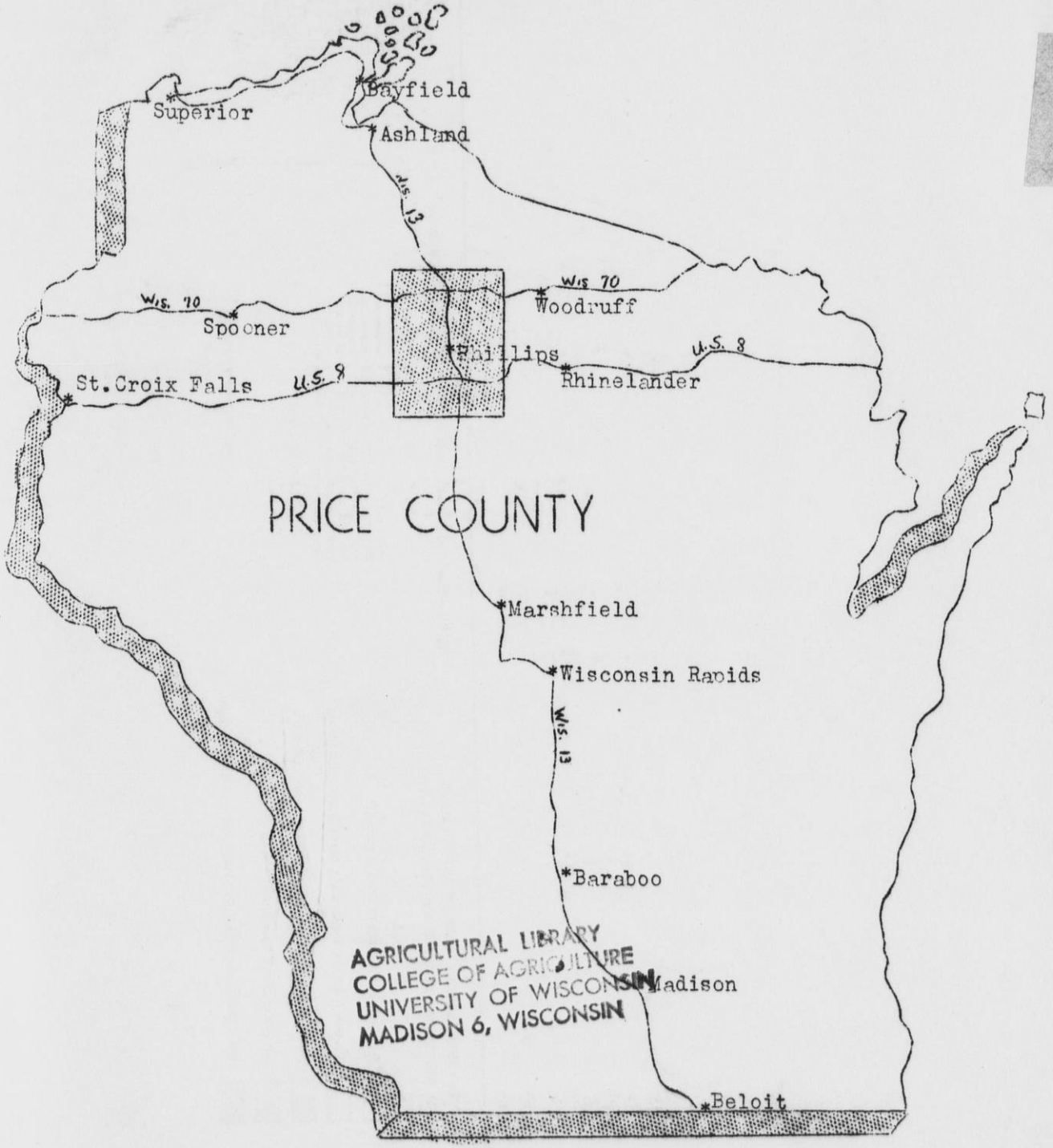
10. Kenosha
11. Juneau
12. Lafayette
13. Marinette
14. Oconto
15. Town Consolidation - Oconto
16. Pierce

Vol. III.

17. Price
18. Taylor
19. Trempealeau
20. Washburn
21. Washington
22. Waushara

111
P

INTENSIVE
LAND USE PLANNING
REPORT



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MADISON 6, WISCONSIN

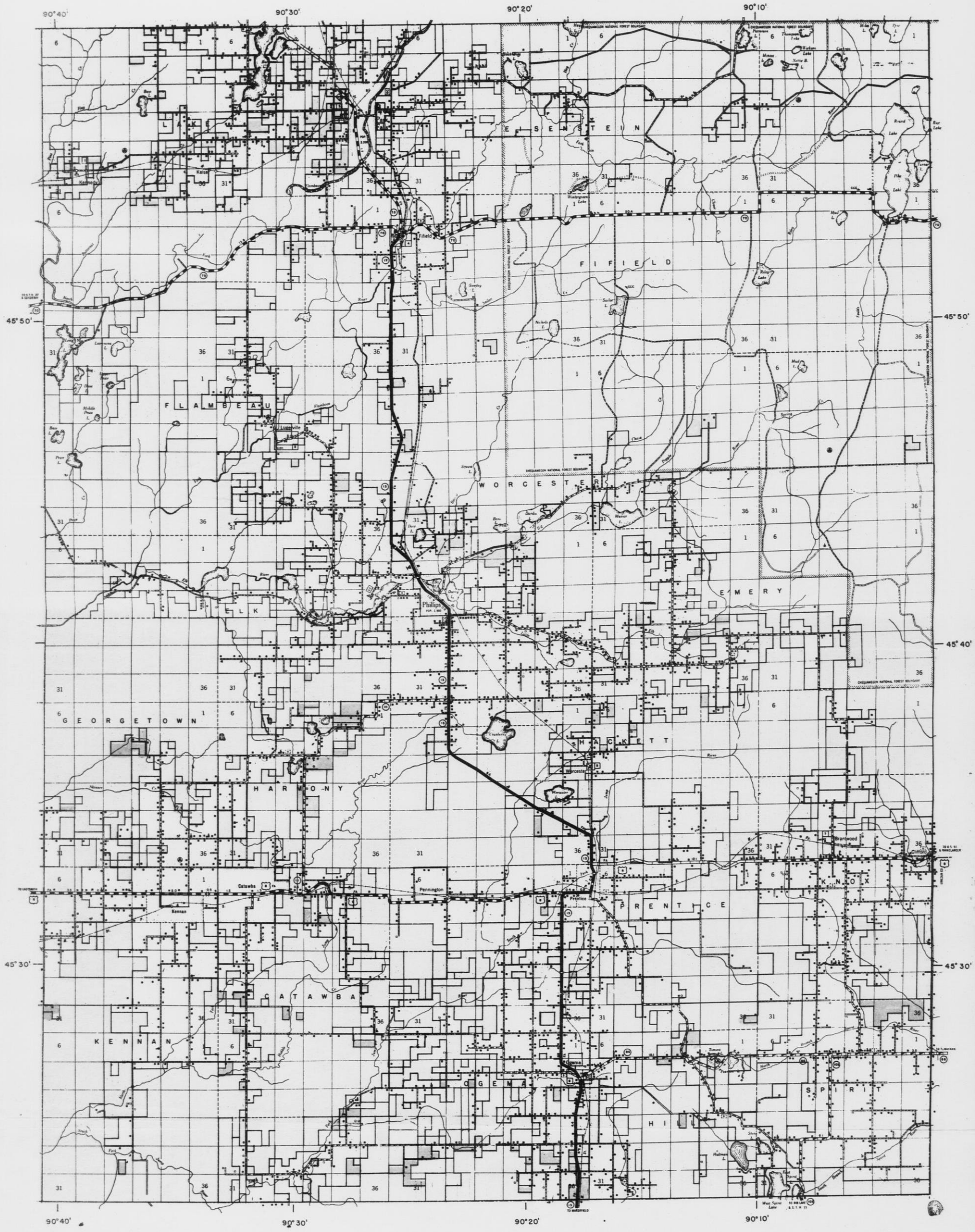
Prepared by

PRICE COUNTY LAND USE PLANNING COMMITTEE
Phillips, Wisconsin

May 15, 1941

LAND USE CLASSIFICATION

PRICE COUNTY, WISCONSIN



- Now in farms, not suited for farms, should be put to other use
- Not now in farms, should not be used for farming
- Now in farms, questionably suited for arable farming
- Not now in farms, suitable for development into farms
- Now in farms, should remain in farming

SCALE: MILES
0 1 2

N

PRICE COUNTY



ROAD TYPES

- UNIMPROVED ROAD
- GRADED AND DRAINED EARTH
- SOIL SURFACED ROAD
- METAL SURFACED ROAD
- BITUMINOUS SURFACED ROAD (LOW)
- PAVED ROAD

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS, U.S.D.A.

PLANNING FOR SECURITY

Security in life of all people, rural or urban, is directly dependent upon the resources of land and water.

Observing our present status resulting from the use of these resources during the past century the Price County Agricultural Committee became much concerned and voted to participate in the Land Use Planning Program which is in progress in our nation.

The members of the county and community committees who were selected to plan for our security worked with representatives of both state and national agencies because many county problems are state-wide and national in scope.

This Land Use Planning report is a summary of recommendations made by county and community committee members of Price County for a better land use in this county.

The members of the county and community committees who were responsible for the preparation of this report deserve commendation and praise for their splendid cooperation. They realize that this report is in no sense final and many have suggested that the committees continue to function in the future.

The county committee herewith respectfully submit this preliminary report of their deliberations to date on these problems with recommendations for their solution.

Nels Risberg.
Chairman

A. S. Peterson
Secretary
Price County Land Use Planning Committee

THEY ACHIEVE MOST – WHO PLAN BEST

TABLE OF CONTENTS

	Page
Foreword	1
Objectives of Land Use Planning	4
Organization and Procedure	5
Personnel of County Committee	6
Personnel of Community Committee	7
Description of County	8
Price County Statistics	10
Major Problems of County	12
I. Agricultural Problems	12
II. Publicly Owned Lands	19
III. Forestry	22
IV. Education and Schools	23
Land Classification	24
Land Use Recommendations	26
I. Publicly Owned Lands	26
II. Privately Owned Land not in Agriculture	30
III. Agricultural Land -- Governmental Agencies	30
IV. General Farm Recommendations	34
V. Recreation.	36
VI. Taxes	36
VII. Zoning	37
VIII. Education	37
IX. Public Health	38
X. Government	39

CHARTS GIVING BACKGROUND INFORMATION

Chart No.		Page
I.	Summary of Farm Survey by Crop Acre Groups	14
II.	Summary of Farm Survey by Townships	15
III.	Livestock Trends	16
IV.	Milk Production by Months, 1938	17
V.	Per Cent of Farms Having no Hogs or Poultry 1939	18
VI.	Land Ownership Chart	20
VII.	Tax Base and Tax Rate Chart	21
VIII.	Land Use Classification	25

LAND USE PLANNING -- WHAT IT IS

Land Use Planning is a joint Federal, State, County and Community procedure aimed at developing a sound, long-time plan of land use designed to secure a permanent, productive and balanced agriculture within the county.

Land Use Planning is judgment based on facts and background material for the county concerned. This background material is secured for participating counties by cooperation of the United States Department of Agriculture and the State Extension Service.

Land Use Planning was requested and sponsored for Price County by the Agricultural Committee of the Price County Board of Supervisors.

Land Use Planning is done by farmer committeemen whose judgment and opinions have been tempered by their farm experience and contacts with representatives of county, state and federal agencies operating within the county.



ORGANIZATION AND PROCEDURE

The county agricultural committee together with L. G. Sorden, State Bureau of Agriculture Economics representative; Walter G. Wilson, ranger of federal forest; Wm. P. Yost, state district ranger; Alvin S. Peterson, County Agricultural Agent, and Armin F. Meyer, Assistant County Agricultural Agent, selected the personnel for the county land use planning committee.

The county land use planning committee first met in October, 1940, with L. G. Sorden, who explained the objectives of Land Use Planning. In addition the county committee divided the county into nine communities and selected community committee members to represent these communities.

The community committees held three meetings. At the first series of meetings in January the members classified the land and at the second and third meetings held in March and May theyreviewed and studied the background information and made recommendations.

The county committee held their final meeting in May to review the report and give approval to the land classification map and recommendations from the community committees. L. G. Sorden and W. A. Rowlands, representing their respective departments, the State Bureau of Agriculture Economics and the College of Agriculture, were present at the last meeting.

PERSONNEL OF THE COUNTY LAND USE PLANNING COMMITTEE

Name	Representing	Occupation
Nels Risberg	Chairman, County Agricultural Committee	Businessman
John Gannon	Agricultural Committee Member	Businessman
John Jansen	Agricultural Committee Member	Farmer
Arthur G. Johnson	Agricultural Committee Member	Farmer
Glen E. Ehle	County Superintendent of Schools	Educator
Hertha Hanson	County Welfare Department	Director
William Jackson	County Highway Department	Co. Commissioner
Roy A. Bodenburg	County AAA Committee Member	Farmer
D. V. Nusbaum	County AAA Committee Member	Farmer
William Dana	Zoning Committee Member	Farmer
George Blomberg	Forestry Committee Member	Farmer
William P. Yost	Wisconsin Conservation Department	Dist. Forester
Wm. Rohlf	Wisconsin Tax Commission	Supervisor of assessments
Walter G. Wilson	U. S. Forest Service	Forest Ranger
Carl Niebauer	Farm Security Administration	Co. Supervisor
Ed. Hainy	Nat'l Farm Loan Association	Farmer
Mrs. Hazel Barton	County Health Department	Sub. Co. Nurse list
M. M. Culp	Soil Conservation Service	Area Conservation-Coordinator
F. F. Fuller	Rural Electrification Administration	
Ernest Heden	Assemblyman	Logger
E. O. Gehrman	Bankers Association	Banker
L. A. Koenig	Legion Representative	Attorney
Wm. Milne	Service Clubs	Educator
Dr. Harold West	Conservation Clubs	Dentist
Mike Cummings	Resort Associations	Businessman
W. A. Munro	Paper Industry	Businessman
Herman Ernst	Grange	Farmer
Louis Bubenic	Community Farm Clubs	Farmer
Joseph Maziasz	4-H Clubs	Farmer
John Lundberg	4-H Clubs	Farmer
Mrs. D. V. Nusbaum	County Homemakers Group	Homemaker
Ed. Solum	Vocational Agriculture	Educator
Tony Drost	Future Farmers of America	Farm Boy
Hilda Hartman	Home Economics	Educator
Richard Glissendorf	Fur Farmer	Farmer
Viking G. Anderson	Fur Farmer	Farmer
James Hilgart	Farmer Representative	Farmer
Leonard Wagner	Farmer Representative	Farmer
John Conradi	Farmer Representative	Farmer
Mike Stanke	Farmer Representative	Farmer
John Hvass	Farmer Representative	Farmer
Ben Kempen	Farmer Representative	Farmer
L. R. Blakely	Farmer Representative	Farmer
Marlin Shauger	Farmer Representative	Farmer
Alvin S. Peterson	Agriculture Extension	Co. Agr'l Agent
Armin F. Meyer	Agriculture Extension	Ass't. Co. Agr'l Agent

PERSONNEL OF COMMUNITY COMMITTEES

Eisenstein-Lake

John Windall
George Koshak
Earl Northrup
Fred Rogers
Walter Wilson
Jacob Schmidt
Paul Herbst

Flambeau-Fifield

Ed. Wesley
Laddy Tom
John Donovan
Mike Cummings
Walter Wilson
Warren Liebelt

Elk-Worcester

Joe Horak
William Goth
Anton Norek
Joe Carek
William Dama
Walter Wilson
John Stanley

Georgetown-Kennan

Arthur Parpart
H. W. Tegen
John Hvass
Frank Kramer
E. A. Davies
John Mittenmeyer
George Mustard

Harmony-Catawba

George Kralicek
John Jansen
John Bachler
William Gehring
Ben Kempen
Nick Weber

Hackett-Emery

Eugene Kaufman
Joe France
Walter Wilson
Mike Hayda
Mike Stanke
Ed. Hainy

Prentice-Knox

C. A. Nelson
Glen Clark
Nels Risberg
Gerhart Erickson
Edward Isaacson
Victor Sundquist
Carl Pokela

Spirit-Hill

Arthur G. Johnson
Herman Ernst
George Blomberg
Oscar Norlin
Ben Bergeson
Clarence Nyberg
Mauno Niemi
August Johnson
Herman Nelson

Ogema

Clarence Johnson
Marlin Shauger
Carl Soderstrom
Art Cummings
Ben Lofquist
Ernest Heden
Howard H. Johnson

DESCRIPTION OF COUNTY

Price County is situated in the north central part of the state (see cover page) and is the sixth largest county in the state with an area of 825,000 acres.

It was established as a county in 1879. Logging was carried on along the Flambeau, Elk and Jump Rivers in this area as early as 1822. The first railway, the Wisconsin Central Railroad, was built through Price County in 1871 and gave impetus to extensive logging operations so that by about 1900 the last white pine forest had been logged.

In 1900 the following cities and villages were well established extending from north to south through the central part of the county. Park Falls had paper and pulp mills employing more than three-hundred men and Fifield was an active mill center. Phillips had one of the largest sawmills in the world with a daily capacity of 200,000 board feet. Prentice had a tannery employing four-hundred men and Ogema, Kennan and Catawba in the southern part of the county were also active mill towns.

Soon after this golden lumbering era the supplies of logs became scarce and many of the men who had been working in the mills began to turn to agriculture as a means of support.

Agricultural development started primarily along the railways and adjacent to the existing communities and is still to a large extent confined to this pattern. Today there are, according to AAA figures, 2,830 farms in the county occupying about 30% of the area of the county.

Of these farms 71% have less than 25 acres of cropland and according to a recent survey only about 49% of the farm operators depended on the farm for their entire income.

The farm income, because of small size farms and distances from market, is comparatively low. According to the Wisconsin Crop Reporting Service the

average annual gross income per farm in 1936 was $584.00 which is the third lowest in the state.

The predominant soil types of the county vary from different phases of sandy loams in the north half to silt loams with a tight subsoil in the southern half. One township in the southeastern part of the county has a rough and very stony heavy soil. With the exception of this one township the remainder of the county is fairly level and is hilly only in local areas.

The 1940 census gives the total population of Price County as 18,512 of which 67% is rural and the balance of 33% is urban. This is an increase of approximately 7% since 1930 with the city of Park Falls, a mill town, showing the largest increase. Although there is no one predominant racial group in the county the population for the most part is made up of people of German, Polish, Croatian, Bohemian, Scandinavian, and Finnish extraction.

At the present time there are two cities with a population of from two to three thousand each. Park Falls in the northern part of the county has a large paper mill and Phillips in the center of the county is the county seat and also has a flooring mill and wood fibre plant. Five villages, Fifield in the north end of the county and Prentice, Ogema, Kennan and Catawba in the southern half of the county make up the balance of urban population.

The land not in agriculture is covered to a great extent with poplar, hemlock, spruce, cedar, pine--white, jack and Norway, Balsam, tamarack, maple and elm. Of this cover 38% is in poplar and 16% in low land or marsh.

The predominant agricultural enterprise is dairying with poultry being the next most important source of income. In previous years potatoes were an important cash crop, but in recent years due to disease problems and low prices the acreage has been reduced to the extent that the county has been importing rather than shipping out potatoes.

Price County has always been known for its recreational advantages.

The Chequamegon National Forest and other large areas of county land and undeveloped privately owned lands offer excellent deer, partridge and prairie chicken hunting. The Flambeau River area is nationally known to fishermen. Several other rivers, lakes and recently developed flowages in the county add to the importance of this county as a recreational site.

The county has 1,100 miles of roads of which 68 miles are hard surfaced. Two paved highways go through the county, Wis. Highway 13 running north and south and U. S. Highway 8 running east and west. There are also five state highways in the county comprising 143 miles and 10 county highways of 165 miles which provide travel facilities throughout the county.

PRICE COUNTY STATISTICS

Population: 1940--18,467. 1930--17,284.

Rural Population--67%,(1940), Urban--33%

Area of County: 816,216 acres or 1,279 square miles (42 x 30 miles)

Land in Farms: 237,943 acres. Land in Crops: 52,183 acres.

Average Size Farm: 85.7 acres. Average Number of Crop Acres: 18.5.

Per cent of farms operated by tenants: 7.6%

County owned tax delinquent land: 119,177 acres.

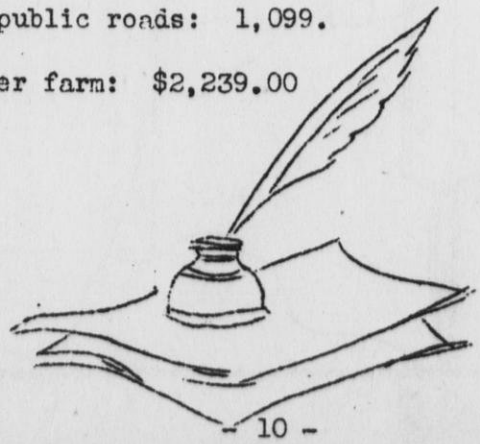
County owned Forest Crop land: 59,216.68 acres.

State Owned Land (Land Commission): 19,140 acres.

Federal Owned Land (Chequamegon National Forest): 128,462 acres.

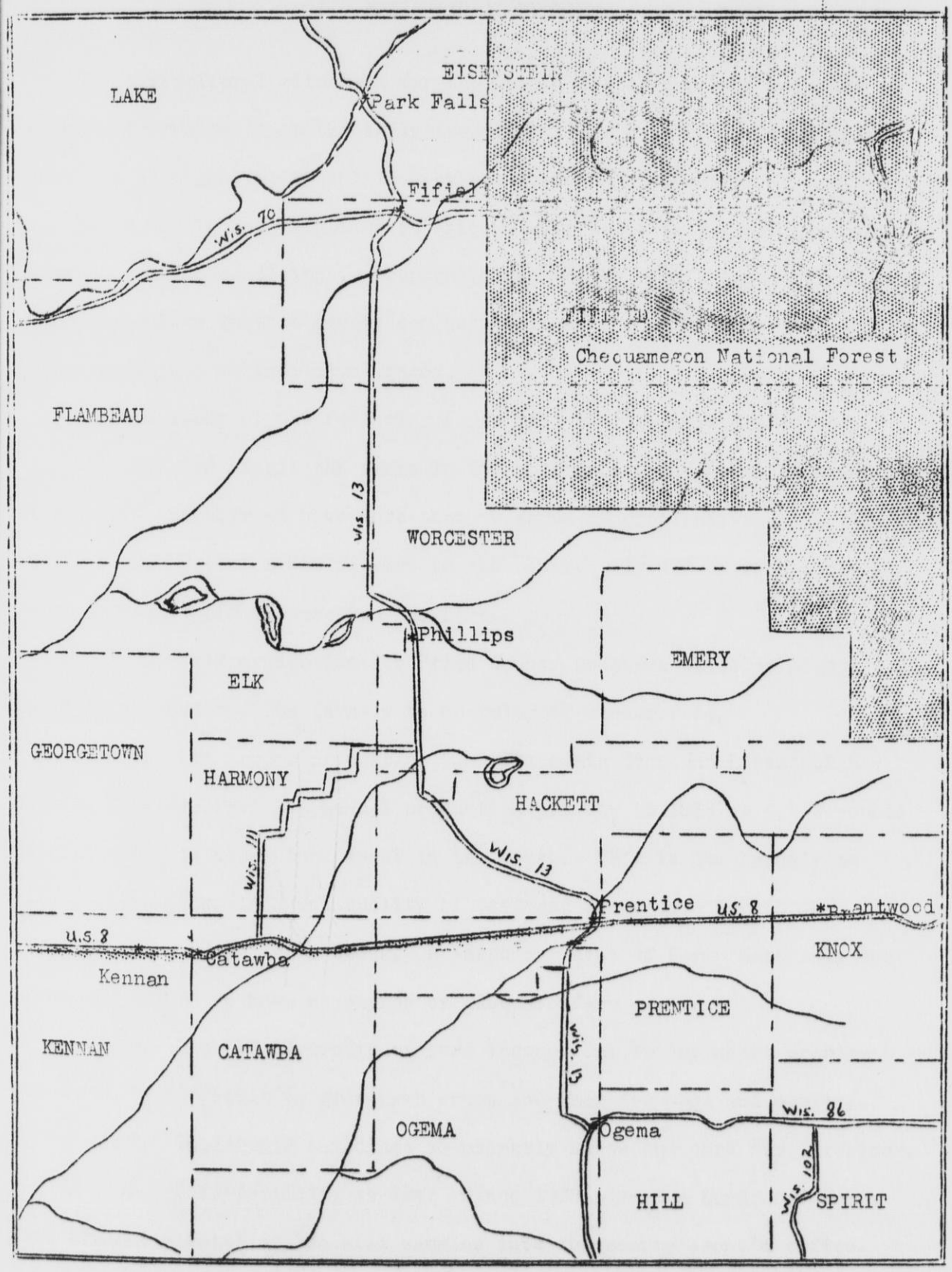
Total miles of public roads: 1,099.

Average value per farm: $2,239.00



Federal Highway
State Highway
Chequamegon National Forest

PRICE COUNTY



MAJOR PROBLEMS OF THE COUNTY

I. AGRICULTURAL PROBLEMS.

The agricultural situation for the United States has been regarded as a national problem since the early twenties. It's most commonly accepted cause has been generally explained by one word--overproduction.

The agricultural situation in Price County has been further aggravated by several local conditions. Ironically enough the chief reason for an agricultural problem in this county can be most easily summed up by one word also--under-production on individual farms.

A brief study of the following facts will clarify this statement:

1. 71% of all the farms in the county have less than 25 acres of cropland and only 4% have more than 50 acres of cropland.

2. Out of 2,830 farmers in the county only 49% of them are now receiving all their income from the farm.

3. Milk production for Price County is three times as high in June as it is in January, due largely to scarcity of winter feed.

4. Low producing cattle. The Wisconsin Crop and Livestock Reporting Service lists the annual production per cow in 1938 as 4,900 pounds of milk which is among the lowest in the state. This is due largely to type of livestock, lack and quality of feed and inadequate housing.

5. Limited work stock. A large per cent of farms have only one horse and many more have no source of adequate farm power.

6. Lack of diversity of farm income. Due to the short growing season it is difficult to grow cash crops and feed for hogs and poultry.

7. Inadequate buildings to properly house and care for livestock.

8. Soil fertility is low. Since 1938 almost a hundred farmers have brought a total of 195 soil samples into the county agent's office.

These soil samples were forwarded to the College of Agriculture to be tested for available phosphorus, potash and acidity.

These 195 soil samples averaged as follows:

1. 50 pounds of available phosphorous per acre. (A fertile soil should have from 75 to 100 pounds of available phosphorous per acre.)

2. 175 pounds of available potash. (A fertile soil should have from 160 to 200 pounds of available potash.)

3. 3.3 tons of lime required per acre in order to grow good leguminous crops such as clover or alfalfa.

Need of lime and phosphates are exceedingly important as both these factors are limiting proper plant growth. It has been observed by many farmers that good crops can be produced on the new soils for only a limited time. The fact is that our new lands are not as fertile as they are believed to be; therefore, requiring a careful program of soil management and judicious use of fertilizers.

The following charts provide additional information on the above mentioned problems:

Chart No. I -- Summary of Farm Survey by Crop Acre Groups
Chart No. II-- Summary of Farm Survey by Townships
Chart No. III -- Livestock Trends
Chart No. IV -- Milk Production
Chart No. V -- Per Cent of Farms Having no Hogs or Poultry.

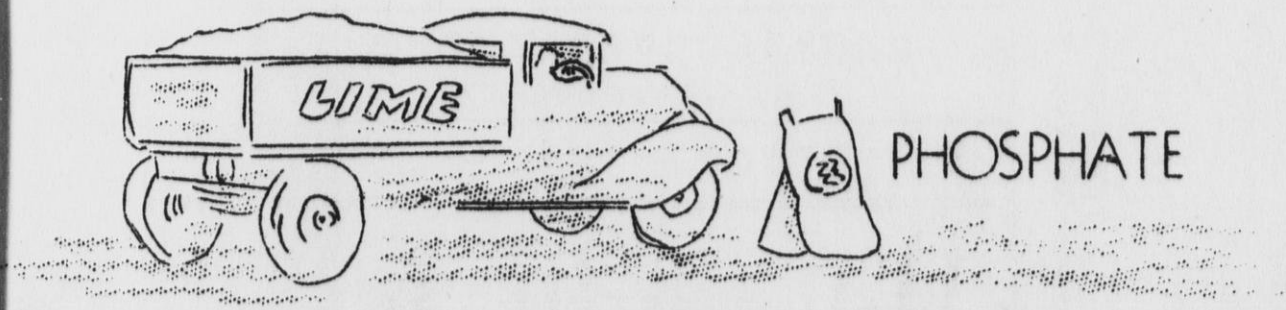


CHART NO. I -- SUMMARY OF FARM SURVEY BY CROP ACRE GROUPS

Crop Acres	Full-time Farms				Part-time Farms				Number of farms where operator is securing no cash income from the farm				Number of farm operators securing income from more than 1 farm			Abandoned or idle farms			
	0-9.9	10-24.9	25-49.9	50 & over	0-9.9	10-24.9	25-49.9	50 & over	0-9.9	10-24.9	25-49.9	50 & over	10-24.9	25-49.9	50 & over	0-9.9	10-24.9	25-49.9	50 & over
Catawba	9	40	37	10	15	7	--	--	3	--	--	--	1	2	1	6	6	--	--
Eisenstein	--	12	18	5	6	23	4	--	28	10	--	--	--	--	--	6	5	--	--
Elk	5	43	19	8	19	13	5	--	29	7	1	--	--	2	1	5	--	1	--
Emery	7	61	33	--	13	13	4	--	3	4	--	--	2	1	--	6	2	1	--
Fifield	--	12	10	1	13	11	4	2	27	6	1	--	--	--	--	7	2	--	--
Flambeau	4	15	21	5	31	15	3	--	17	4	--	--	--	1	1	20	4	--	--
Georgetown	2	21	19	--	3	12	1	--	2	1	--	--	1	4	1	12	3	1	--
Hackett	6	25	9	--	14	11	1	--	5	1	--	--	3	3	1	6	4	--	--
Harmony	6	28	25	2	7	8	--	1	--	--	--	--	--	--	--	3	3	--	--
Hill	11	33	16	--	22	9	2	1	2	--	3	2	--	3	2	5	5	--	--
Kennan	9	51	60	4	4	12	4	--	7	--	--	--	2	2	--	9	7	1	1
Knox	17	40	28	3	49	56	12	3	9	--	--	--	1	--	1	6	6	3	--
Lake	15	34	36	11	17	29	3	--	37	10	2	1	--	3	1	19	5	2	--
Ogema	8	54	48	13	24	36	21	1	12	7	1	--	1	6	3	17	15	4	1
Prentice	13	48	34	3	41	23	6	--	6	4	--	--	--	2	1	5	7	3	--
Spirit	1	33	26	6	25	18	10	--	9	3	1	--	--	4	2	13	5	2	1
Worcester	13	81	72	10	33	53	19	--	24	10	--	1	--	2	3	9	2	1	--
County	128	631	511	81	336	349	97	8	220	67	9	4	11	35	18	154	81	19	3

838 farms have less than 10 acres of cropland and represent 30% of all the farms in the county.
1139 farms have between 10 and 25 acres of cropland and represent 41% of all the farms in the county.
671 farms have between 25 and 50 acres of cropland and represent 24% of allthe farms in the county.
114 farms have more than 50 acres of cropland and represent 4% of all the farms in the county.

(Source--Farm survey--1940)

CHART NO. II

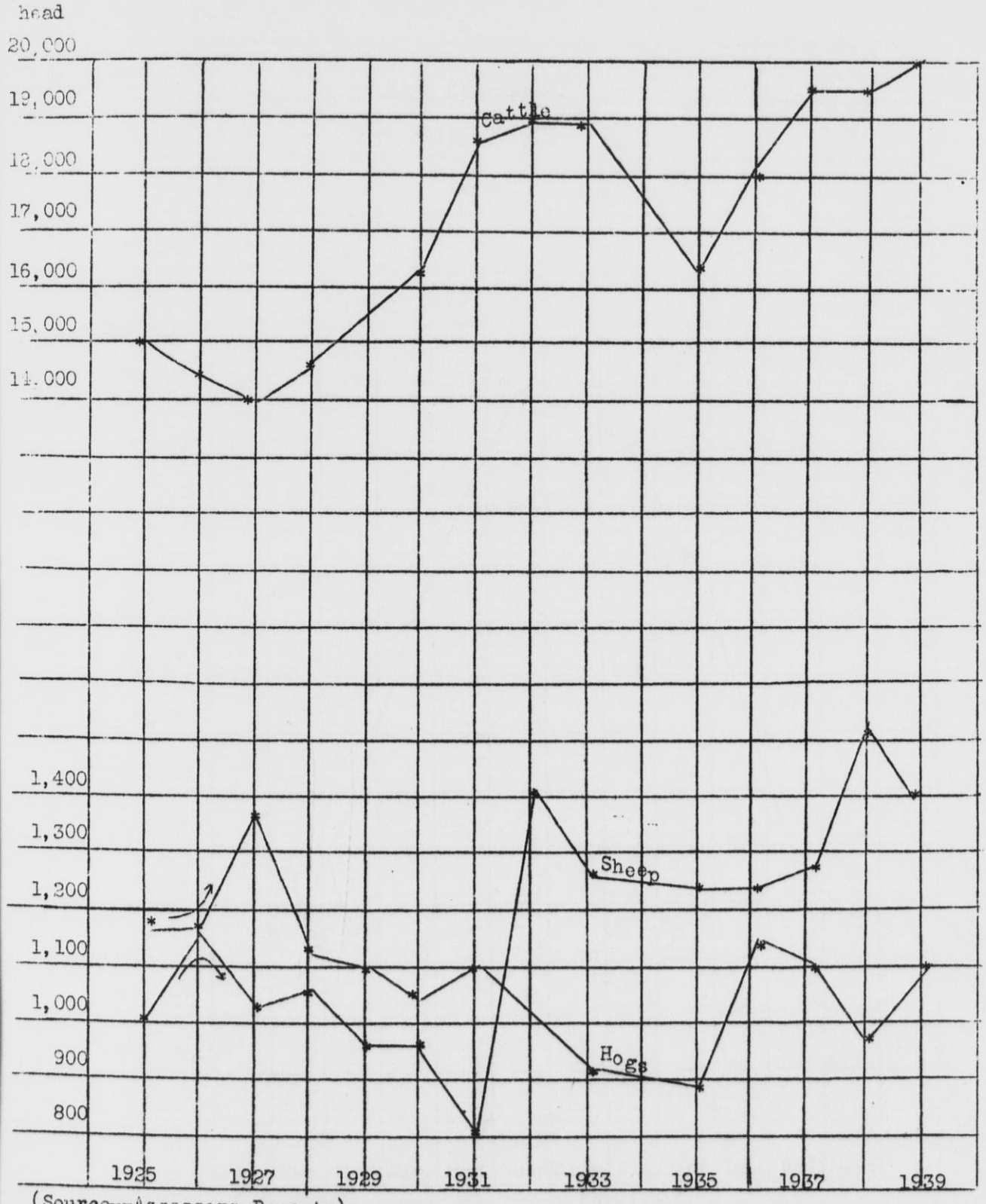
SUMMARY OF FARM SURVEY BY TOWNSHIPS

	Number of farms where information was secured.	Number of farms where operator is securing all his income from farm.	Number of farms where operator is securing part of income from other sources and part from the farm.	Number of farms where operator is not securing any cash income from this farm.	Number of operators securing their income from more than one farm.	Abandoned or idle farms.	Per cent of farms where operator is securing all his income from the farm.	Per cent of farms having more than 25 acres of cropland and idle including combination farms.
Catawba	137	96	22	3	4	12	70%	34%
Eisenstein	117	35	33	38	--	11	30	15
Elk	158	75	37	37	3	6	47	22
Emery	150	101	30	7	3	9	67	25
Fifield	96	23	30	34	1	9	24	19
Flambeau	141	45	49	21	2	24	32	21
Georgetown	83	42	16	3	6	16	51	25
Hackett	89	40	26	6	7	10	45	11
Harmony	83	61	16	1	1	6	74	34
Hill	116	60	34	7	5	10	51	18
Kennan	173	124	20	7	4	18	72	40
Knox	234	88	120	9	2	15	37	21
Lake	225	96	49	50	4	26	43	24
Ogema	272	123	82	20	10	37	45	33
Prentice	196	98	70	10	3	15	50	22
Spirit	159	66	53	13	6	21	42	29
Worcester	333	176	105	35	5	12	53	31
County	2762	1349 (49%)	792 (29%)	300 (11%)	65 (2%)	257 (9%)	49%	31%

(Source--Farm survey--1940)

CHART NO. III

LIVESTOCK TRENDS
1925 -- 1940



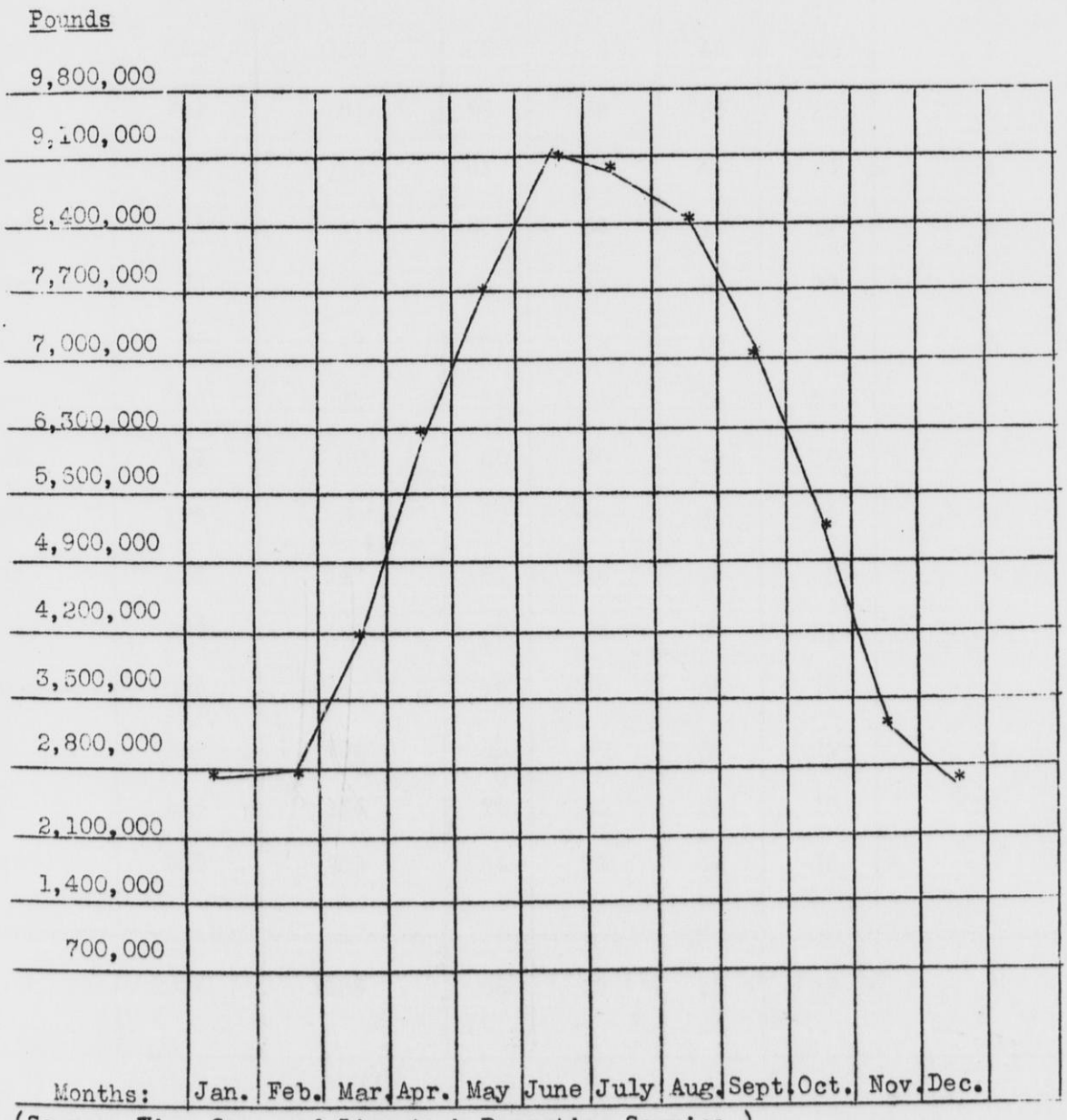
(Source--Assessors Reports)

CHART NO. IV

MILK PRODUCTION

PRICE COUNTY

1938



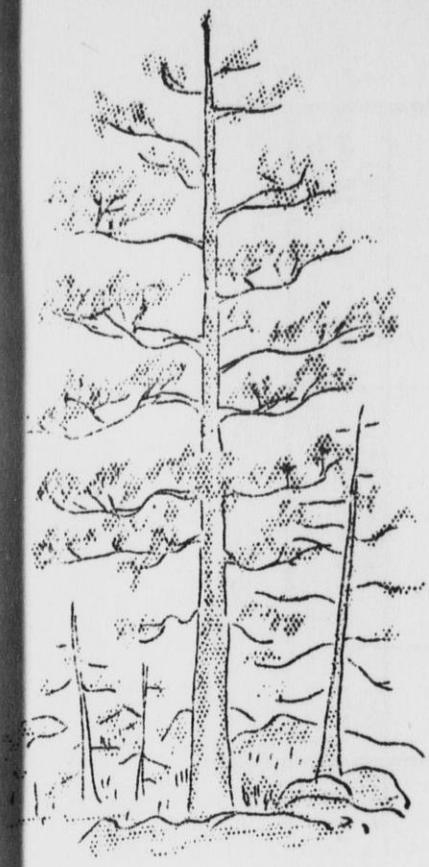
(Source--Wis. Crop and Livestock Reporting Service.)

CHART NO. V

PER CENT OF FARMS HAVING NO HOGS OR POULTRY
PRICE COUNTY--1939

Township	Total No. of farms	No. Farms where data was secured	Per cent of farms with				
			No Hogs	No Poultry	1-25 hens	26-50 hens	51 & more hens
Catawba	141	107	61	39	38	18	5
Eisenstein	116	81	59	20	36	35	10
Elk	162	130	65	24	49	20	7
Emery	151	81	64	38	35	23	4
Fifield	97	68	51	24	49	24	4
Flambeau	145	87	63	36	41	17	6
Georgetown	93	69	64	39	26	23	12
Hackett	98	47	87	62	26	6	6
Harmony	85	71	61	24	49	24	3
Hill	117	50	80	30	48	16	6
Kennan	179	130	60	44	30	22	4
Knox	237	147	82	76	16	5	3
Lake	228	141	59	29	34	21	16
Ogema	282	149	79	52	25	15	8
Prentice	198	131	83	50	34	12	4
Spirit	166	114	70	45	28	15	12
Worcester	339	255	64	23	46	23	8
Price County	2834	1858	68	39	36	19	7

(Source--AAA Farm Survey--1939)



II. PUBLICLY OWNED LANDS

With the failure and inability of the plow to follow the axe came the problem of lands which, denuded of merchantable timber and unsuited for agricultural purposes were left to become county owned as a result of tax delinquency.

As a result of tax delinquency 330,000 acres or 40% of all the land in the county is publicly owned. Chart No. VI gives the present ownership status of all land in the county.

Of this 40%, a little more than half (22%), has a definite management plan either by virtue of the fact that it is federally owned or is entered under the Forest Crop Law.

Approximately 119,000 acres or 15% of the land in the county is still owned by the county and has no plan of forest management. Recently the county adopted the following policy in regard to this tax delinquent land:

That hereafter county owned lands be sold for agricultural use only in accordance with the present zoning regulations, the land use classification map, and only if they are not more than one mile from existing roads or within two miles of a school or existing school transportation system.

Stumpage sales of timber may be carried out on non-agricultural lands on a selective cutting basis.

Lands primarily suited for recreation be leased rather than sold for cabin sites at not less than $5.00 per year.

The county employs a land sales agent whose duties are to carry out this policy, act as trespass officer, make reports on land appraisals and keep on file with the county clerk all land transactions. All sales are made by a committee consisting of the county clerk, county treasurer and town chairman

CHART NO. VI

1939 -- LAND OWNERSHIP CHART -- PRICE COUNTY

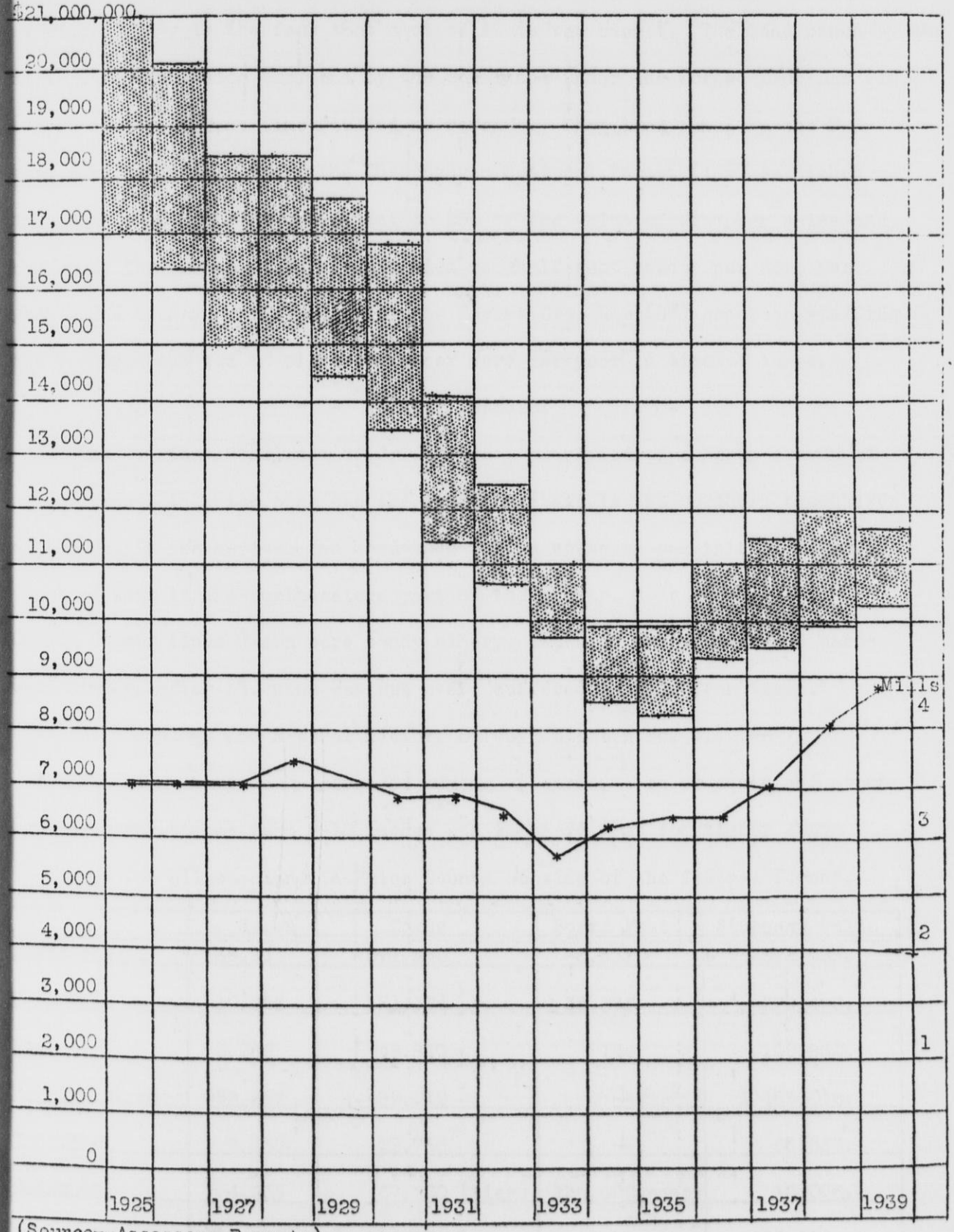
Township	Publicly Owned Land				Privately Owned Land		
	County Forest Crop land (%)	County Owned Tax Delinq. Land (%)	State Land Commission Land (%)	Federal Land (%)	Farm Land (%)	Privately owned Land not in Farms (%)	Privately owned land under Forest Crop Law (%)
Catawba	1	28	1	--	40	30	--
Eisenstein	--	4	2	47	23	24	--
Elk	6	16	2	--	46	29	1
Emery	--	15	7	45	20	13	--
Fifield	6	3	4	56	8	23	--
Flambeau	5	13	3	--	20	58	1
Georgetown	47	9	2	--	23	19	--
Hackett	13	27	6	--	20	34	--
Harmony	22	11	7	--	41	19	--
Hill	--	15	--	--	48	37	--
Kennan	17	23	1	--	34	25	--
Knox	5	21	--	--	54	18	2
Lake	--	15	--	--	36	49	--
Ogema	1	21	--	--	54	23	1
Prentice	5	31	1	--	34	29	--
Spirit	--	7	--	--	60	33	--
Worcester	6	9	1	24	36	24	--
County	6	15	2	16	31	29	--

(Source--Assessors Reports)

CHART NO. VII

TAX BASE CHART OF PRICE COUNTY

Personal Property Values
Real Estate Values
Average Tax Rate



(Source--Assessors Reports)

of the town in which the lands are located.

The most important effect that this publicly owned land has on the people of Price County is the fact that most of it is tax exempt. The land owned by the State Land Commission (2%) and by the county not under the Forest Crop Law (15%) has up to the present time yielded no revenue. That land owned by the Federal Government as part of the Chequamegon National Forest (16%) furnishes only an amount of money equivalent to 25% of the value of stumpage sales and has up to the present time not exceeded one-half cent income per acre per year. The county owned land under the Forest Crop Law (6%) has been yielding the county about six to eight cents per acre per year in lieu of taxes.

III. FORESTRY

"The original woodlands of Price County consisted of a heavy growth of mixed forests in which pine was the dominant stand in the northern two-thirds of the county and hemlock and hardwoods in the southern one-third. A small tract of land in the northeastern part of the county, near the Vilas and Oneida County lines was a pure sandy pinery. Much of the hemlock and hardwood timber, after the pine was cut over, suffered heavily from fires." (Wisconsin Geology and Natural History Survey Bulletin No. 1.)

Following chart shows acreage, number of cords, ties or posts and stumpage value for timber from 6-12 inches and in board feet for timber above 12 inches for all woodland in Price County outside of the federal forest.

	Acres	Cords	Board Feet	Stumpage value
Hardwoods	168,914	871,250	5,537	$ 898,935.
Hemlock	10,263	151,174	36,376	278,490.
Pine	3,280	49,840	144	100,832.
Aspen & Birch	252,287	1,489,012	--	1,489,012.
Tamarack	7,638	32,766	--	65,532.
Cedar	4,234	67,200 (ties)	134,400(posts	12,096.
Spruce & Balsam	37,668	115,899	--	463,596.
TOTAL	484,284	2,709,941	42,057	$3,308,492

A further study of the timber situation in the county shows that in twenty-five years the 481,295 acres of young timber under 12 inches in diameter will grow in value $3,526,503. or at the rate of approximately $141,060. per year which means an average growth increase of approximately $ .29 per acre per year. It is assumed that death and decay offset growth in the older stands of mature timber, therefore, their volume is considered the same twenty-five years from now as at present. Beside the income derived from the mature growth, if young trees of the right species are planted on the 79,055 acres of abandoned, erosion, poor land previously cropped, upland brush, slash, recently burned, dead timber and poorly stocked aspen land the value of the growth on these areas would be at least $2.00 per acre per year. This would mean an added income of $7,905,000. in fifty years or a yearly growth of $158,110. (This information obtained from Wisconsin State Planning Board, April 1939.)

IV. EDUCATION AND SCHOOLS

Over twenty schools have been closed in the last ten years in Price County due to high maintainance cost for small enrollment schools. Last year (1940) there still were thirty-seven schools in the county that had an enrollment of nineteen pupils or less.

Out of a total enrollment of 2,500 grade and high school pupils, 482 were transported to school last year. Some high school children are commuting as much as 70 miles round trip daily due to lack of proper transportation facilities by nearer high schools.

Rural children are often discouraged from attending high school because of high tuition and transportation costs which are borne by the township and reflect in higher taxes for their parents living in the townships.

The county has four high schools only one of which offers a course in vocational agriculture.

Many schools, that have been closed, still maintain their school boards. As an example one township has five sets of school boards and only one operating school.

LAND CLASSIFICATION

At the first series of community committee meetings the members from each township went over each description of land in their township and designated on a large map its best use by coloring it according to the following classification:

A. (Blue) Areas now in farms, but which are not suited for farming and in which the lands should be put to some other use.

B. (Green) Areas not now in farms and which should not be used for farming because they are unsuited for this use either due to soil type, location or a combination of both.

C. (Red) Areas now in farms which are questionably suited for agriculture.

D. (Orange) Areas not in farms but which are suitable for agricultural development.

E. (Yellow) Areas which are now in farms and which should remain in farming.

After the results of all the maps had been transferred to a county map, the judgement and care given to preparing this map was very evident in view of the fact that land classifications did not follow township boundaries. Also when the completed county map was shown to the committee members at their second meeting only a few minor changes were made.

A summary of the classification is shown in Chart No. VIII.

CHART NO. VIII

SUMMARY OF LAND USE CLASSIFICATION

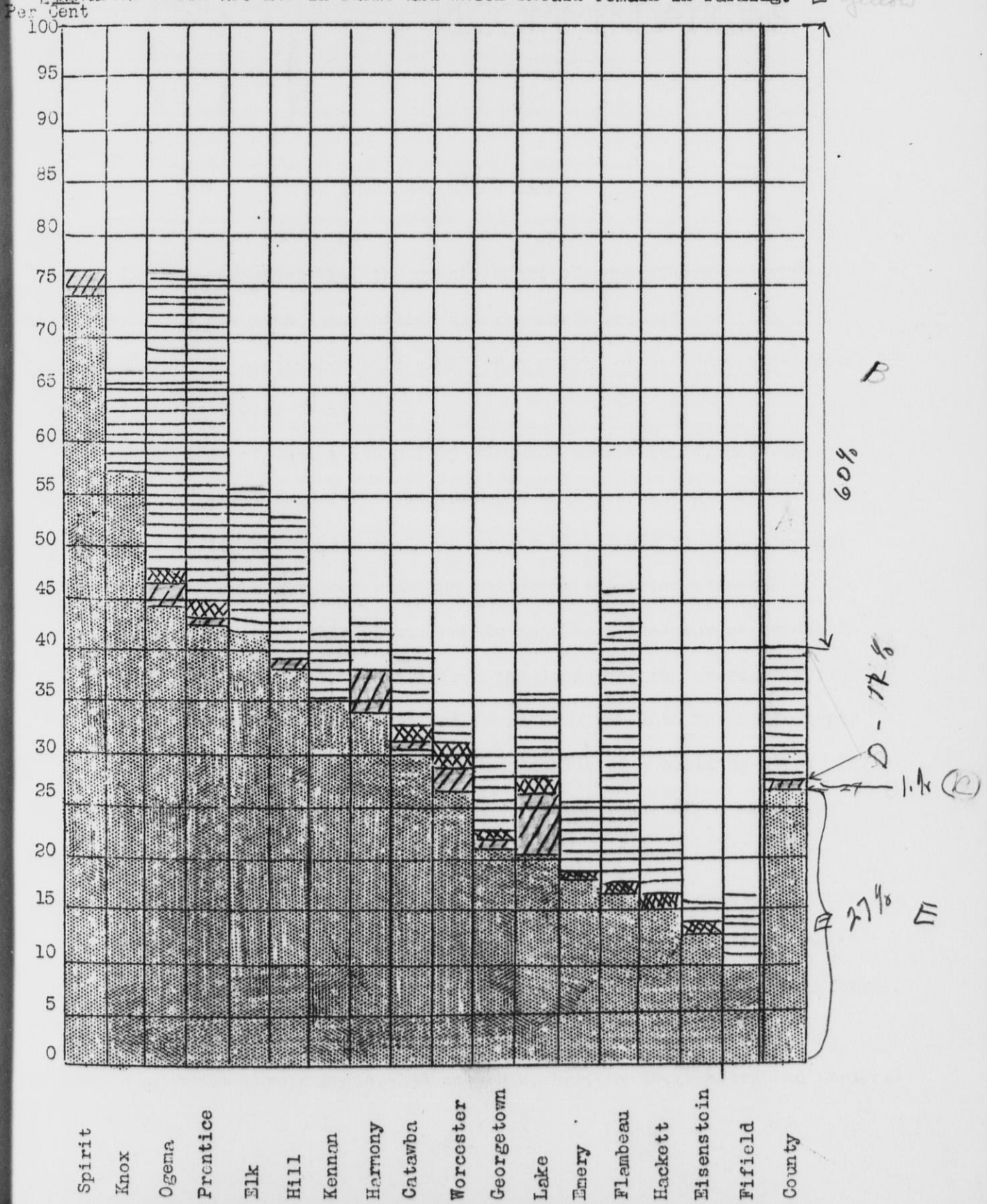
Areas not now in farms and which should not be used for farming. B Green

Areas now in farms and which are questionably suited for farming. C Red

Areas now in farms and not suited for farming. A Blue

Areas not now in farms but which are suitable for development into farms. D Orange

Areas which are now in farms and which should remain in farming. E Yellow





LAND USE RECOMMENDATIONS

I. PUBLICLY OWNED LANDS

A. County Lands.

1. It is recommended that the county board of supervisors fully prove the merit of the new land sales policy and the newly created position of land sales agent by continuing this plan for a period of at least three years except for the following change.

Since the present land sales policy does not permit individuals to purchase non-agricultural land for forest development, recreational or investment purposes it is recommended that the county be allowed to sell non-agricultural land for such purposes with the following provision attached to the deed of all such sales: "This conveyance is made upon the express condition that no trees shall be cut or removed from the lands herein described for commercial purposes; for a period of ten years from the date hereof, except; (a) Such cutting as may be necessary for a clearing of a building site. (b) The salvaging for use or sale of such products which result from selective cutting or forest stand improvement. And, in the event that any trees or timber are cut or removed contrary to the provisions of this condition, this conveyance shall forthwith become void and of no effect, and the title to the lands herein described shall immediately revert to and vest in Price County, its successors and assigns forever; such condition to be binding upon the grantee or grantees herein named, and upon his, her, or their heirs and assigns!"

2. Since the Flambeau River area of Price County is nationally known by sportsmen and since any project working toward making this area more suitable for a more widespread recreational use would reflect itself in a higher tax base for the area it is therefore recommended:

a. That the county retain its present ownership on both sides of both the North and South forks of the Flambeau River and, if possible, secure additional descriptions fronting the river by trade whenever deemed practical.

b. That canoe landing and stop over facilities be provided and maintained by the county highway department on these county holdings for the benefit of tourists and sportsmen.

3. Since the following described area of land lying along the southern boundary of Ogema township is classified as not suited for agriculture, and certain areas of which are largely county owned, and which is adaptable as a game refuge, it is recommended.

a. That the Conservation Department make a study of this area with the purpose in mind of establishing one or two game refuges of practical size and suitable location.

b. That the county board of supervisors cooperate in this enterprise by giving easements on such county owned lands in this area as are suitable for this purpose.

All of sections 27, 28, 29, 30, 31, 32, 33, and 34 all of which lies in T 34 N, R 1 E, and all of sections 25, 26, 35, 36 all of which lies in T 34 N, R 1 W.

4. Since the following described areas of land are largely county owned it has been recommended that the county forest boundaries be enlarged to include these areas under the forest crop law and also that these added areas be zoned so as to prohibit their use for agricultural purposes.

a. Prentice Township--Sections 11, 12, 13, 14, S½ of 15 and 16, all of sections 21, 22, 23, 24, 25, 26, 35 and 36 all of which lies in the town of 35 N, R 2 E.

b. Catawba Township--S½ of Sections 8, 9, 10, and SW¼ of 11, NW NW of Section 14, all of 15, 16, 17 and E½ of Section 18, all of Section 21 and W½ of Section 22, all of which lies in T 34 N, R 1 W.

c. Kennan Township--All of sections 21 and 32, and W½ of Section 33 in T 35 N, R 2 W. All of section 4, NW¼ and N½ of SW¼ of Section 21, W½ of Section 22, SW¼ and S½ of N½ of Section 10, S½ of N½ and NE NW and NE NE of Section 11, S½ of N½ of Section 12, all of which lies in T 34 N, R 2 W.

d. Georgetown Township--S½ of SE¼ and E½ of NE¼ of Section 7, T 37 N, R 2 W.

B. State Land Commission Land.

The State Land Commission owns approximately 16,320 acres of land which is scattered throughout the county. Because the Land Commission has inadequate personnel and authority this land is not supervised according to good forestry practices and consequently much timber and many cords of pulpwood go to waste annually.

a. It is recommended that such of these lands that are within the boundaries of the federal forest be either purchased or secured by trade by the Federal Government and included within the boundaries of the federal forest.

b. Land Commission Lands in Price County outside of the boundaries of the federal forest be placed under the supervision of the Wisconsin Conservation Department. Since the Wisconsin Conservation Department is well staffed with competent personnel to do this work they should be allowed to sell stumpage on a selective cutting and timber stand improvement basis, thereby eliminating this annual waste and providing local employment.

C. Federal Owned Land -- Chequamegon National Forest.

1. Since approximately 16% of the land of Price County is now owned by the Federal Government as part of the Chequamegon National Forest and since this area is tax exempt and since the amount of revenue collected by the county

from their share of proceeds of stumpage sales is almost negligible the following recommendation is made:

That the Federal Government be required to pay the local government a definite sum of money per acre annually in lieu of taxes for the land they own in the county until such time as the revenue from stumpage sales from said land will be equal to this amount.

2. Since the majority of the farmers living adjacent to or near the federal forest have small farms and must depend on other sources for a part of their income the following recommendation was made:

That the forest service be provided with additional funds in order that they might employ local people in forest maintenance and improvement work.

3. It is recommended that the federal forest boundary be extended to include the following area. Extending west from the present boundary of the federal forest along the top of sections 1, 2, 3, 4, 5, and 6 in T 37 N, R 2 E, thence south three sections, thence east six sections, thence south three sections to the North Hackett township line, thence west three sections in T 36 N, R 2 E, south one section, then west one section, then south one section, then west one section, then south one section, then east nine sections along the south Hackett town line and then north three sections to the present federal forest boundary.

This extension to the federal forest was recommended for the following reasons:

a. Of this area 44% is owned by the county as tax delinquent land, 39% is privately owned and undeveloped land, 4% is state land commission land and only 13% is owned by farmers for agricultural use.

b. The community committee classified 72% of the land that is not in farms in this area as unsuited for agricultural use.

This recommendation for an extension of the federal forest to include this area is made with the understanding--

a. That farm areas which would be incorporated into the forest area would remain as such and that suitable agricultural land adjoining these farm areas would be made available by the federal government for agricultural use.

b. That should pasture, hay land or tillable crop land be acquired in the acquisition of this area it would continue to be made available to farmers for a small rental fee according to the present federal forest policy.

4. It was further recommended that a copy of these recommendations be sent to our Wisconsin representatives in Congress.

II. PRIVATELY OWNED LAND NOT IN AGRICULTURE

Since the welfare of Price County is directly dependent to a large extent on the private forests and their resources and since the public has the responsibility of controlling fire, insect and disease dmages in these areas it is recommended:

That such regulations be put into effect as the State or Federal Governments may deem necessary, such as forest cutting regulations, slash disposal and the requirement that the owner of land file with the county clerk a notice of his intention to cut timber whenever this cutting is for commercial purposes.

This recommendation is made in order to insure continuous forest stands for existing industries, and employment and income possibilities for the residents and also to provide cover for wildlife and erosion control.

It was believed that state or federal regulations would be better than county regulations in order to overcome local prejudices and discrepancies.

III. AGRICULTURAL LAND -- GOVERNMENTAL AGENCIES

A. Farm Security Administration (FSA).

Probably the biggest problem that confronts Price County is the fact that 71% of the farms have less than 25 acres of crop land. Despite the

fact that FSA is willing and able to finance the clearing of additional farm land and to help farmers get other necessary equipment, livestock and buildings the majority of the farmers have not yet taken advantage of these services. The reasons for this situation are many, but the main reasons are probably these:

a. Many farmers hesitate in borrowing money because they lack confidence in their ability to pay it back with present farm prices.

b. Many farmers do not like the idea of having their personal property mortgaged and having to assign a portion of their milk or cream checks in order to fulfill the agreements of the loan.

c. Many farmers do not know of all the services rendered by the FSA office and how this office can help them.

This last reason (c) is probably the most important reason why more of these small acreage farmers are not taking advantage of FSA help.

For these reasons it is recommended that:

1. The FSA offices keep the county agent currently informed as to changes in their program and loan services offered.

2. The county agent be responsible for a more widespread dissemination of this information particularly that information regarding financing of land clearing, purchasing additional land, livestock, seed, and equipment.

3. Recommended that the FSA consider the loaning of funds to one or more selected farmers for the purpose of purchasing a bulldozer for clearing land in Price County.

4. As an alternate possibility it was recommended that the county consider the purchase of a bulldozer for land clearing.

5. If either of the above two recommendations are to be carried out it was further recommended that the FSA office be provided with sufficient additional money to take care of a larger number of loan requests in order to

warrent full use of a bulldozer in this county for land clearing.

3. Agricultural Adjustment Administration (AAA).

1. It was the consensus of opinion of all community committeemen that the 1941 AAA program was the best adapted to Price County farmers of any previous program and it was recommended that it be continued in the future except for the following recommended changes.

2. Since red clover is well adapted to Price County as a legume forage and hay crop it was recommended that the AAA payment on red clover be raised from $1.50 to $2.50 per acre so as to encourage more use of red clover.

3. When the ruling on soybeans, oats and millet that were cut for hay was changed from a soil depleting to a soil conserving crop, Price County lost approximately 5,000 acres of the soil depleting base and consequently a relatively smaller amount of money was made available for AAA participation in this county.

As a result of this situation it is recommended that oats, millet and soybeans should always be classed as soil depleting whether cut for hay or grain.

4. It was also pointed out that many owners who though they were not farmers would plant trees on their undeveloped land if they were given some financial aid.

It is recommended that the private land owners who are not farmers be allowed to earn up to $15.00 annually in accordance with the present AAA payment to farmers for tree planting.

5. Three-fourths of the farmers in Price County have less than twenty-five acres of crop land. Only about 50% of the farmers in the county are securing all their income from the farm. Of these farmers not securing all their income from the farm, 38% of them received their outside income in the form of direct relief, WPA and pension. The majority of these public assistance cases are found to be living on farms having less than twenty-five

acres of crop land. For those reasons it is recommended that the AAA payment for pasture improvement be increased from $4.50 to $9.00 per acre and that the farmers be allowed to earn their entire AAA payment by pasture improvement.

6. That a payment up to $15.00 per farm be furnished by the AAA for such home produced foods as fruits, vegetables, meat, poultry, eggs and stored or canned foods.

7. Since dairying is Wisconsin's principal industry, since dairy prices have been below parity and since there have been large increases in the number of dairy cattle during recent years in the U. S., it is recommended that dairying be made a basic commodity under the AAA program for the purpose of controlling surplus production whenever the need arises.

C. Conservation Department.

1. Because there is much misinformation and misunderstanding by many of the people of Price County on all conservation matters it is recommended that the Wisconsin Conservation Department make an effort to better acquaint the public of the duties and responsibilities of the Conservation Department employees such as emergency fire wardens, forest rangers and conservation wardens who are stationed in this county.

2. Recently a law was passed by the state legislature which would prohibit anyone from killing woodchucks except that farmers would be allowed to kill them on their own land. The purpose of the law is to indirectly increase the number of rabbits particularly in the southern part of the state for hunting purposes.

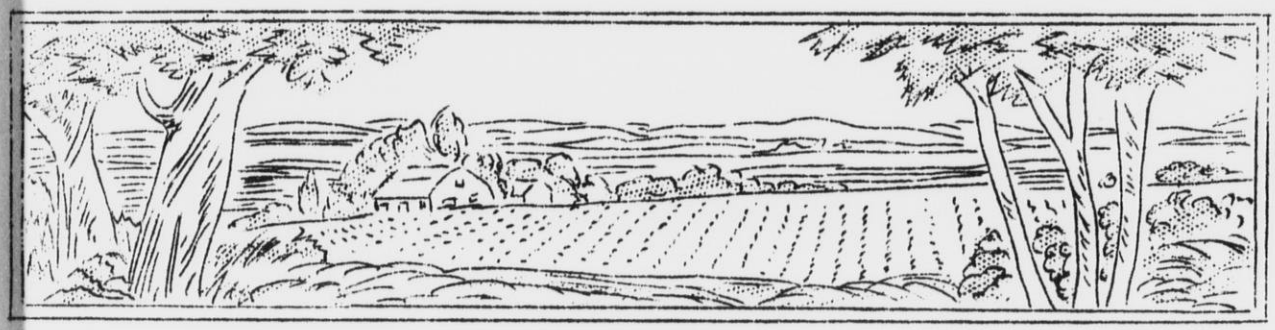
Therefore it is recommended that Price County be exempt from this law since both woodchucks and rabbits are already too numerous in this county.

3. The present fire prevention regulations hinder farmers in their agricultural efforts by prohibiting brush fires until after four o'clock in the afternoon and also the burning of quack and other weeds in open fields.

It is therefore recommended that the regulations regarding the burning of brush for land clearing and weeds for weed control be modified and that there be closer cooperation between the Conservation Department and farmers for these purposes.

D. Public Welfare Department.

1. It is recommended that no man living on a farm suitable for development into a full-time farm should be allowed to work on WPA. An attempt should be made to allow this man to develop his farm with FSA assistance in order that he might sooner become self-supporting.



IV. GENERAL FARM RECOMMENDATIONS

A. Grubstake.

The "grubstake" is a program intended for every rural person and family. It consists of producing a yearly balanced food supply, consisting of about 60% meats, animal fats and other items of animal origin and 40% vegetables and fruits. This program, if properly planned and carried out, will provide a more balanced nutritional diet of greater variety and result in a saving in cash outlay up to $500.00 which can be used for other home needs. This is an important factor in most households at all times and especially so during the present defense emergency when foods are apt to be high priced.

Inasmuch as this problem goes by from day to day unnoticed and is of considerable importance on our low income farms, it is recommended that the Price County Board of Supervisors, Public Welfare Department and all other county organizations give immediate attention to the establishment of the grubstake program similar to that in effect in Washburn county and that

the grubstake program be considered when formulating the extension program for the county in the future.

B. Dairying.

Since the present rates for breeding services of the artificial insemination association would be prohibitive for the use of those Price County farmers that would be most benefited by this program, the following recommendation is made:

1. That the College of Agriculture consider establishing an artificial insemination ring on a state-wide basis and that semen should be mailed to a registered veterinarian in charge of this work in each of those counties desiring this program.

It was felt that organizing on a state-wide basis would make the cost of this service more reasonable and that a larger percentage of the farmers would be able to take advantage of the use of high production bulls.

2. Because many farmers in this county are using inferior bulls that are being provided by cattle dealers merely for the trouble of caring for and feeding them, and because the financial condition of most of the farmers is such that they cannot afford to purchase a good bull, it is recommended that the county agent include in his 1942 program of work either the organization of the artificial insemination ring or attempt to cooperate with any neighboring county that is starting this program.

3. It is recommended that the Bangs area test program be continued in the future.

4. It is recommended that the quality dairy program as carried out in several other counties in the state be considered by the county agent in his next years program of work for Price County

C. Soils.

1. Because of the increasing use of lime and phosphate in Price County as a result of the 1941 AAA program it is recommended that a soil

testing laboratory be established in Price County under the supervision of the county agent with labor to be furnished by WPA. This would enable farmers to have their soil tested and make possible more intelligent use of lime and fertilizer. If not enough soil samples are brought in to maintain a full-time WPA employee consideration should be given to one testing laboratory for two or three counties.

2. It is recommended that the Soil Conservation Service in cooperation with the Agriculture Extension Service look into the erosion control situation in the county and in cooperation with the agriculture committee establish, if it is deemed advisable, one erosion control demonstration farm in the township or townships where in the judgement of the agriculture committee, the Soil Conservation Service and the Agriculture Extension Service such work is needed.

V. RECREATION

1. It was felt that any addition to the tourist business of Price County would indirectly benefit the farmers of this county by providing both additional employment and additional markets for their farm products. It is recommended that farmers lend their moral support to any activity or movement which would encourage the tourist business for this area.

2. It is recommended that State Highway 86 between Ozema and Spirit should be left permanently in its approximate present location to retain as much of the present road as possible and that a strip of the timber along this road be purchased by the state and that this highway be maintained and preserved permanently as a scenic highway.

VI. TAXES

1. It was felt that real estate and personal property taxes are an unfair way of taxing farmers who have large investments in their business and have relatively small incomes. Since all taxes must come out of incomes it is recommended that more of the taxes be levied on an income basis. The

loss of revenue from real estate and personal property taxes resulting from such a change would be made up by lowering the exemption and increasing rates of the present income tax law. It is further recommended that the exemption for single persons be lowered from $800.00 to $500.00 per year.

2. Since an automobile is today a necessity for the farmer and since the farmer does not use the highways a great deal it is recommended that auto license fees be reduced 50% and that the diversion of present gas tax to other uses be stopped.

3. In order to encourage the development of farms particularly in Price County and other northern cut-over counties it is recommended that improvements and cleared land be exempt from taxation for a period of three years.

VII. ZONING

It is recommended:

1. That the question of zoning in the town of Flambeau be seriously considered based on the land classification map. Following areas are recommended to be included in the restricted use district; Sections 2, 3, 10, 11, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33 and 34 in T 38 N, R 2 W, and Sections 25, 26, 27, 34, 35, 36 in T 39 N, R 2 W.

2. That the Federal Government through the Soil Conservation Service continue the isolatedsettler relocation project in relocating these settlers from zoned areas into more accessible farming areas.

VIII. EDUCATION

1. It is recommended that all high school tuition be paid by the state.

2. It is recommended that all grade school tuition be paid by the Federal Government.

3. Provisions should be made for training farm youth, both boys and girls, in the business of farming as well as in the trades in high school and a period after high school by establishing agricultural and manual training

and domestic science courses.

4. That some provision be made for training farm women in better homemaking methods through the assistance of a county home agent.

5. That a county committee be organized to cooperate with the county superintendent of schools to make a study of the school district situation for the purpose of considering the advisability of establishing school districts on a township basis.

IX. PUBLIC HEALTH

1. It was pointed out that in many cases a high doctor bill was often the cause of putting many farmers on the public relief rolls. As a result it is recommended that a study be made with the possibility in mind of organizing a group who would pay a small specified sum annually and in return would receive year-round medical and dental attention on a cooperative basis.

2. The Price County tuberculin death rate is exceedingly high in proportion to the population. This county is one of the few in the state that has families with multiple deaths from tuberculosis. 4% of the population of Price County died of tuberculosis in a period of ten years (1929-1939).

Therefore it is recommended that a county-wide tuberculin test be inaugurated. This program to include not only the tuberculin test, but provision for every positive reactor to be x-rayed at such times as is indicated by the examining physician. (Serum used for such program is furnished free by the State Board of Health. Expenses incurred would be physicians fees for testing and x-ray pictures.

3. The establishment of one or more loan closets. (A Loan Closet is a chest of equipment of materials used for a sick room which might include not only bed pans, basins, urinals, etc., but linens and night clothes required for the care and comfort and progress of a sick individual. We find few homes provided with the necessary equipment. Restrictions can be made as to the use of this equipment only to the effect that they may be borrowed from the loan

closet for a period of two weeks time. In the event that equipment was needed longer, the contract should be renewed for another two week period. Requirements are that all materials taken be returned in as good a condition as when taken from the loan closet. It is recommended that the loan closet be established in the county nurses office so that definite check could be kept on materials going out and returning to the loan closet.

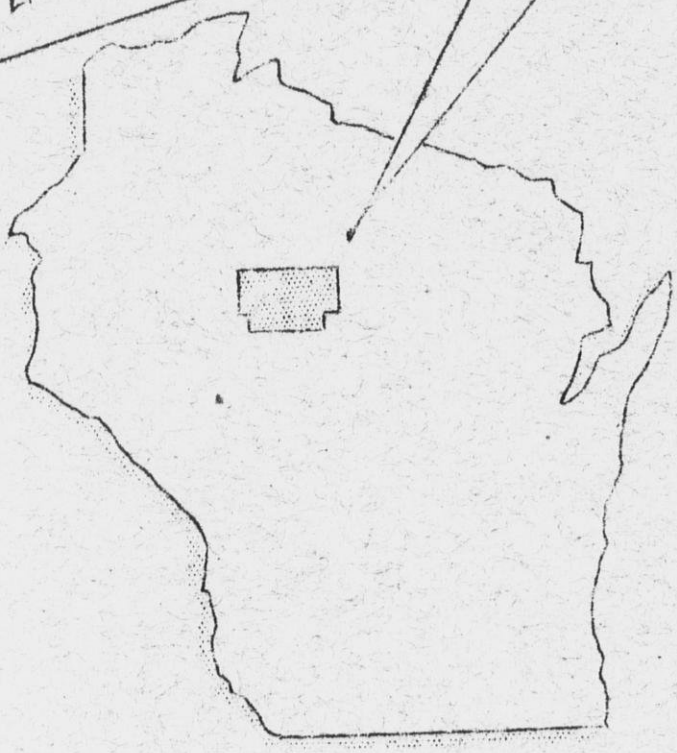
X. GOVERNMENT.

1. It is felt that there is too much duplication of effort and too many offices in our present government system. Since the advent of the automobile, transportation has become comparatively simple, therefore, it is recommended that a study be made of the advisability of reorganizing the local governments on a larger scale perhaps by the combining of townships.

* * * * *

Taylor Co.

TAYLOR COUNTY

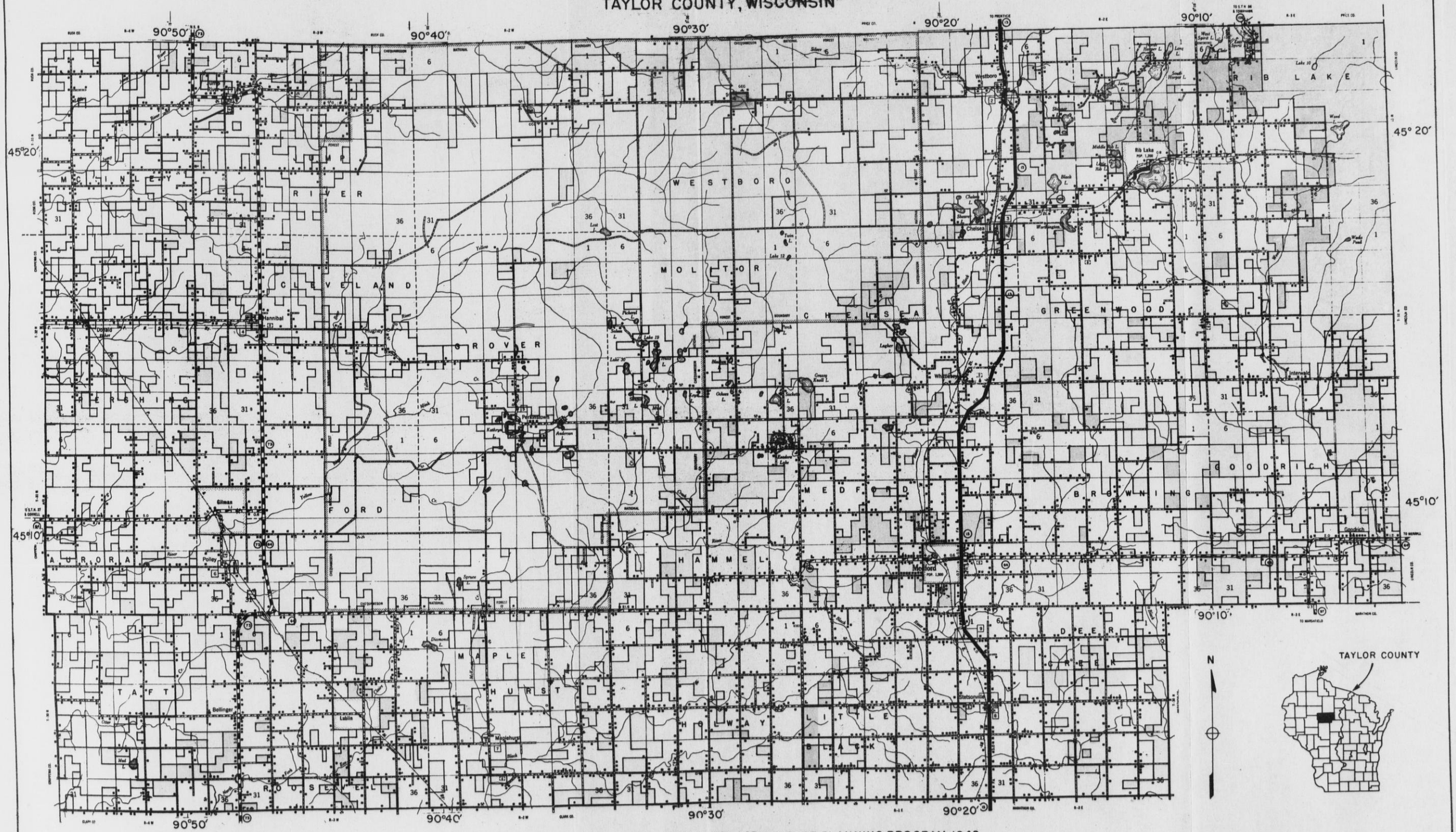


AGRICULTURAL PLANNING

1942

LAND USE CLASSIFICATION

TAYLOR COUNTY, WISCONSIN



TAYLOR COUNTY AGRICULTURE PLANNING PROGRAM, 1942

ROAD TYPES

- UNIMPROVED ROAD
- GRADED AND DRAINED EARTH
- SOIL SURFACED ROAD
- METAL SURFACED ROAD
- BITUMINOUS SURFACED ROAD (LOW)
- PAVED ROAD

- *Areas now in farms that should remain in farming*
- *Areas now in farms that are questionable for farming*
- *Areas not now in farms but which are suitable for farming*
- *Areas now in farms that are not suitable for farming*
- *Areas not now in farms and should not be used for farming*

SCALE: MILES
1 0 1 2

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY. COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS, U.S.D.A.

PLAN OF REPORT

	Page
ORGANIZATION	1-5
County Agricultural Planning Committee	2
Community Committees	3
DESCRIPTION OF TAYLOR COUNTY	6
Figure 1 Taylor County Crop Census	7
Figure 2 Cropland Per Farm by Town 1941	8
Figure 3 Percent of Farms With Less Than 20 Acres of Cropland by Town	9
Figure 4 Percent of Cropland by Town	10
Figure 5 Percent of Farms With More Than 40 Acres Cropland	11
Figure 6 Taylor County Livestock Census	12
Figure 7 Taylor County Crop Census	13
Figure 8 Lime and Fertilizer	14
Figure 9 Taylor County Land Ownership	15
Figure 10 Social Security and W.P.A. Costs Per Farm	16
Figure 11 Public Assistance	17
LAND USE CLASSES BY TOWN	18
Recommendations	
Class A Land	19
Class B Land	20
Class C Land	21
Class D Land	21
Class E Land	22
Taylor County Farm Program	22
SUMMARY OF RECOMMENDATIONS	27

Organization

The Agricultural Committee of Taylor County met with W.A.Rowlands, District Extension Leader, and Wm. L. McFetridge, County Agricultural Agent, on December 6th, 1941, to discuss the possibilities of an Agricultural Planning Program for Taylor County. The Agricultural Committee suggested that a meeting be held in January, 1942, at which time farmers and local representatives of county, state and federal agencies and committees, interested in county planning, be invited.

The county meeting took place on January 16th, 1942, in the Agricultural Room in the Court House. Farmers and local representatives, together with several district and state representatives were present at this meeting.

The Agricultural Planning Program was explained and discussed. It was agreed that the object of this program was to "work out a better agriculture economy for Taylor County" and that it should embrace the following:

1. A clear cut classification of the land.
2. The development of a basic long time land and agricultural program.
3. The enlistment of continued cooperation of agencies of local, state and federal government.
4. The production of essential foods for war as an immediate goal.
5. The human element in regard to the best use of the land.
    a. People that are a definite part of the community.
    b. People that could be re-located for more worthwhile service elsewhere.
    c. Keeping sub-marginal lands out of agricultural production, especially as a protective measure after the war.

Various agencies representatives present stated the part their orga
izations could play in the agricultural planning program for Taylor Coun

It was moved by members of the Taylor County Agricultural Committee
that Taylor County adopt the Agricultural Planning Program and that a Co
Agricultural Planning Committee be appointed by the Agricultural Committe
This motion was unanimously carried.

County Agricultural Planning Committee

Name and Address	Representing	Occupation
Paul Schmoldt, Medford (Chairman)	Chairman, County Board	Farmer
William Tilch, Rib Lake	County Agricultural Committee	Farmer
Frank Pernsteiner, Medford	County Agricultural Committee	Farmer
Emeal Thompson, Medford	County Agricultural Committee	Farmer
R. J. Forehand, Medford	County Agricultural Committee	Supt. of Schools
John Butterfield, Gilman	Forestry Committee	Farmer
Dio Walty, Westboro	Farmer	Farmer
Henry Bergmann, Goodrich	Cooperatives	Farmer
Luther M. Hamrick, Medford	A.A.A. and Zoning Committee	Farmer
Otto Raster, Medford	Farmer	Farmer
Leslie Huber, Medford	Youth	Farmer
Gil Strebig, Medford	Recreation	Businessma
Ben Dehnert, Sheldon	F. S. A.	Farmer
William P. Yost, Park Falls	County Forestry	Dist. Rang
Mrs. Sadie Mundt, Medford	F. S. A.	Home Super
Mr. Paul Jentzsch, Medford	Federal Land Bank	Secretary
William Miller, Medford	Highways	Commission
Miss DeLorr Hayward, Medford	Public Welfare	Director
George Seidel, Rib Lake	Sportsmens Clubs	Businessma
Paul Flieschman, Medford	R. E. A.	Superinten

George Ruesch, Medford	Conservation	Mail carrier
Vincent Hirsch, Medford	Businessman	Banker
Florence Greskowiak, Medford	County Nurse	County Nurse
Fred Sutor, Medford	Farmers Union	Farmer
Mrs. Robert Priese, Medford	Home Maker	Home Maker
Mrs. Edith Haight, Rib Lake	4-H Clubs	Home Maker
Myron Jeglum, Medford	Vocational Agriculture	Educator
Fred Ahlers, Medford	Farm Security Administration	Supervisor
Del Isch, Medford	Federal Forest Service	Forest Ranger
William McFetridge, Medford (Secretary)	County Agr'l. Agent	County Agent
Lambert J. Stahler, Medford	Assistant County Agent	Asst. County Agent

Community Committees

The Agricultural Committee in cooperation with the county agent appointed the following community committees:

Aurora

George W. Potts, Gilman
Mrs. Fred Krueger, Gilman
Marcus Tio, Gilman
Herb Donner, Gilman
Ingman Bolstad, Gilman
Leo Olson, Gilman

Browning

Frank Janko, Medford
Herb Ziemer, Medford
Elmer Felton, Medford
Fred Suter, Medford
John Paur, Medford
Henry Holtz, Medford
Ed Hasseldick, Medford

Chelsea

Paul Schmoldt, Medford
Edwin Knouth, Medford
Chas. Diels, Medford
Carl Brandner, Medford
Leo Mahner, Medford

Cleveland

John Roeder, Hannibal
J. M. Dodge, Hannibal
L. E. Truax, Hannibal
Neal Roeder, Hannibal
E. Henke, Hannibal

Deer Creek

Elmer Hecker, Stetsonville
Forest Swan, Stetsonville
Paul Luick, Stetsonville
Harvey Maxam, Stetsonville
Joe Larson, Stetsonville
Geo. Buehler, Stetsonville
Wm. A. Steevens, Stetsonville

Ford

Nels Anderson, Gilman
Frank Knoll, Gilman
Carl T. Jeager, Gilman
Arthur Lee, Gilman
Dan Delaney, Gilman
Clair Jensen, Gilman
John L. Palmer, Gilman

Goodrich

Henry Bergmann, Medford
Carl Eckert, Goodrich
Benjamin H. Lemke, Goodrich
Chester E. Marthaler, Medford
John Shadrick, Goodrich

Grover

Fred A. Dovara, Perkinstown
E. F. Maurer, Perkinstown
Julius Griesbach, Perkinstown
Ernest Westrich, Perkinstown

Holway

Carl Hatlestad, Curtiss
Carl O. Nelson, Medford
Morris Halverson, Curtiss
Harry Raasch, Curtiss
Luther M. Hamrick, Medford
Fred Krug, Owen

Little Black

Fred Tauchen, Dorchester
Herbert Voit, Medford
John Bishofberger, Medford
Oscar V. Pueschner, Medford
Frank Pernsteiner, Medford
Peter Schumacher, Dorchester

Maplehurst

R. L. Westendorf, Withee
Walter Nowak, Withee

Molitor

Fred Krausse, Medford
Anton Gengler, Medford

Greenwood

Wm. Tilch, Rib Lake
E. R. Stibbe, Whittlesey
Albert Schreiner, Rib Lake
Otto Scheuer, Whittlesey
Henry Fuchs, Whittlesey
Tony Hohl, Rib Lake

Hammel

Emeal Thompson, Medford
Steve G. Kalman, Medford
Wm. Diels, Medford, Rt. 3
Henry C. Harder, Medford
John Totzki, Medford

Jump River

John Butterfield, Gilman
August Plikuhn, Gilman
Carl Hillistad, Jump River
Glenn F. Griffin, Jump River
Clarence Carpenter, Jump River
Zenas Beadles, Jump River

McKinley

E. C. Skistad, Sheldon
Emil A. Monson, Jump River
Louis Dressler, Jump River
Lloyd Smith, Sheldon
Ben Dehnert, Sheldon

Medford

John S. Brandl, Medford
Herbert Schubert, Medford
A. J. Brost, Medford
Frank A. Fink, Medford
Henry Geo. Brehm, Medford

Pershing

John Smith, Donald
Frank Ryba, Sheldon
Geo. Woods, Donald
Tom Sharp, Donald
William Kelloy, Donald

Rib Lake

George Zondlo, Rib Lake
Fred Mielke, Rib Lake
Anton Kauer, Rib Lake
Joe Probst, Rib Lake
E. L. Lamont, Rib Lake

Taft

Albert Skaleski, Thorp
Stanley Blasczyk, Thorp
E. D. Johnson, Thorp
R. L. Rosemeyer, Thorp
Chas. Cukla, Thorp
A. P. Holm, Thorp
Christ E. Ness, Thorp

Roosevelt

Mike Novak, Lublin
Stanley Ogurek, Thorp
John Popowski, Lublin
Doman Kostick, Thorp
Walter Muszynski, Thorp

Westboro

Carl Peterson, Westboro
Jacob Baker, Westboro
Henry Beil, Westboro
Mrs. Clara Goodrich, Westboro
Peter Spiels, Westboro
Dio Walty, Westboro

During the week of January 18th, community committees met in town halls and classified the land in their respective towns. L. G. Sorden, State Representative of the Bureau of Agricultural Economics, assisted with the first three meetings. These meetings were held by County Agent McFetridge and Assistant County Agent Stahler.

Background information consisting of present land uses, agricultural statistics, and public assistance, etc. was presented at this series of meetings.

A second series of committee meetings were held from February 12th to 17th. During these meetings committee members discussed local and county problems, making recommendations which were presented to the County Agricultural Planning Committee on February 19th. Over 120 Taylor County farmers took part in the land classification work and in the developing of recommendations for the county.

County Agricultural Planning Meeting

Chairman Paul Schmoldt called the meeting to order and pointed out the value of the work accomplished. He emphasized the importance of planning by the local people such as was carried out in this program. W. A.

Rowlands, District Extension Leader, reviewed agricultural planning wor stating that the program for Taylor County has been requested by the Bu reau of Agricultural Economics, Farm Security Administration, Forest Se vice, Agricultural Extension Service, and other agricultural agencies. The community committee land classification maps were presented to the county committee. Recommendations made by community committees were di cussed and additional recommendations formulated. Emeal Thompson moved the adoption of the land classification map and recommendations. An amendment to the motion was made by Fred Suter expressing the desire of the committee to continue county agricultural planning work in Taylor C ty. The motion, as amended, was unanimously carried.

Description of Taylor County

Taylor County is located in North Central Wisconsin. Although it has an area of 626,560 acres of land, it has a population of only 20,1 people. Medford, the county seat, with a population of 2,361, is loca 180 miles north-west of Madison.

The topography of the county varies from level to rolling and hi with a belt of terminal moraine extending from the southwest to the no east corners of the county.

The county is within the glaciated region which formed topograph areas, most of which is suitable for farming, but some is better suite for forestry. Early development was dominated by the lumber industry at present farming constitutes the major land use with 51.1 percent of entire area in farms. Dairying is the largest single industry in the county, milk accounting for over half of the total gross farm income 1936.

Colby silt loam is the most extensive soil type in Taylor County, covering a little more than half of the county. Kennan silt loam occurs in the moraine belt and accounts for 10 percent of the total area. Kennan fine sandy loam, Whiteman silt loam, and Genesee silt loam are also distributed throughout the county.

Taylor County Farms

Due to an increase of over 1,000 new farms in the county during the past 20 years the acres of cropland per farm in the county has remained at about 30 acres per farm during this same period. The percentage of land in farms, however, has increased from 38.9 percent in 1930 to 54.1 percent in 1940 as shown in Figure 1.

Figure 1 -- Taylor County Farm Census

Year	Number of Farms	Per Cent Land In Farm Acres	Average Size of Farm Acres	Per Cent of Tenancy	Cropland Per Farm Acres
1920	2260			2.7	
1925	2823		85.0	6.9	
1930	2464	38.9	100.0	4.9	31
1935	3253	49.4	95.9	8.7	27
1940	3310	54.1	102.5	10.4	30

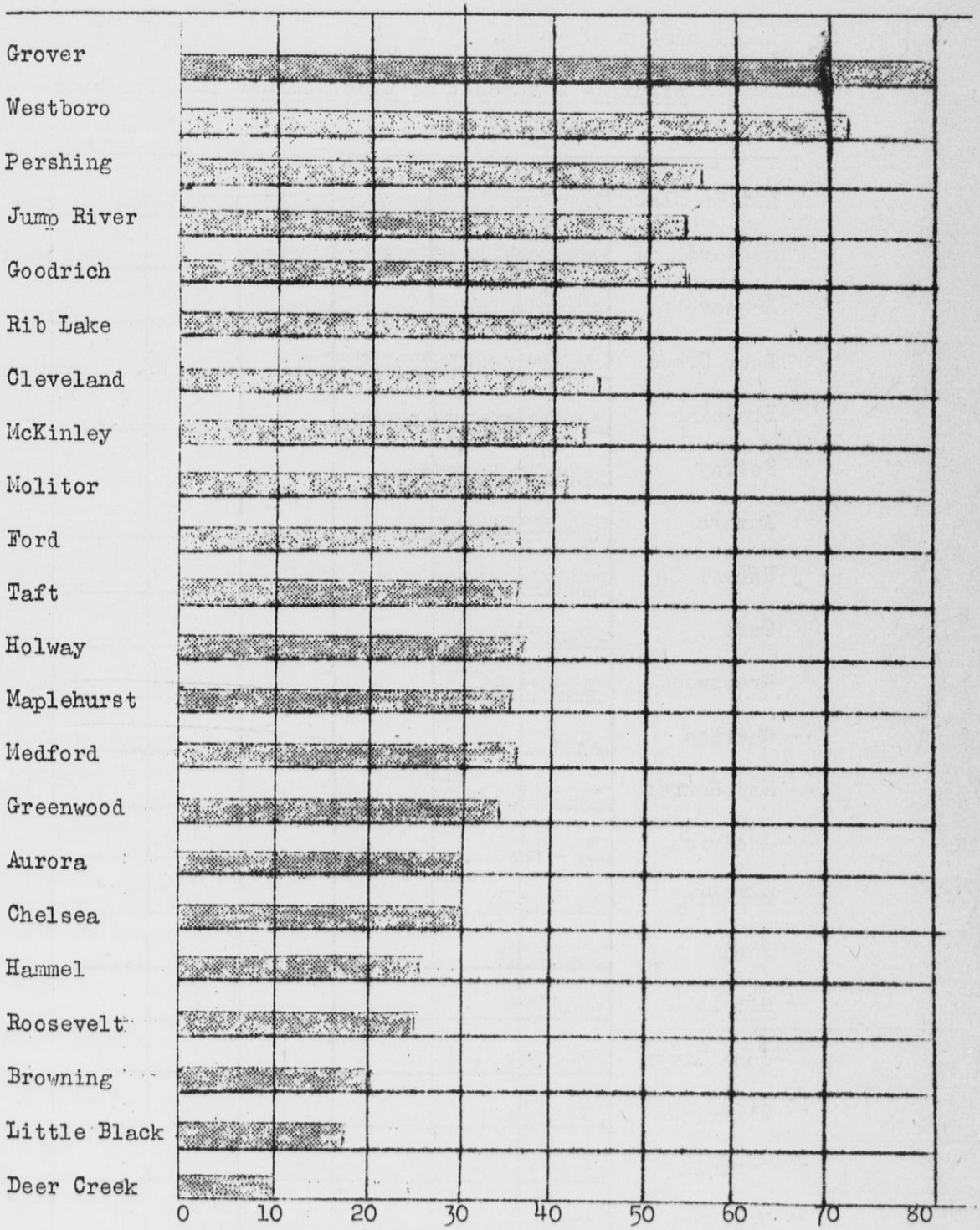
Almost half of the farms in the county are located in one third of the towns. Medford, Little Black, Roosevelt and Rib Lake have the largest number of farms. Molitor, with approximately half of its area in National Forest, has only 47 farms.

1,362 farms or 37 percent of the farms in the county, have less than 20 acres of cropland as shown in figures 2 and 3.

Figure 2 -- Cropland Per Farm by Town 1941

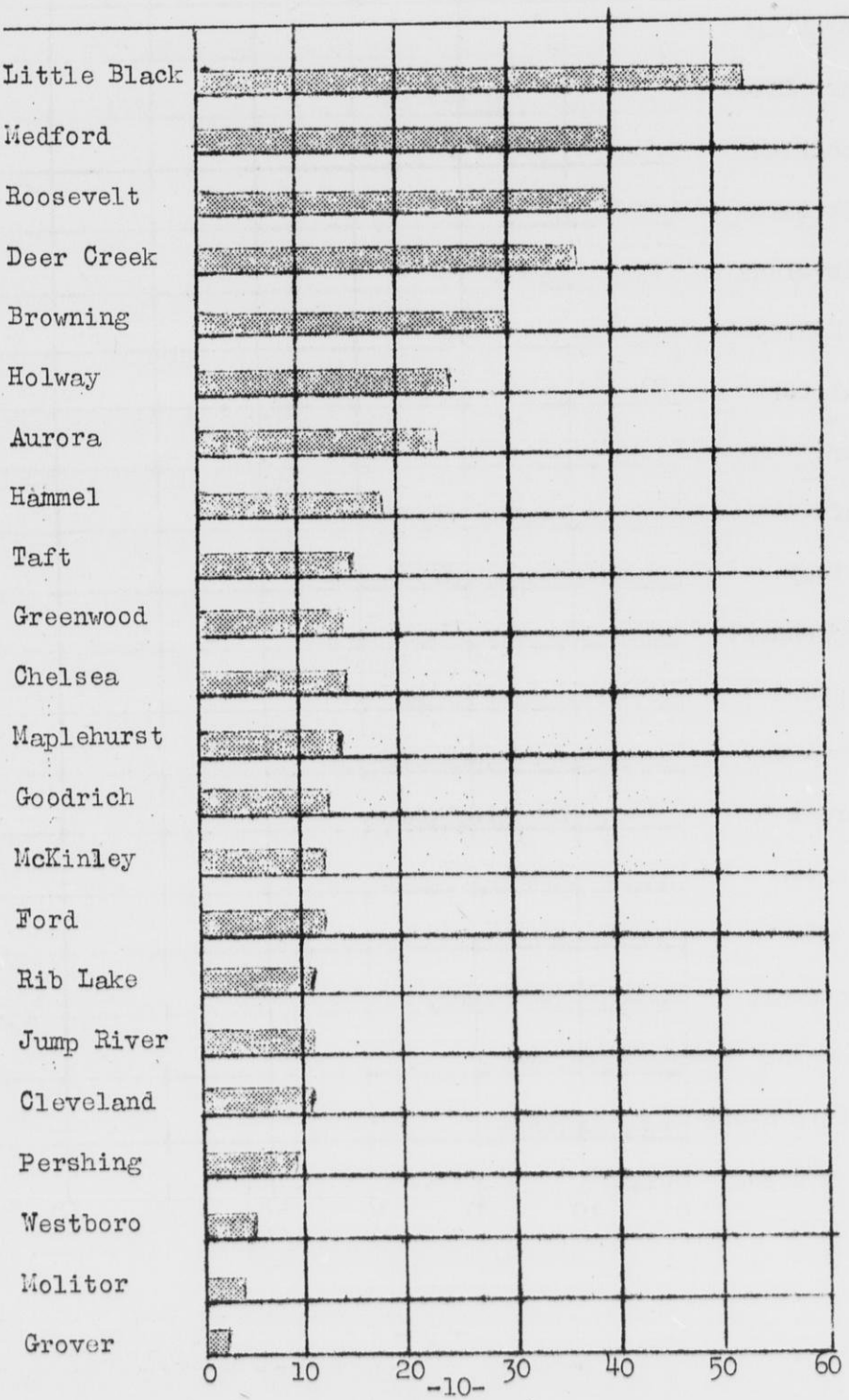
Town	0.0 to 9.9 acres	10. to 19.9 acres	20. to 29.9 acres	30. to 39.9 acres	40. to 49.9 acres	50. to 59.9 acres	60. acres and over	Number of Farms
Aurora	24	31	40	35	17	9	22	178
Browning	18	16	19	26	31	21	38	169
Chelsea	16	20	27	18	19	10	11	121
Cleveland	28	34	19	10	9	6	8	114
Deer Creek	12	7	15	25	23	26	77	185
Ford	15	22	22	20	10	5	5	99
Goodrich	40	31	23	8	9	4	13	128
Greenwood	25	36	32	24	25	10	21	173
Grover	40	22	6	4	-	3	2	77
Hammel	17	17	33	18	17	10	19	131
Holway	33	46	53	30	16	15	18	211
Jump River	41.	32	30	10	9	6	3	131
Little Black	19.	29	29	46	40	39	68	270
McKinley	26.	38	44	13	11	10	6	148
Maplehurst	13.	35	31	26	10	4	12	131
Medford	64	59	53	51	46	22	43	338
Molitor	11	9	8	6	7	2.	4	47
Pershing	36	39	21	21	8	2	2	129
Rib Lake	60	57	41	37	13	11	18	237
Roosevelt	19	46	61	54	32	22	23	257
Taft	30	21	24	23	10	9	18	135
Westboro	65	63	27	25	8	4	11	203
County Total	652	710	658	530	370	250	442	3612

Figure 3 - Percent of Farms With Less Than 20 Acres of Cropland Per Farm - 1941



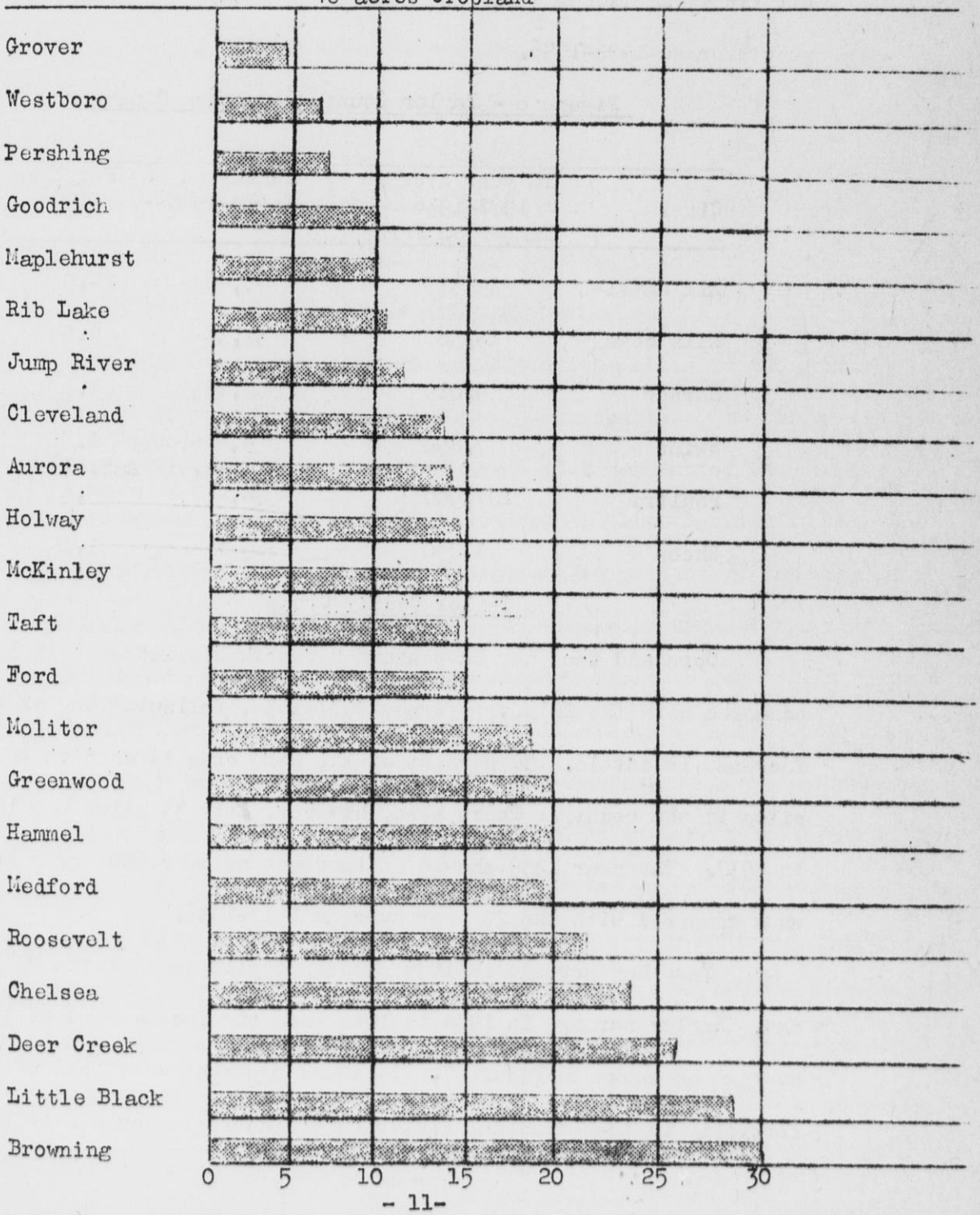
While census figures show 54.7 percent of the county in farms only 18 percent of the county can be classed as cleared crop land. shown in Figure 4, a large portion of the cropland is concentrated i small number of towns.

Figure 4 - Percent of Cropland per farm by towns



Twenty nine percent of the farms in Taylor County have 40 or more acres of cleared cropland per farm. Seventy percent have less than 40 acres of cleared cropland per farm. Approximately one-fourth of the farms in the Town of Browning, Little Black, Deer Creek and Chelsea have over 40 acres of cropland as shown in Figure 5.

Figure 5 - Percent of Farms With More Than 40 acres Cropland



Taylor County Livestock

Along with the increase in the number of farms there has been a constant increase in the number of livestock. The average farm has 14 head of cattle, 1.6 horses, 1.2 swine, 1.1 sheep and 25 chickens.

Milk cows have increased 7,782 or 33 percent in 1940 over the t years average of 1927-1936. Figure 6 shows there has been an increase all livestock except swine and poultry in 1940, when compared with the year average 1926-1936.

Figure 6 - Taylor County Livestock Census

Class	10 year average 1927-1936 Number on Farms	Number on Farms 1940	Per Farm 1940
All cattle	35,315	46,463	14.0
Milk cows	23,560	31,342	9.5
Horses	5,019	5,455	1.6
Swine	7,290	4,248(over 4 mos.old Apr. 1)	1.2
Poultry	107,900	84,487	25.5
Sheep	3,290	3,744	1.1

Taylor County Crops

Corn and tame hay have shown a remarkable increase in 1939 as compared with the 20 year average 1917-1936, following the trend of a increase in cattle. 80 percent of the corn crop is used in the 1081 silos in the county. There were, however, only 33 silos per 100 farm in 1937. The year 1939 showed an increase of over 600 acres of corn when compared with the 20 year average 1917-1936.

Tame hay acreage in 1939 almost doubled that of the 20 year av age. Barley acreage in 1939 is less than one fourth that of the 20 y average as shown in Figure 7. It seems apparent that loss of the soi fertility is the principal factor in the decrease acreage of barley.

Figure 7 - Taylor County Crop Census

20 year average 1917-1936

Crops	Acres	Yield Per Acre		Acres 1939
Oats	12,772		32.4	16,643
Corn	4,638		24.7	10,757
Barley	2,376		26.2	515
Wheat	206		14.8	34
Potatoes	2,200		113.8	1,405
Rye	688		16.5	460
Tame Hay	35,080	Tons	1.5	60,956
Wild hay	1,222	Tons	1.2	1,153

Lime and Fertilizer

An acid condition is found in most of the soils in the county. There is no limestone or marl deposits in the county. Two thousand soil tests taken from the entire county showed 97.7 percent of the samples tested required lime. (Figure 8) Phosphorus is also lacking in both the virgin and tilled soils. The results show 77.5 percent of the samples require phosphate. Potassium was needed in 23.6 percent of the tests made. It has been shown by farm demonstrations that Taylor County soils respond well to lime and fertilizer and there has been a rapid increase in their use. In 1941 there were 8,000 tons of lime applied on farms as compared with 1,680 tons in 1936. If Taylor County farmers were to continue liming at the same rate as during the period 1936-41 it would take over 100 years to apply 3 tons of lime per acre to all of the cropland in the county. At the 1941 rate of application it would require 47 years.

In 1940 the Agricultural Adjustment Administration distributed 30 tons of phosphate and in 1941 269 tons.

Figure 8 - Lime and Fertilizer needs

Percent showing lime needed	97.7
Percent showing phosphate needed	77.5
Percent showing potash needed	23.6
Tons of lime applied 1936-1941	17,597
Pounds of Phosphate applied 1940-1941	597,900

Gross Farm Income

The dairy industry is highly important in Taylor County. It accounts for 85 percent of the gross farm income in 1936. Milk alo accounted for more than half of the gross farm income in the same y Although reliable figures are not available it is known that much o the concentrate feed used in the production of milk and livestock h had to be shipped in the county.

At present cash crops are of little importance in Taylor Cou Potatoes, the largest single cash crop in 1936, accounted for only percent of the gross farm income. Since 1936 the potato acreage ha decreased until in 1940 the acreage was about one-half that of 193

The gross farm income per acre of land in farms varied from $14.61 in 1927 to $9.39 in 1936. In 1933 it was estimated to be $7 per acre of land in farms.

Land Ownership - Taylor County

Forest conservation has increased rapidly since 1931 putting wise use much of the delinquent lands of the county. County, state and federal agencies have participated in this reforestation progra At present 13,779 acres of the 29,979 acres owned by the county are county forests and entered under the forest crop law. To date, 13 acres of county forest lands have been planted. Lack of funds has

impoded the progress in restocking county owned lands. Most of the plantings so far in both county and federal forests have been made possible through the cooperation of the C.C.C. and W.P.A. During the past three years Taylor County has received a total of $706.41 from timber sales from the county forest. Of this amount $234.10 was paid to the state as a severence tax. The annual revenue of 10 cents per acre from the state amounts to over $1,300 for Taylor County, this money being used for forest development. County forests have been important to Taylor County since they keep submarginal lands out of agricultural use.

In the Chequamegon National Forest the United States owns 111,018 acres of land or 17.7 percent of the entire area of the county. Up to now approximately 700 acres have been planted. In 1940 Taylor County received $848.17 as its share of proceeds from timber sales from the National Forest. Each year there are approximately one and one quarter million feet of timber cut on the National Forest.

As shown in Figure nine 77.2 percent of the county is privately owned as of January 1942.

Figure 9 - Taylor Land County Ownership

Owner	Acres	Percent of Land
United States	111,018	17.7
State	2,400	.3
County	29,979	4.8
Private	483,163	77.2

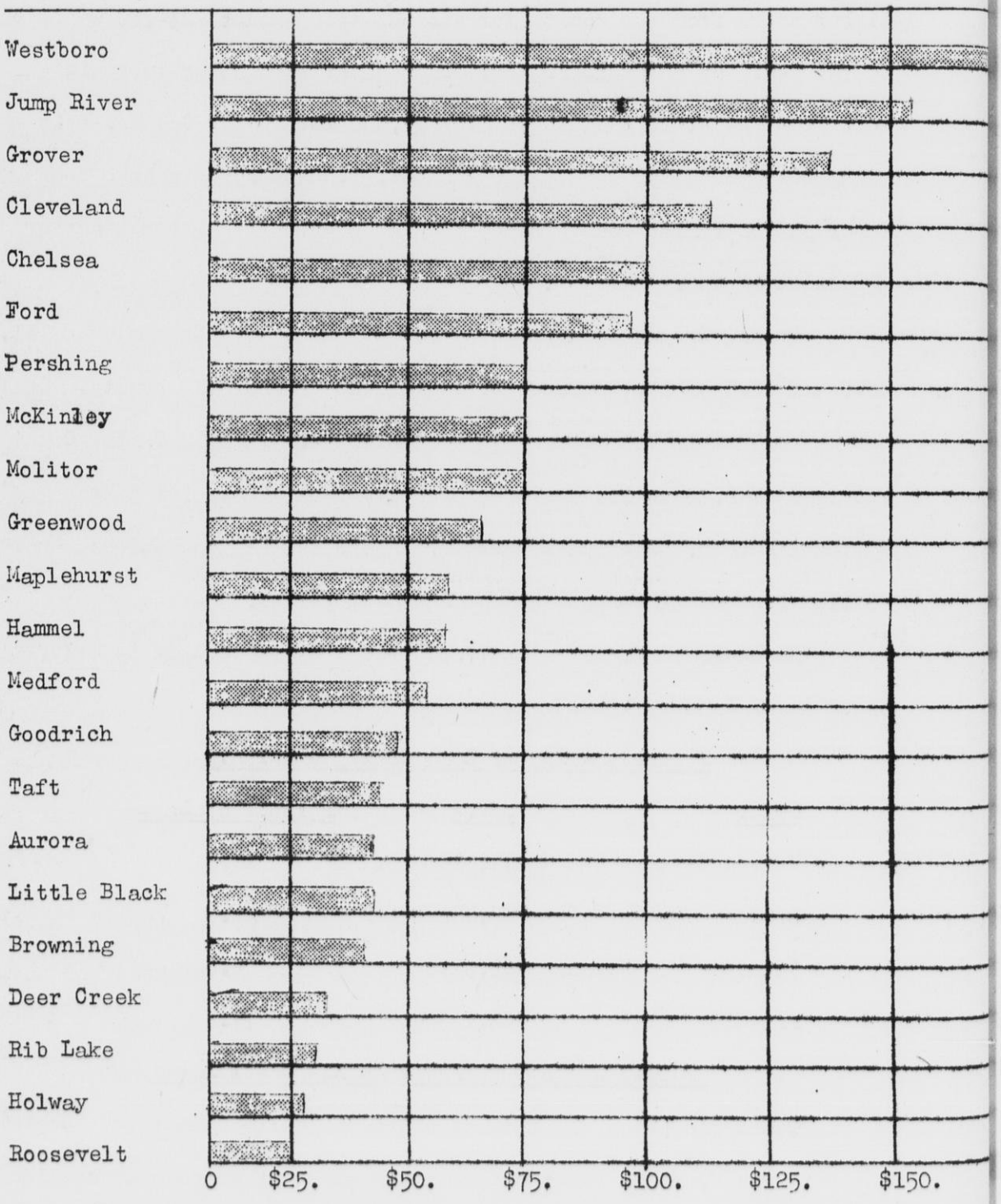
Public Assistance Programs Aid Small Farms

Towns receiving the largest share of public assistance, Social Security and W. P. A. are those with the smallest percent of cropland per farm. (Figure 3).

Towns having a small percent of developed cropland also recei

a large share of assistance as can be seen by comparing figures 10 a

Figure 10 - Social Security and W.P.A. Benefits per Farm by Tow
October 1940 - November 1941



During the twelve month period from October 1939 to September 1940 the public assistance per capita amounted to $24.13. If equally divided among the 3612 farms in the county each would have received $132. or $4.38 per acre of cropland. Total public assistance and source are shown in Figure 11.

Figure 11 - Public Assistance
October 1939 - September 1940

Agency	Amount	Amount paid by Taylor County
General Relief	$47,912	$29,647
W. P. A.	$121,988	
Social Security	$131,894	$28,266
Surplus Comm.	$18,259	
C.C.C.	$93,981	
N.Y.A.	3,688	
F.S.A. Grants	$16,753	
Total	$434,477	$57,913

Land Use Classification

More than 120 farm people living on the land, using their many years of experience in farming, have classified Taylor county lands as follows:

Class A - Areas now in farms but which are not suitable for farming(blue)

Class B - Areas not now in farms and which should not be used for farming (green)

Class C - Areas now in farms and which are questionable for farming (red)

Class D - Areas not now in farms but which are suitable for farming(orange)

Class E - Areas now in farms and which should remain in farming (yellow)

Figure 12 - Land Use Classes by Towns - area mapped

Town	Total	Class A Blue Acres	%	Class B Green Acres	%	Class C Red Acres	%	Class D Orange Acres	%	Class E Yellow Acres	%
Aurora	22,080	120	.5	2,240	10.2	1,220	5.9	3,080	13.9	15,320	69.5
Browning	23,040	200	.8	2,760	11.9	1,360	5.9	2,400	10.5	16,320	70.9
Chelsea	26,880	1,240	4.6	12,360	46.0	1,560	5.8	280	1.0	11,440	42.6
Cleveland	23,040	0	0.0	7,640	33.1	600	2.6	4,800	21.0	10,000	43.3
Deer Creek	22,080	120	0.5	480	2.2	160	0.7	3,600	16.3	17,720	80.3
Ford	23,040	120	0.5	9,520	41.3	0	0.0	1,800	7.8	11,600	50.4
Goodrich	23,040	0	0.0	3,960	17.2	400	1.7	10,680	46.3	8,000	34.8
Greenwood	34,560	120	0.3	6,720	19.4	440	1.3	7,960	23.0	19,320	56.0
Grover	46,080	200	0.4	36,200	78.5	1,200	2.6	2,520	5.5	5,960	13.0
Hammel	23,040	80	0.3	7,560	32.8	640	2.8	1,760	7.6	13,000	56.5
Holway	23,040	40	0.2	560	2.5	200	0.8	4,640	20.2	17,600	76.3
Jump River	23,040	40	0.2	7,360	31.9	280	1.2	4,440	19.3	10,920	47.4
Little Black	22,080	0	0.0	560	2.5	760	3.4	240	1.2	20,520	92.9
Maplehurst	23,040	160	0.7	4,960	21.5	320	1.4	6,240	27.1	11,360	49.3
McKinley	23,040	120	0.5	2,520	10.8	1,320	5.7	4,880	21.3	14,240	61.8
Medford	25,880	320	1.2	2,000	7.7	3,080	12.0	40	0.1	20,440	79.0
Molitor	23,040	40	0.2	13,520	58.7	200	0.8	2,600	11.3	6,680	29.0
Pershing	23,040	80	0.3	5,600	24.3	880	3.8	7,920	34.4	8,560	37.2
Rib Lake	48,480	600	1.2	23,840	49.2	6,320	13.0	1,760	3.6	15,960	33.0
Roosevelt	22,080	1,680	7.6	1,440	6.5	1,560	7.1	160	0.8	17,240	78.0
Taft	23,040	280	1.2	5,200	22.5	2,800	12.2	2,320	10.1	12,440	54.0
Westboro	80,640	720	0.9	38,640	48.0	520	0.6	20,320	25.2	20,440	25.3
County	627,320	6,280	1.0	195,640	31.2	25,880	4.1	94,440	15.0	305,080	48.7

3

Class "A" Lands - Mapped in Blue

Committees classed only one percent of Taylor County land area as in farms now but which are not suitable for farming. In all, this amounts to approximately 6,280 areas. Small tracts are found in all except four of the twenty-two towns. Reasons for placing land in Class A were stoniness and roughness or lands too low lying for adequate drainage. Undesirable location in regard to schools and roads were factors in some instances. In all cases, in the opinion of committees, lands so classified were considered as being in an undesirable location for a farm and home.

It is recommended that farm credit organizations refrain from assistance to farmers on Class "A" lands that would tend to establish them more firmly on these lands. County owned lands in this class should not be sold for farm purposes. All agencies should assist in the re-location of farmers on land not suitable for farming.

Class "B" Lands - Mapped in Green

There were 195,640 acres or 31.2 percent of the entire area of the county classified as land not now in farms that should not be used for farming. The Chequamegon National Forest accounts for over half of this class. The distribution of Class B lands ranges from only a few scattered forties in some towns to half or more of the entire land area in other towns. In the town of Grover 78.5 percent of the land was placed in Class B. Lands that are not now in farms and that should not be used for farming constitute much of the present and potential forest lands of Taylor County.

Protect Our Forests

Federal, state and county owned lands account for 22.8 perce of the area of Taylor County. With a few exceptions the committees have classified all publicly owned lands not now in farms which shou not be used for farming. Committees were forceful in condemning the practice of selling county owned land for timber cutting purposes on which ends in tax delinquency.

Chequamegon National Forest

The Chequamegon National Forest is an asset to county, state nation. It represents an investment of all the people for all the p ple. Adequate fire protection is essential to protect this investme The committee recommended that the federal congress make a definite appropriation each year to maintain and protect the federal forest lands. Planting and protection work already done by the C.C.C. orga ization is highly commended. Timber sale preference should be given farmers in the county when the timber is to be used for farm buildin purposes. Part time or small farmers capable of doing forest work should be given an opportunity to such work in the Federal Forest.

County Forests

Tracts of land not suitable for agriculture that join existi county forests and are capable of growing forests should be added t the county forests. This is especially recommended in the town of Rib Lake.

Other County Owned Lands

Lands so located that they are not suitable for agricultural development and valuable only for the timber they contain or may be made to produce should be withheld from future sales. Timber stump should be sold from these lands under a selective cutting plan.

Class "C" Lands - Mapped in Red

Lands now in farms but which are questionable for farming constitute only 4.1 percent of the total land area in the county. This amounts to approximately 25,880 acres, some of which are to be found in all towns except one. Lands in Class C, with a few exceptions, are almost futile for future agricultural use. Agricultural agencies, and especially the Farm Credit Administration, should be hesitant in promoting future development on Class C lands. General recommendations made to improve the Taylor County farms would not suffice on farms placed in Class C. They were placed in Class C for several reasons; too few good acres available for development, too stoney, too rough, drainage not sufficient for crops or pasture, or isolation. Due to varying conditions farms in Class C represent an individual problem. Relocation is generally recommended. In some instances the purchase of adjoining lands suitable for farming is recommended to improve the economy of the questionable farm unit in this class.

Class "D" Land - Mapped in Orange

Areas not now in farms but which are suitable for farming include 94,440 acres or 15 percent of the land of the county. This is more than one-fourth as much land as is now in farms. Forty six percent of the Town of Goodrich is classed as undeveloped land suitable for agriculture, while in the Town of Medford only 40 acres were placed in this class. In eight towns over one-fifth of the land area was placed in Class "D".

Isolated tracts of Class "D" land should not be developed in the near future. The cost of clearing of roads, and of school services would not warrant development as there are many already cleared or partly cleared farms available in Taylor County. There are many tracts of Class "D" land adjoining existing farm units in a well developed community. Development of such lands would better the farm economy on farms where additional pasture and cleared land is needed.

Class "E" Land - Mapped in Yellow

Land now in farms that should remain in farms. The 1940 census figures show 54.1 percent of Taylor County land in farms. Fifty four cent of Taylor County lands were also placed in this classification by Agricultural Planning Committees. Sixty seven percent, or about two-t of the farm land in Taylor County is undeveloped farm land. This unde farm land ranges from level Colby silt loam suitable for development t and stony waste land which will never be cropped. 51.8 percent of the developed farm land in the county is used for non-crop open pasture. accounts for the bulk of the pasture, as very little crop land is used this purpose.

A Taylor County Farm Program

Clear More Land

Only 18 percent of Taylor County is in cleared crop land. Agri tural planning committees have classified 15 percent of the area of Ta County as land not now in farms but suitable for farm development. Th class of land represents 94,440 acres. Committee members have unanimo agreed than an average dairy farm in Taylor County should have a minim 40 acres of cleared cropland. At the present time, however, 2550 farm 70.6 percent of the farms in Taylor County have less than 40 acres of ed cropland.

Clearing additional acres on existing farms should cut the reli load in many cases. It will put more improved land on the tax roll.

These conditions warrant a land clearing program in Taylor Coun The County Agricultural Planning Committee recommends that:

1. A survey be made jointly by the County Agricultural Agent, F Security and A.A.A. to secure a more exact inventory of lands to be cl its location, and the approximate date clearing could take place.

2. The Farm Security Administration make loans available for land clearing purposes to farmers that could better their farm economy by clearing additional land.

3. Taylor County purchase or make available machinery for land clearing purposes and that the services of such machinery be made available for rental to all farmers needing such service.

4. Orders for land clearing should be centered in the county agricultural agents office. Land to be cleared by county owned or other machinery should be inspected by the Farm Security Supervisor or County Agricultural Agent, using the land classification map as a guide, to make certain that land to be cleared is suitable for farming.

Forty Acres Minimum

It is agreed by all committees that too few acres of cleared cropland on most farms present the major farm problem in Taylor County. It seriously affects the economy of over one-third of the Taylor County farm families and of Taylor County itself. It has a definite relation to the relief load, taxes, livestock, and general farm practices. On many farms with ten acres or less of cleared cropland the families are consumers rather than producers. As stated by one committeeman "there are too many instances where the man keeps the farm rather than the farm keeping the man and the family."

The size of family, the ability of the man, and the quality of the land are all factors in the size of farm. Taking these into consideration, committee members have recommended a minimum of 40 acres of cleared crop land for the average Taylor County dairy farm. In addition to a woodlot the farm should have sufficient pasture to support a minimum of 10 cows. The import-

ance of additional pasture land to permit low cost summer feeding has emphasized at all committee meetings.

In addition to a minimum of 10 cows a farm should be supplied with cash income from either hogs or poultry. Every farm family should rai enough hogs for their own use. Where poultry is used as an additional c income a minimum of 40 hens were recommended. Sheep were suggested on farms having additional rough land suitable for pasture. Hazards such winter feed and housing, short seasons, and predators were mentioned a reasons for not keeping more sheep.

Increase Lime Program

Lime is basic to a soil building program. 97.7 percent of the soi samples tested by the local soil tester in the county showed lime was quired. The lime program has been stepped up tremendously since the b ginning of the conservation material program in 1940. In 1941 there w approximately 8,000 tons of lime applied. In 1942 12,000 tons are ex ed to be applied. To sufficiently lime the present crop land in Tayl County approximately 300,000 additional tons of lime are required. Th is at the rate of 3 tons to the acre.

Committee members not only endorse the liming of Taylor County soi but recommend that an effort be made to increase this program as foll

1. Increase education showing the value, time, rate, and methods application of lime by the county agricultural agent.

2. Continue the conservation material program by the agricultural adjustment administration.

3. Continue the services of the soil tester and that such service on a more definite basis in the future.

Pastures a Major Problem

Pasture feed is economical feed. It saves labor and cash. Over grazed, poorly managed pastures are characteristic of many Taylor County farms. A definite pasture renovation program is recommended. The county agricultural agent should establish demonstrations in various localities in Taylor County showing the value of pasture renovation. On the few farms where such demonstrations have already been conducted, farmers have reported much success. Pasture renovation consists of testing the soil, lining and fertilizing as required, cutting up the sod and planting. This is followed by regulated grazing. The use of legumes in the plan is very important.

Improved Herds

There are approximately 33,300 milk cows in Taylor County or an average of 9.2 milk cows per farm. Milk production in 1940 has been estimated at 5000 pounds per cow. The production of milk and livestock is the chief concern of Taylor County farmers. An increase in milk production would have a direct effect on the farm income of Taylor County. Committee members recommend the organization of an artificial breeding association as a step in improving the quality of livestock and increasing milk production. The county agricultural committee and county agent are asked to gather such information as necessary and to consider the possibilities of organizing an artificial breeding association in Taylor County. Farm organizations are also asked to assist in the launching of this program.

Public Assistance - "Help Yourself First"

It is recommended that no able bodied person be given assistance of any kind unless he has proved first that he has made an honest effort to help himself. Growing a garden, preserving fruits and vegetables

for winter use, keeping chickens or even hogs or a cow to supply meat and milk should be a prerequisite to relief in Taylor County. This recommendation was made unanimous by twenty three members of both cou and community committees. It should be a definite guide post to publi welfare administrators. All agricultural agencies should assist in th operation of this recommendation.

Relief clients on farms and who are capable of becoming full ti farmers should be encouraged to that end. Money spent should be for be ter housing facilities, health improvement, land, land clearing, live- stock and machinery. Every opportunity should be given to make small settlers into full time, self supporting farmers.

The Forest Service should be encouraged to give seasonal emplo ment to low income farmers living on farms that are not suitable for f time farm development. This is especially recommended in areas near t Federal Forest.

Skilled tradesmen seeking employment in industrial areas outsi of the county should be given additional assistance and encouragement locating such work. Committees recommended that state and federal em- ployment agencies give more assistance in relocating families needing and capable of doing industrial work elsewhere.

Summary of Recommendations

Class A Lands - Mapped in blue - Areas now in farms and not suitable for farming.

1. Farm credit organizations should not financially assist farm operations on land that should not be used for farming as indicated on the land classification map.
2. County owned Class A lands should not be sold for farming purposes.
3. All agencies should assist in the relocation of farmers on Class A land.

Class B Lands - Mapped in green. Areas not in farms and which should not be used for farming.

1. There should be a definite appropriation for maintenance and fire protection of public owned forest lands.
2. The Federal Forest Service should give timber sale preference to Taylor county farmers when timber is to be used for farm building purposes.
3. The Federal Forest Service should give part time farmers an opportunity for seasonal forest work.
4. Expand the county forest in the town of Rib Lake
5. County owned lands so located that they are not suitable for agricultural development and valuable only for the timber they contain should be withheld from future sale. Timber stumpage should be sold from these lands under a selective cutting plan.

Class C Lands - Mapped in red. Areas which are questionable for farming.

1. Relocation is generally recommended unless it would be prac-

tical to improve a local condition.

2. In some cases the economy of the questionable farm unit m be improved by the purchase of adjoining lands suitable f farming.

Class D Lands - Mapped in orange. Areas not now in farms but sui able for farming.

1. Isolated tracts do not warrant development at present.
2. Such lands adjoining existing farm units may well be dev oped where there is a need of additional cleared land or pasture or wood lot for the farm.

Class E Lands - Mapped in yellow. Areas now in farms which shou remain in farming.

Forty Acre Minimum

1. A Taylor county farm should have a minimum of 40 acres o cleared crop land.
2. It should have sufficient pasture to support a minimum o ten cows.
3. The farm should be supplied with additional income from either hogs or poultry.
4. Every farm family should raise enough hogs and chickens for the use of the family living in it.

Increase Lime Program

1. Increase education showing the value and the time, rate and methods of application of lime by the county agricu tural agent.
2. Continue the conservation material program by A.A.A. an soil testing program.

Improve Pastures

1. A definite pasture renovation program is recommended.

Improve Herds

1. An artificial breeding association would be a step in improving the quality of the livestock and increasing the milk production.

Agencies

Farm Security Administration

1. There should be an increase in the F.S.A. appropriation. Additional money to be used to increase size of existing farms.
2. Government agencies should not make loans on land not suitable for agriculture.
3. It is recommended that there be more supervision of F.S.A. Farms.

A.A.A.

1. Would recommend an increased payment for land clearing on farms with less than 40 acres of cleared cropland.
2. More encouragement to farmers to earn all possible payments.

All Agencies

Fewer meetings, more correlation of efforts.

Public Welfare

1. No able bodied person be given assistance of any kind unless he has proved first that he has made an honest effort to help himself.

2. Relief clients on farms capable of becoming full time farmers should be encouraged to that end.

3. Skilled tradesmen seeking employment in industrial areas outside of the county should be given additional assistance and encouragement in locating such work.

LAND USE CLASSIFICATION

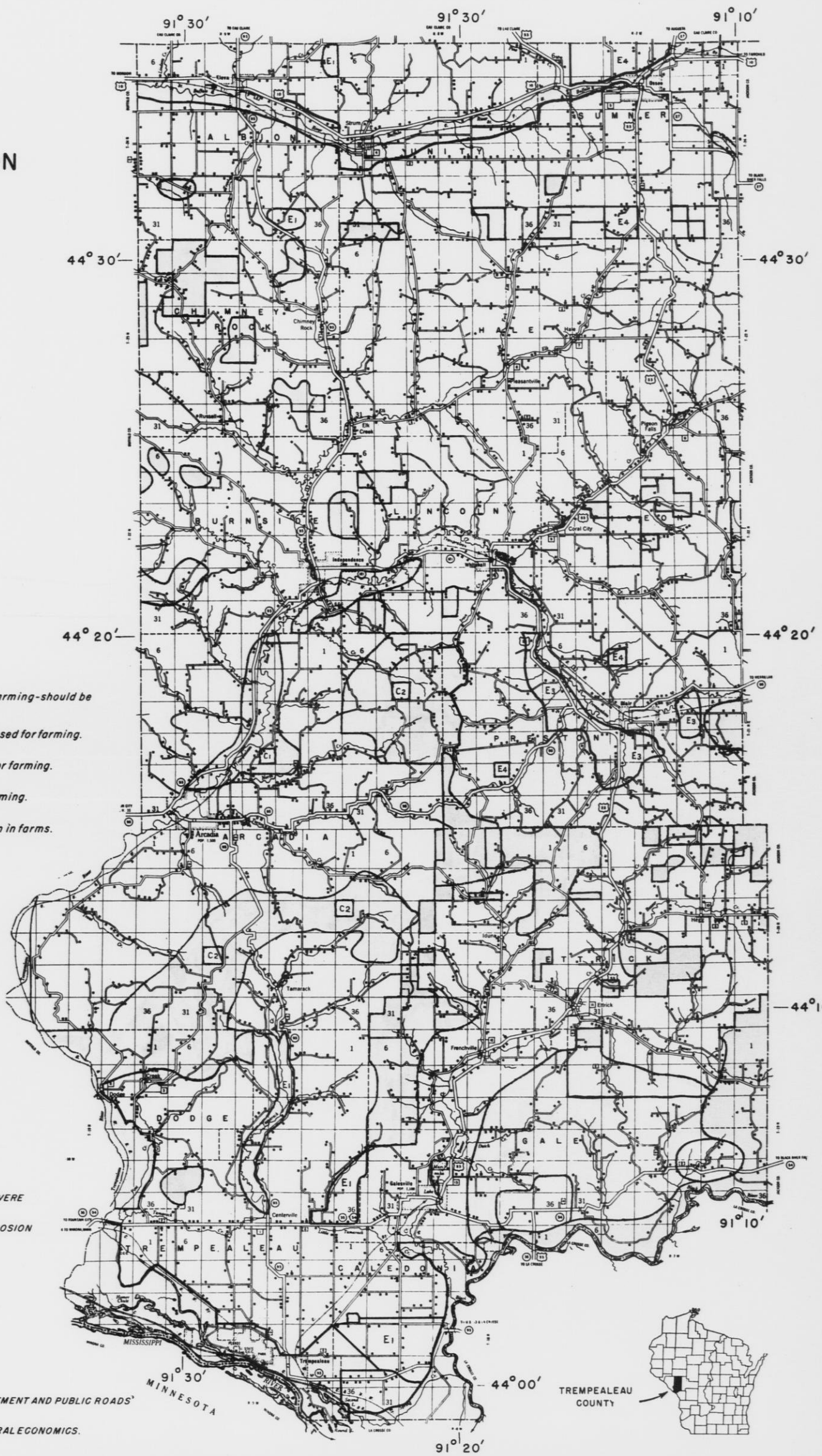
TREMPEALEAU COUNTY, WISCONSIN



- A. *Areas now in farms - not suited to farming - should be put to uses other than farming.*
- B. *Areas not in farms - should not be used for farming.*
- C. *Areas now in farms - questionable for farming.*
- D. *Areas not in farms - suitable for farming.*
- E. *Areas now in farms - should remain in farms.*

SCALE: MILES
1 0 1 2

E1 - WIND EROSION PREVENTION NEEDED
E2 - DRAINAGE NEEDED
C1 - SANDY
C2 - VERY HILLY, SOME TIMBER, EROSION SEVERE
E3 - BEST FARM LAND GENERALLY
E4 - BEST FARM LAND MORE SUBJECT TO EROSION



BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

We, the Trempealeau County Agricultural Committee are pleased to present and endorse the following attached report of the County and Community Land Use Planning Committees:

We feel that while this report is in no sense final, it has already contributed much to the future of agricultural planning in Trempealeau County particularly in assisting in furthering the work of soil conservation; in awakening interest in the need for diversification of agriculture; in promoting a sound approach to the problems of agricultural conservation and finally in pointing to the relationship between land use and farm indebtedness.

Trempealeau County Agricultural Committee

W. F. Raichle, Chairman

E. R. Finner

C. O. Grinde

Fred Kopp

Laura Little, Secretary

AGRICULTURAL PLANNING PRELIMINARY REPORT

TREMPEALEAU COUNTY

This report contains basic information concerning agriculture in Trempealeau County as it is today. Also included are suggested changes and recommendations made by fifteen community land use committees and the county Land Use Planning committee. The report is divided into four major sections as follows:

1. Organization and procedure.
2. Its physical features.
3. Its present land use, type and system of farming.
4. Major problems.

At the last meeting of the county committee it was the general opinion that the report would be preliminary and that very likely valuable information regarding valley or coulee conditions would arise at later community meetings. These findings would undoubtedly be discussed and general recommendations made by the local committee and the county committee.

In that Trempealeau County is in the western and southwestern ridge and valley region of Wisconsin where water erosion is most acute, a proper land use program is necessary. Therefore, the committee felt that since the soil erosion problem is acute and in program planning for the future, erosion prevention must be given major consideration. In short — no soil, no farms, no farm problems. There are of course, other very important farm problems at the present time which have been given much consideration by the committee.

ORGANIZATION AND PROCEDURE

Organization: The legal county agricultural committee composed of W. F. Raichle, Galesville, chairman (also of county board of supervisors); C. O. Grinde, Blair; E. R. Finner, Dodge; Merlin Winters, Trempealeau; and Laura Little, Whitehall, County Superintendent of Schools, selected the county committee from nominations submitted by each. The county agricultural agent was appointed as secretary of the county committee.

The committee, in its selection of county and community committee members, attempted to appoint men and women who were representative of various types and systems of farming and organizations. Good standing in their respective communities and ability to express their own view points were important factors in determining selection. Various organizations and Federal agencies concerned with agriculture in the county are represented on the county committee.

The committee consists of the following men and women:

County Committee

Organization	Name	Address
Agricultural Committee	W. F. Raichle, chairman	Galesville (see footnote)*
" "	Clarence Kaas	Pigeon Falls
" "	C. O. Grinde	Blair
" "	E. R. Finner	Dodge
" "	Merlyn Winters	Trempealeau
" "	Laura Little	Whitehall
Agricultural Extension Service	E. H. Florence, Co. Agent	Whitehall
Homemakers	Mrs. Geo. Schmidt	Arcadia
Agricultural Extension Service	Mable Joos, Home Dem.Agent	Whitehall
Smith Hughes	B. M. Smith	Blair
Agricultural Conservation	Milan Cox	Osseo
Soil Conservation Service	Lyle Molstad	Independence
Farm Security Administration	A. E. Nehring	Whitehall
Farmer	Russell Paulson	Strum
"	Milan Cox	Osseo
"	R. C. Warner	Independence
"	Minor Goss	Eleva
"	Max Eimon	Osseo
"	Raymond Lamberson	Whitehall
"	Oscar Schmidt	Arcadia
"	A. E. Nehring	Whitehall
"	Melvin Solberg	Ettrick
"	Ralph Young	Galesville
"	Fred Koop	Galesville
"	Albert Scherr	Trempealeau

Community Committees

Township		Name	Address
Gale	-	W. F. Raichle	Galesville
		Alvin B. Ekern	Ettrick
		Ralph Young	Galesville
Caledonia	-	Albert Scherr	Trempealeau
		John Lucas	Trempealeau
Trempealeau	-	Carrol Carhart	Trempealeau
		Merlyn Winters	Trempealeau
		Ray Trowbridge	Trempealeau
		Fred Koop	Galesville
Arcadia	-	Roman Stelmach	Arcadia
		Richard Guenther	Arcadia
		Oscar Schmidt	Arcadia
		E. R. Finner	Arcadia

* At the time the project began Clarence Kaas, Pigeon Falls, was chairman of the committee.

Township		Name	Address
Dodge	-	Frank Stencil	Dodge
		Frank Galewski	Trempealeau
Burnside	-	Henry Russell	Independence
		George Graul	Independence
		R. C. Warner	Independence
Chimney Rock	-	Russell Paulson	Strum
		Selmer Longseth	Eleva
		Harry Hawkinson	Strum
Albion	-	A. N. Tweet	Eleva
		Ed Sterry	Eleva
		Minor Goss	Eleva
Unity	-	Ed Thomasgaard	Strum
		L. C. Johnson	Strum
Sumner	-	Jens Klavestad	Osseo
		Phillip Johnson	Osseo
		Milan Cox	Osseo
Lincoln	-	John Sygulla	Whitehall
		Ray Lamberson	Whitehall
		Clark Anderson	Whitehall
Pigeon	-	Clarence Kaas	Whitehall
		Robert Tomten	Whitehall
Hale	-	Nels Johnson	Osseo
		Geo. D. Maloney	Strum
		Max Eimon	Osseo
Preston	-	Bennie Quarne	Blair
		Henry Holte	Blair
		A. E. Nehring	Whitehall
Ettrick	-	John A. Knutson	Ettrick
		Alfred Mahlum	Ettrick
		Melvin Solberg	Ettrick

Procedure:

All meetings held by community committees and the county committee were informal. Each community meeting had, as a member, a member of the county committee. It was thought that such an arrangement would enable community committee suggestions and recommendations to be presented to the county committee in person. Due to the busy season of the year fewer community committee meetings were held than desired. The county committee summarized the community committee data and material into this county report. Structure and arrangement of the county report was done by the secretary and approved by the county committee.

PHYSICAL FEATURES

Trempealeau County is in the west-central part of Wisconsin about 125 miles north of the Illinois State line. The Mississippi River forms the southwestern boundary and Black River the southeastern. The area of the county is 745 square miles, or 476,800 acres.

The central and southern parts of Trempealeau County, with the exception of the stream bottoms and the terraces of Mississippi River, range from rolling to very hilly. Local variations in altitude range from 100 to 500 feet. In the northern part of the county the variation in elevation is not so great, slopes are not so steep, and a gently rolling or rolling relief predominates. The extreme southern part of the county is a level or gently undulating plain covering an area of about 45 square miles.

The main upland of the county rises rather abruptly from the north edge of the Mississippi River terrace and extends northward to the central part of the county where the Trempealeau River Valley crosses the county from east to west. North of the Trempealeau River Valley is a smaller area of rolling upland similar to that south of the river. These hilly or rolling sections of the county are completely dissected by the drainage systems. The valleys are well developed, the ridges are narrow, and the intervening valley slopes and lower ridges have a rolling surface.

The dolomitic limestone ridges south of Arcadia reach the highest elevations and have the steepest relief found within the county. These ridges are somewhat wider than those in the remainder of the county; the upper 150 feet of the slopes are very steep and the valleys are comparatively narrow. The maximum elevation of the limestone ridges above the adjacent valleys is about 400 feet, whereas throughout the rest of the rolling upland area the elevation is about 250 feet. The northern part of the county, particularly the northeastern corner, has for the most part a gently rolling or undulating relief, the elevation in few places being more than 140 feet above the valley and for the most part less than 80 feet. The land immediately north of the Beef River Valley becomes more rolling, and the elevation increases to 180 to 200 feet.

Trempealeau County is completely dissected by a well-developed drainage system. On the whole the divides are comparatively high, giving good fall to the smaller tributary and headwater streams. The only areas not well drained are the first-bottom lands along some of the larger streams. The largest poorly drained areas occur along Trempealeau River, from south of Dodge to Mississippi River, and in Tamarack Valley where a peat marsh covers about 4 square miles. All the surface drainage flows directly or indirectly into Mississippi River.

The bottoms of the main stream valleys are rather broad, and well-drained terraces are conspicuous features along many of the larger streams. The Mississippi River Valley is about 5 miles wide in Trempealeau County. Trempealeau River Valley is from three-fourths to 1 mile wide, and Beef River Valley is from one-half to three-fourths mile wide. Most of the smaller streams have definite valley floors ranging from one-fourth to one-half mile in width. The average elevation above sea level of the main streams other than Mississippi River is about 720 feet in the southern part of the county and 900 feet in the northern part.

CLIMATE

The climate of Trempealeau County is characterized by comparatively long, severe winters and short, warm summers. Seasonal variations in temperature are wide, the winter temperatures ranging from 60° F to -49°and the summer temperatures ranging from 30° to 105°. Temperatures below zero occur very frequently during the winter. The colder periods generally last two or three days and are followed by periods of gradually rising temperature. Hot spells are almost invariably experienced during the summer, but are seldom of more than a few days' duration.

The average frost-free season in different parts of the county ranges from 130 to 160 days, being shortest in the northern part. In the southern part of the county the frost-free season is practically the same as in the southern part of the state. The length of the frost-free period also varies with the elevation, frost occurring sooner in the low narrow valleys than on the higher ridges. Frost has been known to occur as late as June 12 and as early as August 21. In some seasons corn throughout the county is frosted before it reaches maturity.

The rainfall is well distributed for crop production. In general, frequent showers occur during the spring and early summer. During harvest season the actual rainfall is nearly as great as in the spring, but it occurs less frequently and as thunderstorms, and, owing to this and to a higher rate of evaporation, a comparatively drier condition prevails. Fall rains are well distributed and generally leave the soil in a moist condition for spring planting. Storms of high intensities and long duration are not uncommon. When occuring during early spring, these storms result in a high rate of run-off, causing serious sheet erosion and damage to newly sown crops.

Each year, even though there are thirty to forty rains of sufficient intensity to cause run-off, from 70% to 80% of the soil loss occurs during three or four hard storms.

LAND CLASSIFICATION

Community Committees (township basis) composed of the town chairman, town assessor, AAA committeeman, and one or two representative farmers were asked to classify the land in their township on the following basis.

A - Areas now in farms - Not suited to farming - should be put to uses other than farming.

B - Areas not in farms - Should not be used for farming.

C - Areas now in farms - Questionable for farming.

D - Areas not in farms - Suitable for farming.

E - Areas now in farms - Should remain in farms.

TABLE OF LAND USE CLASSES

Towns	Per cent of Land in Farms	Number of Farms	Total Acres per Farm	Crop Acres per Farm	Total Land Area	Land in Farms	% Class A	% Class B	% Class C	% Class D	% Class E
Albion	87.2	160	125.7	55.1	23,073	20,117	---	---	12.5	---	87.5
Arcadia	95.8	419	178.3	71.9	77,964	74,689	---	---	29.6	---	70.4
Burnside	89.6	153	146.2	66.7	24,976	22,374	2.8	---	6.6	---	90.6
Caledonia	85.6	70	168.9	79.6	13,819	11,825	---	23.5	4.6	---	71.9
Chimney Rock	93.6	178	122.8	45.2	23,344	21,861	10.9	---	7.6	---	81.5
Dodge	95.1	73	180.3	58.0	13,845	13,165	5.9	---	41.6	---	52.5
Ettrick	95.2	334	143.2	51.8	50,232	47,841	12.9	---	16.1	---	71.0
Hale	85.4	243	139.6	54.2	39,684	33,926	10.3	---	46.7	---	43.0
Hale	95.9	296	145.7	71.1	44,974	43,133	---	---	---	---	100.0
Lincoln	93.4	102	161.2	75.9	17,600	16,444	---	---	14.2	---	85.8
Pigeon	97.9	189	130.3	55.8	25,148	24,622	---	2.0	7.7	---	90.3
Preston	95.5	286	130.1	51.9	38,954	37,213	1.7	---	2.5	---	96.8
Sumner	94.7	134	161.2	75.6	22,807	21,595	2.8	5.6	1.4	---	90.2
Trempealeau	79.9	195	147.0	64.0	35,902	28,674	---	13.1	4.0	4.1	78.8
Unity	86.3	137	145.2	66.5	23,048	19,895	2.8	2.0	13.9	---	81.1
Total	92.0	2,969	147.3	61.8	475,370	437,374	3.2	3.0	13.2	none	80.6

On the following page a map indicates the classification as made by the community committees and the county committee.

LAND CLASSIFICATION CONTINUED

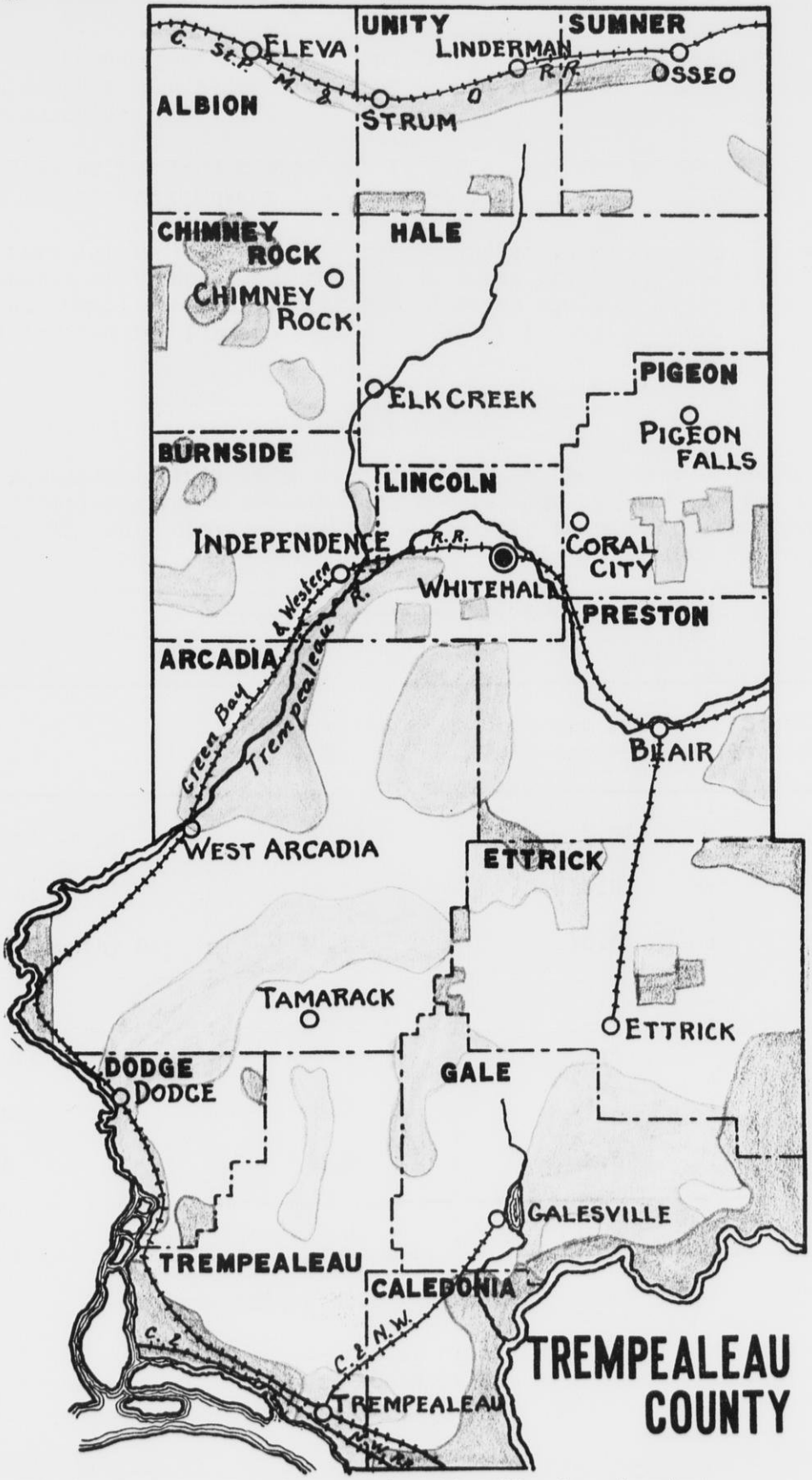
The land use map indicates many small areas of classifications and in some instances areas divided by township boundaries. Small area classifications may be explained due to topography variations. The county is made up of valleys, coulees, narrow and wide ridges. The map may appear too detailed, if so, we as a committee have been too conscientious in our classifications.

The county has irregular township boundaries and some classification boundaries appear chopped off. An example may be where a ridge follows a township boundary. Most of the ridge may be located in one township and the land in the neighboring township is good valley land.

It may be noted that 80.6 per cent of the land in the county should remain in farms. All community committees recommended erosion control practices should be followed on such land.

LAND USE CLASSIFICATION

Blue - Areas now in Farms, Not suited to farming, should be put to uses other than farming.
Green - Areas not in farms, should not be used for farming
Orange- Areas not in farms, suitable for farming



Red - Areas now in farms, Questionable for farming
Yellow- Areas now in farms, should remain in farms.

The township of Caledonia and Trempealeau have indicated by C1 land that it is subject to wind erosion, but should remain in farms providing proper control measures are practiced.

Most of the land marked not in farms, and should not be is bottom land along the rivers or steep land in timber.

Very little land not in farms is indicated on the map. A small area in the township of Trempealeau could be in farms providing proper drainage takes place. Small acreages in individual farms could be grubbed out, but cost is prohibitive and few farmers care to do it at present prices.

PRESENT LAND USE

A detailed study of present land use in the Beaver Creek Soil Conservation district gives a satisfactory description of land use for the county as a whole. The only distinct variation would be in parts of the towns of Caledonia, Gale, and Trempealeau where considerable level land is cropped.

Present Distribution of Land Use

	District as a Whole	Northern Part (Steep sections)	Southern Part (less steep sections)
Inter Tilled Crops	8.3%	5.3%	11.8%
Small Grains	16.7	13.2	20.8
Clover and Timothy Hay	15.1	15.6	14.5
Alfalfa	7.6	6.9	8.5
Open Pasture Land	4.1	2.4	6.1
*Wooded Pasture	45.7	54.1	35.8
Other Land	2.5	2.5	2.5
	100.0	100.0	100.0

*Less than 10% of this figure is woodland protected from grazing.

Inter tilled crops are made up almost entirely of corn with some tobacco, potatoes, soybeans, and cucumbers. Oats is the chief small grain in the county, with small acreages of barley, winter wheat, and rye.

Practically all of the wooded pastures are lands ranging from 24% to 45% slope. The degree to which these areas are wooded ranges from a few scattered

trees to densely covered. In the above table all woodland is included in the figures for wooded pasture.

Slopes up to 20% and over have, of necessity, been cultivated. In the past this cultivation has been done largely without erosion control practices and is the chief reason for large top soil losses.

TYPE OF FARMING

The agricultural crops and practices at the present time vary slightly in different parts of the county. In the hillier parts, the farms are larger and a smaller proportion of the land is cleared. However, too many farmers needing additional income have sold timber on steep land to tie companies who did the cutting. No selection was practiced and entire steep hillsides were cut for tie material and firewood, and as a result much soil washing has occurred due to this practice. In some of the hilliest parts, dairying is the only farm business carried on, whereas, in other parts of very hilly sections dairying combined with sheep or beef raising is practiced. Where only dairying is practiced, incomes have been materially reduced, due mainly to lack of diversity. Cash crops are more commonly grown in the less hilly areas. Crop rotation and systematic fertilization are more commonly practiced in the smoother sections.

As a whole general livestock farming predominates in the County. Dairying is the chief industry supplemented by poultry, sheep, or hog raising and more cash crops. In the township of Ettrick where the tax delinquency is high the loss of tobacco, due to low price, as a chief cash crop has undoubtedly played a part in the taxation problem of the township. The production of hybrid seed corn and soybeans are new cash crops in parts of the county, especially in parts of the towns of Caledonia, Trempealeau and Gale.

The total milk cows per farm in the county is 11.7 cows and the crop acre average per cow is 5.5 and total acres per cow is 12.9%. It is significant to note that townships having the smallest crop acreage per milk cow in most instances have the largest tax delinquency figure per farm. Townships having fewer milk cows and more crop acres per cow seem to be better off than when the opposite is true. Examples of such is the town of Caledonia with 9.6 milk cows per farm compared to the county average of 11.7. Averaging 8.29 crop acres per cow to the county average of 5.5 and 17.6 total acres per milk cow to the county average of 12.9 acres. The town of Ettrick for example has more than 12 cows per farm as compared to the county average of 11.7 and 4.08% crop acres per milk cow compared to the county average of 5.5 acres and Caledonia's average of 8.29 acres. Town of Ettrick has 11.3 total acres per milk cow compared with the county average of 12.9 and Caledonia's average of 17.6 acres.

SYSTEM OF FARMING

At present practically all crops grown are fed to livestock. The principal source of income in the county is from livestock and livestock products. Supplementary incomes are derived from the sale of cash crops, vegetables for canning, poultry and eggs, hybrid corn production, tobacco, grass seeds and soybeans. A limited amount is secured from forest production, as firewood and tie material.

Ground work is accomplished with tractors and two or more four horse implements. Fall plowing has been generally practiced. Corn in most cases is checked and little regard has been given to contour farming. Field areas generally follow rectangular land boundaries, subdivisions and streams.

The average acreage per farm in the county is 147.3 acres of which 61.8 acres is used as cropland. The percentage of crop acres per farm is 42.5. The township of Hale has the highest percent of crop acres per farm. Also, high in crop acres per farm are the towns of Caledonia, Lincoln, and Sumner. The townships of Dodge, Ettrick and Galesville are below the county average in crop acres per farm. The percentage of intertilled crop varies in the county according to the topography. The town of Caledonia has 44.1% of its cropland in intertilled crops. The town of Gale 25.5%, the town of Trempealeau 34.3%. These townships have considerable level land. The county average for intertilled crops is 19.5 acres per farm. The town of Dodge has a low percentage of its land in intertilled crops. Other towns low in intertilled crops are Arcadia and Chimney Rock. In the county 32.9% of the cropland is devoted to the raising of oats, 3.5% to barley, 6.6% to wheat, peas, winter wheat and rye. All grains total 42.8% of the total cropland. The acreage of timothy and clover hay is 28.4% of the total cropland figure. It is difficult to say what percentage of this is in good clover hay. The percentage of alfalfa totals 7.7% and seed clover, sudan grass, millet and soy beans for hay 2.06%. The percentage of cropland raising tame hay is 37.7%.

The gross income per acre of farm land is $13.00 of which 89.9% is obtained from livestock and its products. This percentage is proportioned as follows: milk 45.6%, cattle and calves 9.4%, hogs 16.8%, poultry and eggs 16.4%, and sheep, wool, and honey 1.7%. The remaining 10.1% is derived from crops which is proportioned as follows: potatoes 1.8%, fruits .4%, canning peas .1%, Tobacco.1%, grain 1.4%, seeds and grasses 3.3%. The total farm income for the county is $6,033,518.00 of which $5,411,804.00 is from livestock and livestock products. Crop income totals $621,713.00. Gross income per farm is $1,885.00 which ranks the county 29th in the state. The county ranks 24th in regard to total income.

MAJOR PROBLEMS

The committee feels that the major agricultural problems facing the county are as follows:

1. Soils and soil erosion.
2. Taxation and mortgage indebtedness.
3. Efficiency of crop and livestock production.
4. Tenancy.

The following briefly describes each problem. Recommendations regarding each will appear in the summary.

SOILS AND SOIL EROSION

Local committees and county committee were practically unanimous in the opinion that conserving the county's soil was the major problem on land use.

Below is the result of a study made in the Beaver Creek Soil Conservation District concerning degree of erosion. These figures compare with those of the Chimney Rock Demonstration Area and could be applied to the county.

The following table indicates that much top soil has been lost. The original average depth of top soil in the county was shallow, being 7 to 10 inches deep. On over 50 per cent of the farms in the county, over one-half the top soil has been washed away. Many fields already have all the top soil removed. In other instances fertile valley fields built up by soil from hillsides are now being covered with subsoil washing down. At first it was a benefit, now it is not.

Estimated Degrees of Erosion by Per Cent of Deposition and Top Soil Lost

Per Cent of Deposition and Top Soil Removed	For District as A Whole		Northern Part Steep Region		Southern Part Less Steep Region	
	Acres	Per Cent	Acres	Per Cent	Acres	Per Cent
Deposition	2593	8.4	676	4.1	1917	13.5
0 - 25% removed	10589	34.3	6610	39.5	3979	28.0
25- 50% removed	8285	26.7	3958	23.7	4287	30.4
50-75% removed	6387	20.7	4034	24.2	2353	16.6
75-100% removed	3059	9.9	1425	8.5	1633	11.5
TOTAL	30872	100.0	16703	100.0	14169	100.0

There are cases where farms have been eroded to such an extent that they have been abandoned. If the farm is offered for rent, nobody could afford to rent it. The most productive fields on such farms are being rented by neighboring farmers along with their own farming units.

Erosion has been going on in the county for years, however, the drought period in 1933-34 hastened it considerably. Sheet erosion of the past broke out into small gullies, soon they became larger and could not be crossed with machinery and fields had to be worked "between ditches". Few farmers can make the claim "a family automobile can be driven over every piece of ground on my farm".

Our soils, because of their origin need liming at the rate of 2 - 3 tons per acre. Few of the thousands of tests made the last few years indicate that applications of phosphorus and potash were not necessary. The majority of samples tested run below that necessary for ordinary plant growth.

TAXATION AND MORTGAGE INDEBTEDNESS

Tax delinquency has been a major problem concerning the county and the delinquency figure has increased considerably during recent years. However, it has been on a downward trend since 1935. In 1915 the total tax delinquency for the county was $938.42, in 1930 it was $39,118.50, in 1935 $75,029.94, in 1937 $59,759.10. Generally the delinquency has been reduced, however, in some townships the figure for that township has continued to increase. Such is true in the towns of Caledonia, Lincoln and Sumner, however, in the case of the town of Caledonia their total tax delinquency increased only slightly. The figure in 1935 was $397.95 and in 1937 it was $426.16. As stated, the general trend of tax delinquency is downward. In cases of Towns having an increase the increase is slight.

The tax delinquency figures for townships seems to tie up fairly well with the small acreage of crop acres per cow in this manner. Townships having a large number of cows per farm and also a small crop acreage per cow are high townships in total tax delinquency. Townships having more crop acres per cow and fewer cows, have less tax delinquency. This is true in the town of Caledonia, however, it must also be considered that this township has a greater diversity in livestock and crops. Its level section is able to produce more intertilled crops, mainly corn, much of which is used as a cash crop and also for the feeding of hogs and steers. A survey is to be made in regard to assessed valuation of land in the township of Ettrick to compare with Caledonia. According to soil productivity, assessment per acre should be lower. This survey will include all townships * (see table on following page).

TAX DELINQUENCY IN TREMPEALEAU COUNTY

BY TOWNS

PER CENT OF TOTAL ACRES DELINQUENT Dec. 31, 1933 *

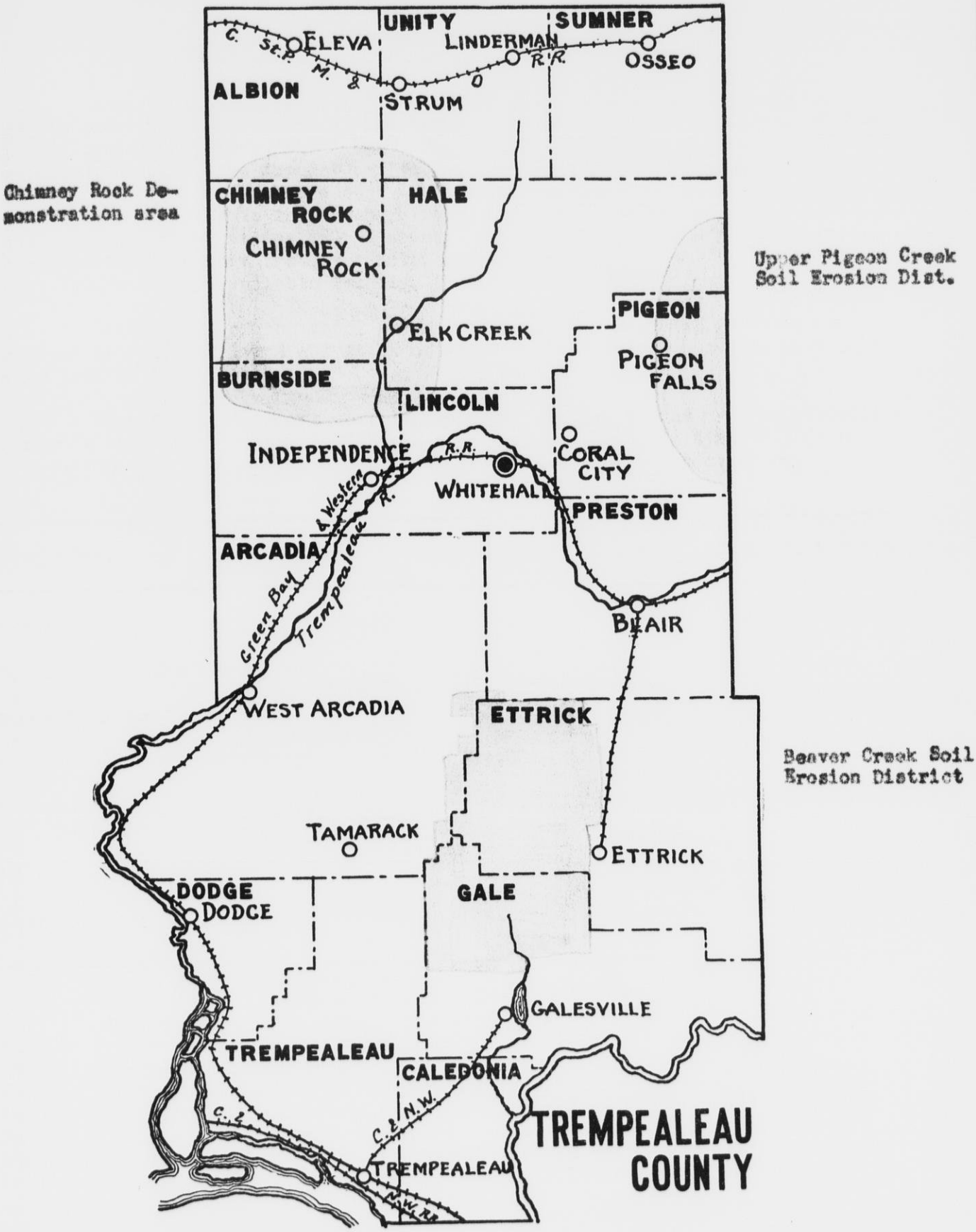
Towns	Delinquent 5 years	Delinquent 4 years	Delinquent 3 years	Delinquent 2 years	Delinquent 1 year	Total Delinquent 1 or more years
Albion	-	0.9	0.2	2.7	11.9	15.7
Arcadia	-	-	0.2	0.6	6.7	7.5
Burnside	-	-	-	1.1	5.8	6.9
Caledonia	-	-	-	-	3.8	3.8
Chimney Rock	-	0.3	1.0	1.9	6.8	10.0
Dodge	-	-	2.3	1.6	6.4	10.3
Ettrick	-	0.5	0.8	1.6	10.6	13.5
Gale	-	0.1	1.1	1.9	9.2	12.3
Hale	-	-	0.6	3.4	6.0	10.0
Lincoln	-	-	0.1	1.4	6.9	8.4
Pigeon	-	0.1	1.3	1.8	4.6	7.8
Preston	-	0.2	0.7	4.1	9.3	14.3
Sumner	0.9	0.2	0.8	4.8	18.6	25.3
Trempealeau	0.4	-	0.1	2.9	19.3	22.7
Unity	-	0.6	3.9	3.0	9.1	16.6
County Total	0.1	0.2	0.7	2.1	9.1	12.2

* Based on acreage on 1932 tax roll and levies of 1928 - 1932.

Mortgage indebtedness is high in the county. In addition to existing local bank and private individual loans, 713 Federal Land Bank loans have been made in the county. A detailed study in the Beaver Creek Soil Conservation District indicated 56 per cent of the farms were mortgaged and the average mortgage debt per acre was about $33.00 or 50% of the acre value. The state census of 1930 indicates 55.9 per cent totaling $5,908,300.00. This figure represents 50 per cent of the acre value. The average mortgage per farm is $4,831 or $33.02 per acre. The interest rate averages 5.7 per cent.

Farmers at the present time are unable to pay on the principle and many cannot take care of the interest. Federal Land Bank foreclosures have increased the past year. Most mortgages are for a figure in excess of present farm value. A common practice now is to determine sale value on the basis of soil erosion taken place on the farm. Again soil erosion is an important factor.

LOCATION OF SOIL EROSION DISTRICTS AND S.C.S. DEMONSTRATION AREA



Chimney Rock Demonstration area

Upper Pigeon Creek Soil Erosion Dist.

Beaver Creek Soil Erosion District

EFFICIENCY OF CROP & LIVESTOCK PRODUCTIONS

Here again the soil fertility and erosion problem play an important part, in reducing crop yields, although the labor item remains constant. Fields that are eroded have increased labor. The acreage of alfalfa has been gradually increasing, however, the drought period and subsequent high priced seed, coupled with the need for lime has held down the rate of increases. AAA benefit payments have helped materially in increasing alfalfa and getting back our clover acreages. Fertilization demonstrations in the county have proved that it pays. Farmers generally recognize that fact, yet however, because farm prices are low and credit is not easily available locally, fertilization is not a common practice.

Since 89.9% of the total gross income is derived from livestock and livestock products, a large reduction of gross and net income per farm obviously traces back to livestock.

Significant data was compiled in 1937 relative to the average production of cows in the county compared with the state average. In addition this average was compared with cow testing association (D.H.I.A.) production averages.

County Average Number of Cows - 39,000	State	County	State D.H.I.A.	County D.H.I.A.
Average lbs. B.F. per year (1934-35-36)	200	185.4	313.0	300
Average lbs. milk per cow (3 yr. ave.)	5,500	5066	8037	6900
Average Butter Fat Test	3.61	3.66		
State Value B.F. per cow @ 37 ¢	$74.00	$68.00	$115.81	$103.60
Cost of feed per cow, Sept. 1936 to September 1937, was $78.41				
Profit per cow			$ 37.40	$ 25.19
Loss per cow	$ 4.41	$ 9.82		

A practice all too common in sections of the county is the loaning of bulls to farmers by stock dealers. Bulls of questionable breeding, especially production background, are brought to a farmer by the dealer free of charge. When the farmer is through with the bull the dealer markets him and profits by the increased weight. Another bull is taken to replace the one picked up. One dealer in the county has over 100 such bulls in service. This situation came about during the depression and undoubtedly its convenience to the farmer is an inducement. Many are paying for it now with lower production of offspring.

In some localities farmers have been crossing for beef by the use of a beef bull on dairy cows. Poor type and quality beef bulls were used and poor beef resulted. Some farmers have raised heifers from such crossing and continue to have them in their herds. They really have neither good dairy or beef cows. They use them for dairy purposes and of course, their milk production is not satisfactory if they depend on it as their main income. It is recommended that increased effort be made to overcome the rented bull and beef crossing practices as they now exist.

TOTAL LAND, CROP ACRES AND LIVESTOCK NUMBERS

BY TOWNS, TREMPEALEAU COUNTY*

Average for 3 years, 1936-38

Towns	Total Land Area	Land in Farms	Total Crop Acres	Total number of milk cows	Total Number of all Cattle	Total Number of Sows	Total Number of Laying Hens and Pullets
Albion	23,073	20,117	8,820	1,642	2,372	211	12,182
Arcadia	77,964	74,689	30,146	5,466	8,305	1,040	37,865
Burnside	24,976	22,374	10,203	1,871	2,924	325	16,471
Caledonia	13,819	11,825	5,575	674	1,186	173	5,243
Chimney Rock	23,344	21,861	8,037	1,773	2,820	196	17,138
Dodge	13,845	13,165	4,236	892	1,459	196	3,819
Ettrick	50,232	47,841	17,307	4,245	6,196	416	42,092
Gale	39,684	33,926	13,166	3,320	5,164	439	23,247
Hale	44,974	43,133	21,026	3,228	5,136	321	38,231
Lincoln	17,600	16,444	7,740	1,304	1,914	197	14,253
Pigeon	25,148	24,622	10,543	2,109	3,051	125	26,525
Preston	38,954	37,213	14,856	3,247	5,050	200	45,398
Sumner	22,807	21,595	10,128	1,490	2,095	115	11,737
Trempealeau	35,902	28,674	12,480	1,913	3,414	397	11,100
Unity	23,048	19,895	9,111	1,682	2,340	84	11,364
Total	475,370	437,374	183,374	34,856	53,426	4,435	316,665

*Compiled from Wisconsin Crop and Livestock Reporting Service Data

FARM TENANCY

The state figure for farm tenancy for Trempealeau County is 19.6%. This figure, however, does not check with our report taken from AAA records, which we consider more accurate in that they are more up-to-date. The total per cent of tenancy in the county according to AAA records is 33%.

Many farms are rented on a cash basis. In such cases the farmer pays the owner a specified amount each year, such as $300.00 or $250.00, etc. In some cases the owner furnishes grass seed. Leases are generally for only one year. Cash rented farms usually are not as well farmed because the renter never knows how long he will be on the farm and will not make improvements to the soil and buildings.

The share-rent system is somewhat flexible. Under one common arrangement the owner furnishes the farm and the grass seed, and the productive livestock; the owner receives 50 per cent of the gross income and the renter 50 per cent. In another arrangement the owner furnishes part of the livestock and receives a larger proportion of the farm income. The exact agreement in share renting depends partly on the amount of capital the renter has available for operating the farm.

A large per cent of the tenancy in the county is within the family, such as the son renting from the father, or father-in-law, or some other relative. In other words, there still is a tie-up to the farm, other than purely financial. The danger lies in the fact that when the old folks and other relatives lose possession of their farms, either through death or foreclosure, that particular relative on the farm now may not be there in the future, and undoubtedly, the farm will deteriorate through loss of land value caused by water erosion.

S U M M A R Y

The following is a summarization of recommendations made by the county committee for the betterment of agriculture in the county. Again we wish to make known that these recommendations are not final and that they are subject to changes and additions. We do wish to emphasize that our findings and recommendations should be of material assistance in aiding programs affecting agriculture in the county.

I. Changes in Land Use and Cultural Practices considered Necessary to Control Soil Erosion and Maintain and Improve Soil Fertility.

A. Changes in Land Use.

Seventy-five years of agricultural activities in the county. Under farming methods practices in the past have resulted in tremendous losses of top soil and soil productivity because of erosion. At least 50% of the land under cultivation has lost more than half of its top soil and 26% has lost from 25% to 50%. Land not in cultivation at present is either permanent blue grass pasture or woodland, all of which is unsuitable for the growing of crops because of topography or loss of productivity.

1. Permanent Cover on Steep and/or Eroded Land.

All badly eroded areas that are now being cropped should be seeded to permanent vegetation. These areas should be used for permanent hay or pasture, and if this is impossible because of the condition of the soil, they should be developed for woodland-wildlife areas. Steep slopes now being used as wooded pasture should be managed either as woodlot areas for the production of timber products or as permanent blue grass pastures. The land use on these slopes should be decided on the basis of the erosion condition and economic needs of the farm.

2. Exclusion of Livestock from Land Devoted Primarily to the Production of Timber Products.

It is recommended that all existing woodland areas and new plantations be protected from grazing and fires. These should be tax free.

3. Erosion-resisting Crops Instead of Clean-Tilled crops on Highly Erodable Lands.

On steep highly erodable lands, that for economic reasons must be used for cropland, a greater use of erosion-resisting (grass-legume) crops and semi-erosion resisting small grain crops are recommended to replace clean tilled crops.

4. Other Land.

It is recommended that odd corners and isolated areas that cannot be utilized for crop land, permanent hay, or pasture be developed as woodland and/or wildlife areas.

B. Changes in Cultural Practices.

1. Vegetative Control

a. Rotations.

The acreage of legume hay crops is high and the acreage of clean tilled crops low. Rotations of all crops, however, in general have been planned without regard to contour cultivation or strip cropping and the high soil losses are largely due to this fact. It is recommended that rotations be planned to increase the use of legume-grass mixtures in long rotations on all cultivated land, and that these rotations be supplemented with a liming and fertilization program and such mechanical practices as are applicable. The addition of timothy in the seeding of legume crops will insure a better erosion resisting vegetative cover.

b. The Use of Extra Seasonal Cover Crops.

The practice of using cover crops for green manure and to furnish vegetative protection to crop land during the winter and early spring should be encouraged.

c. Liming and Fertilizing.

The application of manure is recognized as an important practice in the maintenance of soil fertility. At present it is used largely for cultivated crops with a small amount being used as a top dressing on new hay seeding. More effective use of manure for all fields is recommended.

Most of the land in the county requires lime and fertilizers. The more progressive farmers have found liming and fertilizing essential to insure good results from alfalfa and clover seedings.

d. Strip Cropping.

Strip cropping is a new practice to be used in the county. A number of farmers in the county area are now practicing strip cropping and many have been on tours to the Independence and Coon Valley Project Areas where this erosion control measure is used on every farm cooperating with the Soil Conservation Service.

It is recommended that strip cropping be used in the county as a major erosion control measure.

e. Grass Waterways.

Sod has been used to protect waterways by some farmers for many years. This practice is not general, however, and as a result many drainageways are presenting a serious gully problem. The importance of grass waterways is recognized and their use is recommended in all drainageways.

f. Pasture Management.

Pastures in the county are very much in need of management. Most of them are of poor quality and furnish little forage, especially during the middle of the grazing period. With proper management methods and renovation, these pastures can be improved to give adequate forage and erosion protection. The practice of turning cattle out on pasture too early in the spring is too common and is not recommended. Such treatments as liming, fertilizing, re-seeding, grazing management, control of weeds and brush, and the application of suitable mechanical means to conserve soil and water are necessary in the county to improve the existing pastures. Pasture renovation demonstrations conducted during 1937 indicated that renovation, which included fertilization and seeding with legumes, materially increased the stand and duration of the pasturing period.

g. Woodland Management.

With a few exceptions the farmers have not recognized the value of these areas from the standpoint of erosion control or as a means of profit from timber products, and at present less than 10% of all wooded areas are protected from grazing. This has resulted in pastures of poor quality, deterioration of the timber, or in some cases complete elimination and damage to lower lying cultivated fields due to excessive run-off of rainfall causing loss of soil or deposition.

With the improvement of pasture land, including areas now classed as wooded pasture that are suitable for grazing and establishment of new pastures, the wooded areas on the steep slope can be fenced out and managed to give the maximum timber production which will also give protection from erosion.

h. Wildlife Management.

The grazing of woodlot areas, intensive cultivation, burning of fence rows and nesting places, and uncontrolled hunting has resulted in almost complete elimination of wildlife. It is recommended that a program of game management be established and maintained to correct these practices.

2. Mechanical Control.

a. Contour Cultivation.

Contour cultivation has not generally been used in the county, but is a practice that should be more widely used on limited areas.

b. Terracing.

Terracing is necessary on some of the more gentle slopes in the county. Their use will naturally be limited to where cheaper methods are not adequate and where outlets for terraces are available or can be provided at reasonable cost.

c. Contour Furrowing.

Contour furrowing has not been used in this area but should in some cases be used on pastured fields suitable for furrowing to avoid excessive run-off damage to lower lying land.

d. Gully Control Structures.

Gully control structures of a permanent or semi-permanent type will be necessary in some of the more critical gullies of the county where vegetative control is impossible.

e. Erosion Affecting Public Roads.

Roadside ditches and many of the cut sections of all roads in the county are becoming badly eroded and in some cases are affecting adjoining farm lands. These areas should be considered in making erosion control plans for the county.

f. Streambank Protection.

Serious streambank erosion is taking place along Beaver Creek and in the lower part of French Creek, and other creeks and rivers in the county. It is recommended that plans be developed for protection of land and buildings endangered by stream bank erosion.

C. Soil Conservation District.

1. The county already has approximately 40,000 acres in organized soil conservation districts. One district is already in operation, being the first in the state to do so. This acreage is very small compared to total county acreage. In addition to districts, a Soil Conservation Service Demonstration Area, comprising 30,000 acres, located largely in the township of Chimney Rock, has been in operation for a number of years. This area has been valuable to the

county from the standpoint of demonstrating by tours, etc. In addition to the Chimney Rock area, demonstration work done by CCC Camps has been conducted in the Dodge, Independence, Pigeon Falls and the eastern part of the town of Gale areas.

2. The committee recommends that the entire county be included as a soil conservation district. It is felt that more wide spread use of erosion control practices would result from such a procedure.

D. Education.

1. The committee urges that conservation of soil be taught in the rural schools. It should be by law, however, text material provided by the state has been very inadequate. Therefore, the county superintendent of schools, the Soil Conservation Service and the county agent are cooperating in devising a satisfactory study outline. Our special school trials have been very successful and a complete outline for all schools will be drafted for the coming school term.

2. Soil losses by erosion are slow, deadly and difficult to replace. Since they cannot be measured by a "money out the pocket" term as evident in a case of loss of a horse which required immediate replacement, farmers do not fully realize their soil losses each year. As a result the subject is difficult to present at meetings, and meetings were not well represented. It became apparent that the use of visual education through movies and slides would aid in securing greater attendance at meetings. Farmers could see what has happened and what they could do to combat erosion. The county board authorized the purchase of a movie projector.

It was found that films on erosion control prepared by the U.S.D.A., while fine, did not fit our local conditions. Therefore, with funds provided by the banks of the county, a local two reel film, in color, is being made. Local people, conditions, control structures, methods of cropping, etc., to control erosion will be shown. A sound practice in South Carolina may also be sound in Trempealeau County, but to many farmers the thought arises, "it won't work here". Pictures of people and localities they know, indicating it has worked in Trempealeau County should aid much in solving our erosion control problem.

TAXATION & MORTGAGE INDEBTEDNESS

The total tax delinquency for the county is high, however, it is encouraging to note the figure is being reduced. It is questionable whether this trend will continue this year. Because the tax dead line was extended the thought could be delinquency may rise slightly or remain stationary.

The committee feels that woodland should not be taxed if it is fenced or not pastured. Better farm prices on a more comparable ratio with products farmers sell to what they buy would do much to solve the financial problem.

Mortgage indebtedness in the county is high as noted before. The committee would like to see a complete refinancing plan at lower interest rates. Mortgages are in excess of present value or future value and interest rates are too high. It was asked "why can't we farmers secure some of that 1½% money?" The Federal Land Bank is condemned for the high land value appraisals given on farms in the county. Foreclosures now at a great loss tend to unstablize land valuation. The Federal Land Bank should be a stabilizer of land values.

TENANCY

The county committee feels that the increase in tenancy in the county is serious, in that since we are in an area subject to water erosion, it was felt that tenants did not feel secure, and therefore, are not as apt to take care of their land in such manner as to prevent erosion. In most instances rented farms, especially those on a cash basis, are subject to sale, and the renter usually rents from year to year.

The county is being considered as a tenant purchase county. However, the amount of money available for that program is very small and such a program it is felt will not solve the problem.

High mortgages out of line, with present values prevents many good cash tenants from purchasing the farms they rent.

EFFICIENCY OF CROP AND LIVESTOCK PRODUCTION

Data gathered indicates that the cropping program is generally well diversified. The loss of cash crops such as peas and tobacco to farmers in the more hilly areas where corn raising must be on a small scale, has resulted in loss of income, which normally would have paid the taxes and some interest on indebtedness. The ratio of land in hay, compared to tilled crops cannot be changed a great deal. The percentage of tame hay at the present time is 37.7. Crops such as alfalfa with its high feeding value should have an increased acreage. Liming and fertilization must be carried out on soils to increase efficiency of production.

Livestock diversity is not a general problem, however, in some townships, coulees or valleys, it is. Farmers depending entirely on cows, poultry, hogs, beef or sheep as their main source of income generally are not as well off.

Data secured on the production of our dairy herds indicated much efficiency is needed. Too much labor, and feed is used for poor producing cows. The organization of cow testing associations, securing production backed herd sires, 4-H club members, and Smith-Hughes boys through their organized projects should do much to help the situation. Quality not quantity is needed.

The county committee felt that possibly the cause of more cows per crop acre, as in the case of the township of Ettrick, has been due to the low price of milk and butter fat. Most farmers in the areas where a small percentage of crop acres is available per cow, has been faced with a problem that was not true in past years. Now that they have reduced crop yields it has become necessary for many of them to purchase feeds, with the result -- lowering of net income from their dairy cow. Instead of buying more cows in hopes of increasing production, to offset the low price of butter fat, culling should take place. Net income would probably be as great and more labor available for other enterprises.

FEDERAL PROGRAMS

The committee expressed the opinion that larger benefit payments should be made on soil building practices. Especially for liming, fertilizing, reforesting and erosion control practices. Dairying should be considered as a basic commodity which would put the dairy farmer on a par with the special crop farmers as far as benefit payments are concerned.

The committee expressed a desire to have a coordination of federal agricultural programs within the county if our land use program is to be of value to the county, existing federal agencies such as AAA, Soil Conservation Service, FSA, etc., must have a part in working toward the county objective which is -- better use of our land, and a more stabilized and balanced agriculture within the county. Representatives of these federal agencies meeting with local farmers, and securing their viewpoints on how their particular agency would best meet the needs of their communities, should aid their program and the respective community.

One of three highest *
One of three lowest **

TOWNSHIP	:TOTAL ACRES :PER FARM	:CROP ACRES :PER FARM	:% OF CROP :ACRES/FARM	:NO.OF MILK :COWS/FARM	:CROP ACRES :/ MILK COW	:TOTAL ACRES :/ MILK COW
Caledonia	168.9*	79.6*	48*	9.6**	8.29*	17.6*
Burnside	146.2	66.7	46	12.2	5.47	12.0
Chimney Rock	122.8**	45.2**	37**	10.0**	4.52**	12.3
Albion	125.7**	55.1	44	10.3	5.35	12.2
Pigeon	130.3	55.8	43	11.2	4.98	11.6
Arcadia	178.3*	71.9	40	13.0	5.53	13.7
Unity	145.2	66.5	46	12.3	5.4	11.8
Gale	139.6	54.2	39	13.7*	3.96**	10.2**
Trempealeau	147.0	64.0	44	9.8**	6.53*	15.0*
Lincoln	161.2	75.9*	47*	12.8*	5.92	12.6
Preston	130.1**	51.9**	40	11.4	4.55**	11.4**
Hale	145.7	71.1	49*	10.9	6.52	13.4
Sumner	161.2	75.6*	47*	11.1	6.81*	14.5
Ettrick	143.2	51.8**	36**	12.7*	4.08**	11.3**
Lodge	180.3*	58.0	32**	12.2	4.75	14.8*
Average	147.3	61.8	42.5	11.7	5.5	12.9

ALL CATTLE: PER FARM	CROP ACRES/ : ALL CATTLE	TOTAL ACRES/ : ALL CATTLE	SOWS PER : FARM	LAYING CHI- : CKENS/FARM	% OF : TENANCY	% OF : CORN	POTATOES & TOBACCO
16.9	4.71*	9.99*	2.5*	74.9**	37	43.4*	.7
19.1	3.44	7.66**	2.1	107.7	23**	16.7	.7
15.3**	2.95	8.03	1.1	96.3	42*	12.6**	1.0*
14.8**	3.72	8.49	1.3	76.1	36	18.1	0.6
16.1	3.47	8.09	.7**	140.3*	41*	15.4	0.9*
19.8*	3.63	9.0*	2.5*	90.4	29**	15.2**	.7
17.1	3.88	8.49	.6**	82.9	43*	16.4	.2**
21.3*	2.54**	6.55**	1.8	95.7	34	25.0*	.5**
17.5	3.71	8.4	2.0	56.9**	38	33.6*	.7
18.8	4.04*	8.57	1.9	129.9*	32	21.1	.7
17.7	2.93	7.35**	.7**	158.7*	33	16.6	.7
17.4	4.03	8.37	1.1	129.2	29**	11.7**	.5**
15.6**	4.85*	10.33	.9	87.6	36	20.4	.6
18.6	2.79**	7.69	1.2	126.0	31	17.9	.6
20.0*	2.9**	9.0*	2.7*	52.3**	18**	18.7	3.2*
18.0	3.56	8.4	1.5	106.7	33	18.8	.76

INTERTILLED CROPS	OATS	BARLEY	WHEAT, RYE PEAS, BUCKWHEAT	ALL GRAINS & PEAS	CLOVER & TIMOTHY	ALFALFA	SOY BEANS, MILLET SWT. CLOVER, SUDAN
44.1*	22.1**	.7**	7.2	30.0**	4.6**	9.5	11.8*
17.4	36.0	4.7	6.2	46.9*	31.1	4.1**	.5**
13.6**	34.1	2.8	3.7**	40.6	40.7*	4.6	.5**
18.7	36.3*	5.1	5.1	44.1	30.8	5.8	.6
16.3	34.6	4.5	5.8	42.2	33.7*	6.6	1.2
15.9	34.7	5.5*	6.4	46.6*	27.5	9.5	.5**
16.6	38.0*	2.6	6.7	45.7	34.4*	2.5**	.8
25.5*	24.6**	6.5*	6.2	37.3**	24.2	11.1*	1.9
34.3*	23.6**	1.9	9.7*	35.2**	14.4**	11.8*	4.8*
21.8	30.0	4.5	9.7*	44.2	24.2	8.3	1.5
17.3	32.7	1.8**	4.6	41.2	32.1	8.0	1.4
12.2**	39.9*	2.7	6.8	49.4*	31.5	6.3	.6
21.0	33.4	1.1**	10.0*	44.5	27.7	3.8	3.0*
18.5	32.2	2.2	4.3**	38.7	32.0	9.6*	1.2
21.9	28.7	6.6*	6.2	43.5	25.0**	9.0	0.6
19.5	32.9	3.5	6.6	42.8	28.4	7.7	2.06

TOTAL TAME HAY	% FARMS WITH FARM LOANS	TAX DELIN PER FARM	% QUESTIONABLE LAND	UNSUITED FOR FARMS	NOT IN FARMS
25.9**	17.1**	6.08**	4.7		23.5*
35.7	24.8**	10.56**	6.6	2.8	
45.8*	15.2**	11.27**	7.6	10.9*	
37.2	21.2	13.42	12.5		
41.5*	18.0	13.83	7.7		2.0
37.5	22.2	14.60	29.6*		
37.7	28.4	15.52	13.9	2.8	2.0
37.2	21.8	19.41	46.7*	10.3*	
30.5**	13.9**	19.75	4.0		13.1*
34.0**	22.5	24.65	14.2		
41.5*	30.0*	25.38	2.5**	1.7	
38.4	24.3	26.72			
34.5	23.9	28.15*	1.4**	2.8	5.6*
42.8*	35.0*	30.0*	16.1	12.9*	
34.6	34.2*	35.80*	41.6*	5.9	
37.7	23.5	19.14	13.2	3.2	3.0

HIGH :
LOW : SUMMARY

Total acres, crop acres, % of crop acres, crop acres per milk cow and all
H. cattle, hogs, corn, intertilled crops, sweet clover, etc., Land not in farms.
L. Milk cows, tax delin., oats, barley, grains, clover & timothy, tame hay & farm loans.

H. Total grains.
L. Total acres per head of cattle, tax delin., % of tenancy, alfalfa, swt. clover, etc
farms.
H. Farm tenancy, potatoes & tobacco, clover & timothy, tame hay, land unsuited to/
L. Tax delin., milk cows, total acres, crop acres, % crop acres, crop acres per milk
/cow & all cattle, corn, etc.
H. Oats.
L. Cattle and poultry.

H. Poultry, farm tenancy, potatoes & tobacco, clover & timothy, tame hay.
L. Total acres, hogs.

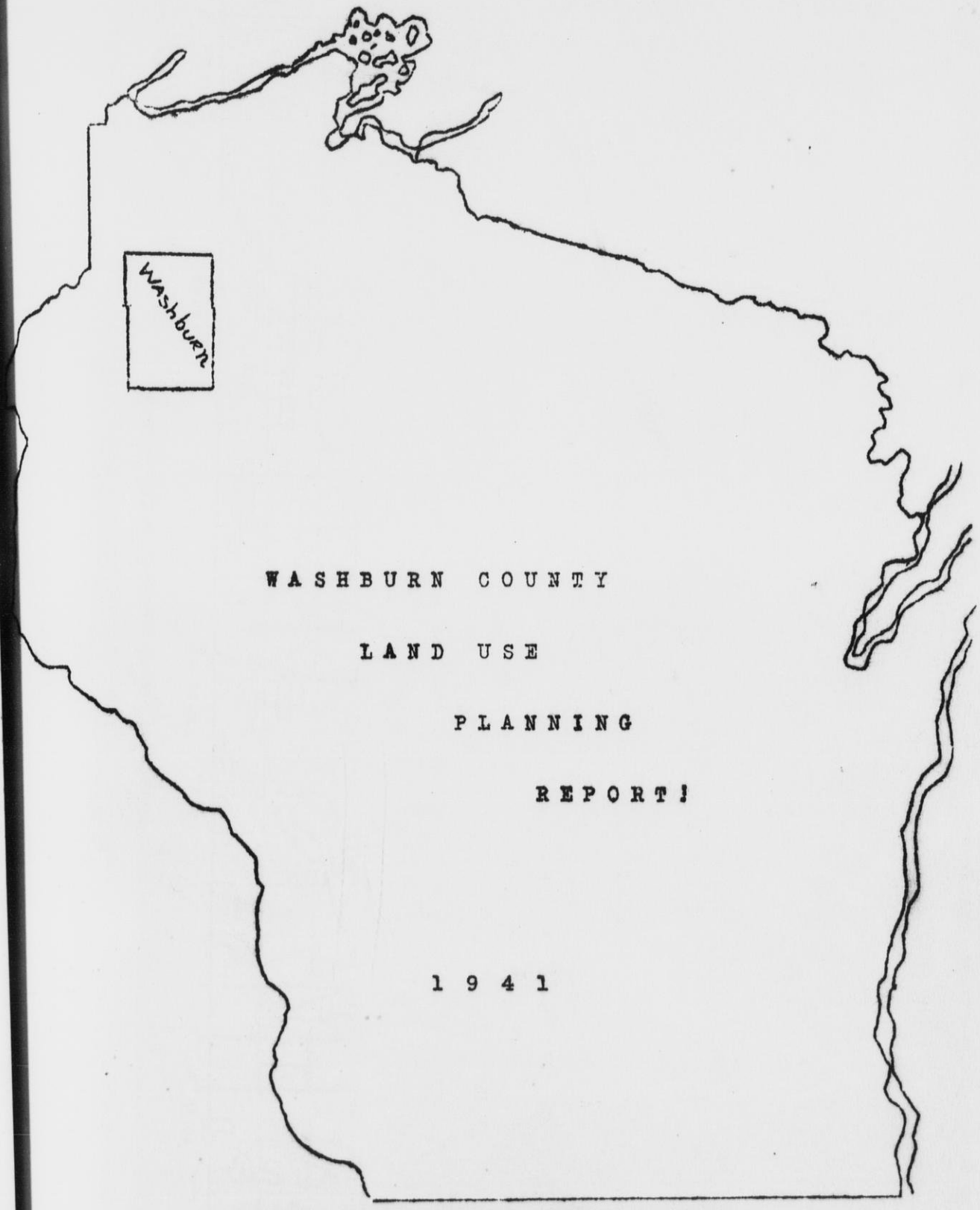
H. Total acres/farm & all cattle, cattle, hogs, barley, total grains & peas,
% land questionable for farming.
L. Farm tenancy, corn, intertilled crops & sweet clover, soy beans, etc.
H. Farm tenancy, oats, clover & timothy.
L. Hogs, potatoes & tobacco, alfalfa.

H. Milk cows, all cattle, corn, intertilled crops, barley, alfalfa, questionable
land, land unsuited to farming.
L. Crop acres & Tot. acres/milk cow & all cattle, potatoes & tobacco, oats, all
H. Crop acres & Tot. acres/milk cow, corn, /grains, clover and timothy.
intertilled crops, wheat, rye, etc. alfalfa, sweet clover, unfarmed land.
L. Milk cows/farm, poultry, oats, total grains, hay, loans.
H. Crop acres, % crop acres, milk cows crop acres per all cattle, poultry.
L. Clover and timothy, tame hay.

H. Poultry, tame hay, farm loans.
L. Total acres, crop acres, total acres per milk cow and all cattle, hogs,
barley, wheat and rye, etc. Questionable land.
H. % of crop acres per farm, oats, total grains.
L. Farm tenancy, corn, potatoes & tobacco, intertilled crops, questionable land.

H. Crop acres, % crop acres, crop acres/milk cow and all cattle, wheat and rye,
etc., sweet clover, unfarmed land.
L. Cattle/farm, barley, alfalfa, % land questionable for farming.
H. Milk cows, tax del., alfalfa, tame hay, farm loans, unsuited land.
L. Crop acres, % of crop acres per farm, crop acres and total acres per milk
cow, crop acres per cattle, wheat and rye, etc.
H. Total acres, total acres per milk cow and all cattle, cattle, hogs, potatoes
and tobacco, barley, farm loans, tax delin., questionable land.
L. % of crop acres/farm, crop acres/all cattle, poultry, farm tenancy.

George S. Wehrwein W



WASHBURN COUNTY

LAND USE

PLANNING

REPORT!

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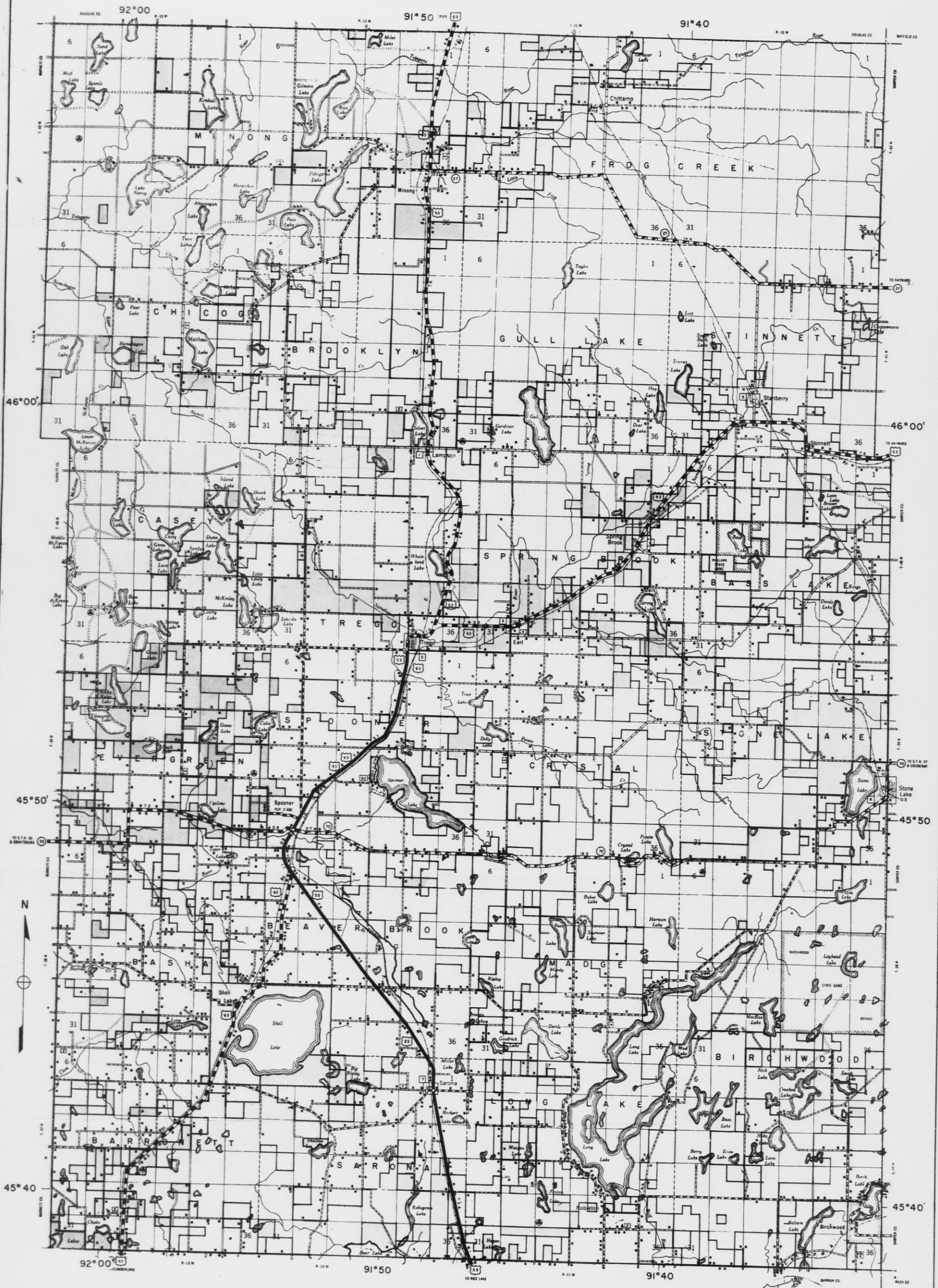
WASHBURN COUNTY LAND USE PLANNING COMMITTEE
Spooner, Wisconsin
June - 1941

LAND USE CLASSIFICATION

WASHBURN COUNTY, WISCONSIN



ROAD TYPES

- UNIMPROVED ROAD
- GRADED AND DRAINED EARTH
- SOIL SURFACED ROAD
- METAL SURFACED ROAD
- BITUMINOUS SURFACED ROAD (LOW)
- PAVED ROAD

SCALE: MILES

1 0 1 2

WASHBURN COUNTY

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS, U.S.D.A.

TABLE OF CONTENTS

I.	FOREWORD	1
II.	ORGANIZATION AND PROCEDURE	2, 3, 4, 5, 6, 7
III.	DESCRIPTION OF COUNTY.	7, 8, 9, 10
IV.	ORGANIZATIONS AND PROBLEMS	11, 18
V.	GRUBSTAKE PLAN IN WASHBURN COUNTY. . . .	18, 19, 20, 21
VI.	PRESENT LAND USE	22
VII.	SUMMARY SHEET.	23
VIII.	RECOMMENDATION FOR LAND USE AREA	24, 27
IX.	RECOMMENDATION OF SPOONER BRANCH STATION.	27
X.	MAJOR PROBLEMS OF COUNTY	29
XI.	RECOMMENDATIONS OF COUNTY.	30, 35

This intensive land use planning report is the final product of a year's work by county and community committees in Washburn County. It represents the judgment of more than one hundred public spirited farmers and others interested in the future use of Washburn County. These people realize that this report is not in any sense final or complete but feel that their suggestions and recommendations offer an approach to the solution of the problems which exist in the county.

Representatives of federal, state, and local agencies are to be commended for the assistance which they have given in furnishing background material and assisting in the planning work.

S D Eastwold
Chairman, County Planning Committee

W H Dougherty
Secretary, County Planning Committee

Organization and Proceedure

The county agricultural committee met in July, 1940 and voted to approve and sponsor the Land Use Planning Program.

In December, 1940, the agricultural committee met with W. A. Rowlands, Extension Supervisor, L. G. Sorden, State Bureau of Agriculture Representative, and the secretary of the county planning committee. Mr. Sorden and Mr. Rowlands discussed with the committee the proceedure to be followed in the land use planning program. During this meeting the committee selected the county committee which includes the following:

Name	Representing	Occupation
J. D. Eastwold	Chairman Co. Agr'l Committee	
Charles Biver	Agricultural Committee	Farmer
Anton L. Neste	Agricultural Committee	Farmer
F. H. Tripp	Agricultural Committee	Farmer
Irving E. Crowell	County Supt. of Schools	Educator
George Brinkley	County AAA Committeeman	Farmer
Claire Taylor	County AAA Committeeman	Farmer
Gebhardt Gronning	County AAA Committeeman	Farmer
A. J. Osborn	County Welfare Department	Director
Edith Turner	County Nurse	Nurse
Lorna Searles	Farm Security Administration	District Home Supervisor
Sara Peck	Farm Security Administration	Co. Home Supervisor
Edward Rydberg	Farm Security Administration	County Supervisor
Art Gehrmann	Farm Security Administration	County Supervisor
Frank N. Fixmer	Wis. Conservation Dept.	District Forester

Oscar Peterson	Wis. Conservation Dept.	Forest Ranger
Percy Weaver	Wis. Conservation Dept.	Sup't of North West Fisheries.
Ed. Omernick	Conservation Club	Lawyer
Jean Snoyenbos	Vocational Education	Home Economics Teacher
Sherman Weiss	Vocational Education	Agr'l Teacher
Vernon Geiger	Vocational Education	Agr'l Teacher
E. L. Appleman	Banks	Banker
S. G. Swanson	Federal Land Bank	Secretary
B. D. Blakely	Soil Conservation Service	Soil
Al Bibby	Branch Experimental Station	Supervisor
O. S. Soholt	County Clerk Representative	County Clerk
John Oltman	District Attorney Repres.	District Attorney
Lewis Gullickson	Register Deeds Representative	Register of Deeds
Irvin Wolff	Chamber of Commerce Repres.	Businessmen
Carl Kunz	Resorts	Resort Owners
Ed. Eckwright	Cooperative	Buttermaker
Albert Nelson	Farm Organizations	Farmer
Art Rydberg	Farmer Representative	Farmer
J. B. Burke	Farmer Representative	Farmer
Christian Olson	Farmer Representative	Farmer
L. A. Rummel	Farmer Representative	Farmer
Frank Zenaitis	Farmer Representative	Farmer
Peter Helgeland	Farmer Representative	Farmer
E. C. Cable	Farmer Representative	Farmer
Carl Stephan	Farmer Representative	Farmer
Harold Byrkit	Farmer Representative	Farmer

F. O. Shoquist	Farmer Representative	Farmer
R. H. Comstock	Farmer Representative	Farmer
Alfred Neilsen	Farmer Representative	Farmer
Albert Asp	Farmer Representative	Farmer
Wenzel Johnacheck	Farmer Representative	Farmer
Tom Cockson	Farmer Representative	Farmer
John Beardsley	Farmer Representative	Farmer
E. W. Crippen	Farmer Representative	Farmer
Edward Elliott	Farmer Representative	Farmer
Claude Riley	Farmer Representative	Farmer
W. H. Dougherty, (Secretary)	Agricultural Extension	County Agr'l Agent

After the December meeting the secretary with the help of the Agricultural Committee selected the township, or community committees which include town chairman, assessor, and AAA Community Committeemen. The following Committees were selected:

Minong	Frog Creek	Chicog
Art Mautho	Alfred Nielsen	P. O. Klawitter
Olof Nordlof	Arthur Brown	Carl Haupt
Fred Smith	W. A. Grimes	Wesley Baggs
Brooklyn	**Evergreen**	**Casey**
C. E. Casler	R. H. Comstock	Carl Stephan
Lyman Christanan	George Greenfield	Jack Schabell
Harvey Woodliff	Robert Pfundheller	W. O. Heuer
Gull Lake	**Stinnett**	**Springbrook**
Albert Asp	Edward Elliott	A. L. Neste
Roland Buchman	Melvin Kellogg	R. E. Newman
Henry Haddick	Howard J. Knoepker	Ray Riley
Bass Lake	**Spooner**	**Crystal**
Christian Olson	H. C. Hansen	F. O. Shoquist
Robert Bradway	Earl Salquist	Raymond Shoquist
John B. Krenn	Emil Heidtke	Carl Johnson

Trego	Stone Lake	Bashaw
Claude Riley	F. H. Tripp	Charles Biver
George Schultz	Adolph Barnhardt	Ernest Nordin
Otto Schnagl	Asa Metcalf	Victor Mattson
Beaver Brook	**Barronett**	**Sarona**
L. A. Rummell	J. D. Burke	E. W. Crippen
George Peterson	Harold Anderson	George Gebhardt
Howard Jones	Harold N. Peterson	John I. Beardsley
Madge	**Long Lake**	**Birchwood**
Wenzel Johnacheck	Carl Kunz	P. A. Helgeland
George Todd	Ed. Foss	George Amans
John Jesse	Henry Vonderheid	Albert Johnson

At the July meeting the secretary was instructed to prepare the essential background information in the form of charts and maps which the committees would need as a basis for their recommendations. The following individuals and agencies are to be commended for their cooperation in making this information available: Farm Security Administration, Federal Land Bank, County AAA Association, District W.P.A., County Welfare Department, County Superintendent of Schools, Supervisor of Assessments, County Clerk, and the Wisconsin Crop and Livestock Reporting Service.

The following information was prepared and used:

Maps (Scale 1" to the mile)

1. Map showing zoning boundaries, county forest crop land, county owned land, State Commission land, Federal lands, and private owned forest crop land.
2. Map showing owner and tenant-operated farms.
3. Map showing soil types in Washburn County.
4. Map showing location of farms owned by Federal Land Bank, Farm Security Loans, and Federal Land Bank Loans.

5. Map showing school districts, operating schools, and non-operating schools.

Charts (Size 24" x 36")

1. Chart showing total assessed valuation for three years, 1925-1930-1939, by townships.
2. Chart showing total assessed valuation of all townships for fifteen years, 1925 - 1939.
3. Chart showing tax exempt lands by townships.
4. Chart showing part time farming in 1940 by townships.
5. Chart showing sources of gross farm income in Washburn County and Wisconsin.
6. Chart showing percent of crop land by townships.
7. Chart showing percent of crop acreage in various leading crops.
8. Chart showing last ten year trend in acreage of leading crops in Washburn County.
9. Chart showing number and value of cattle in Washburn County, 1939 - 1940.
10. Chart showing trend in numbers of sheep, horses, and hogs, 1930 - 1940
11. Chart showing percentage of farms with various crop allotments.
12. Chart showing AAA payments for the past four years by townships.
13. Chart showing Farm Security loans by townships.
14. Chart showing Farm Security subsistence grants by townships, 1936 - 1940.
15. Chart showing relief costs for the past three years by townships.
16. Chart showing trend in relief costs, Farm Security Subsistence grants, Surplus commodities and W.P.A. certification since 1937.

The first county committee meeting was held in January. This was attended by both county and community committeemen. At this time basic objectives and proceedures of the land use planning program were explained. This meeting provided an opportunity for the committee to analyze and discuss the basic information presented. All community committees were represented at this meeting.

Following this first meeting a complete series of community meetings were held throughout the county. At these meetings the land use planning program was explained, basic objectives discussed, and the background material presented. Following these discussions and presentations each community committee classified the land in that township showing the class to which the land was best suited.

Following this series of meetings another complete round of community meetings were held. At this time the committees presented their recommendations for the best land use.

The final county committee meeting was held in April. During this evening meeting the committee discussed, checked and approved the county land use classification map and the recommendations submitted by the Community Committees.

Description of County

Washburn County is located in the extreme northwestern part of the state of Wisconsin mostly in the drainage of the St. Croix river. It is bounded on the north by Douglas County, on the west by Burnett County, on the south by Barron County and on the east by Sawyer County. It is rectangular in outline with 24 geographical

townships. A jog of from one half to three quarters of a mile occurs on the correction line between townships 40 to 41 north. The county is served by three railroads and by U. S. highways #53 and 63, and State highway #70.

Practically all of Washburn County is in the area of recent drift and its topography has been largely governed by glaciation. In general it is a fairly level to undulating county with hilly areas in the loam soils in the north central and southeastern parts. The Plainfield sands or jack pine plains in the northwestern part are usually quite level. The sandy region in the southwestern part, classified as Vilas sand, is quite rolling and consists of many hills and depressions.

Nearly 40% of the soils of Washburn County are of a sandy nature. The greatest area is in the northwestern section, a jack pine plains region which is part of a great sand plain extending northeasterly into Bayfield County and southwesterly into Polk County. Sands also occur in the west central region, central and eastward along the valley of the Namekagon river and its branches. The loam soils occur mainly in the southern part, north central and northeastern parts. The peat soils occur mainly in the towns of Crystal, Trego, Evergreen, Stinnett, Gull Lake, Brooklyn, and Minong.

The underlying rock in the southerwestern part of the county is Potsdam sandstone. This is covered with a deep mantle of drift and alluvial material. The southeastern part of the county is Pre-Cambrian granite. In the north and northwest the underlying rock is Keweenawan sandstone of a reddish to chocolate brown color. This material has been used extensively for building purposes. This

Kowcenawan sandstone underlies more than 75% of the sandy soils described as Plainfield sand in the northwest district. In many cases, however, the loam soils bear no relation to the underlying rock formation. As extensive formation of trap rock runs in a wide belt from Ashland county, where it is known as the Copper range running from the northeast corner at Washburn County to a little above the southwest corner. This belt is from ten to fifteen miles wide in this county.

As Washburn County is in a region of recent glaciation it has numerous areas in lakes and marshes. The early surveyors who surveyed this county in '54 and '55 noted the largest of these marshes and the townships in which they were seen are now mapped in the soil survey with large areas of peat land. These townships where especially large tamarack marshes were noted by the first surveyors are in the towns of Crystal, Spooner, Evergreen, Stinnett, Gull Lake, Brooklyn, and Frog Creek. The township having the largest area of swamp as mapped by the inventory is now found in Brooklyn and Chicog with 7,384 acres of timbered and open marsh and town of Frog Creek with 12,793 acres. The total area in open marshland and timbered swamp is 56,683 acres, 69% of this is timbered swamp. The following table shows the location of each type of the open and timbered wet lands of the county for every township.

The mean rainfall at Spooner for the growing season is 19.17 inches and for the non-growing season 8.46 making a total mean annual of 27.63 inches. The mean summer temperature for Washburn County is from 65 to 66 degrees and the mean winter temperature for Washburn County from 12 to 13 degrees above zero. The length of the

growing season of about two thirds of the southwestern and western portions if from 110 to 120 days. The northeastern one third has a growing season of from 100 to 110 days. Washburn County lies in an area where the date of the last killing frost may be expected from May 20 to June 1st and the date of the first killing frost in the fall from September 10 to 20.

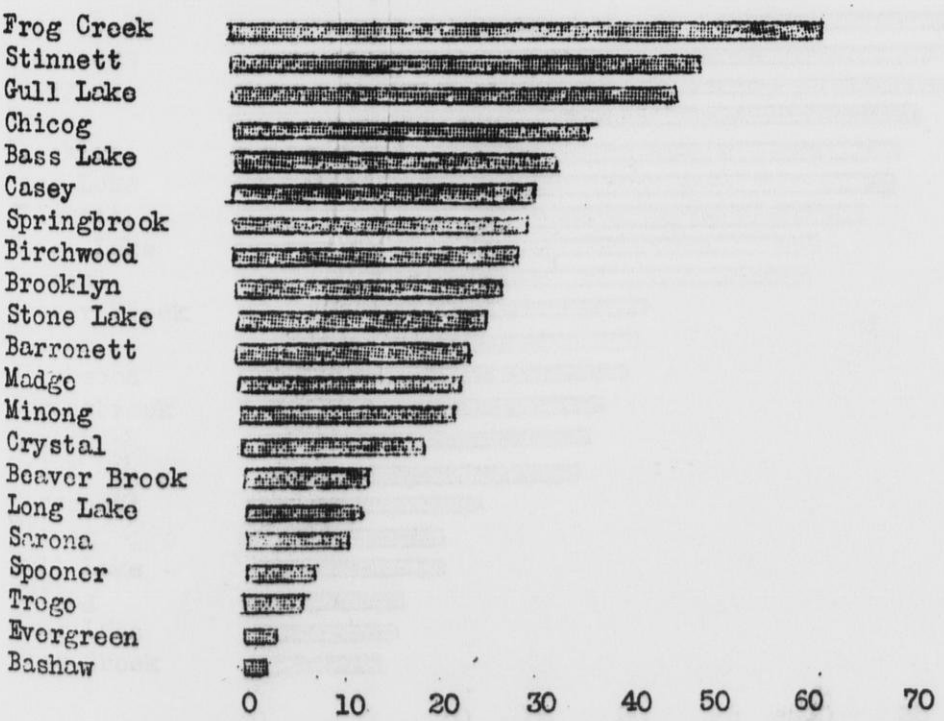
The main rivers of Washburn County are the Namekagon and Totogatic which drain the greater part of the northwestern area. Birch and Cedar creeks, Brill river and Bear creek drain southerly a small area in the southeastern part of the county. These streams flow into the Red Cedar river, a branch of the Chippewa. The Namekagon drains the greater part of the central area and the Totogatic the northern area. The Totogatic flows into the Namekagon in Burnett County to the west. Main streams flowing into the Namekagon from the north are Chippanazee, Hay, Spring, and Stace and from the south Bean Branch and the stream coming from Dilly Lake and Casey Creek.

Some of the more important lakes of Washburn County are Shell, Long, Stone, McKenzie, Nancy, Pokegama and Gull. The most productive lake is probably Shell Lake. This lake originally had an outlet into the Yellow River and is one of the Yellow River chain but this outlet does not function now.

Several factors are responsible for the many problems which exist in county's agricultural areas. One of the most important of these factors is the decrease in total assessed valuation during the years 1925 - 1939. In 1925 the total assessed township valuation was $9,350,000. In 1936 this figure had dropped to $4,950,000 approximately 53% of the former valuation.

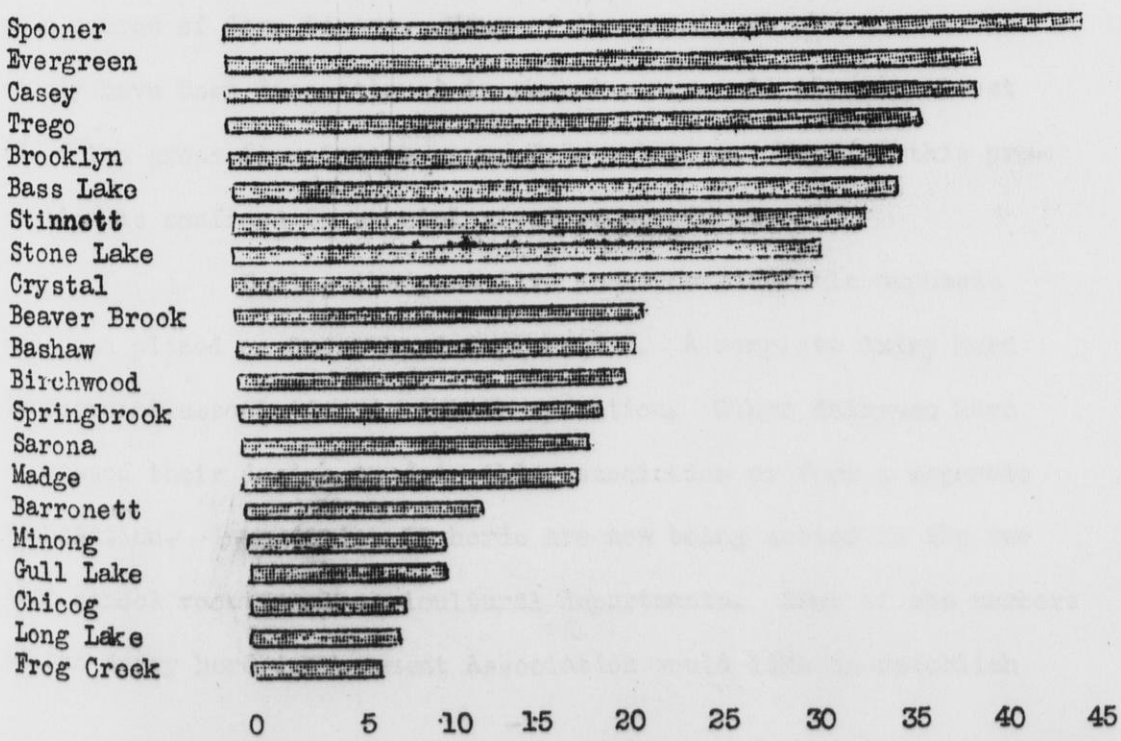
The majority of this drop in valuation has been confined to the northern and eastern parts of the county. In these areas many people without farming experience were induced to start farming. Lack of experience along with poor soil has resulted to considerable farm abandonment in these areas. To prevent further public problems along this line, the Washburn County Board of Supervisors in 1935, enacted a county zoning ordinance.

Following is a chart showing the percent of tax exempt land by townships. Total figures for the county show that 29.54% of all the land is tax exempt:



Farm tenancy in Washburn County has been increasing steadily since 1920. At that time 7.5% of all the farms in the county were operated by tenants. In 1935 the figure had increased to 23.1% and since that time the figure has more than doubled, having reached 51%.

The average size farm in Washburn County is 122.8 acres of which 42.4 acres are crop land. Under the AAA program about 70% of all the farms participating have a soil depleting allotment of 20 acres or less. Information obtained from the AAA Committeemen shows that many of the smaller farms are becoming part time farms. In other words part of the farm and family living expense is coming from sources other than the farm. A majority of the outside income can be classified under the following headings: employment on other farms, employment in urban industries, employment in forest industries, pensions and W.P.A. The following chart shows the percent of part time employment which exists on the farms in Washburn County.



Washburn County is similar to many other northern counties so far as sources of gross farm income are concerned. Nearly two-thirds of the farm income comes from the sale of milk, dairy cattle, and calves. Most of the dairy farming is confined to the southern two-thirds of the county. The following table shows how the sources of farm income in the county compare with Wisconsin.

Sources of Farm Income 1936

Income	Wisconsin	Washburn County
Milk	48.1	53.6
Cattle and Calves	10.2	10.9
Poultry and Eggs	10.3	10.0
Crops	15.7	16.3
Swine	14.7	7.4
Other Income	1.0	1.8

Sources of farm income have changed somewhat since 1936. This change can be explained by work relief projects and AAA benefit payments.

Fifteen years ago potatoes were of major importance as a source of farm income. Many of the potato warehouses in the county have been discontinued in recent years. At present almost 6% of the gross farm income comes from potatoes. Most of this production is confined to special sized potato farms.

During the past five years considerable emphasis has been placed on dairy herd improvement. A complete dairy herd improvement association is now in operation. Other dairymen have expressed their desire to join this association or form a separate association. In addition 50 herds are now being tested in the two high school vocational agricultural departments. Some of the members of the dairy herd improvement Association would like to establish

a Washburn County Breeding unit in cooperation with the Artificial insemination program now operating in Barron County. It will be necessary to have 200 cows signed by agreement before the Washburn County could be considered for membership. Further advance in dairy herd improvement can be shown by the area Bang's test completed in Washburn County in the fall of 1940.

Cattle numbers increased steadily from 1929 to 1934. In 1929 there were 12,700 cattle on Washburn County farms and in 1934 this figure had increased to 16,900. From 1934 to 1938 the trend was reversed, the number in 1938 being 14,600. The latest figures made available through the Bang's test indicate there are 19,500 cattle in the county.

The number of horses, swine, and sheep have shown a gradual decline during the past twenty years. A large number of factors including farm abandonment, the increase and the use of tractors, and the lack of feed have been responsible for the decline in horse numbers. Most farm families in the county are now realizing the importance of home produced mutton and pork as a part of the family food supply. The following table shows the changes which have taken place in horse, swine, and sheep numbers since 1920.

Year	No. of Horses	No. of Swine	No. of Sheep
1920	4,250	2,500	5,650
1925	3,500	1,750	2,250
1930	2,980	1,150	4,070
1935	3,100	2,100	4,200
1940	3,150	1,500	3,380

A majority of the crops in the county are raised primarily for their use in feeding dairy cows. Since 1930 the acreage of alfalfa has increased from 1600 acres to 4000 acres.

Clover and timothy acreages in 1930 over 19,400 acres and the 1940 acreage is equal to this figure. Rye, oats, and barley acreages have shown a marked downward trend since 1930. Corn acreage has increased from 6400 in 1930 to 10,000 in 1940.

The following table showing the ratio of crops to crop land for Wisconsin and Washburn County summarizes the cropping system followed in this area.

Crop	Wisconsin	Washburn County
Clover & Timothy	20.0	38.2
Oats	24.7	18.8
Corn	21.9	16.0
Other Tame Hay	5.0	13.1
Alfalfa	11.4	7.3
Potatoes	2.4	3.1
Barley	8.7	1.3
Other Crops	5.0	2.2

Since 1934 many rural families in Washburn County have been aided by many agencies which are serving the county.

Records in the county public welfare department show that during the three year period, 1938 - 1940, rural families received relief aids amounting to $42,966. During this same period surplus commodities valued at approximately $40,000 have been distributed in the county.

The Work Projects Administration has aided many who have been working on projects set up within the county. From September, 1935 through September, 1940 a total of $2,008,304 was spent on W.P.A. projects in Washburn County. This total includes sponsors funds amounting to $446,124 and federal funds amounting to $1,562,180. In November, 1940 about .31% of all people living in the county were certified for W.P.A.

The Farm Security Administration has aided many farm families by giving subsistence grants. Since 1936 approximately $80,042 have been made available through grants. In October, 1940 there were 159 farms with F.S.A. loans amounting to $138,801, or an average of $873 per farm. In March 1941 the F.S.A. had made 185 loans, 24 of which has been repaid.

During the four year period, 1937 - 1940, all of the direct aids, excepting surplus commodities, have been declining. This is also true of the number certified for W.P.A. employment.

On December 31, 1939 the Federal Land Bank had made 276 loans amounting to $540,000. On June 28, 1940 the Federal Land Bank owned 61 farms in the county. The investment in these farms amounted to $229,100.

Total AAA payments in the County from 1937 through 1940 amount to $144,518. The average payment per farm during this four year period was $106.20.

The land use planning program in Washburn County represents a reconsideration by local people of past land use programs as well as a partial solution to present and future land use problems. Town and county officials are to be commended for the fine program which has been made along this line.

On November 16, 1932 the county board established county forests under the State Forest Crop Law. At present there are 109,342.91 acres of county forest crop land. These are permanent forests on county owned land the majority of which is unfit for farming. The Forestry Committee of the County Board and the County Agent have charge of their development and local non-relief labor is

used in planting this forest improvement work. Financial aid from the state includes ten cents per acre to the county for forestry development and a smaller payment to the towns in which the land is located. The payment received by the towns is used for county taxes, town purposes and for schools.

On May 15, 1934 the county board passed the Washburn County Rural Zoning Ordinance, under which those lands which local people decided were not suited to Agriculture development were set aside for forestry purposes. Since that time the zoning ordinance has been amended on six different occasions. Following the enactment of the zoning ordinance the zoning committee has been very active in settler relocation. In 1938 the town officials in cooperation with the county zoning committee established an order of priority which served as a guide in moving isolated settlers. This action resulted in lower school, highway, and relief costs in the towns concerned as well as the setting up of these families in established agricultural communities.

In 1938 the Wisconsin Conservation Department in cooperation with local officials established the Northwest Fisheries Division with area headquarters at Spooner. This industry is providing employment for many people residing in the county. The department is to be commended for their efforts in restocking lakes and streams in this section of the state.

The county board through the agricultural committee has followed a policy of selling merchantable timber on county owned land on a selective basis. The committee has through its control of land sales given careful consideration to the future use of non-

agricultural lands.

A basic solution to many of the problems which exists in the county can be found in the Washburn County Grubstake program started in the spring of 1940. This program has received the support of the county board, extension service, Farm Security Administration, A.A.A., W.P.A. public welfare department, county superintendent of schools, vocational home economics and agricultural department, county nurse and the pension directors. Coordination of these agencies has been achieved. Now one of the major problems confronting all of these organizations is being solved.

The significance of the grubstake program is described in the Washburn County pamphlet compiled and printed for distribution to all rural families by all agencies and all county field workers.

A brief and complete description of the program is given in the following story prepared by the following members of the Grubstake Committee: J. D. Eastwold, Chairman of the Washburn County Board; Lorna Searles of the Farm Security Administration, and W. H. Dougherty, the County Agricultural Agent.

THE GRUBSTAKE PLAN IN
WASHBURN COUNTY

"The Grubstake is a program intended for every rural person and family regardless of financial or social standing. The general program is the "producing of a year around balanced food supply, consisting of meats, animal fats, vegetables and fruits, all of which can be produced from the soil." In reality this plan results in a Food Insurance Policy.

Many farm families in Washburn County have such a "paid up food insurance policy" this year, providing a good living

for the next twelve months in the form of a Grubstake which they themselves have provided. The terms of this "Food Insurance Policy" profides:

(1) that the family will take an inventory and develop a plan of its complete food requirement for a year;

(2) that the family shall raise a year around food supply in the form of dairy products, meats, vegetables, potatoes and fruits on the farm and thereby eliminate the necessity of purchasing basic farm produced commodities;

(3) that through their efforts the family will store these foods in an economical way, using modern methods of preservation.

For the purpose of clarifying the need for this grubstake plan, it is necessary to enumerate some of the underlying factors. It should be realized that the financial conditions and problems of this county can be found in many other counties within the state. Washburn County is located in the "cut-over" area in Northern Wisconsin. Thirty-three per cent of the land is off the taxing base due to tax delinquency. The records of the Mediation Board reveal that many of the farm foreclosures were due, not to a single large loss, but, rather a grdaul yearly slipping of about $150.00. In a few years this amount was so large it could not be liquidated by farming operations. Fifty and eighty tenths per cent of the farm families in Washburn County are tenants. The average farm has from five to twenty-five acres of tillable crop land. Many of these farms are unable to support a progressive farm program. With accumulating debts, low farm prices, mortgage foreclosures and increased need for public aid, the financial condition reached the breaking point.

The morale of too many families was broken down to the extent that outside assistance seemed to be the only answer to their problem.

A county survey showed that, each year, the family liabilities increased in an amount equal to the value of a complete Grubstake, if it had been provided. Relief records showed that the first request for assistance was for food, not clothing and other necessities, and yet, these families lived in Rural Areas. Next to this was the steadily increasing county cost for medical care and hospitalization, reflecting a definite relationship between health and the lack of sufficient quantity and variety of food.

An analysis of the situation shows that the solution of this most important problem must be met by the individual. Until the family has done all that it can for itself, it cannot justly expect to obtain aid from Town, County, State or Federal Governments. True, a mortgage cannot be repaid with the Grubstake but the money saved from food purchasing will go a long way. The Grubstake plan will increase the income and broaden the purchasing powers to better meet the vital needs of the family.

In areas where financial problems have become so complex and where so much public assistance has been required to subsidize farm family income, there has been a definite downward trend in living standards. There has been an equal downward trend in the morale of the people. Realizing the changes and the causes for many of our problems which can be met, it therefore becomes of paramount importance to coordinate the work of all our many agencies in aiding these people to stage a "comeback". A COMPLETE GRUBSTAKE IS THE <u>POINT OF BEGINNING</u>. From there on the structure can be anchored to a substantial foundation

and be built to a higher and more secure level.

In checking over the many reports of families who participated in the program this past year, one of the outstanding records was selected to show what can be accomplished. This family consisted of five people, three adults, two children, aged eight and ten. The variety and quantity of food provided is listed as follows:

Animal Foods

Plenty of milk, cream and butter
1 one-year old steer
2 hogs
20 roosters
25 hens for eggs
7 gallons of lard

Vegetable Foods (canned)

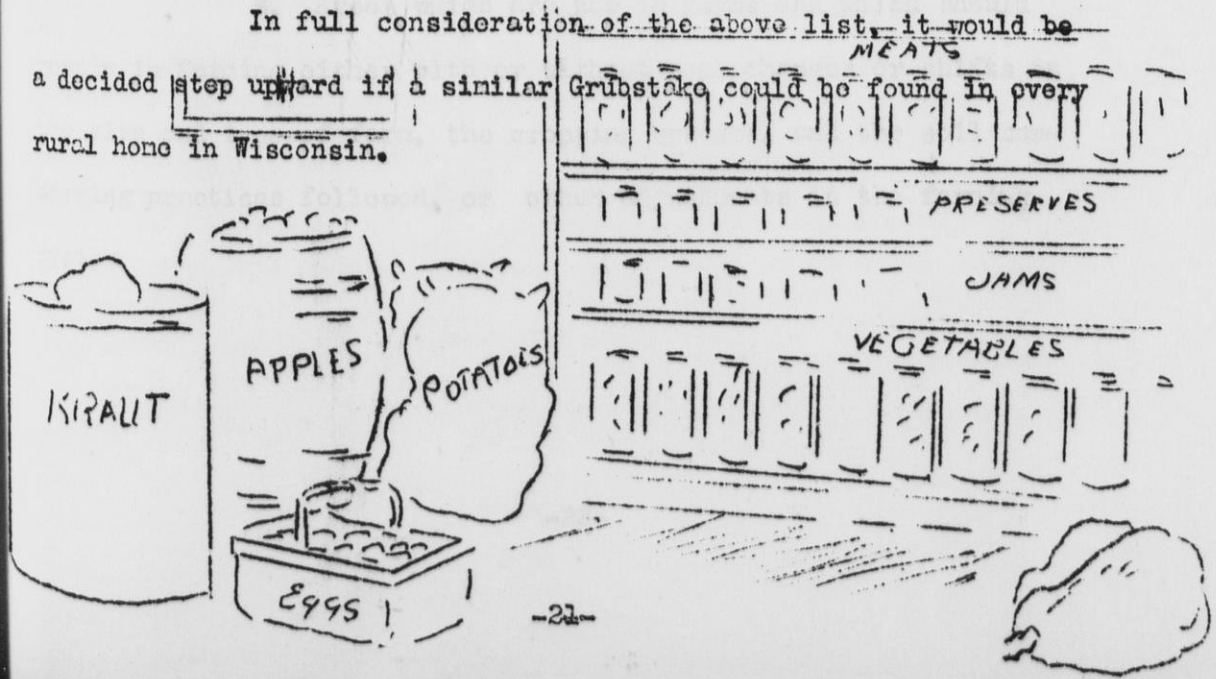
120 quarts tomatoes
111 quarts vegetables
295 quarts fruits
10 gallons sauerkraut
Jams, jellies and pickles

Stored

1½ bushel dried beans
3 bushel parsnips
50 head cabbage
2 bushel rutabagas
3 bushel carrots
50 squash-both Acron and Hubbard
½ bushel beets
20 pounds dried corn
1 bushel onions
25 bushel potatoes
2 bushel sweet potatoes
1 peck peanuts
1 bushel butternuts
4 gallons sorghum
6 bushel dried apples

This Grubstake including both food and wood for fuel is valued at not less than $400.00. This list may give an idea of the possibilities which a farm family has in providing its own food supply.

In full consideration of the above list, it would be a decided step upward if a similar Grubstake could be found in every rural home in Wisconsin.



Land Use Classification

Land Use Classification included the classification of each designed land use area in accordance with the committees conclusions concerning the most desirable future use of the land. All land was classified under the following land use classes:

A. Areas now in farms which are not suited for farming and in which the lands should be put to some other use. These areas were colored blue on the county map.

B. Areas not now in farms and which should not now be used for farming because they are unsuited for this use either. As full time or as part-time farms used in conjunction with existing dependable opportunities for non-farm work. These areas were colored green.

C. Areas now in farms which are questionably suited for farming. These areas were colored red on the county map.

D. Areas not now in farms but which are suitable for development into either part-time or full time farms. The areas were colored orange.

E. Areas which are now in farms and which should remain in farming either with or without some changes or shifts in the size and type of farm, the cropping systems, and the soil conserving practices followed, or other adjustments in the farming system.

SUMMARY SHEET

of

LAND USE CLASSIFICATION

Township	Blue		Green		Red		Orange		Yellow		Total
	Acreage	%	Acr.	%	Acr.	%	Acr.	%	Acr.	%	
Barronett	655	3.0	8000	36.8	1640	7.5	914	4.2	10,564	48.5	21,773
Bashaw	400	1.8	2441	10.9	636	2.8	840	3.7	18,069	80.8	22,386
Bass Lake	-	-	5121	23.6	807	3.8	7335	33.8	8,410	38.8	21,673
BeaverBrook	80	.3	3141	14.0	160	.7	4511	22	13,425	63.0	21,317
Birchwood	220	.5	29002	68	160	.4	2855	6.7	10,450	24.4	42,687
Brooklyn	-	-	9346	40.6	859	3.7	4163	18.1	8,670	37.6	23,038
Casey	121	.6	16626	83.3	-	-	680	3.4	2,523	12.7	19,950
Chicog	400	1.4	22362	80.6	863	3.1	811	2.9	3,336	12.0	27,772
Crystal	240	1.1	7989	34.5	240	1.1	-	-	14,779	63.3	23.248
Evergreen	1825	8.3	6011	27.3	7268	33.0	-	-	6,920	31.4	22,024
Frog Creek	120	.3	36351	79.4	1250	2.7	3267	7.1	4,809	10.5	45,797
Gull Lake	-	-	16496	72.3	210	.9	1249	5.5	4,851	21.3	22,806
Long Lake	-	-	9791	45.3	3061	14.2	960	4.4	7,781	36.1	21,593
Lodge	40	.2	7909	37.8	199	.9	3652	17.4	9,155	43.7	20,955
Minong	800	1.9	35182	84.4	2132	5.1	800	1.9	2,800	6.7	41,714
Sarona	-	-	7873	38.2	2521	12.2	80	.4	10,147	19.2	20,621
Spooner	-	-	3505	27.9	1351	10.7	400	3.2	7,313	58.2	12,569
Springbrook	3190	14.2	10208	45.6	2954	13.2	160	.7	5,892	26.3	22,404
Stinnett	187	.8	15586	68.7	611	2.7	1247	5.5	4,884	22.8	22,515
Stone Lake	40	.2	8254	36.5	6605	29.2	1403	6.2	6,329	27.9	22,631
Trego	393	1.6	1428	5.9	4453	18.5	939	3.9	16,875	70.1	24,088
County Total	8,711	1.7	262,622	50.2	37980	7.3	36266	6.9	177982	33.9	523,561

Recommendations for Land Use Areas

Class A (Blue)

Class A lands represent areas now in farms which are not suited to farming. This class represents 8,711 acres or 1.7% of the county area and 3.9% of the farm land. These areas are now being farmed either as crop land or part of an operating farm. The majority, 37% of this area is located in the town of Springbrook.

Local people felt that these lands should become part of the county forest areas. Most of these lands are located within the zoned area and have therefore been previously designated as non-agricultural land. The committees concluded that present zoning boundries should be extended to include this Class A areas which are not included in the zoned area. The entire area can be planted to trees.

The county board through the forestry committee can be of great help in accomplishing these changes. Local committees realize the problem and therefore ask that Washburn County continue its policy of trading county owned land outside the zoned area for private owned Class A land within the zoned area. It is recognized that these adjustments will require a long period of time to complete.

Class B (Green)

This class includes areas not now in farms which should not be used for farming. This classification represents 262,622 acres or 40.2% of the total area. Included in this classification are 153,280 acres which are not a part of the county forest area.

All open Class B lands are suitable for timber production. Land on and around the many desirable lakes and streams in

this are suitable for recreational development. Local people repeatly recommended that as a county policy the public should have access to all desirable lakes and streams.

To assure that these areas are not used for farms, the land use planning committees in the towns of Minong, Chicog, Casey, Evergreen and Sarona have recommended that the zoning Ordiance be extended to include all such lands in these towns. All committees favored a policy of extending the zoning ordinace to all Class B areas which will block in with the present boundaries.

Tree planting has been recommended on all open areas on Class B lands, espocially those areas owned by the county which are not part of the county forest. Private owners could develop wood-lots be participating in this part of the AAA program. Grazing is recommended on those areas adjacent to established farms which require additional pastures.

Class C (Red)

This classification represents areas which are in farms but are questionable suited to farming. Included in Class C are 37,980 acres or 7.3% of the total county area. In one township families living in these areas had become town burdens. This situation was due mainly to the poor quality of the land. In another case the classification was made because of the general isolation of the area. The public costs involved in transporting school children and maintaining roads was entirely too high. Other cases resulted from the human element, ie: the people living on these lands were poor farmers. Generally this land was clasified as questionable because of its marginal or submarginal nature.

Class D (Orange)

Class D lands represent land that is suitable for development into either part-time or full time farms depending upon the opportunities for non-farm work. Of the county area 36,266 acres or 6.9% were so classified. The majority of these lands are found in the towns of Beaver Brook, Madge and Bass Lake.

In many instances these lands are now county owned, having become tax delinquent through poor management. From a taxation view point these areas could be developed for farming. This type of development would relieve part of the tax burden now being carried by privateowners. Parts of these areas can profitably be added to adjacent farms which at present are too small to provide a complete subsistence from the land alone. Other areas near or in established communities can be developed into part time farms depending upon the part time employment available in forest industries. Local committee feel that anyone considering farming these or other areas should follow the farming recommendations of the Branch Experiment Station At Spooner. Sheep raising under proper management has a place on these areas especially where sufficient pasture land can be obtained. Some of these pastures would need improvement including establishment of legumes. However, if the major portion of the income on this land is to come from sheep considerable emphasis should be placed on the production of home-grown rations.

Class E (Yellow)

This class includes those lands which are now being farmed and should be continued in agricultural use. Included in this classification are all those lands which are now being used as part of farming unit. This area comprises 177,982 acres or 33.9% of the total county area.

During recent years many farmers have been purchasing large amounts of hay and grain. Under proper cropping systems which will provide more legume hay and pasture a large amount of this expense can be eliminated. To establish prpoer cropping system fertilizer is needed. Reports from the county extension soil testing service show that 90% of the soils tested need lime, 83% need phosphate and 75% need potash. The AAA conservation materials program enables the farmer to obtain lime, marl, and phosphate.

Local Committees felt that the AAA pasture improvement and tree planting programs be given more emphasis and consideration by AAA committeemen. Local people recommended that the farmers follow cropping systems suitable to these areas. To carry out these practices the committees felt that the agricultural agencies in Washburn County should follow the recommendations of the Spooner Branch Experimental Station. The following summary explains the seven year rotation which has given good results at the station:

SPOONER BRANCH STATION

SPOONER, WISCONSIN

By A. M. Strommen

Brief summary of 7 year rotation used as a cropping practise on the experiment station at Spooner.

1 st year ---- oats, nurse crop, seeded down to alfalfa

2nd " ---- alfalfa, for hay

3rd " ---- alfalfa, for hay

4th " ---- alfalfa, for hay. First week in Sept. drill fall rye in alfalfa sod. This rye supplies early pasture the following spring. The cattle prefer the rye thus permitting the alfalfa to get a good start.

5th " ---- alfalfa plus the rye for pasture. In Sept. this may again be seeded to fall rye by drilling it in the sod and the crop allowed to mature for grain the following year.

6th " ---- rye for grain. 5 year ave. at Spooner by this method is 18 bushel per acre. Alfalfa sod is still maintained. After rye harvest it may be pastured. In the fall it may be PLOWED for corn or other cultivated crop.

7th " ---- Cultivated crop. May be corn, potatoes or other crops of this nature.

Salient features of this rotation scheme:

1 - At leat 50% of the crop area is in alfalfa.
2 - PLOW once in 7 years. This reduces field operating costs, soil erosion reduced to a minimum.
3 - It is flexible. In the 6th year it may be desirable to grow soybeans on part of the field. Or if a field requires two years of a cultivated crop in order to control weeds this would be the place for the first year of cultivated crop.
4 - It supplies an abundance of hay and pasture which enables the farmer to carry more units per acre.

Primary essentials in order to carry out this rotation plan.

1 - LIME and sufficient soil fertility to grow alfalfa.
2 - Hardy alfalfa seed, 10 lbs. per acre plus 2 lbs. timothy Oats as nurse crop 1 to 1½ bushel per acre.
3 - ROLLER, every new seeding, few realize the importance.

Major Problems of the County

Local people now realize that there are not one, but many conditions which are responsible for the major problems confronting the county. These problems can be summarized under the following headings:

1. Constant increase in farm tenancy.
2. Constant increase in tax exempt land.
3. Excessive relief costs.
4. Decreased valuation which has been associated with increasing county expenses.
5. Small inefficient farm units due to lack of sufficient cleared land.
6. Loss of soil fertility resulting in low crop yields.
7. Inadequate farm income.
8. Lack of employment opportunities in forest industries as well as urban industries.
9. Dependency of the individual on Government financial assistance.

RECOMMENDATIONS OF THE COUNTY

Land Use Planning Committee

(Washburn County)

GRUBSTAKE PROGRAM (Complete home produced food supply)

The County Land Use Planning Committees recommend that:

1. Washburn County continue to increase its participation in the program and its ultimate effectiveness to the county.

2. A more concentrated effort be made by all agencies to insist that needy applicants for aid be encouraged to produce a complete Grubstake.

3. That all town officials in the county be encouraged to promote the wide-spread adoption of the Grubstake Program in their respective towns.

4. That the County Land Use Planning Committee recognize the tremendous value in a Grubstake Program in Washburn County in lowering relief costs and thereby eliminating financial burden to the county and the Federal and State Agencies. They heartily commend the action taken by the County Board of Supervisors, the Agricultural Committee and the County-Wide Grubstake Committee in initiating and developing this program for Washburn County.

GENERAL AGRICULTURE

1. The local committees recommend that the average family sized farm have the following minimum qualifications:

a. 80 total farm acreage
b. 40 acres crop land
c. At least four main sources of income including the following:
    1. Dairying
    2. Poultry
    3. Sale of vegetables or other cash crops such as potatoes, beans, cucumbers, etc.
    4. Sheep and hogs.

It was further recommended that: (2) The average farm have at least 8 cows, 100 laying hens and 1 brood sow.

3. All Agencies place more emphasis on the production of high quality, home grown feed for livestock.

4. Enough space on this farm be alloted to a food plot so that there will be sufficient potatoes, vegetables and berries to supply all the family food requirements for a year.

5. The dairymen in the County take advantage of the artificial breeding program which has started in Barron County.

6. There is a great need to develop the lands indicated on the land-use classification map as suitable for farming (orange). This land could be used to increase the size of farms near by, by providing additional pasture - woodlots - or cleared land. Many of the part time farms could be made full time through increase in size.

7. The present marl program be pushed and more pits be developed. It was suggested that perhaps a system whereby marl could be delivered by county trucks to stock piles in scattered areas in the county be started.

8. It is recommended that farmers be encouraged to make more use of the Spooner Branch Experimental Station particularly by taking advantage of the results of the Experimental work in the selection of seed grains, corn, potatoes, and crop rotations.

9. The Soil Conservation Service in cooperation with the County Agricultural Committee set up two soil erosion control demonstration farms in the southern part of the county.

10. The Extension Service in cooperation with other Agricultural agencies work out methods which would include long term leases thereby providing for better systems of tenue.

AGRICULTURAL ADJUSTMENT ADMINISTRATION

1. The dairy farmer be given the same consideration as other special crop farmers. The program should provide more earning power.

2. The AAA program in Washburn County include the land clearing practice, so that new land can be opened for cultivation. This practice is a part of the general conservation program in the cut-over areas.

3. The new conservation program now in effect in seven counties in the cut-over area be investigated for use in Washburn County.

4. The conservation materials program be continued in the county.

5. The pasture improvement program be continued.

6. The Grustake program be efficially recognized by the AAA through providing a special payment similiar to the forest payment for these farm families developing a complete Grub-state program.

FARM SECURITY ADMINISTRATION

1. The tenant purchase program be started in Washburn County. Before young couples are set-up under this plan local town officials should be consulted. Those set-up under the program should be urged to consult successful farmers in the community.

2. The new Special Real Estate program be continued.

3. The County in cooperation with F.S.A. should promote the land settlement of rural young people who wish to farm and are now residents in the county to good land in established communities.

4. The County Land Use Classification map be used as a guide in determing size and location of loans.

5. The F.S.A. in cooperation with the [illegible] Extension groups assist farmers in developing cooperatives, particularly those involving the cooperative purchase and maintainence of farm machinery.

FARM CREDIT ADMINISTRATION

1. Congress continue the present policy of 3½ percent interest rates on all Federal Land Bank loans for farm mortgages.

2. A refinancing of old Federal Land Bank loans written at interest rates above 4 percent be rewritten at 4 percent comparable to new loans issued today.

3. There should be a continuation of 4 per cent commissioner loans.

4. The interest rates on Federal Land Bank purchased farms be reduced from 5 per cent to 4 per cent.

5. One half of the interest payment be applied on the principal and the remainder paid as interest.

FORESTRY

1. It is recommended County forest land should be extended to include all that land which will block in with the present forest. The land use classification map be used as a guide in extending the county forest as well as in the purchase or sale of land.

2. The county forests should be extended to include a maximum of 150,000 acres.

3. The present system of appraising land and timber be continued by the county land sales committee.

4. The full 10¢ per acre should be paid to towns on forest crop land and the present payment of 10¢ per acre per year to the county for forestry purposes should be continued.

5. County timber sales agreements should include a statement whereby local labor shall be used.

6. Local people should be given preference in the sale of county timber are made by the county board.

ZONING

1. The committee recommends the Washburn County zoning ordinance should be maintained in those areas which are classified as green, red, or blue on the land use classification map.

2. The present policy of entering only zoned areas in forest crop be continued.

CONSERVATION

1. As a county policy, the public should have access to every desirable lake. Some land on each lake should be reserved for public interests.

2. The county should not sell county owned land on trout streams unless provision for public access has been legally established.

3. Conservation meetings and hearings should be held in the smaller towns in the county.

ISOLATED SETTLER RELOCATION

1. The present program of isolated settler relocation should be continued until all isolated settlers who are a burden to expense to the community or who haven't a chance to succeed in their present location are given an opportunity to relocate to better land in an established community.

DEVELOPMENT OF SMALL INDUSTRIES

1. The possibility of developing small local wood using industries be given careful consideration. It was suggested that mills making excelsior and other wood products would provide added income to those engaged in part time farming.

2. It is recommended that the County Agent and the District Forester continue to assist local groups in developing timber Products Cooperatives such as the Frog Creek Co-op.

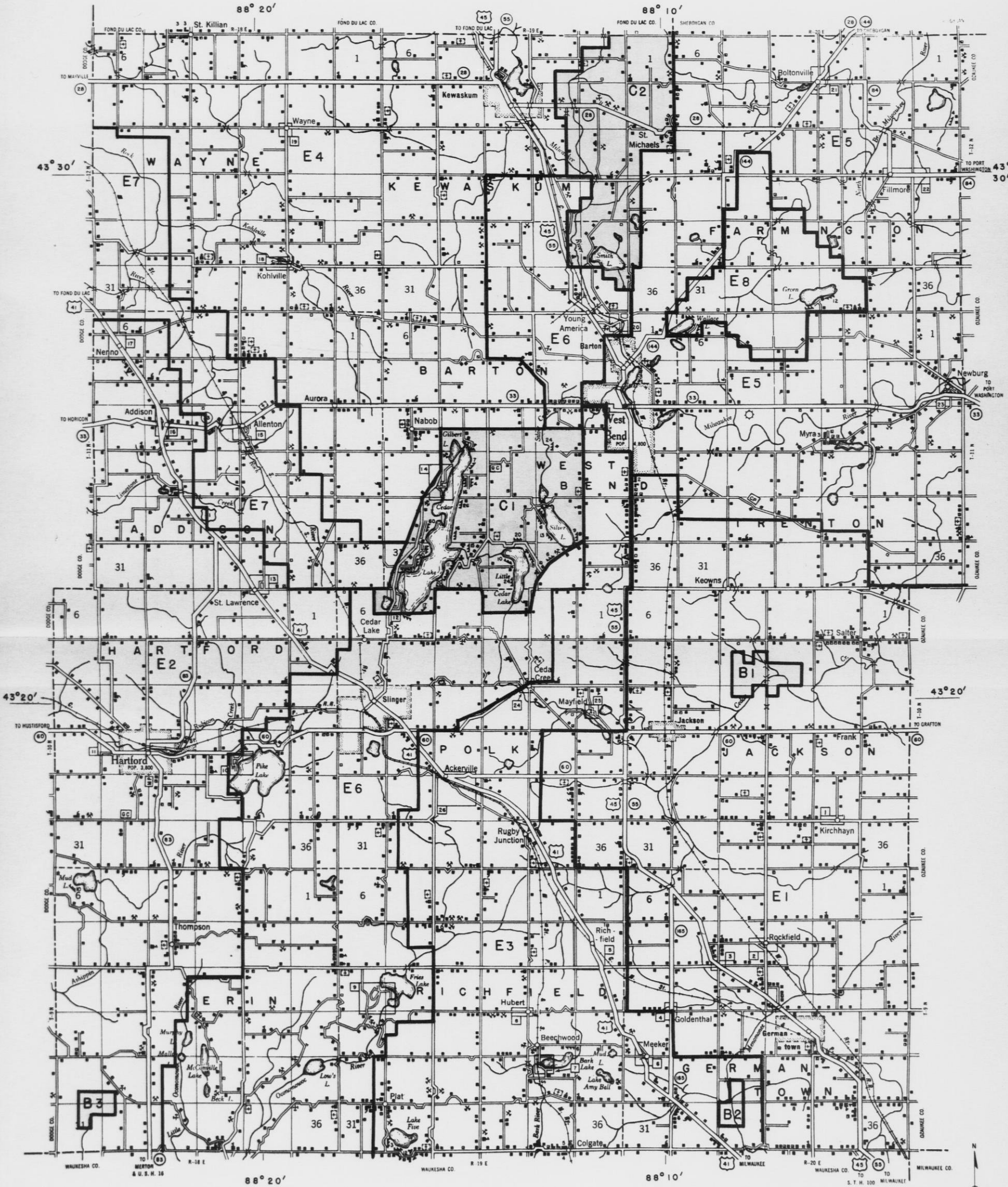
WASHINGTON COUNTY
WISCONSIN



LAND USE PLANNING REPORT
1940

LAND USE CLASSIFICATION

WASHINGTON COUNTY, WISCONSIN





SCALE: MILES
1 0 1 2

B Land not in farms - not suitable for farms.

C Land in farms - questionable for farming.

E Land in farms - should remain in farms.

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.

COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

FOREWORD

Washington County has been farmed for more than 100 years. Its settlers, largely of German decent, have been hard working and conservative farmers. The county has witnessed the change from a wheat growing area to one of diversified farming with the main source of income being derived from dairying.

The thought of classifying the land according to its best possible future uses was new to most of the farmers in this county. However, many of the land owners are beginning to realize that there are problems which must be studied and planned for collectively in order to secure the most economical long time use of the soil resources of this county.

This project was begun with an attitude of gaining a widespread expression of opinions from rural folks and others concerning possible adjustments in land use of the various areas into which the county was divided. This information was carefully evaluated and from it were gained the recommendations herein presented.

This report is in no sense a final expression of the best possible use of land in Washington County. However, it is a step in the direction toward improving the agricultural program of the County because it represents the opinions of nearly a hundred leading farmers, 4-H leaders, representatives of state and federal action agencies, and other rural minded men and women.

The Chairman and Secretary of the County Land Use Planning Committee at this time wish to express their sincere appreciation for the loyal cooperation they have received from both the County and the Community Committees. Many of the Community Committee meetings were held under unfavorable conditions, such as very cold and stormy weather or on days when other work was urgent. In no case did any committee member waiver in tendering his or her best to the cause of the land use planning project. Their enthusiasm was remarkable. And to them goes much credit for this report.

Guido Schroeder
Chairman

E. E. Skalisky
Secretary

TABLE OF CONTENTS

		Page
	Map Showing Location of Washington County.....	
	Foreword	
I.	Introduction	1
II.	County Committee Personnel	2
III.	Community Committee Personnel	3
IV.	Map Showing the Divisions of the County	4
V.	Background Information	6
VI.	Community Committee Meetings	7
VII.	Trends in Land Use in Washington County	9
VIII.	Description of the County	14
IX.	Present Land Use Areas	16
	1. The Heavy Soils	16
	2. The Sandy Soils	17
	3. The Peat Soils	18
X.	Land Use Classification	19
XI.	Map Showing Land Use Classification	20
XII.	Land Use Areas and Recommendations	21
	1. Area "B" Land	21
	2. Area "C" Land	22
	3. Area "E" Land	25
XIII.	General County Recommendations	34
	1. Farm Purchase for Tenants	34
	2. Farm Tenancy	34
	3. Cedar Lake Resort Area	35
	4. Living Snow Fences	35
	5. Farm Woodlot Management	36
	6. Wild Life Feeding	37
	7. Farm Indebtedness	37
	8. Personal Property Load	37
	9. Interest Rates	38
	10. Weed Control	38
	11. The European Corn Borer	39
	12. Cash Crops	40
	13. Certified and Registered Seed Grains	41
	14. Drainage	41
	15. Soil Erosion	42
	16. Soil Management	43
	17. Dairy Improvement	44
	18. Livestock Recommendation	45
	19. Beekeeping	45
	20. Bird Conservation	45
	21. Rural Education	46
	22. American Youth Hostel	47
	23. 4-H Club Organization	47
XIV.	Summary Sheet	48
XV.	Summary of Recommendations	
XVI.	Statistical Data and Graphs	

INTRODUCTION

The task of carrying out a proposed project of Land Use Planning in Washington County was undertaken as a direct responsibility by the County Agricultural Committee of the County. The Committee directed that the County Agricultural Agent serve as the secretary of the County and Community Land Use Planning Committees. He was relieved by an assistant County Agricultural Agent from most of his regular duties which enabled him to give much of his time to the work of this project.

SPECIALISTS DIRECT THE STUDY

To start the work of Land Use Planning in Washington County, the Chairman of the County Board who is also the Chairman of the County Agricultural Committee, called a meeting of the Committee to consider plans for carrying out this project. Mr. Walter Rowlands, State Extension Leader of Land Use Planning, was invited to meet with the Committee and to explain the purposes of the land use planning project and the organization necessary for carrying on the work.

ORGANIZATION

The Agricultural Committee assisted by Mr. Ray Pallett, Extension Supervisor, appointed the County Committee members. Care was taken to include in its membership representative farmers from all areas of the county as well as representatives of the various action agencies. A majority of the committee was made up of people whose livelihood depends directly upon the soil.

PROCEDURE

For the purpose of the Land Use Study it was decided to divide the County into five "Communities." Each Community would consist of two or three townships. It was felt that by limiting the size of these areas, Community Committee members would be more fully acquainted with the region each community represented, and hence with the problems of each of these areas. Thus a more full and wise discussion of Land Use Study problems would be forthcoming.

THE COUNTY COMMITTEE

The membership of the County Committee is as follows:

Name and Address	Representing	Occupation
Guido Schroeder, West Bend	Chairman, County Board	Farmer
W.K. Carter, West Bend	Farm Security Adm.	Dist.Supervisor
Raymond Lepien, Hartford	Soil Conservation Serv.	Farmer
Paul Horlamus, West Bend	County Park Board	Farmer
Dr. C.M. Herman, Allenton	County Park Board	Doctor
B. C. Ziegler, West Bend	County Park Board	Industrialist
Dr. H. F. Weber, Newburg	County Park Board	Doctor
Walter Boettcher, Richfield	County Park Board	Plumber
George Sell, Hartford	Co. Highway Dept.	Retired
L. B. Cummings, Hartford	Soil Conservation Serv.	Dist.Supervisor
A. E. Reif, West Bend	Conservation Commission	Game Warden
George C. Nehm, Slinger	County Agr'l Committee	Farmer
John C. Mayer, Kohlsville	County Agr'l Committee	Farmer
Phillip Burg, Colgate	County Agr'l Committee	Farmer
M. T. Buckley, West Bend	Rural Education	Co.Supt. Schools
Armand Langenbach, West Bend	City Planning Board	Conservationist
Henry Schowalter, West Bend	Community Interests	Attorney
Bentley Courtenay, West Bend	Lake Resort Area	Attorney
Arthur Kuehlthau, West Bend	Press	Newspaperman
Ed. Held, Hartford	Farming	Farmer
Wm. H. Gruhle, West Bend	Farming	Farmer
Helena Muehlmeier, West Bend	Extension	Home Agent
Edith Heidner, West Bend	Secondary Schools	Teacher
Mrs. Ralph Petri, Kewaskum	Homemaker	Merchant
Mrs. Ed. Held, Hartford	Homemaker	Farmer's Wife
Mrs. Wm. Kuhn, Rockfield	Homemaker	Farmer's Wife
Mrs. Adam Peterman, Newburg	Homemaker	Reverend's Wife
Mrs. Wm. H. Gruhle, West Bend	Homemaker	Farmer's Wife
Mrs. Egbert Muth, West Bend	Homemaker	Homemaker
Mrs. H. B. Esselman, West Bend	Homemaker	Farmer's Wife
Leslie Gerner, West Bend	Junior Farmer	Farmer
Martha Kopp, West Bend	4-H Clubs	Jr.Homemaker
E. E. Skaliskey, West Bend	Secretary	Co.Agr'l Agent

FIRST MEETING OF THE COUNTY COMMITTEE

The first meeting of the County Committee was held in the Court House, West Bend, Wisconsin, on December 21, 1939. Mr. Walter Rowlands, State Extension Leader of Land Use Planning, Mr. Ray Pallett, District Supervisor of Agricultural Extension work, and Mr. L. G. Sorden, State Representative, Bureau of Agricultural Economics, were present to assist with the organization work. Mr. Guido Schroeder, Chairman of the Washington County Board, served as chairman of the meeting. Mr. Rowlands outlined the purposes of County Land Use Planning. Mr. Sorden gave further land use planning suggestions. The County Committee approved the division of the county into 5 communities and the appointment of the committee members of these 5 communities. The accompanying map shows the 5 divisions into which the county was divided for the purpose of the Land Use Planning work.

The membership of the 5 Community Committees by towns commonly called townships follows -

COMMUNITY ORGANIZATIONS

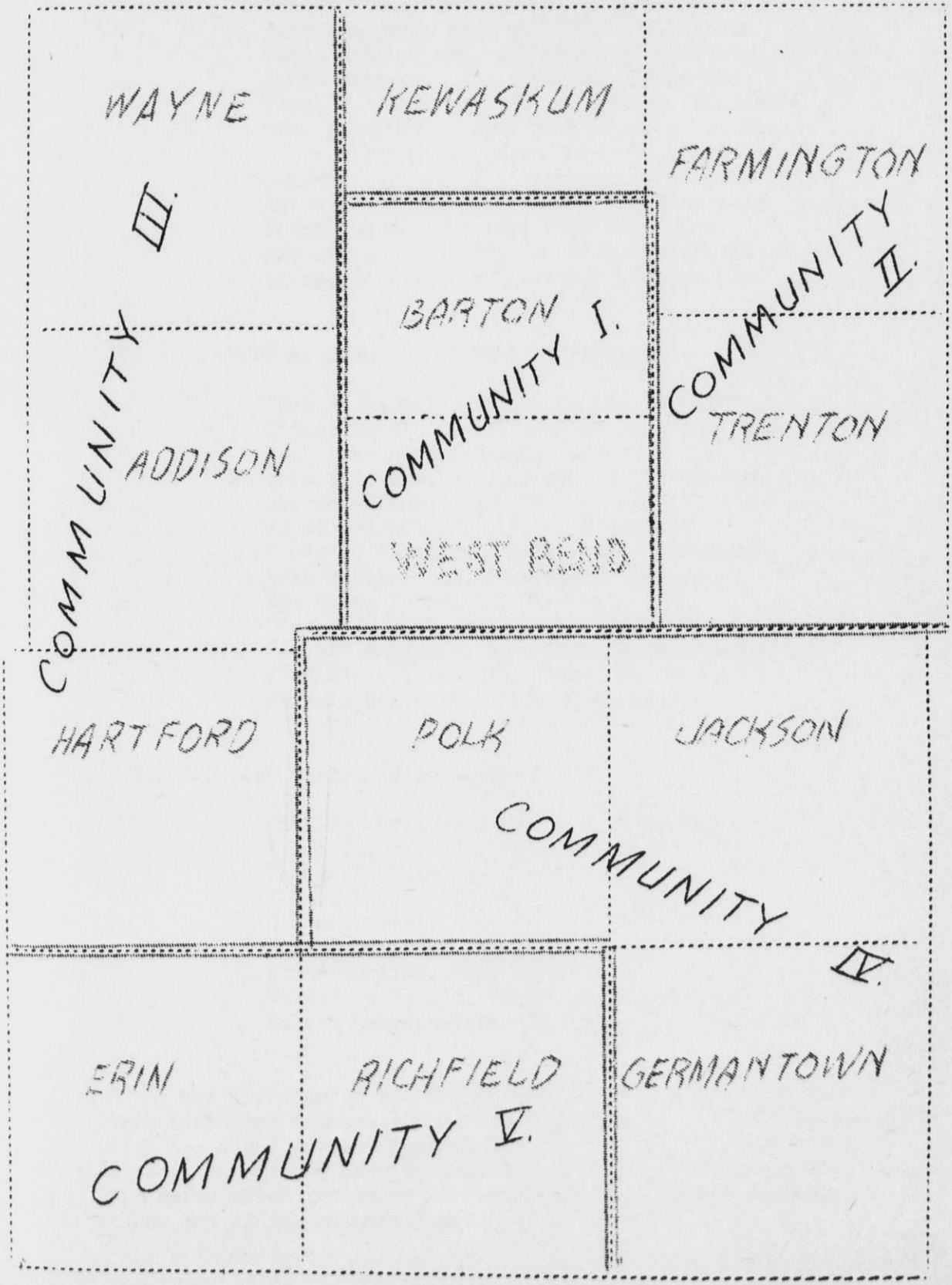
I. West Bend and Barton Townships -

Guido Schroeder, R#5, West Bend, Wisconsin
Paul Horlamus, R#5, West Bend, Wisconsin
Bentley Courtenay, R#5, West Bend, Wisconsin
Walter Kletti, R#5, West Bend, Wisconsin
John VanBeek, R#2, West Bend, Wisconsin
Paul Cypher, R#3, West Bend, Wisconsin
Albert Bandle, West Bend, Wisconsin
Edwin C. Roecker, R#3, West Bend, Wisconsin

II. Kewaskum, Farmington and Trenton Townships -

Henry Muckerheide, R#3, West Bend, Wisconsin
Conrad Bier, R#2, Kewaskum, Wisconsin
Raymond Schaefer, R#2, Kewaskum, Wisconsin
Louis Opgenorth, R#3, Kewaskum, Wisconsin
Ed. J. Campbell, R#3, Kewaskum, Wisconsin
Harvey Dettmann, R#1, Random Lake, Wisconsin
Wm. H. Gruhle, R#2, West Bend, Wisconsin
Ed. Fickler, R#2, Kewaskum, Wisconsin
Leslie Gerner, R#2, West Bend, Wisconsin
Merton Murray, R#2, West Bend, Wisconsin
Henry Schloemer, R#2, West Bend, Wisconsin
Joe Kowanda, R#1, West Bend, Wisconsin
Jos. Klinka, R#1, West Bend, Wisconsin
John Bruendl, R#2, West Bend, Wisconsin

WASHINGTON COUNTY



III. Wayne, Addison and Hartford Townships -

John C. Mayer, R#3, West Bend, Wisconsin
Hubert Klein, R#2, Kewaskum, Wisconsin
Fred Pamperin, R#3, West Bend, Wisconsin
Theo. Ritger, R#1, Allenton, Wisconsin
Alois Neuberg, R#1, Allenton, Wisconsin
Jacob A. Wolf, Jr. R#5, West Bend, Wisconsin
Geo. E. Schmidt, R#3, West Bend, Wisconsin
Oscar Moritz, R#3, West Bend, Wisconsin
Raymond Lepien, R#1, Hartford, Wisconsin
Arthur Lichtenwalner, Hartford, Wisconsin
Frank Zuern, R#2, Hartford, Wisconsin
Herbert Lepien, R#3, Hartford, Wisconsin
George Rettler, R#2, Hartford, Wisconsin

IV. Germantown, Polk and Jackson Townships -

Paul W. Bartelt, R#1, Jackson, Wisconsin
Ernest Retzlaff, R#2, Cedarburg, Wisconsin
Paul Liesener, Jackson, Wisconsin
John Prochnow, R#1, Rockfield, Wisconsin
Ed. Gettelman, Germantown, Wisconsin
Jacob Leicht, Germantown, Wisconsin
Jacob B. Bast, R#1, Rockfield, Wisconsin
Arthur Schaetzel, Germantown, Wisconsin
Wm. Kuhn, Rockfield, Wisconsin
George C. Nehm, R#1, Slinger, Wisconsin
Christ. Hoffmann, R#1, Slinger, Wisconsin
Fred Binner, R#4, West Bend, Wisconsin
Everett Schubert, Slinger, Wisconsin

V. Erin and Richfield Townships -

Phillip Burg, R#1, Colgate, Wisconsin
A. J. Cleary, R#1, Hartford, Wisconsin
Thomas J. Manning, R#1, Hartford, Wisconsin
Albert Lofye, R#1, Hartford, Wisconsin
George Roebel, Hubertus, Wisconsin
John Youngbauer, Colgate, Wisconsin
Elmer Ebeling, R#1, Richfield, Wisconsin
Walter Boettcher, Richfield, Wisconsin
Robert Laubenheimer, Richfield, Wisconsin

The division of the County into the 5 areas called communities indicated above was based on several factors, chiefly among which are - (1) present land uses ; (2) marketing practices ; (3) soil topography and (4) soil type. No one factor was the sole guide which determined the inclusion of a given township in any one of the communities.

COMMUNITY COMMITTEE PERSONNEL

The Community Committees were made up of able successful farmers of the township they represented. Their schooling ranged from the middle grades of the rural school to men who were graduates of the four year course in agriculture. Several were short course graduates. One was an attorney and lives permanently in the Cedar Lake Resort area. His contributions were of special value because of his knowledge of the resort problems of Cedar Lake which is said to be the most concentrated resort area in Wisconsin.

In the selection of the County or Community Committee members, no reference was made of the political affiliation, nationality, religion, financial standing, social significance, or length of residence within the community. All members were residents of the county. All were selected on their ability to contribute to the work of land use planning for Washington County.

SOURCES OF BACKGROUND MATERIAL

Statistical data was obtained from a number of sources in order to present a true picture of the agricultural situation in Washington County which might serve as a guide in making recommendations.

The local AAA Soil Conservation office furnished valuable information on productivity, farm tenancy, acreages of various crops for 1939 and aerial photographs.

The District Farm Security Administration, the Juneau Production Credit Association, and the National Farm Loan Association all furnished information regarding their respective clients in Washington County. This information pertained to the location of their clients, the amount of their loans, and the size of the farms involved.

The County Welfare office presented data by townships on the relief situation for this county.

The County Treasurer's office gave information on the extent of tax delinquency in the county.

The Wisconsin State Planning Board at Madison supplied a generalized soil map and other data of Washington County.

Valuable agricultural data was obtained from Bulletin No.188, "Wisconsin Agriculture" published by the Wisconsin Crop and Livestock Reporting Service at Madison, Wisconsin.

Information on crop and livestock trends for 20 years by townships and also a four-year average of crop acreages and livestock numbers were furnished by the Bureau of Agricultural Economics at Madison.

The County Superintendent of Schools supplied information as to the number of rural schools and enrollments. Miss Edith Heidner of the West Bend High School prepared a good historical account of Washington County.

COUNTY COMMITTEE MEETINGS

The County Committee met for organization purposes on December 21, 1939. This committee did not meet again until May 14th of the following year. At this time a preliminary report of the recommendations of the Community Committee were presented for consideration.

COMMUNITY COMMITTEE MEETINGS

First Community Committee Meeting -

At the first Community Committee meeting the secretary explained the purpose of the Land Use Planning project and the contributions expected of the committee. He next presented the statistical information referred to above.

Following the presentation of this background material a round table discussion of it was conducted. This was to ascertain if each member of the community clearly understood the work he was about to do.

At the first meeting of the Community Committee the members were given a copy of a questionnaire consisting of about 100 questions which was prepared by the secretary with the assistance of the County Committee. This questionnaire was prepared solely for the purpose of helping Community Committee members in analyzing existing problems, and in determining if definite land use problems existed. Community Committee members were instructed to review the questions contained therein and to write out such answers as they wished. The questionnaire was to be discussed at the second meeting.

Second Community Committee Meeting -

The questions contained in the questionnaire required all of the time allotted for the second meeting. In three communities the committee remained in session for more than five hours in order to give consideration to the questions discussed.

Third Community Committee Meeting -

At the third and final meeting of the Community Committee the land of the communities concerned was classified. This was done according to the instructions contained in the phamplet "Out-Line for County Land Use Planning in Wisconsin."

For the purpose of mapping and classifying the land, the township was taken as the unit and meetings were held in each township. The township mapping meetings were attended by the assessor who in some townships was not a member of the community committee.

At this meeting each Community Committee member was furnished a plat map giving the size, location and ownership of each tract of land within the township. Each member was also given a copy of the directions for classifying the land as set forth in the instructions. These directions were thoroughly discussed before the work of classifying the land was begun.

Starting with Section No.1 of each township the secretary prepared a colored map of the classification assigned by the committee to each 40-acre tract.

The major use of the "forty" was used to determine the classification to be assigned to that particular tract of land. For example - if a given forty acres had 15 acres of woods and unplowed pasture land and 25 acres of recognized crop land, the entire forty was classified as crop land. It was felt that the law of averages would provide a proper distribution of the land.

Each township was mapped independently. When these were compiled into a county map, few, if any, discrepancies from township to township were found. In only two instances were community members asked to reconsider their classification. In one instance only was the classification slightly modified.

The Community Committee meetings were informal round table discussions. Each member of the committee was on a par with every other member which permitted individual thinking. All were accorded equal freedom of expression. The secretary recorded only those opinions and suggestions approved by a majority of the committee.

It is the personal opinion of the secretary in viewing the land classification of the thirteen separate township committees, that, perhaps, some differences of standards were present in the minds of the committees as the land was classified. However, for the purposes of this report all of the land except area "B" land within the county is to be regarded as arable. Hence, any differences of opinion concerning a 40-acre tract in question will not materially alter the contents of this report.

The results of the Community Committee meetings were summarized to make up the county narrative report. These together with the map were presented to the County Committee on May 14, 1940, for correlation of the recommendations of the five separate communities and for the county as a whole. Mr. L. G. Sorden assisted in directing this part of the report.

TRENDS IN LAND USE IN WASHINGTON COUNTY

by
Edith Heidner
Teacher of American History
West Bend High School

The frontier approached the lands now included in Washington County during the last half of the 1830's. Fortunately, in 1835-37 during the feverish speculation immediately preceding the panic of 1837, only the lands along the Milwaukee River in the townships of Trenton and Farmington were bought by absentee speculators. When the actual settlers came in 1839 they could buy land directly from the government at the minimum price of $1.25 per acre. Settlers located first in southeastern Germantown and proceeded north, northwest, and west along the trails. The Yankees preceded other nationalities by very little, but they sought out the water power and town sites. Yankees, Germans, Irish and a few French, Swiss, Scandinavians and British bought the land which best measured up to their own standards and experience. Good hardwood forests and limestone soils indicated productive land according to their home land standards. The rolling hills and beautiful lakes appealed strongly to both the German and Irish immigrants, reminding them of their native lands.

Proximity to the Lake Michigan markets tended to hold the cautious Germans in the south central and east townships of the county; the abundance of pure water to be had without the digging of expensive wells, the cheapness of the government land, the building and fencing material to be had for the labor of preparing it, all rendered possible the making of a farmstead with a comparatively small investment of capital. It appealed to those pioneers, native and foreign, who had little money but were willing to work hard and by thrift to improve their economic position. By 1850 all of the desirable land in the county had been purchased from the government.

In 1850, in the town of Hartford, the adult male settlers were largely of native American decent of English origin commonly called "Yankee". They were also a strong element in Farmington, Kewaskum, Trenton, and West Bend townships. The Irish far outnumbered all other nationalities in Erin and were prominent in Hartford, Farmington, Richfield, Trenton and Wayne. The Germans over-whelmingly out-numbered all others in Germantown, Jackson, Polk, Richfield, Addison and Wayne, and were more numerous than any other nationality in Farmington and West Bend.

By 1860, the population of the county had reached 23,622 inhabitants, the Germans had become more numerous than all other nationalities in all townships except in Erin which was over-whelmingly Irish, and Hartford - predominently Yankee, and the trend since has not changed appreciably.

The dense, hardwood forests which covered the entire county made land clearing a slow process. Due to this fact and also to the

relatively small amount of capital of most of the settlers, the size of the average farm was about eighty acres. Wheat was the most profitable cash crop and every farmer aimed to raise as much of it as possible because it helped him to pay for his improvements, livestock and machinery. Wheat grew best on the newly cleared land, therefore its production increased in the county as the cleared acreage increased. However a little of everything else was raised. Rye, corn, buckwheat and maple sugar were important items of food of the early pioneers. A few pigs and a cow or two were kept by each family. Oats was produced, and also a considerable acreage of barley for it found a good market in the local breweries.

Soon after the first settlers came to the county, dams were built to utilize the many excellent water power sites. Saw mills and grist mills were erected. In 1860, eighteen saw mills with a combined capital of $46,100. employed forty-five hands and produced 4,228, 740 feet of lumber. Oak, basswood, cherry and butternut logs were the principal ones used.

In 1860, ten flour mills used 470,000 bushels of wheat worth $415,700. to produce 93,133 barrels of flour worth $490,315. Rye was also used for flour. The coarse grains such as oats, barley, corn, etc., were ground for stock feed.

In the same year eight breweries used 15,300 bushels of barley and malt to manufacture 6,550 barrels of beer. These local industries used home grown raw material and sold most of the products in the local market.

Between 1855 and 1886 the marketing facilities of the area were greatly extended by the building of three railroads across the county from Milwaukee to points west, north, and northwest.

Specialization in wheat and barley production increased here as it lagged in other Wisconsin counties. In 1889 the county ranked third in the state in wheat raising, and second in the per capita production of barley. But an adjustment was taking place on these acres that had been cleared earliest and used longest. In 1880 Washington County was one of five out of twenty-three older counties of the state that still devoted more acreage to market crops such as wheat, rye and barley, than to feed crops such as oats, corn and hay. By 1889 however, the proportion in acreage between the two was reversed in favor of feed crops.

There were several influences that brought about this shift to more diversified farming, among them were diminishing yields on the acres that had been farmed longest and the increasing ravages of the chinch bug. The farmer cast about for some cash crops that would take the place of wheat.

As early as 1855, the Washington County Agricultural Society was organized. It was reorganized in 1858 with the first fair or show at the Court House Square in West Bend in that year. The first premium lists show that the major interest soon turned to livestock.

The first pedigree livestock on the records were Norman draft horses listed in 1877 and Durham and Devon cattle in 1879.

Factory cheese-making was introduced into the county in Farmington in 1871 with the manufacturing of full cream cheddar cheese. Other cheese factories were quickly established. In an attempt to make the supply of milk more nearly equal to the capacity of the neighboring cheese factory, a farmer from the town of West Bend introduced the black and white cows which, from his experience in his native Germany, he knew to be producers of large quantities of milk. In 1883, he and his son, C. A. Schroeder, bought two pedigreed Holstein heifers. In order to prove their merit, the son kept separate the milk from each of the two cows, weighed it, skimmed off the cream and churned it. He found that twenty-eight pounds of milk from one cow produced one pound of butter while it took only twenty-one pounds of milk from the other to produce a like amount. The latter cow was kept as the foundation for his herd. The testing and keeping of individual records of the volume of milk and amount of butterfat produced for each individual cow is the foundation for the scientific breeding of Holstein as well as other breeds of cattle. Breeding for milk production was thus introduced.

A year round cash income such as is now obtained from milk is important to the prosperity of the farmer. Cheese factories were regularly closed during the winter months because of the lack of an adequate supply of milk. Agricultural Scientists and progressive farmers at about this time advocated the use of preserved green feed as a means of continuing the milk flow during the winter months. A silo, probably the first in the county was built in 1885 in the town of Jackson. It was square, the lower portion built of field stone--the upper part of wood. Silos were adopted rather slowly. The drive to conserve food in 1917 and 1918 during the World War stimulated interest in them. In 1919 the number of silos increased by 203 making 1,717 in all. A survey of the county today shows an average of slightly more than one silo per farm.

Not the least in importance among the elements to success in dairy farming in the county were the already mentioned German farmers. In addition to their patient devotion to the principles of good tillage, they generally cared well for their stock and were willing to milk twice a day, feed and tend cows, and deliver milk at the factory.

During the decade between 1910 and 1920 important influences shaped our agricultural development. It is believed that the electric power line constructed in the year 1919 from the city of West Bend, west and northwest, through the townships of West Bend, Barton, Addison, and Wayne was the first completely rural electric power line built in the United States. Macadam roads and state trunk highways were built; automobiles and trucks increased in number. In 1920, Washington County built its first few miles of concrete highway.

The rapid and all-weather transportation facilities helped to solve one of the fundamental problems of the county-- the adequate handling of its most valuable product--milk. It was essential in

effectively developing every important commercial outlet for milk, whether to the local creameries and cheese factories and condenseries, or as fluid milk to the local industrial population and to the great Milwaukee-Chicago metropolitan area.

Dating from approximately 1915, Washington County has been a leader in registered breeding stock. It has developed a nation-wide and even international market for pedigreed cattle. The first herd testing association was organized in 1917, and at the present time there are four in the county. The original purpose of the testing associations to increase milk and butterfat production and develop better parent stock has been well carried out.

Influences to arouse and lead farmers to better agricultural practices have not been wanting. The Washington County Agricultural Society, already mentioned, continued to exercise an important influence through the 1920's. Under the leadership of the County Superintendent of Schools the Boys' Agricultural Club made its first exhibits at the County Fair in 1904. The impetus of the World War and the demand for increased food production brought about the employment of the first County Agent in 1919; and the first Emergency Home Demonstration Agent for work among the older girls and women. However, this last office was later discontinued until revived in 1936 with a County Home Agent. The 4-H work was established about in 1919 as part of the same movement and obsorbed the previously mentioned Boys' Agricultural Club. There are now twenty-four 4-H clubs in the county. A County Fruit Growers' Association was established in 1931 and there are eleven communities that do active spraying of their fruit orchards.

Land Use for recreational purposes in the Kettle Moraine region of the county dates back to its earliest history. Its wooded ridges and slopes, many cleared-watered, spring-fed lakes abounding in game, water-fowl, and fish were prized by the Indians and early white settlers. Commercially, land use for recreational purposes probably dates back to the first subdivision made in 1884 and known as Cedar Lake Park. Camps, hotels and picnic grounds, cottages, steadily increased in number and importance until the shores of most of the lakes have been occupied. Local residents and organizations have cooperated with government agencies to foster sports. Fish stocking by the state began in Cedar Lake as early as 1886. In 1914, the office of Game Warden was established in the county.

The Washington County Fish and Game Protective Association was established in 1922 and there are also five active local conservation clubs. The first Wild Life Refuge in the county was established at Lake Amy Belle in 1929. At present there are five within the county boundaries. Pheasants were first released in large numbers in this area about 1930.

In 1940, a lease of several years duration was obtained on 2,200 acres of land in the Theresa marsh located in the Rock River Valley in the township of Wayne which will be used as a public shooting grounds. It will be stocked by the Wisconsin Conservation Department and opened to the public for hunting in the fall of 1940.

In addition to the already mentioned conservation activities yatching and other water sports, as well as the natural scenic beauty attracted local residents and thousands of people from Milwaukee, Chicago and more distant cities. The Cedar Lake Yatch Club was organized in 1898. With the purchasing of land for golf courses by the Hartford Golf Club in 1927 and the West Bend Country Club in 1928, golf was added to these sports.

At no time in the history of Washington County was its prosperity dependent exclusively upon one source of income. Diversified farming has always been practiced with incomes from poultry, hogs, fruit, dairying, livestock, and cash crops.

The industries of the county are numerous and varied. With the establishment of automobile manufacturing in Hartford in 1905, that city became an important industrial center of the county. Before 1910, the industries of West Bend were largely those that used local raw materials or produced for a local agricultural market. Since that date more industries have been established which are not so dependent upon the vicinity for materials or market. Agricultural implements, pocket books, aluminum ware, cheese boxes, wagons, shoes, woolen blankets, automobile accessories, washing machines, fibre conduit line materials, stainless steel, outboard motors, canned vegetable and milk condensery products, have a national or international market. The industries draw their labor supply from the farm and village populations as well as from the cities of the county and are one of its foremost sources of revenue and stability.

In order to insure the public safety, welfare, and convenience in the future expansion of these many and varied land uses, the County Board, in 1939, created a Washington County Park Commission whose duty is to make plans and recommendations for the future development of the county.

DESCRIPTION OF COUNTY

Washington County is one of a group of seven southeastern Wisconsin counties. It is approximately fifty miles north of the state line and 12 to 15 miles west of the border of Lake Michigan. It is classified as a rural county with a population in 1935 of 26,551 people. The largest urban center is West Bend, the County Seat, which has a population of 4,760 people. West Bend, which is practically in the center of the county is 32 miles from Milwaukee, and is located on Federal and State Highways 45 and 55. The second city in size is Hartford, population 3,754, which is located near the western boundary of the county. In addition there are three villages, namely; Kewaskum, Barton and Slinger with a population of about 800 to 1000 each. Also six smaller villages or unincorporated settlements, namely; Allenton, Fillmore, Newburg, Richfield, Jackson, and Germantown, with populations of less than 400 people per settlement. Of the total population 57.2 percent of the people are distinctly rural and directly dependent upon the soil for a livelihood. 32.1 percent live in the two cities within the county and 10.7 percent live in small villages or unincorporated settlements.

The County is served by one Federal and one Federal-State Highway running in a northerly and southerly direction. Two State Trunk Highways traverse the county in easterly and westerly directions. Three railroads provide adequate rail transportation. These transportation facilities provide convenient outlets to the Milwaukee and Chicago markets for Washington County farm produce.

Washington County is one of the smaller counties in the state, consisting of thirteen townships. It is 18 miles wide and 24 miles long. The area included is 432 square miles or 276,480 acres.

The County has an elevation varying from 900 to 1050 feet with the highest point being Holy Hill which is 1361 feet above sea level. The rainfall is approximately 32 inches per year. The length of the growing season ranges from 155 days to 165 days. The average date of the first killing frost in autumn is usually shortly after October 1st. In the spring time the average date of the last killing frost has been about the first week in May.

The soils of Washington County, like the soil of most of the eastern Wisconsin counties, were formed principally by three different methods. These are - (1) glacial deposits; (2) alluvial or stream deposits and (3) lacustrine or lake-laid soil. Soils formed by the latter method are found only along the eastern border of the county. Glacial deposits account for the greater percent of the soils.

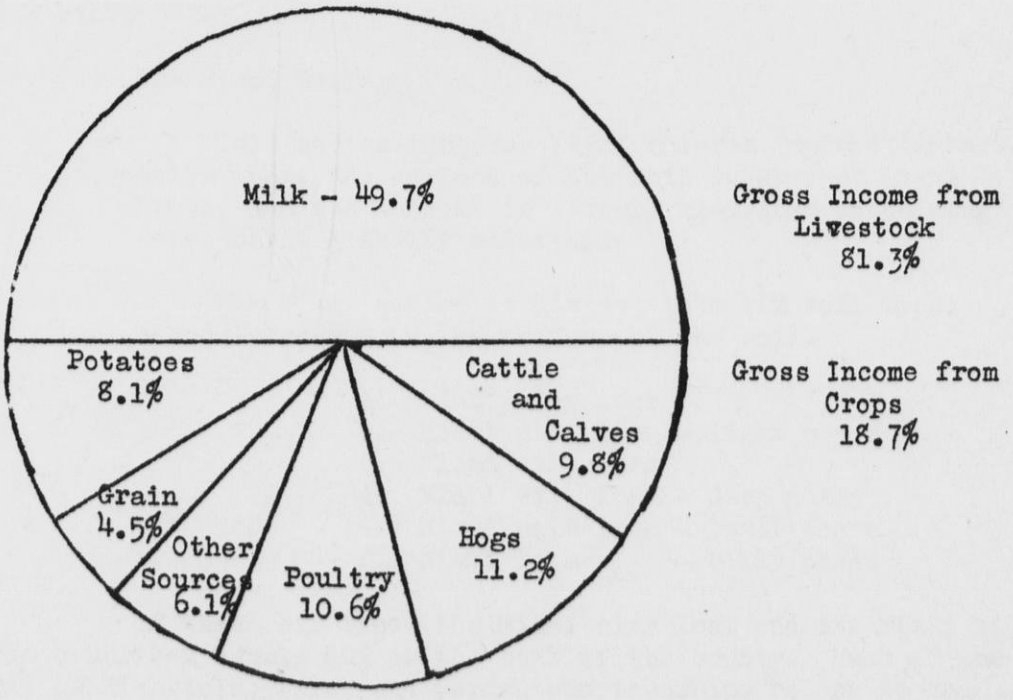
Washington County was traversed by two distinct glaciers, one known as the Lake Michigan lobe, and the other as the Green Bay lobe. Where these two glaciers came in contact, they formed a pronounced moraine which is known as the "Kettle Moraine" and which traverses the county almost diagonally from the northeast corner to the southwest corner. This area is best described as hilly,

while the balance of the county may be classed as undulating to rolling with the exception of the two southeastern townships, namely; Jackson and Germantown which are quite level.

More than 90 percent of Washington County is underlaid with Niagara limestone. Along the western border, covering an area of not to exceed two townships, the surface rock is Cincinnati shale. The weathering of these and other native rocks produced the original soil of these areas. During the event of the glacier much of the underlying rock was ground up and mixed with the original soil produced by the weathering agencies. This produced a soil of average fertility which in many instances has become deficient in phosphate. Since the Niagara limestone is the most extensive formation, it has contributed most to the formation of our soils. This explains in part at least, why the soils of the eastern two-thirds of the county are usually not acid and need little if any lime for crop growth. The Cincinnati shale found along the western borderline of the county has left pronounced acid conditions in the soil and farmers find it advantageous to apply lime.

In the Wisconsin geological and natural history survey the soils of the county have been classified into eleven soil series. This classification is based very largely on the origin, texture, topography, chemical composition, and native vegetation. The predominant type of farming is diversified dairy farming with such cash crops as barley, potatoes, peas, sweet corn, carrots, and tomatoes. 60 percent of the farm income is derived from dairy cattle. Poultry and hog raising contribute about 10 percent each to our farm income. The balance is derived from the sale of cash crops.

Sources of Gross Farm Income, Washington County, 1936.



From Bulletin No.188 Wisconsin Agricultural Statistics.

Washington County has approximately 2,850 farms whose average size is 94.6 acres with an average value of $87.62 per acre or $8,286.00 per farm. Of the total land in the county, excluding the lake region, 96.2% is in farms of which 56.3% is under cultivation. The remaining land is in pasture, wooded or open, and in farm building sites. About 12.1% of the land is wooded pasture and is covered with a fair stand of second growth timber. In addition 2.5% of the land is pastured woodland.

PRESENT LAND USE AREAS

Washington County is a small, compact, and uniform area with little natural obstruction to wind or to the elements. This makes possible a relatively uniform climate.

The topography of the county does affect its agriculture to some extent. The dark soils, mostly of the Clyde clay loam series in the southeastern part of the county which we have grouped for the purpose of this study into one community, are suited for such crops as cabbage, tomatoes and red beets. These cash crops are not so well adapted to the soil types and soil topography of the remaining communities into which Washington County is divided.

We have no forests, public recreational lands, or tax reverted areas in the county.

The principal soils with a brief description of them follows -

I. THE HEAVY SOILS

(1) The Miami Soils:

This series includes light colored, upland timbered soils where the surface of the soil is gray or light brown, and the subsoil is largely clay loam containing some coarse gravelly material.

The Miami series is divided into six soil types based largely upon the texture of the soil.

a. Miami clay loam
b. Miami clay loam - light phase
c. Miami silt loam
d. Miami silt loam - deep phase
e. Miami silt loam - level phase
f. Miami loam - hilly phase

Of these six types the Miami clay loam and the Miami silt loam comprises nearly 50% of the soil of the county. Much of the soil of Richfield, Polk, and Germantown townships belong to the Miami clay loam. The Miami silt loam is the most extensive of

Washington County soils and is the principal soil of Addison, Hartford, Erin, Wayne, and Kewaskum Townships.

When the County was settled most of the soil was covered with virgin timber consisting largely of oak, maple, elm, ash, beech, hickory and basswood. Today most of the merchantable timber has been removed and the land put under cultivation.

The surface of the Miami clay and silt loam soil of Washington County varies from undulating to gently rolling. The natural surface drainage is good. About 10 percent of this area has inadequate under-drainage and must be tilled for best agricultural crops. General farming and dairying is the principal type of agriculture. Some cash crops, as peas, sugar beets, red beets, barley, potatoes, carrots and tomatoes are also grown. The yields secured compare favorably with any secured in Wisconsin. Alfalfa and most legumes have in the past grown well without the addition of lime or fertilizer. Farms on this type of soil and which are well located usually command top prices. This is because of the fact that most of the land can be readily improved with the minimum of effort. The good roads, schools, churches, and shipping facilities are added factors that make this land highly desirable for agricultural purposes.

(2) Fox Loam and Silt Loam:

Of these two soil series the Fox loam, heavy subsoil phase, is the most important. The Fox silt loam occurs only in limited areas. These are to be found mostly along the streams and natural terraces of Jackson, Farmington, and West Bend townships. Because of its presence in only small areas, few if any farms are located entirely upon it. The same can be said of the Waukesha silt loam.

II. THE SANDY AND GRAVELLY SOILS

(1) The Miami Gravelly Loam Phase:

This soil phase is quite widely distributed in smaller areas throughout the county. Its most extensive occurrence is within the Kettle Moraine Area. In the more sandy sections of the county this phase becomes the sandy loam phase.

(2) The Rodman Series:

This series is found in the extremely rough and broken morainic country where the soil consists almost entirely of gravel and has only a very shallow covering of top soil. The gravel is made up almost entirely of glaciated limestone.

(3) Coloma and Plainfield Sand:

These two phases of sandy soils are of only medium

importance in the agriculture of Washington County. They are found principally in Farmington and Trenton Townships and in small areas along the borders of the Kettle Moraine. These soils respond well to commercial fertilizers and are well adapted to dairy farming with potatoes as a cash crop.

The three mentioned phases of soil comprise most of the land in the Kettle Moraine Area. The soil is light colored indicating the absence of organic matter. Less than one-half of it is under plow. The rougher areas are utilized for forests or grazing. This area is Washington County's problem area since much of the land is either too low in fertility or subject to erosion.

III. THE PEAT AND LOW LAND SOILS

(1) Clyde Silt and Clay Loam:

These two phases of soil constitute a large part of the poorly drained non-peat area of the county. In recent years a part of this soil has been improved through tilling.

The surface soil of the Clyde silt and clay loam to a depth of 10-14 inches consists of a black smooth silk loam which is very high in organic matter. The subsoil is usually a clay loam and extends to a depth of three feet or more. This soil is all low-lying and lacks sufficient natural drainage for good crop production. Drainage, either tile or open ditch, or both are necessary before this type of soil can be classed as desirable agricultural land.

The land when drained and broken makes excellent agricultural land, and deep rooted crops as corn, carrots, and sugar beets and non-legume hays produce superior yields upon it.

(2) Peat:

Peat and muck soil is found in every township in the county. The largest areas are found in Wayne, Jackson, Germantown, Erin and Addison Townships.

The peat soils lack ample natural drainage for good agriculture. Where the peat is in an advanced stage of decomposition, it has been found practical, if good drainage is possible, to clear this land and put it into agricultural use. In past years many acres of peat land had been broken and seeded to Canary grass. In the town of Wayne nearly 2,000 acres in one farming unit have been so managed. With careful farm management this type of land can be made to produce almost unlimited quantities of high quality forage.

LAND USE CLASSIFICATION

At the final meeting of the Community Committees, all land of the County was classified into five major land use classifications shown on the accompanying map. The method of procedure was presented earlier in this report. The five different classes into which the land was grouped are given below:

A. Areas Now In Farms Which Are Not Suited For Farming And In Which the Lands Should Be Put To Some Other Use.

These areas were marked A and colored blue.

B. Areas Not Now In Farms And Which Should Not Be Used For Farming Because They Are Unsuited For This Use Either As Full-Time Or As Part-Time Farms Used In Conjunction With Existing Dependable Opportunities For Non-Farm Work.

These areas were marked B and colored green.

C. Areas Now In Farms and Which Are Questionably Suited For Arable Farming.

An arable farm is one on which ten percent of the land is tillable. These areas were marked C and colored red.

D. Areas Not Now In Farms But Which Are Suitable For Development into Either Part-time or Full-Time Farms.

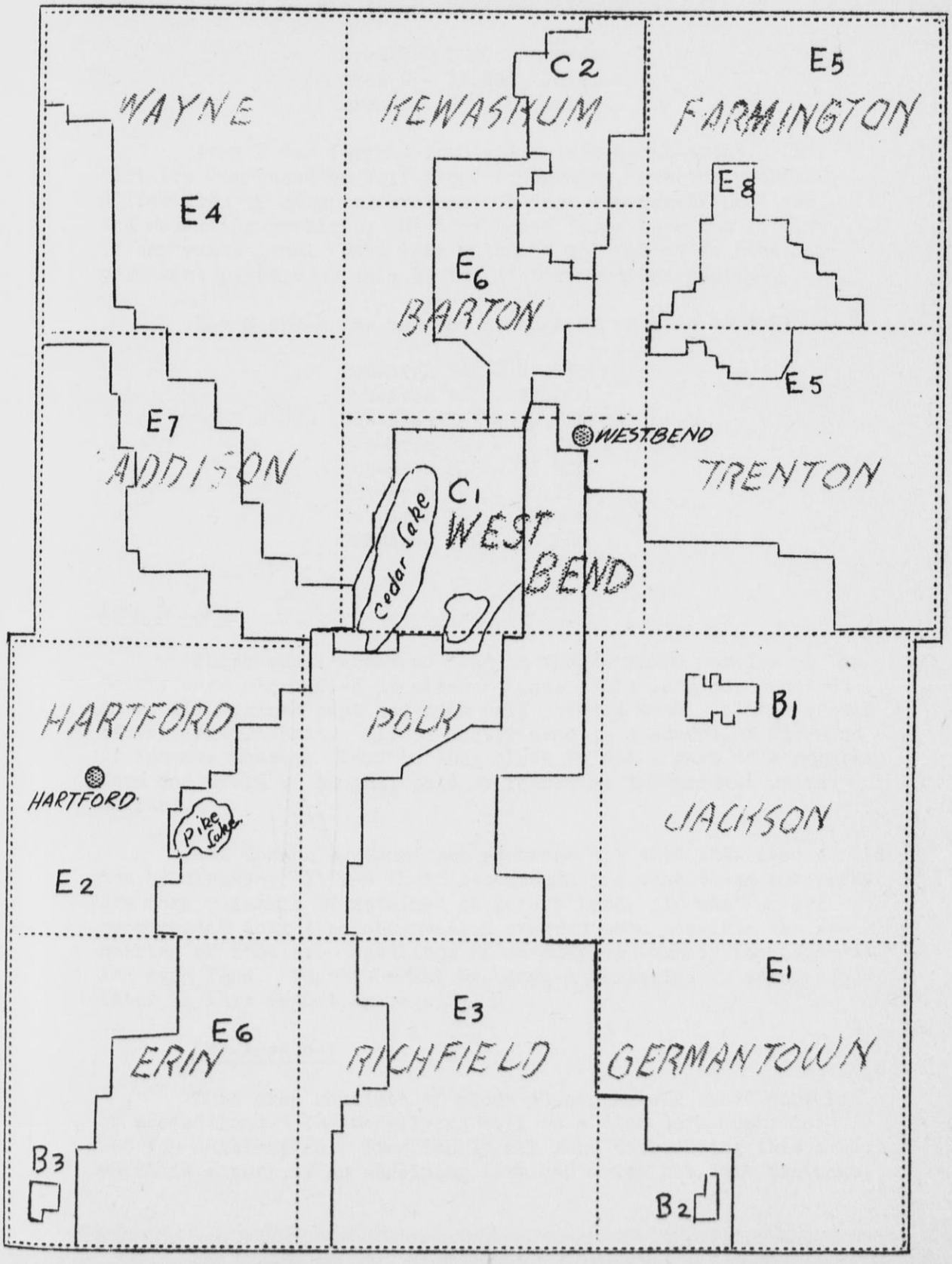
These areas were marked D and colored orange.

E. Areas Which Are Now In Farms And Which Should Remain In Farming. Either With Or Without Some Changes Or Shifts In The Size And Type Of Farm, The Cropping Systems, And Soil Conserving Practices Followed, Or Other Adjustments In The Farming System.

These areas were marked E and colored yellow.

In the preparation of the Land Classification Map no land was placed in Class A or Class D.

WASHINGTON COUNTY



LAND USE AREAS AND RECOMMENDATIONS

The total land of the County was classified by the County Committee into three areas as follows:

Area B - 1200 Acres
Area C - 11,800 Acres
Area E - 244,360 Acres

Area E was further subdivided into 8 sub-areas. This division was based on soil type, topography, erosion problems, differences in cropping systems, in farm management problems, and marketing problems. Most of these farms have but little if any waste land. That land which is not tilled is used for permanent pasture or as a source of firewood and pasture.

The 8 sub-areas and the acreage of each is as follows-

Sub-Area E-1 - 47,480
Sub-Area E-2 - 37,000
Sub-Area E-3 - 34,320
Sub-Area E-4 - 41,040
Sub-Area E-5 - 38,480
Sub-Area E-6 - 28,120
Sub-Area E-7 - 12,240
Sub-Area E-8 - 5,680

AREA B LAND

Three small areas of land in the Southern portion of the County were classified as class B land. This land now consists of poorly drained peat and muck soil covered with a timber growth of varying intensity. It is mostly used as a source of firewood by farmers nearby. Land in this class is not a part of a regular farm and would be bought, sold or leased as independent units of land.

All Community Committee members felt that this land should not be cleared. It was their recommendation that these sub-areas are more valuable if retained as forest land. If was further recommended that the conservation program make possible the acquiring of free tree seedlings of an adapted variety for reforesting such land. What is meant by adapted varieties is discussed later in this report on page 23.

Sub-Area B-1

This area consists of about 35 separately owned parcels of wooded land. The underlying soil is a rich dark muck, too wet for cultivation. Practically all land surrounding this area which is a part of an adjoining farm and which has fair drainage,

either natural or man made, has been cleared and broken during past years. All that land in sub-area B-1 needs is drainage to change it from its present use, timber growing, to highly productive truck crop or corn land. Frequent unsuccessful attempts have been made to establish a drainage district in this area.

Sub-Area B-2 and B-3

These areas are the least suited to clearing and tilling. It was the consensus of opinion that the best use of land for sub-areas B-2 and B-3 is to retain them as woodland, and to reforest them, when and if necessary by planting adapted seedlings.

AREA C LAND

Two areas were designated as land which is questionable for agriculture. All of the farms at the present time in these areas may be classed as arable since 10 percent or more of the land is tillable. It was, however, the judgment of the two Community Committees and of the County Committee that farming was not the best use that can be made of the majority of the land in these two areas. They have similar morainic soil with Rodman gravel predominating. The soil consists of a shallow covering of loam with a gravelly sub-soil. Its productivity is relatively low. A goodly portion of the land is in permanent pasture. In poor crop years those who farm in this area are among the first to suffer crop failure.

Area C land comprises 4.63% of the total land area of the County. Yet farmers in this area represent 6.45% of the tax delinquency of the County. It also represents 5.43% of the Production Credit Loans, and 5.26% of the Federal Land Bank Loans. While these percentages are not excessively out of proportion to the remainder of the county, they do show that farmers in area C land find it more difficult, as compared to farmers in other parts of the county, to meet their financial obligations. It was the opinion of the County Committee that these problems may become even more acute in future years because of decreased farm income.

It was their opinion that future tax delinquency and relief problems for the County may be eliminated if the necessary steps be taken in the near future to acquire land in area C for park and recreational purposes.

It was the judgment of both the Community Committee and the County Committee that further study be made of these areas with a view of finding a more profitable land use than their present ones.

Sub-Area C-1

This sub-area comprises 6,320 acres. 52 percent or 3,320 acres are wooded or in permanent pasture. Since this area is located within one hour's driving distance of a metropolitan center representing three-quarters of a million people, it was

considered desirable that this land be included in a public park and used for recreational purposes for greater Milwaukee and surrounding regions.

There are no State or Federal recreational centers or parks in Washington County. City Parks within the county are frequently over-crowded with visitors from the metropolitan area. More recreational space is needed.

The several lakes including Cedar Lake which has more than 15 miles of shore line, the scenic morainic hills, and the many wooded knolls make this area ideally adapted for a year round recreational use. The Community Planning Committees felt that the County Park Board, the Wisconsin Conservation Department, the State Board, and other State and Federal Agencies and Departments concerned should give this area further study with the view of including it as a recreational center for Southeastern Wisconsin.

Included in this area according to Community Committee estimates of the predominating land of each 40-acre tract there are also 3000 acres of tillable land. This represents 48 percent of the total land involved.

Two uses could be made of these areas. The land could be seeded to a conserving crop. It then could be rented out for grazing purposes. In this way the land could be made to produce a revenue during the years it was being developed for recreational purposes.

In the wooded areas where the timber stand has been thinned by local cuttings in past years, and on the smaller cultivated fields, reforestation by planting adapted varieties of trees can be carried out.

It is not the intention of this report to indicate the adapted varieties of trees. It was, however, the consensus of opinion that hardwood seedlings make up most of the plantings. The State Extension Forester should be invited to confer with the County Agricultural Committee in determining what the adapted varieties of trees are. It was further recommended by the County Committee that the County Board petition the Federal Government to establish a CCC Side Camp in this area for the purpose of providing the labor necessary for converting this area into a recreational park. Should the amount of CCC labor be inadequate, men could be taken from the relief rolls to carry on this project.

Sub-Area C-2

This area totalling approximately 5,600 acres is made up of very hilly and rough, gravelly soils with one small natural lake in the southern part. In addition the Milwaukee River runs along its southwestern boundary for about half of its length.

It was felt by the Community Committee that about 2,072 acres or 37 percent of the area is adapted for crop land. Approximately 1,792 acres or 32 percent of the area is now in permanent pasture with a good part of it wooded. The remaining land, 31 percent or 1,736 acres, is now farmed but is of such nature that it is questionable for agricultural use according to the opinions of the Community Committeemen.

Because of its proximity to the Mauthe Lake State Park, located in the adjoining County immediately to the north of this sub-area, the Community and the County Land Use Planning Committee feel that this area should be considered by the State Park Board as a possible addition to the Mauthe Lake State Park and that appropriate action be taken by the County Board towards such a development.

Included in this recommendation is the proposal that this area be reforested. Future serious erosion problems would therefore be avoided and the soil would be growing a valuable woodland crop.

Until such time as this area is turned over to public recreational uses the following recommendations for farm management are suggested:

(1) That farms within the area be given a 60-40 conserving-depleting allotment in the A.A.A. Farm Conservation program.

(2) That the increased use of grass silage be encouraged.

(3) That no land now in permanent pasture or woods be broken or cleared.

(4) That adequate erosion control measures of strip cropping and grassed water run-offs be carried out.

(5) That the State Conservation Department increase their restocking of the game and fish life in this area.

It was further suggested that many farms in this area would be suitable for private hunting grounds if the owners could assure hunters of reasonable game catches. It was felt that since more and more of the townships of Southeastern Wisconsin Counties were closing their boundaries to open hunting, there would be a demand on the part of hunters and fishermen from the Milwaukee Metropolitan area for the establishment of private hunting and fishing grounds. Many of these hunters and fishermen would be willing to pay reasonable fees for the privilege of pursuing their sports. The County could further cooperate with privately owned hunting and fishing grounds by adjusting the tax burden and the state by supplying young game and fish stock.

It was suggested that the recommendations in the Land Use Planning project give due consideration to park and recreational possibilities within the County. Both Committees recommended that sub-areas C-1 and C-2 be set aside on a long term basis as a distinct park and recreational area. However, a distinction was drawn between the two sub-areas in the following way -

Sub-area C-1 includes the Cedar Lake region. It has within it considerable land suitable for farming. A large part of the remaining land has already been developed by prior enterprises for residential and recreational use. The land values are high and its acquisition would be a slow and expensive venture.

Sub-area C-2 is characterized by almost a complete absence of good agricultural land. It is a composite area and runs adjacent to Mauthe State Park. It would lend itself admirably to conservation purposes. It was thought that this land could be purchased at a comparatively low cost.

The suggestion was made and voted upon favorably by the County Committee that an attempt be made to acquire isolated smaller parcels of poor agricultural land throughout the county. That such parcels of land be reforested and developed into parks, and hunting or shooting reserves. This plan might encounter less resistance to carry out as it would minimize the amount of money needed.

RECOMMENDATIONS FOR THE E LAND

The recommendations which are being offered in this report for the eight subdivisions of the class E land are largely the consensus of opinion of the five Community Committees. These recommendations have been reviewed and evaluated by the County Committee and have their full endorsement.

In no instance was it the intention of either Community or County Committees to alter or to interfere with the carrying out of the peaceful pursuits of the present day agriculture. The recommendations are suggested in order to bring about a more desirable and a more worth while use of land of the areas for which they are made. The changes in land use will be largely the result of rural education by schools and by all agricultural agencies within the county. Hence the recommendations made in this report are long time objectives. Future agricultural programs should be planned to bring about the fulfillment of the land use recommendations.

Since all of the class E land is considered desirable farming land and is intensively farmed, the recommendations made

for this area may be applied with but few minor changes to other areas. There will also be considerable overlapping of recommendations. This is logical since there is so little difference in the various sub-areas. The main differences in the recommendations depend largely upon -

(1) The topography of the land.
(2) The composition and fertility of the soil.
(3) The present marketing methods.

In most of these sub-areas the variations are so small that definite recommendations may be questioned.

Sub-Area E-1

Sub-area E-1 contains 47,480 acres and is regarded as the most fertile and the most diversified farming area in Washington County. About 75 percent of the soil here consists of Miami and Clyde silt and clay loams. The remaining 25 percent of the acreage is peat land which in many instances has decomposed into a muck soil highly prized for agricultural purposes. This makes this area one which lends itself to much diversification.

The entire area lies within the fluid milk zones of the Milwaukee and Chicago Markets. Dairying is the chief source of agricultural income. It was deemed desirable to continue all of the present crop land in agriculture. This sub-area had more cash crop acreage in 1939 than any other corresponding equal acreage in the county. The A.A.A. listings of the 1939 crops show that more than 7 percent of the crop land was planted to cash crops excluding barley.

Since much of this area has soil ideally suited for truck crops, and since the truck crop zone is rapidly being extended to greater distances from Milwaukee, it was the opinion of community committee members that the future will see an expansion of the growing of truck crops on the adapted land of this sub-area. Several such truck crop farms are already established. The shift from the present cropping systems to the growing of increased acreage of truck crops is to be made when the market is ready to absorb the products. The value of the land furthermore is such that a more intensive agriculture must be practiced to make a profit on the investment represented in the land.

Southeastern Wisconsin because of its large population consumes many bushels of apples. A large portion of this fruit is shipped in from Michigan and from the West Coast. Only a small percentage of the total apples consumed by the Milwaukee area is produced locally. The southern counties bordering on Lake Michigan have in recent years planted many acres of apple orchards. These have proved highly productive and have yielded good returns on the investment to their owners. The eastern border of the sub-area is within 15 miles of the shores of Lake Michigan. The distance to the Milwaukee markets is about the

same. Its Miami clay loam soil is ideally adapted to fruit growing. There are a number of mature and well producing orchards found within the area. These are undeniable proof that this area is adapted to the production of quality tree fruits, particularly apples. It was the suggestion of the local committee that further study be made by the County Extension Department in cooperation with farm orchard specialists from the College of Agriculture with a view of increasing the orchard acreage.

The poultry business fits in nicely with fruit and truck crop farming. This is true because the labor needed for these two types of agriculture does not conflict to any great extent. It is also possible to make use of marketing contacts of the fruit and truck crops for obtaining a market for the poultry products. An expansion of the poultry industry was deemed advisable for farmers within this area, particularly insofar as it affects those who may shift from dairying to fruit and truck cropping.

It was further suggested that 60 percent and 40 percent were fair apportionments of depleting and conserving crop acreages respectively. That five-year rotations be followed with two years soil conserving crops, one year small grains, and the remaining two years be planted to intertilled crops.

A study of the acres of farm crops indicates that 16.5% is planted to barley and 19% to oats. Barley has always been an important cash crop. Scientific studies made by the Wisconsin Experiment Station show that the total digestible units per acre with average yields of barley is 1131.9 pounds as compared to 784. pounds for oats. This indicates that barley is a cheaper source of food nutrients than oats. The Community Committee recommended that since this sub-area is adapted to good barley culture more acres of barley be grown. It was suggested that the barley-oats ratio be on a 50-50 basis.

Sub-Area E-2

Sub-Area E-2 contains about 37,000 acres and is a highly productive soil. The soil is partly Miami clay and partly silt loam. The balance of the land equal in area to about one township is a mixture of glacial soil and the product of the integration of Cincinnati shale which is the predominating underlying rock. The soil in this sub-area is more in need of lime than is the soil of any other part of the county. The soil analysis of more than 400 samples taken from 34 farms shows that about 60 percent of the land is acid. Years of heavy cropping have greatly reduced its available phosphorus content to a point where this element should be replenished.

The land in this area prior to 1920 was the largest producer of white clover seed in the United States. The soil was relatively free from weed seeds and good stands of white clover grew naturally. Following the advent of the agricultural

depression which came shortly after the world war days, the price of white clover seed dropped to a point where there was little if any profit in its production. Farmers turned to the production of alsike clover to take the place of a lost white clover income. Today many farmers are anxious to resume their former white clover seed production. Many of these farmers find that their land will no longer produce pure stands of white clover seed because of the presence of alsike seed in the soil. The seeds of these two clovers cannot be separated by the use of machines in common use. Thus, this good white clover seed market which frequently in years past produced much cash crop revenue is partly lost at least to the farmers of this sub-area.

It was the consensus of opinion that farmers in this region cooperate with the Extension Office and carry out an extensive soil testing program. The application of lime and phosphorus as has been shown by repeated experimental trials will insure better legume hayland catches and will appreciably strengthen the plant to overcome winter killing. It was thought that if this were carried out for a period of ten years, purer stands of white clover would result. Other recommendations were to the effect -

(1) That all arable land be in a conserving crop two years out of every five.

(2) That the production of adapted fruits such as apples be encouraged to a point where local demands are supplied by home production.

(3) That barley and oats acreage be divided on an equal basis.

(4) That low land areas be utilized for the production of carrots as a cash crop.

(5) Production of fluid milk is one of the best farm practices for this area. Farmers should endeavor to maintain their market by continuing to produce a quality product.

Sub-Area E-3

This area, totalling approximately 34,000 acres includes most of Richfield township and about one-half of Polk township. The soil type shows typical Washington County variation and could be described as being made up of the Miami silt and gravelly loams with some areas of peat. The topography ranges from undulating to hilly depending on its proximity to the Kettle Moraine area. This area was so outlined on the map because it represents a transitional area between the Kettle Moraine topography and the rolling level surface features of Area E-1.

Since this area is a transitional area having both level to undulating and hilly land, recommendations made for Area E-1

and E-6 will also apply to this area depending upon the type of land concerned. For example - the hill regions should adopt erosion practices whereas the level areas may consider such practices as fruit growing or production of truck crops if soil and market conditions warrant.

A recommendation offered was that the farmers be encouraged to increase their barley acreage and reduce oat acreage accordingly so as to produce their livestock feed at a lower cost per pound of food nutrient.

U.S. Highway 41 traverses this area for over fifteen miles. This is a heavily traveled highway during the summer months when there are many tourists as well as much travel back and forth from the lake regions. This large number of people using the highways should provide ample patronage for roadside vegetable and fruit stands. That such stands could be profitably operated was the opinion of community committeemen who recommended that interested farmers market such commodities as fresh eggs, fresh vegetables, home made preserves and canning, honey, sweet corn, melons, apples and other similar commodities that they may have to offer for sale at this time of the year. In addition some farmers may further utilize their location to the point of providing overnight guest rooms or cabins for tourists.

Since this area is definitely low in hog production, an increase in hog production for the home meat supply is advocated up to a point where each farm on an average has one brood sow. It is felt that such an increase in hog production may be safely made even with present hog prices, because of the spread between retail prices and cost of producing pork for home use.

Sub-Area E-4

Sub-area E-4 which includes 41,040 acres is now largely a diversified dairy region. Like the sub-area E-3 the topography offers much variation. It ranges from peat deposits to the more rolling soil of the county. The soil too offers much variation but consists largely of Miami silt loam (rolling phase).

Barley, potatoes, sugar beets, and some canning peas, are the leading cash crops.

This area is ideally suited to dairying. Its many rolling hillsides are adapted to the growing of legume crops for hay and pasture, and the low and fertile valleys can and do produce corn, grain and cash crops. It was recommended that erosion control practices be included in the farm management policies of the land in this area. There is ample evidence, like the presence of gullies, the deposits of sand gravel washed down from the hillsides, the filling in of fence embankments, and the out-cropping of subsoil, to show that much erosion is taking place. Most of the most seriously eroded land is adapted to strip cropping. Some contour farming may also be practiced as a few slopes are of sufficient

length and regularity to justify such practice. Waterways showing erosion tendencies should be sodded before serious damage is done to the land. Some land owners expressed the wish that their area be included in an erosion district so that local farmers may have the advice and guidance of the Soil Conservation Service.

It was the opinion of the Community Committee that the conserving crop and depleting crop ratio be divided on a 50-50 basis. For individual farms the ratio would vary with the topography. This higher conserving acreage will necessitate the increased use of grass silage.

Sub-Area E-5

This area making up the greater part of Farmington and Trenton townships comprises approximately 38,840 acres. The soil types vary widely including peat soils, but the Miami loams and the Fox sandy loams predominate and the surface topography is classed as undulating becoming hilly in certain parts.

There is less than one-third as much barley grown as there is oats. The cash crops of the two townships concerned are below the average of the county, particularly for Farmington township. Farmington has the highest percentage of conserving crops. Trenton township has the lowest number of milk cows and brood sows per farm as compared to the remainder of the county.

General recommendations are as follows:-

A general shift from oats to barley as a feed for livestock wherever soil conditions warrant. This change can be continued until 40 percent of the grain planted is barley. More diversification should be practiced in the form of more cash crops particularly for Farmington township. The cash crops to be planted will vary with soil conditions. The production of legume seeds might be considered practical for the area since it is now growing a high percentage of conserving crops.

Special erosion practices other than the use of conserving crops need to be carried out on a limited number of farms in the Kettle Moraine part of this area. Control of erosion losses can very effectively be accomplished by strip cropping or a modified form of this practice.

This area is low in hog production and for this reason the same recommendations as were given for sub-area E-3 will apply here.

Sub-Area E-6

Sub-area E-6 consisting of 28,120 acres is made up largely of the land in the Kettle Moraine. The hills in this area are not as steep and broken as they are farther north in

the Moraine. Much of the area is adapted to being continued as crop land with special management recommendations to be carried out on the more hilly land. The Community Committee pointed out that among the special management problems are those of erosion control. Fully 10 to 12 percent of the land in this area should be strip cropped. There would even be a few farms that might go a step farther and practice contour cropping. Furthermore, there is need for sodded water runways. Other recommendations were to the effect that conserving crops should be planted on about 55 percent of the crop acres. This is not impractical as much of the conserving crops may be utilized either as a dry feed or as silage for the livestock. It was further suggested that dairying be the main source of income of the agriculture of the sub-area. Cash crops should not be extensively grown except on the more adapted soils. Not more than three and one-half percent of the crop land should be planted to cash crops.

Sub-Area E-7

Sub-area E-7 consists of approximately 12,240 acres. It includes that part of Wayne and Addison townships which lies in the Rock River Valley.

This region is made up largely of poorly drained swamp and marsh soils of the light and shallow peat type flanked on each side by rough hilly topography. Most of the lowland acreage is being used chiefly as a source of firewood and lowland pasture by the farmers owning the land.

About 2,000 acres in the north end of this area are under the ownership of one corporation. About 1400 acres have been broken up and seeded to Reed Canary Grass. This crop is harvested both for seed and hay.

It was the opinion of the community committee that the cultivation and cropping of land in this area is a questionable practice because of poor drainage and in some cases because of extremely rough hilly land.

The recommendations for this area are the following:-

(a) For the swampy area not now cultivated - that the farmers in this area cooperate with the Wisconsin Conservation Commission in restocking and feeding the wild game in this area, particularly pheasants.

In return for the farmers extra work and trouble he could sell hunting privileges on his farm. Many Milwaukee sportsmen would be willing to pay a reasonable fee for hunting if they had assurance that there was game to be had.

(b) For the poorly drained area now cultivated -

Continue farming the land suitable for normal agricultural purposes. The balance may be seeded to Reed Canary

Grass and the crop may be harvested by either pasturing it, cutting it for hay, or green silage or both for hay and seed.

(c) For the rough hilly land of this area -

This land for the most part should be kept in conserving crops and a five-year rotation practiced using a cultivated crop only one-year out of six, one year a grain nurse crop and the remaining four years conserving crops with the production of legume seed crops as the primary objective. It was felt that the possibility of securing "catches" of legumes could be made greater by proper applications of lime and fertilizers, particularly phosphates when needed as shown by soil tests.

The increasing use of legume crops as a green silage should be practiced to replace part of the corn acreage on the steepest slopes.

Another erosion practice besides the use of conserving crops that should be carried on is strip cropping or a modified form of this practice to prevent continued soil losses from these hillsides. Further discussion of erosion control will be found on page 42 of this report.

Because of the small area involved no other recommendations will be made concerning shifts in cropping systems. The recommendations for other areas bordering sub-area E-7 will apply also for this area.

Sub-Area E-8

Sub-area E-8 comprises 5,680 acres. This area includes the greater portion of the light soil of the county. Because of this it deserves special consideration in a Land Use Study. This sub-area in the past has been devoted largely to dairying with a small acreage of potatoes as a cash crop. Dairying should be continued on a basis similar to past practices.

Special emphasis should be given the use of green manure crops such as sweet clover or rye for the purpose of increasing the organic matter in the soil. In years of insufficient moisture these soils are the first to show the effects of drought. An increase in the amount of organic matter will help to conserve the moisture in these light soils.

In the fall immediately following the harvesting of a tilled crop the field may be sown to rye for the purpose of preventing wind erosion and also to hold the snow in the winter time. The rye can then be plowed under in spring as a green manure crop or left for pasture or grain. It was recommended that the land in this area should be in conserving crops about three years in every five years.

It has been recommended that the conserving to depleting ratio be 60-40 respectively for this area.

With the greater use of sweet clover or rye as a green manure the acreage of potatoes as a cash crop may be increased because of the adaptability of these sandy soils to the production of high yields of potatoes. Some of this increased acreage of sweet clover may be used for the production of seed.

The other recommendations for this area would be the same as for the surrounding sub-area E-5.

AREA RECOMMENDATION SUGGESTIONS

The area recommendations presented in this report are intended merely as possible future goals. They are not presented in a sense of being final and are merely offered as preliminary suggestions by which the farmers of the areas concerned can guide themselves in their future farm managment plans.

The data in the table below gives information concerning the past, present, and suggested future crop acreages and livestock numbers of the average Washington County farm.

The data presented in the column headed 1924 was taken from the Wisconsin Crop and Livestock Reporting Service, that in the 1939 column was taken from the A.A.A. listing sheets for that year, and the estimates given in the column headed 1954 are based upon the recommendations made in this report.

The Average Washington County Farm
During Three Eras

Crop	1924	1939	1954
Oats	16.9 Acres	15.3 Acres	11. Acres
Barley	2.3	8.5	9.5
Rye	1.5	.4	.2
Corn	10.5	11.2	11.
Clover	10.7	7.6	8.
Alfalfa	3.4	6.9	10.
Potatoes	2.1	1.2	1.5
Peas	1.6	.9	.8
Total	49.0	52.0	52.0
Milk Cows	9.9	11.1	10.
Brood Sows	1.0	1.07	1.2
Laying Hens and Pullets	68.2	64.3	72.
Horses	3.4	2.8	2.5

GENERAL COUNTY RECOMMENDATIONS

FARM PURCHASE FOR TENANTS:

Most of the community committees gave approval to the practice of the Bankhead Act which provides governmental aid in the purchasing of farms by selected and worthy young farmers. It was suggested furthermore that such aid as allotted to this county be confined to farmers living within the county.

In Washington County there appears to be a definite correlation between farm tenancy and tax delinquency. Therefore any agricultural policy that will decrease the percentage of tenancy will also decrease tax delinquency.

FARM TENANCY:

The farm tenancy problem is one of grave concern in any community. Washington County because of its productive land and good market facilities is a county with a low tenancy rate. In 1935 the percent of farm tenancy in the county was 14.4 percent of all farms. By 1939, this percentage had increased to 16.4 percent according to information based on the registration of farms in the Agricultural Conservation Program. This would indicate that farm tenancy is definitely on the increase.

Most Community Committee members favored share rental as having advantages over cash rental in maintaining soil fertility and in more desirable farm management practices. This is because in share rentals more voice is retained by the land owner in the planning of the crop rotation, the farm management practices, etc., to be carried out by the renter.

It was further recommended that the number of years a farm be rented under the terms of a given contract be increased. Most farms are now rented for a period of one year for beginning renters and not to exceed three years for renters who have proved satisfactory. The recommendation made was that this period be increased to five years.

In recommending that tenants be given long time rental contracts, the County Committee pointed out that the important consideration was not necessarily the length of time for which a farm is rented, but rather the provisions called for in the rental contract. This agreement to contain more satisfactory provisions for a greater participation by the tenant in the Soil Conservation practices adapted to the farm. The tenant should receive his just share of the benefits for this participation.

This, it was felt, would serve as an inducement for a worthy tenant to increase the amount of his seedings and other soil

building practices. This longer rental period would enable the tenant to share more fully in his soil improvement practices.

CEDAR LAKE RESORT AREA:

The statement was made in the Community Committee meeting of Barton and West Bend townships, that Cedar Lake is filling up with soil and weeds at an alarming rate. Furthermore, that if the present filling up of the lake continues it will only be a short time before the beauty and utility of the lake as a natural resource will be curtailed.

The trouble appears to arise from two sources. First - the annual accumulation of dead weeds, and secondly - from the erosion which takes place on the hillsides which drain into the lake. Both factors work jointly to increase the amount of lake fill. It was the opinion of this community committee that there were methods and means for attacking both of these problems. Consideration of the problem is of county-wide concern and the immediate attempt to control it can be thoroughly justified on the basis of conservation. The Community Committee, in part at least, felt that something must be done to retain the beauty, utility, and property values of the Cedar Lake Area. It was suggested that a recommendation to that effect be included in this Land Use Planning report, and furthermore, that this matter be called to the attention of the County Board of Washington County.

Buildings are being erected along the Cedar Lake shore line which are obstructing the view from the highway of this beautiful lake. That such erection of buildings greatly impairs the beauty of the lake and lowers its value is the belief of the Community Committee of this community and of the County Land Use Planning Committee. It was their urgent recommendation that this destruction of the beauty of the lake be called to the attention of the Washington County Park Board with the suggestion that this Board take immediate steps to prevent the further erection of such buildings.

LIVING SNOW FENCES:

The removal of snow from the highways of the county during the winter months is a costly and important problem. Two important state and federal highways run in a northernly and southernly direction through the county. Two additional state trunk roads transverse the county in an easternly and westernly direction making a total of 141 miles of state trunk roads. In addition the county has 165 miles of county trunk roads and 644 miles of township roads. To permit the marketing of agricultural products, especially fluid milk, it is imperative that all roads be opened promptly after snow falls. This requires, on the part of both the county and the civil towns, the maintenance and use of expensive snow removal machinery.

It was felt by various members of the West Bend-Barton

Community Committee that a part of the snow removal expense could be saved by the planting of living snow fences along highways in regions where county highway records show that bad drifting occurs. Since the trees used as living snow fences must be planted some distance away from the highway right-of-way, it becomes an expensive practice in regions of high priced agricultural land such as is to be found in Washington County. Therefore, the recommendation was to plant such snow fences only along much traveled highways in places where unbroken or cheap land lay adjoining the public right-of-way. It was further recommended that this be done at the expense of the political agency maintaining the road. Since snow fences are still in the experimental stage, it was further recommended that only limited planting be made in any given year.

FARM WOODLOT MANAGEMENT:

Washington County was once largely covered with native forests. Man in his desire to obtain crop land has cut down trees and cleared the fields with little thought of the future supply of wood products. Today less than one-eighth of the total land area of the county is in forests. To make matters more acute about 97½ percent of what woodlands there are left in the county are pastured by livestock. This makes it almost impossible for young trees to grow up and replace those that are removed as logs or for firewood purposes.

The various community committees have suggested and submitted to the county committee for their approval a recommendation that more effective means of conserving our forest acres be inaugurated. They suggested that more farmers comply with the present woodlot tax exemption law.

Under this law, land which is recognized as a part of an operating farm is eligible for tax exemption if such land conforms to the following requirements:

(1) Such land must be fenced in order to keep out livestock. (2) Wood land exempt from taxation may not exceed 20 percent of the farm. (3) Such woodland must not be burned, thus destroying young timber growth.

Land with more than 30 percent slope and which complies with the above requirements for wooded acres may also be tax exempt under present law. The extent of this acreage is not limited. However, if the area is not wooded the owner is required to plant such land to grasses, trees, or vegetation which will prevent erosion.

It was recommended that more local publicity be given the woodlot tax exemption law. Also that benefit payments equal to the current rent plus tax exemption for the land be paid such woodlot owners who conform to the full requirements of the Wisconsin woodlot tax exemption law.

WILD LIFE FEEDING:

During the past winter and in former years the Wisconsin Conservation Department has distributed feed for pheasants and other forms of wild life. To avoid the possible use of commercial feeds which might contain noxious weed seeds and because of the present big surplus of farm seeds, it was recommended that only farm grains of a reasonable degree of purity be purchased by the Conservation Department for this purpose. The small difference in cost, if any, may prove to be a good insurance against the spread of some of our worst weeds.

THE RELATIONSHIP OF THE SIZE OF THE MORTGAGE TO THE TOTAL INVESTMENT:

It was regarded unsafe for a man to start farming if the mortgage exceeds 50 percent of the investment. Of course this percentage is to some extent dependent upon the managerial ability of the farmer. If the managerial ability is above the average, then the percent of the mortgage may exceed 60 percent or possibly even 70 percent. However, it was felt that about one-half of the investment is all that should be mortgaged if the farmer be an average farmer and wishes to be reasonably sure of promptly meeting his obligations.

The above is an answer to the question frequently asked regarding what percent of the total farm investment may be represented in the mortgage. The answer to this question as given above may be used as a guide for advising those with limited capital and about to invest in farm property.

RELATION OF SIZE OF FARM AND PERSONAL PROPERTY LOAD:

It was felt that the size of the average farm in Washington County has become too small for an economical unit of farming. The reason for this is the advent of mechanized agriculture. This means more machinery and a more expensive overhead. All farmer committeemen agreed that the personal property load on present average Washington County farms was much too large. Various ways of reducing this overhead per acre of arable soil were suggested. However, it was felt that almost every method of reducing the personal property investment was circumscribed with certain limitations. In Washington County, unlike many other parts of the state, 85 to 90 percent of the farms, irrespective of size, are equipped with practically all of the machinery needed for doing all types of farm work except that of threshing the grain. That is each farmer has his own tractor, silage cutter, grain binder, etc., It was thought that neighborhood cooperation in the utilization of the more specialized machinery might reduce the personal property overhead per farm. It was the opinion however that such cooperation would be practical only in a limited number of communities. In a large percentage of these communities this cooperation is

already being practiced. In many other communities, it was attempted, but was not successful.

Most farmers felt that it is an unsound agricultural practice to replace the horse with the tractor to the extent that the farm become a "horseless" farm. Yet many farms in the county are supplementing horse power with tractor or motor power. Those who do this claim economy and convenience of operation.

Much additional research by the College of Agriculture, as well as by farm machinery manufacturing plants remains to be done on the farm concerning the machine problem. It is generally agreed that mechanized agriculture is here to stay. Its present handicap is the cost of upkeep. Further study and research may find ways of reducing this cost. The following is a possible suggestion -

Discarded automobile tires have but little cash value, yet they, might give service for an indefinite period of time if they could be used on rubber-tired farm machinery. To use them for this purpose would necessitate that farm machinery wheels be built of standard automobile wheel sizes. This is not being done to any great extent at present. It was recommended that further research be undertaken on the problem of more economical and better adapted farm machinery.

INTEREST RATES:

Many farmers of Washington County are borrowers from the Federal Land Bank at St. Paul or from some other Federal Agency. The recent world wide depression, which started in 1929, brought about changes in the credit systems of the United States of America. To relieve distressed local banks, the Federal Government through its system of Land Banks took over many of the farm loans which up to this time were held by local money lending institutions.

One requirement of borrowing money from Federal sources is that the borrower acquire loan association stock amounting to five percent of his loan. In practice this requirement has added five percent to the amount borrowed. Farmers have not always been assured that this money would be returned to them. It has been recommended that this step be discontinued. Also that one-half of the cost of applying for a loan be returned if the loan is denied. It was further suggested that this recommendation be communicated to the Governor of the Farm Credit Administration in Washington, and to all local banks and other farm loaning agencies.

WEED CONTROL:

Noxious weed infestation lowers the value of agricultural land. Farm lands in southeastern Wisconsin have for many years been heavily infested with certain bad noxious weeds such

as Canada thistle and quack grass. In the past few years, with the aid of the farm tractor and modern machinery, the fight against the spread of these and other weeds has reduced their number on many farms. There is, however, another weed which has slowly been making serious inroads on farms. This weed is the Field Bindweed or Creeping Jenny. Each of the five Community Committees viewed the spread of it with great alarm. All went on record with recommendations that the campaign to stop its spread become a definite part of the agricultural extension program of the county.

Two control recommendations were suggested by local committees. They are - (1) to make weed control a more definite part of the Federal Farm Program and to increase benefit payments where weed control is carried out according to an approved plan. (2) that a program of weed control be submitted to the County Board by the County Agricultural Committee and that county aid be provided to carry it out. There was some difference of opinion as to the extent of this aid, but all committees agreed that in no case should such aid exceed more than one-half the actual cost involved excluding labor.

Another weed that is causing untold losses to Washington County farmers is wild mustard. It was recommended at various community meetings that mustard control work should also be made a part of the Agricultural program. Recommendations were received at community committee meetings that weed control work be entrusted to a County Weed Commissioner who would direct and supervise the work of the present system of township, village, and city weed commissioners. It was felt tha a more uniform enforcement of the weed law would be secured in this way, and that it would eliminate the unpleasant task of enforcing the weed law in the immediate neighborhood by the local weed commissioner.

THE EUROPEAN CORN BORER:

During the past few years the European Corn Borer has spread into twenty-two Wisconsin Counties including Washington County. Much of the rapid spread of the corn borer westward in Wisconsin is due to the lack of an understanding of the life habits of this insect by the farmer.

The members of the Land Use Planning project are fully aware of the loss to Washington County agriculture which would result from a widespread infestation of the corn borer. It was their suggestion that farmers be given further information regarding the life habits, the possible damage, and the loss which this insect could cause. The recommendation was made that the seriousness of the corn borer problem be called to the attention of all farmers, and that control measures, consisting of clean tillage, and the burning of fence land as well as other refuse and stubble on and near corn fields be stressed by the County Extension Department.

CASH CROPS:

Each Community Committee discussed what cash crops should be encouraged and which ones discouraged in their locality. The conclusion invariably was that the production of white clover seed be encouraged. In past years this crop together with potatoes comprised the leading cash crops in the county. It has already been explained in this report that the production of white clover seed has dropped off appreciably because of the difficulty of obtaining a stand due to droughts and decreased soil fertility. Also the number of farms that can grow pure white clover seed has been greatly decreased because of mixtures with alsike clover, which like white clover, grows natural in Washington County soils.

Potatoes as a cash crop have been more extensively grown than any other crop with the possible exception of barley. In recent years this crop has met with a number of reverses, particularly disease problems. It was, however, thought that in sub-area E-1, which is well adapted to potato growing, the present acreage could profitably be increased. In other parts of the county other crops might be substituted for potatoes.

Further recommendations for cash crops were as follows-

Red beets and carrots for canning purposes should be encouraged as cash crops in those localities where there is an abundance of peat and muck soil and where the cost of hauling the products to the canning factories is not excessive. The same can be said of sweet corn and tomatoes planted for canning purposes.

It was the opinion of many that the more adapted soils of sub-area E-1 grow more vegetables for the metropolitan markets. This change to vegetable growing is to be done only as fast as the market can absorb the products.

Since Washington County is distinctly a dairy county and as such it must grow many acres of alfalfa and other conserving crops. These crops are hosts to an insect, the pea louse, which has greatly handicapped the pea canning industry. It was thought that many of the acres formerly devoted to the growing of canning peas could be utilized in the growing of sugar beets, a crop well adapted to the soil and climatic conditions of the county. This is also a crop which in past years has not been overburdened with surpluses.

It was recommended that more apples and other adapted tree fruits be grown in the E-1 and E-3 sub-areas. Also that the growing of bush fruits and berries be encouraged on possibly subsistence farms near Hartford or West Bend.

It was the consensus of opinion of the Community Committees that the percentage of crop land that may profitably be planted to cash crops range from 3.5 percent to 7.5 percent depending on the soil type and soil fertility.

Also that sub-area E-1 may plant the maximum percentage to cash crops while other sub-areas as E-6 should not plant more than 3.5 percent of its crop land to cash crops.

CERTIFIED AND REGISTERED SEED GRAINS:

Of the approximate 2,850 farmers in the County less than one-half of one percent plant officially certified or registered seed grains of barley, oats and other small grains. There is no doubt but that much of the seed grain planted is high enough in quality to permit its certification or registration. It is common knowledge that certified and registered seed grain is superior in value to common seed stocks insofar as it produces higher yields, has stiffer straw, and germinates better. For these reasons it was recommended that farmers give more attention to the seed stock used and that the planting of improved seed of grain and corn be strongly recommended through the activities of the County Extension office and other Federal agricultural agencies operating within the county.

Community Committee farmers, and local seed dealers estimate that more than 60 percent of the corn acres of Washington County are planted to hybrid corn. At present the county has but one producer of Hybrid seed corn and six other farmers who grow one-half acre or less Hybrid seed corn for their own use.

It was the recommendation of the Community Committee that more farmers be encouraged to produce certified, registered and hybrid seeds. This is to be done not with a view of offering competition to out-of-county seed producers, but rather to help encourage more county farmers to plant their fields with this better type of seed stock.

DRAINAGE:

The surface water of Washington County empties into five natural river basins. The two which offer natural drainage to the greater portion of the county are the Milwaukee River which receives the surface drainage of the eastern area of the county, and the Rock River which provides surface drainage for the northwestern portion. The Rubicon, Oconomowoc, and Menomonee Rivers provide natural drainage to the southern and southwestern part of the county.

Two drainage districts, one in Jackson township and one in Germantown township, offer drainage outlets for the peat area of the southeastern portion of the county.

The question of the further drainage of the low areas of the five communities was discussed by all community committees. Opinion was unanimously voiced against possible drainage proposals. The reason for this opinion was to conserve the present level of the water table and also to discourage the clearing of new land in the face of present agricultural surpluses.

SOIL EROSION PROBLEM:

It was estimated by County and Community Committee members that 60,000 acres or 25 percent of the crop land in Washington County is subject to erosion in varying degrees. Severe erosion problems are present in 20,000 acres or one-third of the roughest land of the county. These acres should receive erosion control management. The extent of such management to depend upon the extent of the erosion problem present.

There are five factors which largely determine the amount of erosion losses which may take place on a given soil. These are -

(1) The type of vegetative covering on the land. Soil protected by thick growing cover crops is much less subject to erosion than soil planted to intertilled crops.

(2) The amount of erosion from a given field varies directly with the length of the slope. Other things being equal, longer slopes suffer greater erosion damage per unit area than do shorter slopes.

(3) Just as the length of the slope increases soil erosion, so does the steepness of the slope. The steeper the slope, the more washing takes place.

(4) The soil type influences the amount of erosion. Silt loams erode more easily than do clay loams.

(5) Intense rains cause more soil erosion than do more gentle rains.

The County Agricultural Agent with Mr. O.R. Zeasman, Soil Erosion Specialist, Wisconsin College of Agriculture, made a preliminary survey of the more hilly regions of Washington County for the purpose of determining the need and the extent of soil erosion management. The results of this survey were presented to the various community committees. This information largely formed the background for the recommendations made by these committees.

The Community Committees of sub-areas C-1, C-2, E-3, E-4, E-6, and E-7, felt that there was a definite need for soil erosion management in their respective localities. It was recommended that farmers be given more information regarding strip cropping and sodded waterways. By strip cropping is meant the alternating of deep rooted crops like the grasses and shallow rooted crops like corn and the grain crops.

It was further suggested that for the time being contour cropping systems be established on a few of the more lengthy slopes to serve as experimental demonstrations.

The opinion was expressed that the introduction of tractor

power increased soil erosion because many of the old sodded waterways were now being plowed.

It was the recommendation that water runways be seeded and kept in a sodded condition. This principle of erosion control is inexpensive and can be carried out on all farms requiring it.

Since soil erosion control practices are new to Washington County farmers it was suggested that the County Agricultural Extension office cooperate with the Wisconsin College of Agriculture and Soil Conservation Service in making a preliminary survey in determining the best workable plan to be followed in controlling the soil erosion problem. This plan is to be presented to the County Agricultural Committee who, if they approve of it, present it to the County Board of Supervisors.

SOIL MANAGEMENT:

In the formation of the soils of Washington County the Miami and the Clyde clay loams predominate. The early settlers, were largely subsistence and cash crop farmers. Wheat was the cash crop most extensively grown during the middle years of the nineteenth century. At about this time it was noticed that the fertility of the soil was decreasing. This and other factors such as insect problems caused the type of agriculture to change to dairying. This system of farming helped maintain a more stable soil fertility and proved more profitable.

Up to about five years ago little if any commercial fertilizer was used by Washington County farmers. The farm management practices of dairy farming were depended upon to maintain the soil fertility. The purchase of commercial feeds to supplement those grown upon the farm was expected to help maintain a fairly good equilibrium between the fertility taken from the soil in the crops harvested and sold for cash and that returned to the soil. Even the system of dairy farming failed to return as much fertility to the soil as was taken from it by growing crops and a gradual lowering of the fertility manifested itself in decreased crop yields. Threshermen were among the first to notice this. Some of these say that the soil of today produces from ten to twenty less bushels of oats and from seven to fifteen less bushels of barley per acre than did crops thirty to forty years ago.

More than 3,500 samples of soil, taken from 540 farms, from every township of Washington County have been tested during the past 18 months by our W.P.A. soil testing service. The average of these tests show that 37 percent of the soils of Washington County are acid, and that 79 percent is deficient in available phosphorus. An additional 32 percent of the samples tested were below the minimum available potash requirement as set forth by the Department of Soils of the Wisconsin College of Agriculture for good crop production.

To restore the fertility that the soils of the county

once had and to retain maximum crop production, it was recommended by the Community Committee that six soil management practices be followed. These practices are - (1) to use commercial fertilizers judiciously, particularly on cash crops such as barley, peas, beets and carrots. (2) to incorporate more organic matter into the soil by the growing of sweet clover, winter rye, and other green manure crops. (3) to practice strip cropping and contour farming in the more hilly areas and prevent the erosion and washing away of fertile land. (4) to increase the acreage of conserving crops as compared to the acreage of depleting crops. The amount of this increase for the county as a whole is to be determined by further study. This ratio of conserving and depleting crops to depend upon the fertility and quality of the land of the area in question. (5) the wise use of commercial fertilizer and lime in the preparation of the seed bed for grass and legume seedings. (6) since phosphorus is the element most needed in Washington County soil to bring about a balanced fertility, that the need for this plant food element be stressed in all county extension soil fertility programs.

DAIRY IMPROVEMENT:

Washington County is an intensive dairy county. It has more silos per farm than any other county in the state except one. It has in round numbers 127 milk cows per one-thousand acres of land. It ranks sixth in Wisconsin in the percentage of gross farm income from dairying. There are four active Dairy Herd Improvement Associations within the county. It was thought however that there is further opportunity for improving the dairy industry without increasing the number of milk cows.

It was recommended that such improvement be accomplished by -

a. The use of registered sires from dams producing 300 or more pounds of butterfat per year.

b. Through dairy herd production and butterfat records carried out on an extensive scale with the assistance of trained W.P.A. labor at a cost of about $1.00 per month per average farm.

c. Through the maintainance of active breed association of the predominating dairy breeds within the county. Such breed associations to encourage and foster the selection of dairy calves as 4-H projects.

d. By careful adherence to dairy sanitation and disease control programs as recommended by the Wisconsin College of Agriculture and the State Veterinarian's office.

SHEEP HUSBANDRY:

Washington County farmers are receiving less than one-half of one percent of their farm income from sheep and wool. This figure is among the lowest for Wisconsin counties.

Community Committee members have recommended increases of conserving crops on the rougher land of the county. This increase in conserving crops will result in either a greater production of forage feed or a greater amount of legume seed.

Instead of recommending increases in dairying to consume this greater production of forage feed the County Committee has recommended that some of the rougher land be utilized for the grazing of sheep. Sheep production is an excellent way of further diversifying farm income as there is relatively little extra equipment, labor and care required for handling a farm flock.

BEEKEEPING:

Increases in alsike, white and sweet clover seed production have already been recommended for several areas. Since the blossoms of these plants yield a nectar that produces what is regarded as a very fine quality honey it has been suggested that a substantial increase in the number of colonies of bees would be a desirable land use in conjunction with increased legume acreage.

Profitable honey production however demands special equipment and knowledge and it is not advisable to make this a general recommendation. However, increases in numbers of colonies by present beekeepers are to be encouraged when increases in legume seed production warrant.

It was suggested that the County Extension Department study these recommendations and apply them in the Agricultural program of the county.

BIRD CONSERVATION:

Most people are not aware of the extent that the use of farm machinery destroys upland bird nests and young bird life, particularly game birds. Birds which nest on uplands often show a preference for nesting in crops adjacent to fence rows, field edges, woods or marshes. The growth here is usually the most abundant and offers added protection from enemies.

Crops often are harvested before the eggs are hatched or the young is mature enough to protect itself from dangers. The ruthless harvesting of crops in fields where quail, partridge, pheasant, grouse, prairie chicken and other game birds hatch their eggs and rear their young destroys countless numbers of them. Farmers can cooperate in conserving wild life by adopting modified

farm practices when harvesting crops in these areas. For example when harvesting grain or mowing hay in fields bordered by favorable nesting grounds, the farmer can safeguard many nests and give game an opportunity to get into cover without injury by using a flushing bar. Such flushing bars can be readily made by the farmer and at a very small cost. The flushing bar will cause the birds to scatter or fly from the nest. With this warning the farmer can stop the machine and locate hidden nests. He can then raise the sickle and leave a cover over and around the nest. This practice will do much to reestablish upland game birds, particularly in such areas where their increase is a desired land use.

RURAL EDUCATION

The Wisconsin policy of maintaining a school within walking distance of every rural child has resulted in the maintenance of a large number of extremely small schools. Washington County has a very definite small rural school problem. Thirty-four schools have an enrollment of twelve pupils or less. This is due to two facts - 1st, a parochial school system is well established witnin the county, and 2nd, the growing tendency to have smaller families.

The solution of this problem lies wholly within the hands of the rural districts. The "small" school law which was enacted by the 1939 state legislature will have a tendency to solve this problem in part at least. However, only four schools were closed during 1940. What to do with the small schools is a problem that must be faced by the school districts of this county. A further study of this problem is recommended. This study to be made by the administrative and educational authorities of the county.

Addison and Wayne townships are located about equal distances between Hartford and West Bend cities. Secondary school attendance of the children of these two townships is about equally divided between the High Schools of the above two mentioned cities. The problem of transporting these children to High School is one of grave concern to the parents. As a result of this transportation problem many children are unable to go on to High School.

It was the recommendation of the Addison and Wayne Community Committee that further study be made of the possibility of establishing a Junior High School in or near the village of Allenton which is almost centrally located. Such study to be made by interested people of the two respective townships. It was their belief that the establishment of a local Junior High School would result in more children continuing school after they had completed the elementary grades.

AMERICAN YOUTH HOSTELS

Youth Hostels have become increasingly popular with young people who enjoy nature and who have only a limited amount of money to spend for vacations. A youth hostel route from Milwaukee leading northward through the scenic Kettle Moraine region of Washington County has already been proposed by the local Youth Hostel Committee. No definite action has been taken to lay out and establish this route.

Since sub-areas C-1 and C-2 abound in natural scenic resources, it was recommended by the County Committee that a Youth Hostel route be so located to traverse these sub-areas with a hostelry in each of them. Roads leading to and from these sub-areas as well as the distance between them meet with the youth hostel requirements. That is, these highways are largely gravelled roads or roads which are surfaced with tar so as to eliminate the dust element. Such roads are good for needed motor travel, but do not usually carry a heavy motor vehicle load. They are satisfactory for foot or bicycle travel which is the mode of transportation of most youth hostel travelers.

This recommendation is to be referred to the County Youth Hostel Committee.

4-H CLUB ORGANIZATIONS

A discussion of the growth and development of the 4-H Clubs of Washington County has already been included in this report. During the years 1936 to 1940 the 4-H movement in Washington County began to expand because of added leadership. Each of the five communities into which the county was divided for this study has within its borders several active clubs. The area surrounding West Bend, the County Seat, has more 4-H organizations than more distant communities.

Formerly the County Fair Grounds were located at West Bend. This location may have encouraged many of the young people of this area to participate in 4-H club activities. In 1938, the management of the Washington County Fair transferred it to the County Board of Supervisors. A new site, near the village of Slinger has been selected for holding the fair. This is quite centrally located within the county and should inspire a stronger club spirit in the southern and western parts of the county.

Both County and Community Committee members viewed the 4-H movement as a worthy land use and strongly recommended its continuance on a year round basis.

Washington County
Summary Sheet - County Planning Study
1940

ITEMS	COUNTY AVERAGE
Percentage of Present Cultivated Cropland to be continued in cultivation	95.4%
Approximate number of acres of land in the area to be continued in cultivation	244,360
Percentage of Recommended Cultivated Acreage to be in:	
1. Intertilled crops	22 %
2. Small grains and other close grown crops	30 %
3. Grass and hay crops	48 %
Percentage of Recommended Cultivated Cropland Acreage Needing Soil Conserving Practices:	
1. Lime application	30 %
2. Phosphate Fertilizer application	60 %
3. Potash Fertilizer application	20 %
4. Strip Cropping	20 %
5. Contour Cultivation	4 %
6. Terracing	1 %
7. Winter cover crop for green manure	5 %
8. Summer cover crop for green manure	2 %
Approximate Acreage Recommended for Pasture	20,000
Percentage of Recommended Pasture Acreages Needing Soil Conserving Practices:	
1. Lime application	20 %
2. Phosphate application	60 %
3. Potash application	10 %
4. Reseeding	25 %

SUMMARY OF RECOMMENDATIONS
OF THE
WASHINGTON COUNTY LAND USE PLANNING COMMITTEE

1. FARM PURCHASE FOR TENANTS

There are many worthy farm families in Washington County who would become good farmers if given ample start in farming. It is recommended that the Bankhead-Jones Farm Tenant Purchase Plan be encouraged. That Washington County farm tenants only be considered for Washington County farms so purchased and further, that a minimum of three families be aided through this program annually.

2. FARM TENANCY

Short term farm leases do not always result in the best farm management policies by tenant farmers because of their indefinite stay upon a given farm. It is recommended that farm leases be written for a period of 3 to 5 years for tenants who have proved satisfactory. It was further suggested that the College of Agriculture assist in working out satisfactory long time lease plans.

3. CEDAR LAKE RESORT AREA

Cedar Lake is gradually filling up because of soil erosion and weed deposits at a rate which if continued will in a limited number of years mar the utility and beauty of the lake as a natural resource. Since consideration of the problem is of county-wide concern, it is recommended that this be called to the attention of the County Board and the State Rivers and Streams Commission at Madison for further consideration and action.

4. HIGHWAY BEAUTIFICATION

State Trunk Highway 144 follows along the southwest shore of Cedar Lake. Summer cottages are being erected along this road and they obstruct the view of the lake and other scenery. It is recommended that the area between the highway and the lake shore be restricted in order to prohibit the erection of buildings. It is further suggested that the Washington County Park Board be advised of this proposal.

Tree planting along the public right-of-way and at highway intersections can be effectively used to beautify

many miles of the public road. It is recommended that such beautification work be done by W.P.A. labor and under the direction of the political subdivision maintaining the highway.

5. LIVING SNOW FENCES

Because of the daily year round need of our roads, snow removal becomes a major highway maintenance expense. It is recommended that a minimum of 3 miles of living snow fence be planted annually where land adjoining the public highway may be acquired for a reasonable financial consideration and that such planting be done by the political subdivision maintaining the highway and for an indefinite period of time.

6. FARM WOODLOT MANAGEMENT

Much land in Washington County is not suited for agricultural use. It is recommended that such land be reforested. It is further recommended that approved reforestation practices be continued as a provision of the agricultural conservation program of the A.A.A.

7. WILD LIFE FEEDING

The Wisconsin Conservation Department usually distributes feed during winter months for pheasants and other forms of wild life. To avoid the possible use of commercial feeds which might contain noxious weed seeds and because of the present big surplus of farm feeds, it is recommended that only farm grains of a reasonable degree of purity be purchased for this purpose.

8. THE RELATIONSHIP OF THE SIZE OF THE MORTGAGE TO THE TOTAL INVESTMENT

Many renters and young farmers purchase farms without adequate funds with which to make ample down payment. In past years many such farms have been foreclosed. It is recommended that prospective farm buyers refrain from buying farms if the total debt load exceeds approximately 60 percent of the investment. This percentage will depend somewhat on the industriousness and managerial ability of the farmer.

9. FARM TENANCY AND MORTGAGE INDEBTEDNESS

It is recommended that a copy of these farm recommendations covering tenancy and mortgage indebtedness

be furnished to all banks, loaning agencies, attorneys and others interested in any phase of this work in the county.

10. RELATIONSHIP OF SIZE OF FARM AND PERSONAL PROPERTY LOAD

Mechanized agriculture is increasing within the county. The increased use of farm machinery has made the personal property load excessive, particularly for the small farms. Additional study should be made of the farm machinery problem for both large and small farms, particularly with reference to cost and upkeep. It is proposed that this study be made by the College of Agriculture and that this entire problem be more forcibly brought to the attention of farm machinery manufacturers.

11. INTEREST RATES

It is recommended that the Federal Land Bank and other Federal Loaning Agencies reduce the cost of applying for a loan. Furthermore, if the loan is denied that one-half of the application fee be returned. Also, that any investment in loan association stock as a requirement for obtaining a loan be eliminated.

12. WEED CONTROL

Noxious weeds particularly the Field Bindweed and Creeping Jenny have been making serious inroads in Washington County and in many cases have materially lowered the value of farms. It is proposed -

(1) To make weed control a more definite part of the Federal Agricultural Conservation Program and to increase benefit payments where weed control is carried out according to an approved program.

(2) That a program of weed control be submitted to the County Board by the legal Agricultural Committee and that county aid be provided to carry out this program.

13. THE EUROPEAN CORN BORER

The spread westward of the European corn borer presents a serious menance to the agriculture of Washington County. It is recommended that a more definite attempt by farmers should be made to control this insect. Also, that the County Extension Department and the State Department of Agriculture stress more vigorously a campaign

of educational and control measures on the corn borer.

14. CASH CROPS

White clover seed for many years has been one of the leading cash crops of Washington County. Its production has dropped off recently because of droughts and decreased soil fertility. It is the recommendation of the Community Committee in the communities formerly included in the white clover belt that fertility plots to demonstrate the value of phosphorous and potash rich fertilizers, to increase legume catches, be established by the County Extension Department.

Because of the nearness of Washington County to city markets, potatoes have for many years been an important cash crop. In recent years the acreage has declined due to disease problems and low yields. It is recommended that more acres of this crop be grown, particularly in sub-area E-1, and that the College of Agriculture continue further disease control work within the county.

Two acres of oats are now being grown for each acre of barley. Scientific studies show that barley produces 45 percent more pounds of nutrients per acre than oats under average conditions. It has been recommended that wherever soil conditions warrant, that a general shift from oats growing to barley growing be made until an equal acreage of the two crops be grown. The County Extension Department should encourage this practice among the farmers of the county.

15. CERTIFIED AND REGISTERED SEED GRAIN

Less than one percent of the farmers of the county grow certified or registered seeds of barley, oats, wheat, rye, and corn. In view of the importance of good seed stock for farm crops, it is recommended that the County Extension office encourage the growing of more improved seed stock.

16. DRAINAGE

In order to protect the underground water level, it is recommended as a basic principle that no new large areas of land be drained for agricultural purposes.

17. SOIL EROSION

More and more erosion is taking place every year in Washington County as is evidenced by the appearance of

subsoil on hillsides, by the formation of gullies, by the filling up of valuable streams and lakes with silt and weeds and by the difficulty of securing good yields of crops on some slopes. It is proposed that further surveys and studies of the soil erosion problem be made and that a limited number of erosion control demonstrations be set up. Further, that the County Agricultural Extension office cooperate with the Wisconsin College of Agriculture and Soil Conservation Service in making a preliminary survey in determining the best workable plan to be followed in controlling this problem. This plan is to be presented to the County Agricultural Committee for further consideration.

18. SOIL MANAGEMENT

Results of an extensive soil testing program in Washington County indicate that 79 percent of the soil is deficient in available phosphorous, 32 percent is deficient in available potash and 37 percent of the soil requires lime. It has been recommended that a more extensive program of soil improvement than is even now being carried out by the County Extension Department be adopted. The recommended practices proposed are as follows -

(1) This program should include a continued close cooperation between the Extension Department's soil testing and lime grinding projects and the A.A.A. soil building payments.

(2) That the A.A.A. furnish annually at cost, superphosphate and potash fertilizers to be used on conserving crops for the purpose of replenishing deficient phosphate and potash supplies. It was the consensus of opinion that the use of superphosphate fertilizers be stressed most.

(3) And that the A.A.A. program continue to emphasize sound soil conservation principles.

(4) That the conserving acreage be increased as is elsewhere specifically mentioned in this report.

19. DAIRY IMPROVEMENT

Washington County is an intensive dairy area. There is much need for increasing the producing ability of dairy cattle, thereby raising the farmers income without materially increasing his farm operating expense. It is recommended that dairy herd improvement work

according to the following suggestions be encouraged.

a. Through the use of registered sires from dams producing 300 or more pounds of butterfat per year.

b. Through dairy herd production and butterfat records carried out on an extensive scale with the assistance of trained WPA labor at a cost of about $1.00 per month per average farm.

c. Through the maintainance of active breed associations of the predominating dairy breeds within the county. Such breed association to encourage and foster the selection of dairy calves as 4-H projects.

d. By careful adherence to dairy sanitation and disease control programs as recommended by the Wisconsin College of Agriculture.

That the County Extension Office stress such dairy herd improvement as a part of its annual program of work.

20. LIVESTOCK RECOMMENDATION

Washington County receives less than 1 percent of its income from sheep. Increasing conserving crop acreage on the more hilly and rough land will result in more feed being available for livestock. Since sheep are well adapted to feed on rough and hilly land, it is recommended that some of this additional land be used to diversify the income by increasing the number of sheep.

21. BEES AND HONEY

Because of increased legume acreage, ample nectar for honey bees will be available. It is recommended that more colonies of bees be kept both for the pollination of legumes and for the production of honey.

22. RURAL EDUCATION

Washington County has 34 schools with an enrollment of 12 pupils or less. These small schools present a problem from the tax payers view point as well as from the school administrative viewpoint. The committee recommends that a further study be made of the small school problem in order to determine the most desirable policy affecting them. This study should be made by local school boards and other educational authorities.

23. SECONDARY EDUCATION

Addison and Wayne townships because of their distance from neighboring high schools feel that their children are handicapped by lack of secondary school opportunities. It is proposed that a study be made by local committees of the advisability of establishing a Junior high school at some central point in the two townships concerned. It is recommended that the personnel of the necessary committees be appointed by the local authorities.

24. COUNTY PARKS

It is recommended that small isolated tracts of land which are desirable for recreational and wildlife purposes be purchased and developed for park purposes by the County Park Commission as they are needed.

25. YOUTH HOSTEL CAMPS

It is recommended that the committee responsible for Youth Hostel Camps in Washington County take appropriate action towards the establishment of a minimum of two such camps in this county.

26. BIRD CONSERVATION

It was recommended that the County Extension Department furnish information to farmers regarding the use of a flushing bar to be used in connection with mowing and harvesting machinery. The use of a flushing bar would prevent the unwarranted destruction of large numbers of upland game birds during the harvesting of hay and grain crops.

AREA RECOMMENDATIONS

Class B Land

Twelve hundred acres of land were classified as B land. It was the general recommendation that this land be continued as forest land. To replenish decreasing timber growth, reforestation with adapted seedlings has been suggested.

Class C Land

Sub-Area C-1

The land of sub-area C-1 is less than 50 percent tillable. The remaining land is in permanent pasture and woodland. The seven lakes and the scenic morainic hills and knolls contained within the area make it adapted for year round recreational use. It is recommended that this area be set aside as a recreational center, and the Washington County Park Board give this area study and consideration as a possible recreational site.

Sub-Area C-2

Like sub-area C-1, C-2 is better suited for recreational purposes than for agricultural land. It is the recommendation that this sub-area be made a part of Mauthe Lake State Park. It was suggested that this recommendation be called to the attention of the State Conservation Department.

Class E Land

Sub-Area E-1

The soils of this sub-area represent a wide range of adaptability for crop production. It has been recommended that crops be grown which will give a higher net return than that obtained on less adaptable land further from the Metropolitan markets. It is suggested that-- (1) More truck and cash crops be grown. (2) More fruit such as apples be produced. (3) Equal acreages of oats and barley be raised. (4) That 40% of the cultivated land be in a soil conserving crop. (5) That poultry production be increased.

Sub-Area E-2

Prior to 1920 this sub area was the largest producer of white clover seed in the United States. It is recommended that the farmers in this area cooperate with the Extension Department and the triple A farm program in soil testing, liming and fertilizing in order to increase the possibility of securing good "catches" of white clover and again becoming a white clover seed producing center. Other recommendations for this area are as follows:

1. That all arable land be in a soil conserving crop two years out of five.

2. That production of adapted fruits such as apples be increased to a point where local demands are supplied by home production.

3. That equal acreages of barley and oats be grown.

4. That adapted lowland areas be utilized for the production of carrots as a cash crop.

Sub-Area E-3

Sub-area E-3 represents a transitional area between sub-area E-6 and sub-area E-1 or E-2. Since this area is transitional many of the recommendations for these other areas may also be applied here wherever the topography and soil conditions warrant.

In addition it is recommended that farmers living along U. S. Highway 41 in this area utilize their location for the purpose of direct selling, by means of roadside markets, some of their farm produce during the summer months. Items suggested were fresh eggs, vegetables, fruit, home made preserves and honey. Some farm families may further utilize their location on this heavily traveled highway by providing overnight guest rooms or cabins for tourists.

Since this area is definitely low in hog production an increase in this enterprise is recommended to a point where most of the farm meat supply may be produced on each farm.

Sub-Area E-4

Recommendations:

(1) Because of evidence of erosion damage recommendations were made for a system of farm management which includes strip cropping or a modified form of this practice and in some cases contour farming. (2) Soil conserving and soil depleting crop ratio should be divided on a 50-50 basis varying among individual farms according to the topography. (3) Encourage the increasing use of grass silage.

Sub-Area E-5

Recommendations for this sub-area were as follows:

(1) A general shift from oats to barley on the heavier soil until 40 percent of the grain planted is barley. (2) Production of more legume seeds since this area is now quite high in percent of conserving crops. (3) Increase in cash crops particularly potatoes and sweet corn wherever soil conditions warrant.

Sub-Area E-6

This includes most of the land which is regarded as being a part of the Kettle Moraine.

Recommendations for this area are as follows:

1. Ten to fifteen percent of the cultivated land in this area should be strip cropped.

2. Soil conserving - soil depleting ratio should be 55 - 45 percent respectively.

3. Greater use of green silage for utilizing conserving crops.

4. Three and a half percent is the maximun amount of crop land to be devoted to cash crops.

Sub-Area E-7

This sub-area is made up largely of poorly drained swamp and marsh soils of the light and shallow peat type lying in the Rock River Valley and flanked on each side by rough topography.

The recommendations for this area are as follows:

(a) For the swampy area not now cultivated - that the farmers in this area cooperate with the Wisconsin Conservation Commission in restocking and feeding the wild game in this area, particularily pheasants. In return for the farmers extra work and trouble they could sell hunting privileges on their farms.

(b) For the poorly drained area now cultivated - seed this land into canary grass and harvest it by either pasturing, cutting it for hay or green silage, or both for hay and seed.

(c) For the rough hilly land of this area now cultivated - Practice a six year rotation using a cultivated crop one year, a grain nurse crop one year and remaining four years conserving crops with the production of legume seed crops as one of the principal objectives. Some form of erosion control is necessary on practically all of this land and a further study of this problem should be made by the College and Soil Conservation Service.

Sub-Area E-8

This area includes for the most part light sandy soil subject to wind erosion and drought.

Recommendations were as follows:

1. Special emphasis to be given the use of green manures crops such as sweet clover or rye. (2) Practice a five year rotation with a conserving-depleting ratio on a 40-60 basis respectively. (3) Potatoes to be grown as the main cash crop.

AGRICULTURAL STATISTICAL DATA - WASHINGTON COUNTY

1939

Township	Farm Acres Average Size	Per Farm Crop Acres	Milk Cows Per Farm	Total Acres Per Milk Cow	Crop Acres Per Milk Cow	No. of Laying Hens & Pullets	Brood Sows Per Farm	% of Farm Tenancy	Average Assessed Value Per Acre
Addison	98.2	67.2	12.4	7.9	5.4	58.4	1.84	19.7	53.15
Barton	94.0	60.0	9.9	9.5	6.1	61.2	1.11	20.0	47.00
Erin	108.4	65.5	12.1	9.0	5.4	48.2	.83	42.8	40.36
Farmington	110.2	74.7	11.5	9.6	6.5	78.4	1.76	19.6	55.27
Germantown	70.3	50.2	11.0	6.4	4.6	56.8	.36	24.1	76.45
Hartford	96.5	68.4	12.8	7.5	5.3	53.6	1.32	28.5	70.83
Jackson	88.7	60.0	10.8	8.2	5.6	75.5	.71	17.1	63.23
Kewaskum	95.9	61.7	10.6	9.0	5.8	69.9	1.23	25.5	46.48
Polk	95.7	65.8	11.1	8.6	5.9	74.3	.85	17.2	57.03
Richfield	97.0	63.4	11.0	8.8	5.8	47.7	.46	26.9	51.69
Trenton	97.2	64.8	9.5	10.2	6.8	63.8	.82	17.6	49.50
Wayne	114.7	73.0	11.5	10.0	6.3	76.8	1.93	16.7	59.72
West Bend	95.3	61.0	11.0	8.7	5.5	70.6	.75	23.0	50.43
County Average	97.1	64.3	11.1	8.7	5.8	64.3	1.07	22.9	55.47

ACRES OF FARM CROPS EXPRESSED AS A PERCENT OF THE TOTAL

(Obtained from 1939 Washington County AAA Listing Sheet)

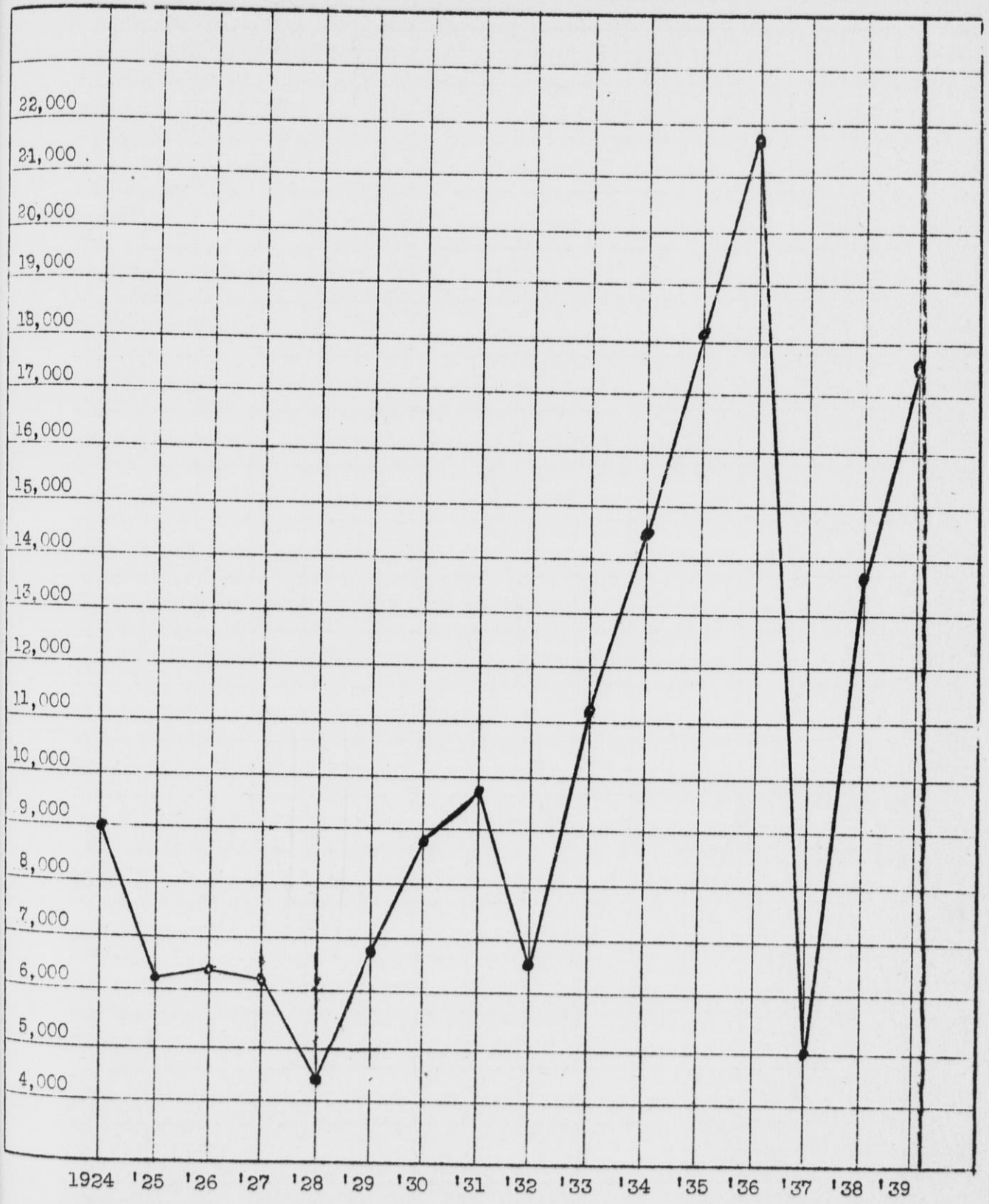
Township	Corn	Barley	Oats	All Grain	Cash Crops	Alfalfa	Clover	Total Hay & Pasture	Potatoes	Canning Peas	Alsike & White Clover Seed
Addison	16	13	22	35.6	6.9	12.9	15.	32.8	1.8	.9	4.2
Barton	16	11	25	37.3	4.5	10.	14.7	37.9	1.3	.5	2.7
Erin	18	10	25	35.7	1.9	11.3	12.7	40.6	.3	.8	.8
Farmington	17	9	26	35.7	1.9	12.3	16.6	47.2	.9	.5	.5
Germantown	20	18	22	40.8	7.0	15.5	12.9	42.4	3.0	1.8	2.2
Hartford	19	15	23	38.4	4.2	12.9	12.3	36.8	.9	1.5	1.8
Jackson	19	15	16	31.8	5.7	13.3	11.0	38.4	2.3	2.2	1.2
Kewaskum	17	13	22	36.3	4.0	12.8	13.1	41.9	1.6	.5	1.9
Polk	16	12	25	38.2	7.7	14.0	13.8	42.6	1.8	2.9	3.0
Richfield	17	11	24	36.1	3.4	11.2	12.3	36.4	1.7	.6	1.1
Trenton	21	7	24	31.8	4.2	9.0	16.5	40.6	2.5	.5	1.2
Wayne	16	13	22	35.7	5.1	14.4	12.3	40.7	2.1	1.0	2.0
West Bend	19	11	30	32.5	5.6	15.2	14.4	43.6	.8	1.0	3.8
County Average	17.7	12.2	23.5	35.8	4.8	12.7	13.7	40.2	1.6	2.0	2.0

Township	Tax Delinquent Farms	National Farm Loans	Production Credit Loans	Farm Security Loans	Total
Addison	4	10	7	1	22
Barton	4	13	6	1	24
Erin	28	28	20	4	80
Farmington	18	15	9	2	44
Germantown	16	15	10	2	43
Hartford	11	14	8	1	34
Jackson	2	20	25	3	50
Kewaskum	10	8	4		22
Polk	4	9	7	2	22
Richfield	14	24	10		48
Trenton	8	16	10	1	35
Wayne	3	10	7		20
West Bend	2	8	6		16
Total Washington County	124	190	129	17	460

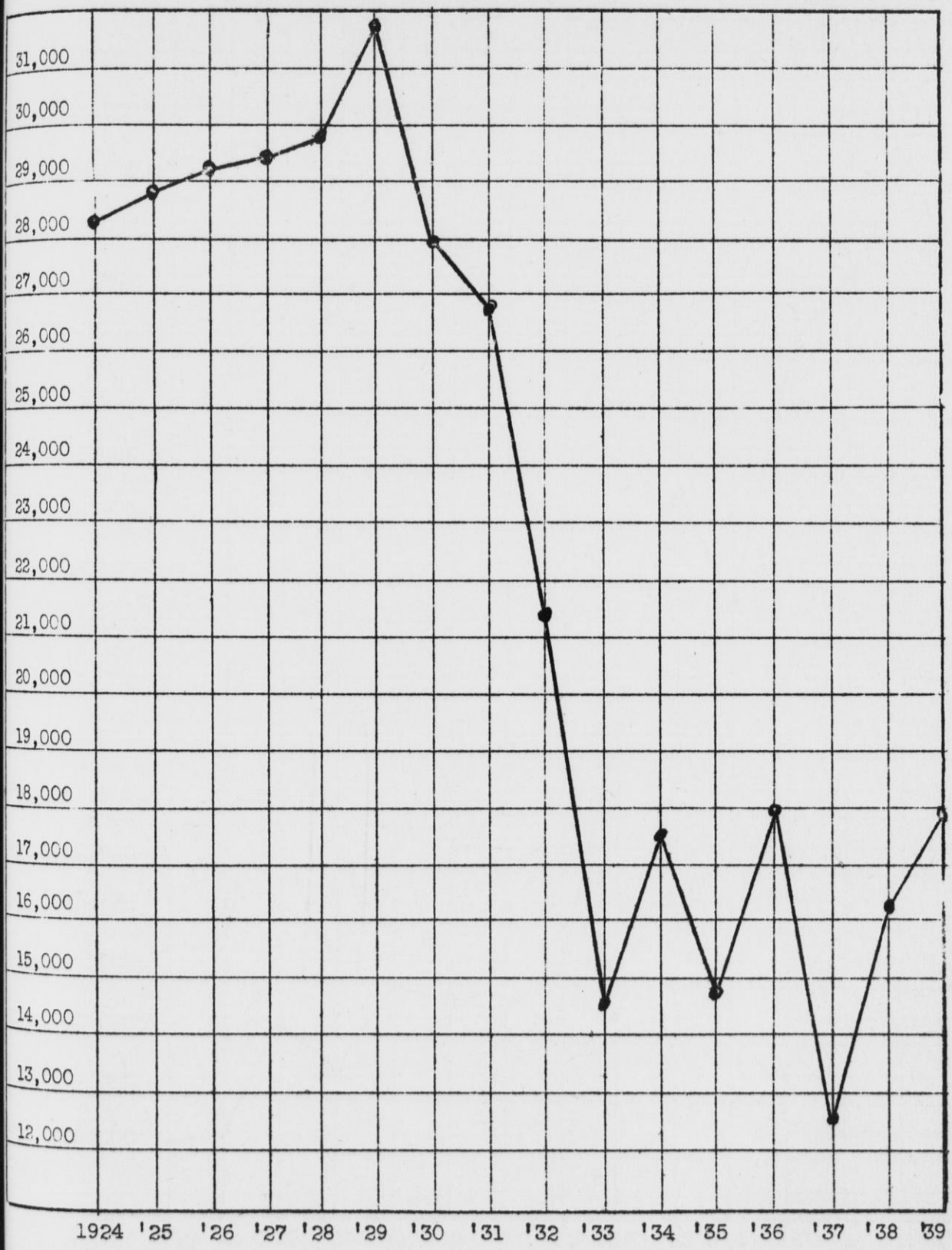
SOIL TEST RESULTS - WASHINGTON COUNTY 1939

Township	Tons of Lime Requested Per Acre	Available Phosphorus Per Acre in Lbs.	Available Potash Per Acre in Lbs.	No. of Samples	No. of Farms
Addison	1.2	36	135	64	11
Barton	.2	56	197	60	10
Erin	1.4	51	144	56	8
Farmington	.2	34	177	37	7
Germantown	.5	36	152	104	17
Hartford	1.0	37	162	133	34
Jackson	.3	43	154	137	16
Kewaskum	.8	49	151	71	10
Polk	.6	37	137	77	13
Richfield	.6	36	159	64	14
Trenton	.2	30	160	137	25
Wayne	.3	45	183	63	10
West Bend	.2	48	181	80	20
County Average	.6	41	161	1083	195

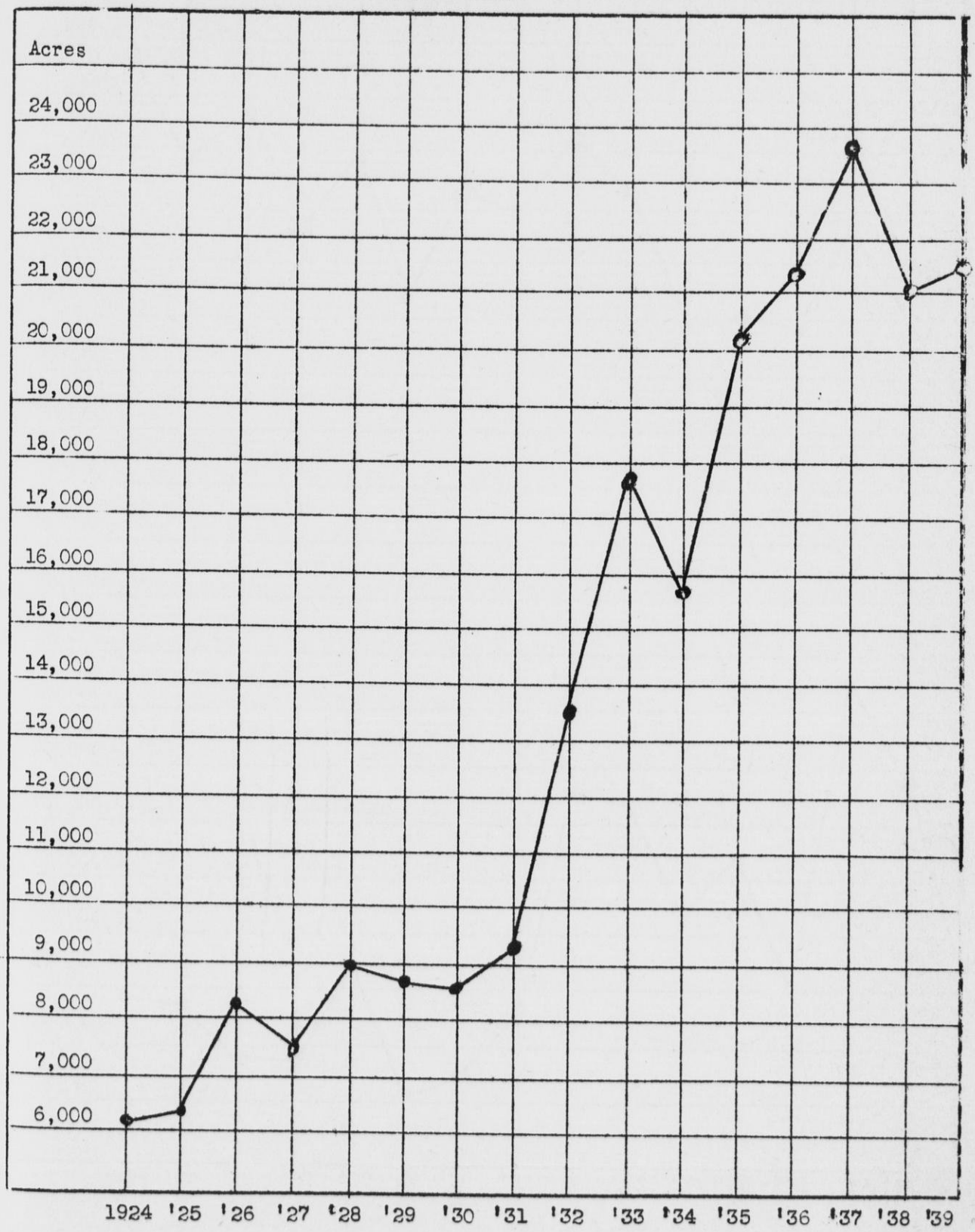
Alfalfa Acreage
Washington County
1924-1939



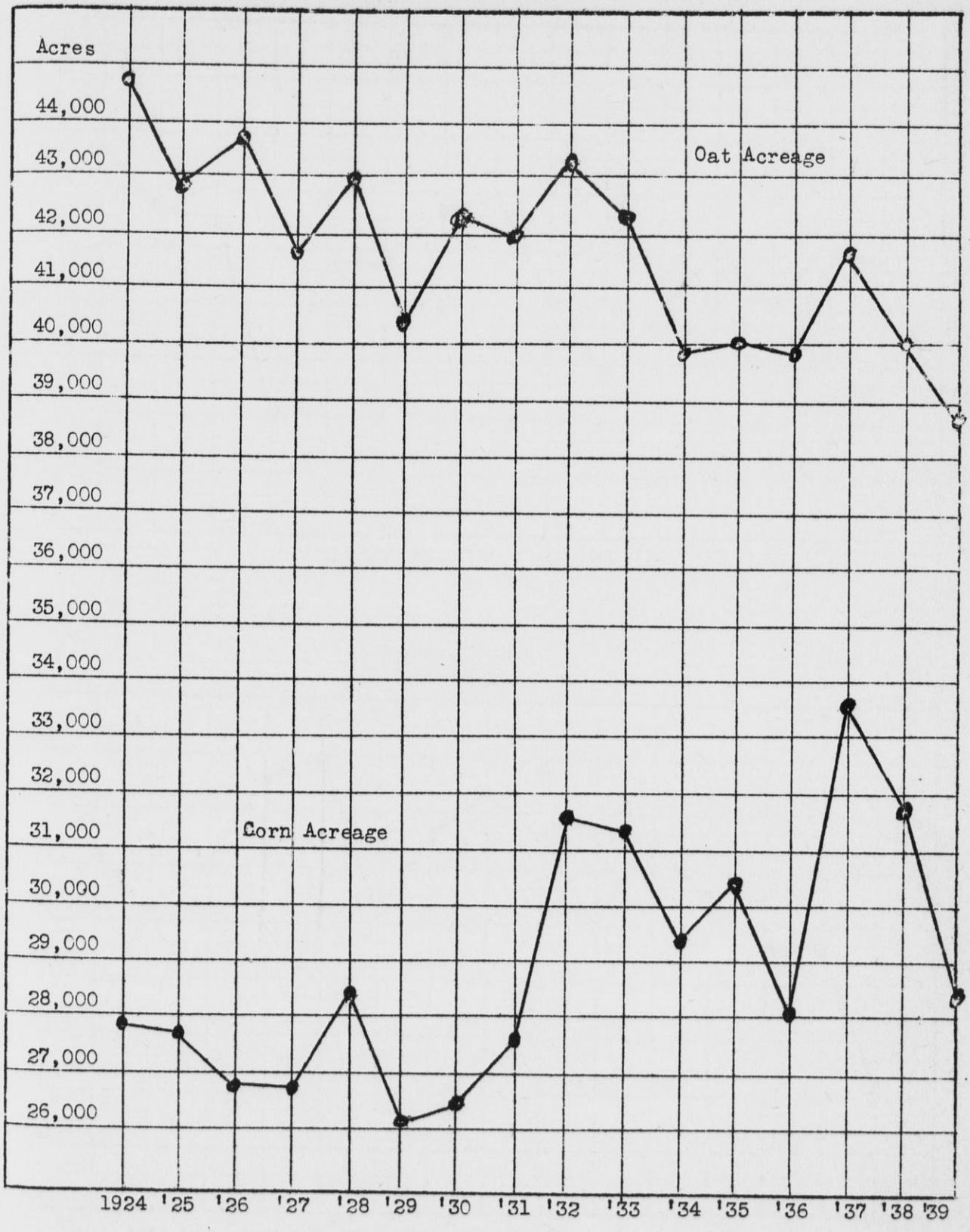
Clover and Timothy Acreage
in
Washington County
1924-1939



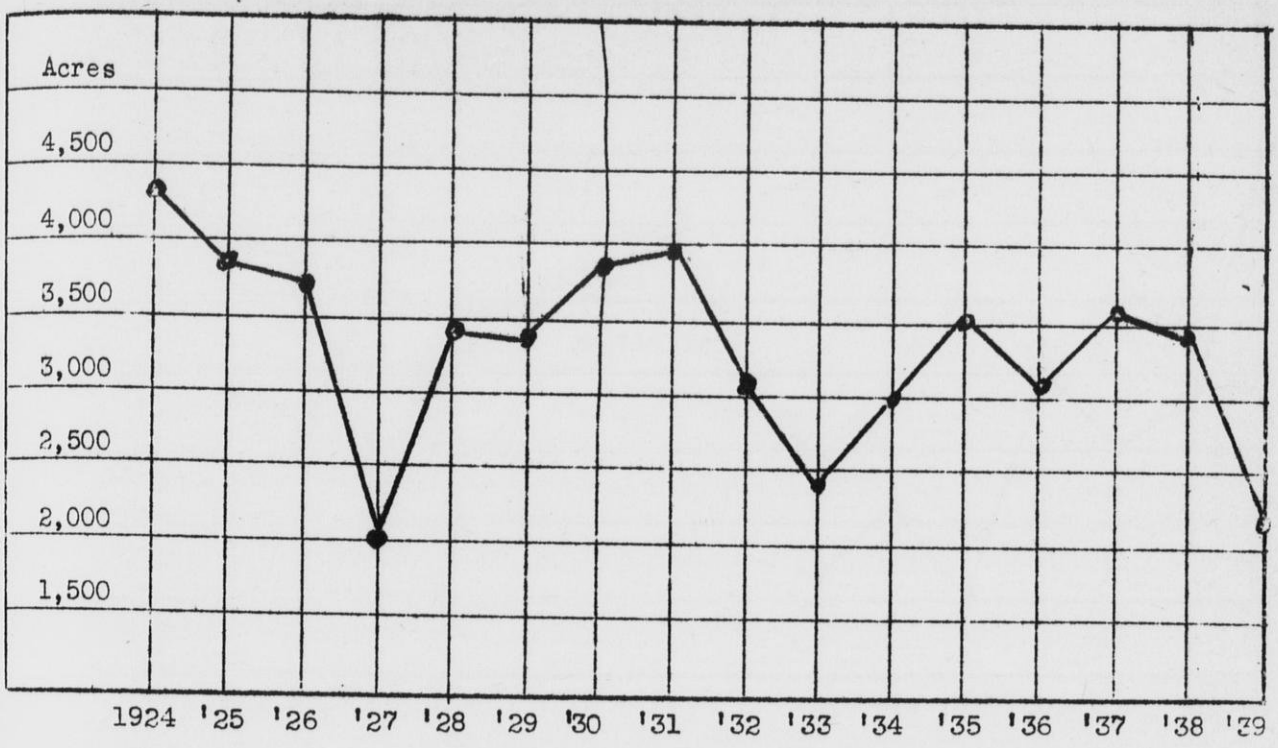
Barley Acreage
in
Washington County
1924 - 1939



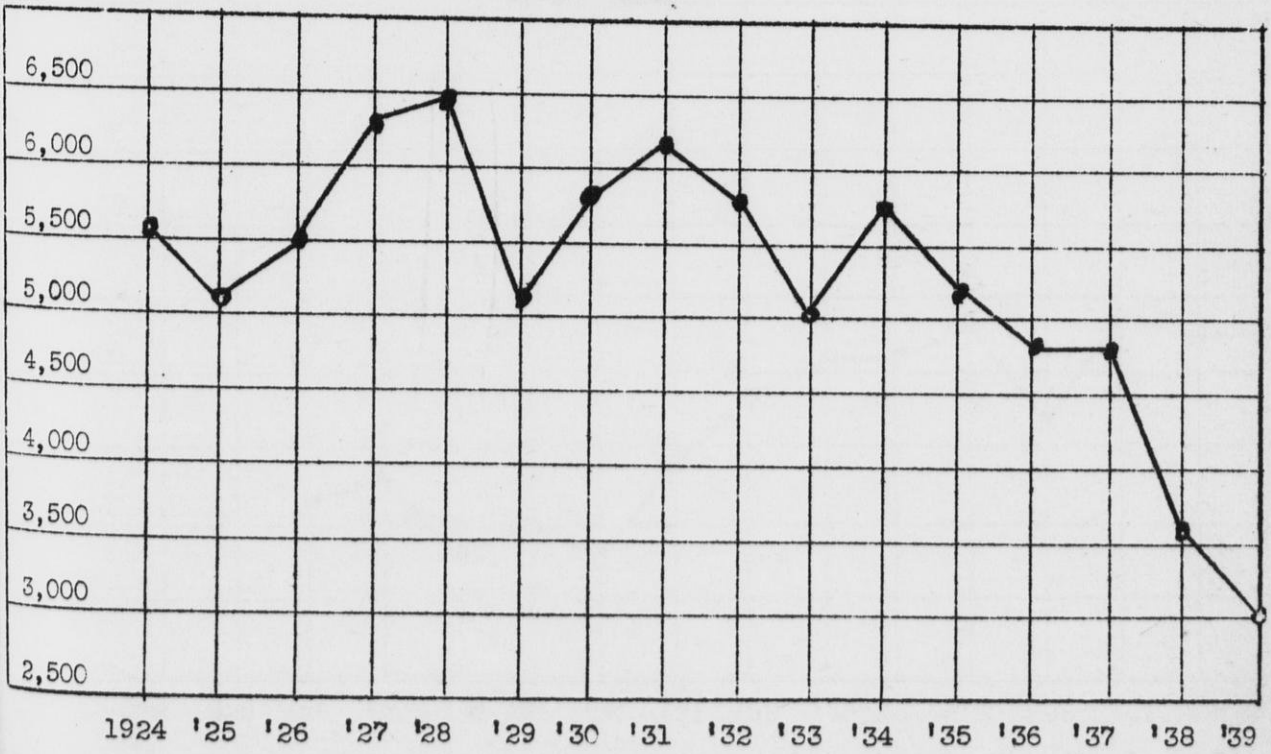
Oat & Corn Acreage
Washington County
1924-1939



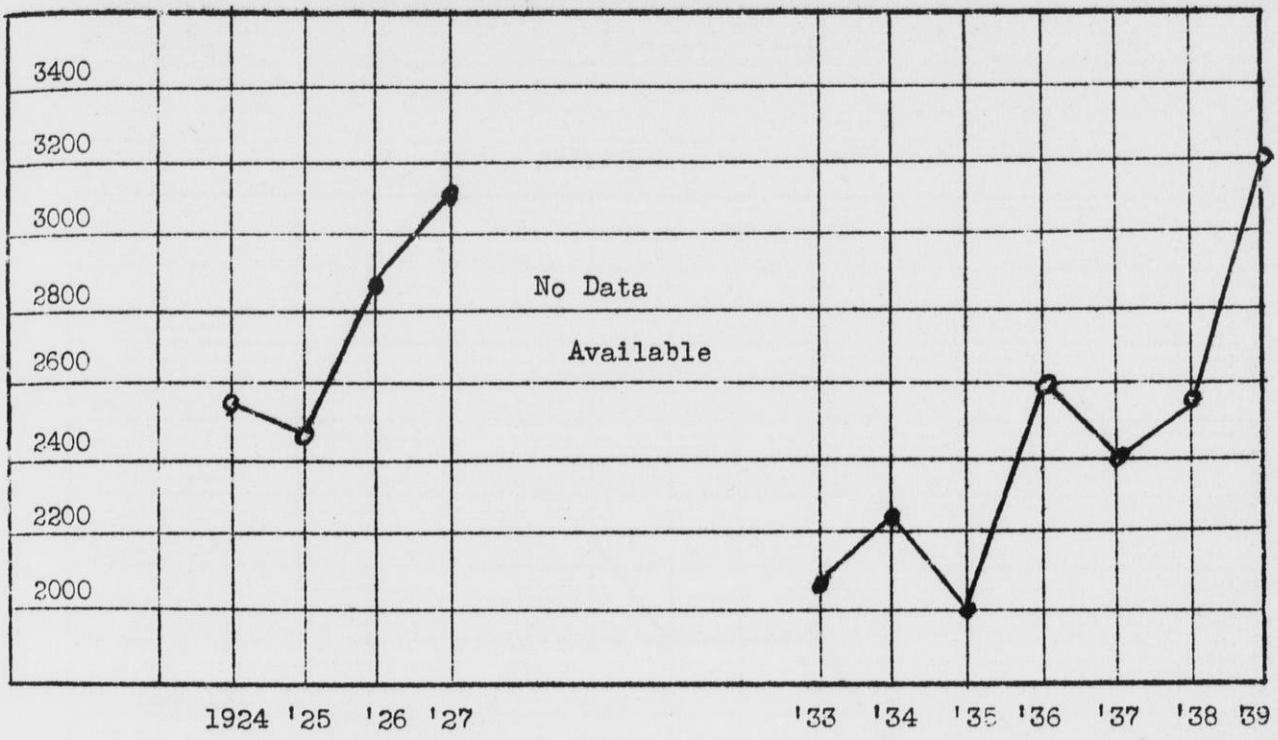
Pea Acreage
in
Washington County
1924 - 1939



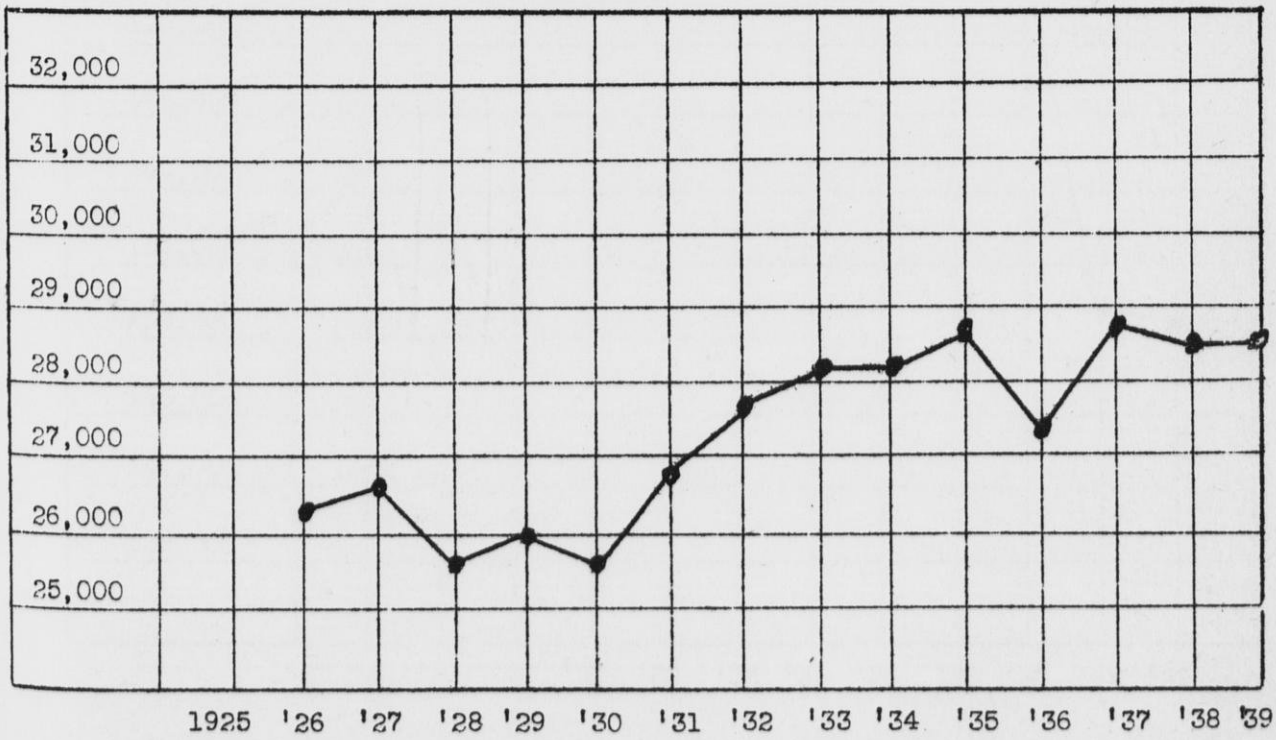
Potato Acreage
Washington County
1924 - 1939



Brood Sows
Washington County
1924-1939

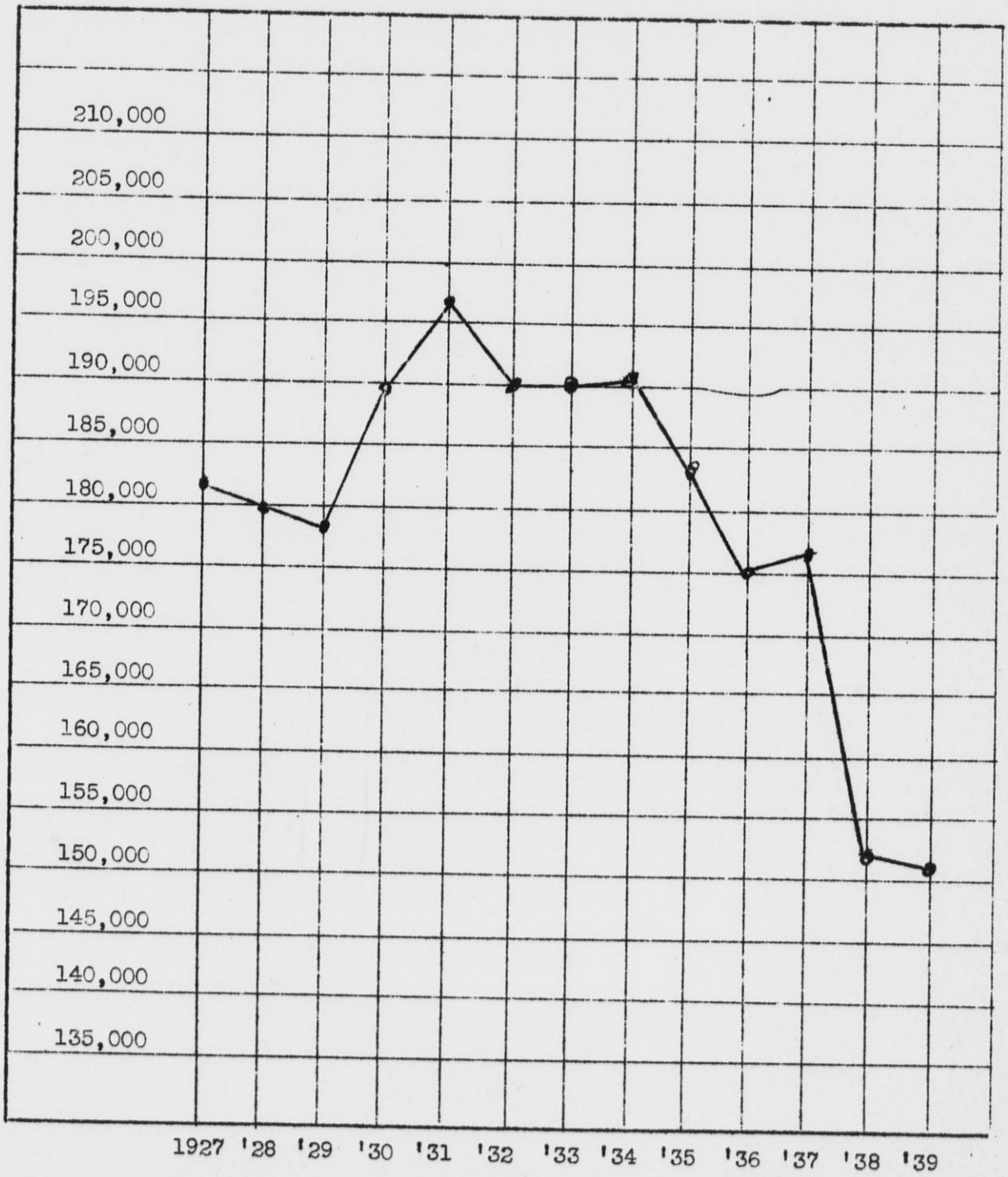


Milk Cows
Washington County
1925-1939



Number of Laying Hens and Pullets
in
Washington County

1927 - 1939



Waushara County

Wisconsin

Land Use Planning Report

TABLE OF CONTENTS

I. FOREWORD 1

II. ORGANIZATION AND PROCEDURE 3

III. DESCRIPTION OF DESIGNATED AREAS. 5

IV. LAND USE PROBLEMS AND RECOMMENDATIONS. 9

Class A - Farm Land to be Retired 9
Class B - Wood and Swamp Land 12
Class C - Questionable Farm Land. 13
Class D - Land which can be Developed 15
Class E - Arable Farm Land. 17

V. TECHNICAL PROBLEMS ASSOCIATED WITH CLASS E FARM LAND 18

Grade 1 - Phosphate, Drainage, Shift in Crops, Weed Control 18
Grade 2 - More Alfalfa, Equipment, Shift in Crops 19
Grade 3 - Fertilizers, Humus, Wind Erosion Control. 19

VI. LOCAL ECONOMIC PROBLEMS - ARABLE FARMS 22

Size of Business too Small. 22
More Home Produced Foods Needed 23
Higher Productivity Needed. 24
Diversity of Farm Income Satisfactory 24

VII. LONG TIME PLANNING 25

Area II_1 - Recreational District. 25
Area II_2 - Non-Commercial Country Life Farming. 27
Area II_3 - Commercial Farming - Prairie Soil. 28
Area III - Forestry - Hunting - Farming 29

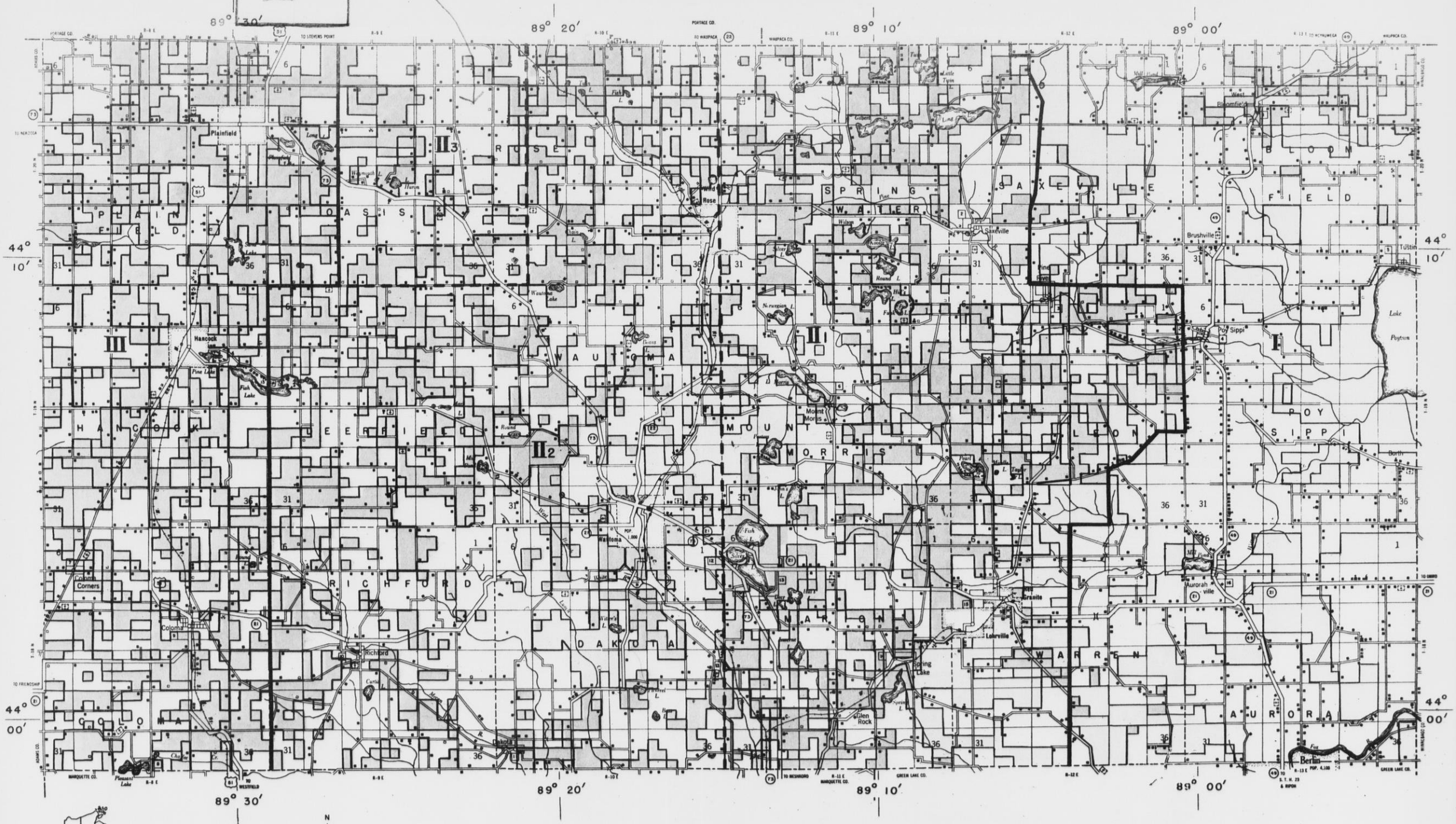
VIII. EXTERNAL ECONOMIC PROBLEMS ASSOCIATED WITH FARMING 30

IX. STATISTICS - SUPPORTING EVIDENCE 31

Waushara County Growing Season Rainfall 31
Temperature Causing Droughts. 31
Relief Aids. 32
Farm Tenancy Per Cent 32
Trend and Size of Farm Business 33

LAND USE CLASSIFICATION

WAUSHARA COUNTY, WISCONSIN





N

A. *Areas now in farms - not suited to farming - should be put to uses other than farming.*

B. *Areas not in farms - should not be used for farming.*

C. *Areas now in farms - questionable for farming.*

D. *Areas not in farms - suitable for farming.*

E. *Areas now in farms - should remain in farms.*

SCALE: MILES

0 1 2

BASE MAP BY WISCONSIN STATE HIGHWAY DEPARTMENT AND PUBLIC ROADS ADMINISTRATION, FEDERAL WORKS AGENCY.
COLOR REPRODUCTION BY BUREAU OF AGRICULTURAL ECONOMICS.

FOREWORD

The future of Waushara County will depend, as in the past, on how the land can best be made to work for its citizens. We are now going through a period of transition, when action must be considered and planned by as many qualified persons as possible.

The desires of men have always, and probably always will, determine land uses. Before the World War, when our population was continuing to increase, when we had practically an unlimited foreign outlet, and most everyone was employed, - there was a desire among all farmers to put as much of their land into farming as time and finances permitted. These conditions have now changed and farmers feel that much of the land which they broke would have been better left into timber and much of the marsh which they drained should have been left in its natural state. The attitude toward life has also changed in these thirty years. The land was first being farmed to build a home, then it was farmed for the purpose of buying an automobile. This last objective in farming has resulted in ramshackled houses, leaning barns, poor fences, wind-eroded fields, and the absence of landscaping around the homestead. There is at present a trend away from the expensive automobile and toward building a farm home and rebuilding the soil. (This is especially true among the young men who are starting in farming.) There is another desire or attitude about life which has had much to do with land uses, -- There used to be a feeling among men that the accumulation of money was the most desirable measure of success, - the school readers used to set up this kind of goal for its young men, - the teachers could have informed the pupils that there wasn't a million dollars for each of them, and for that reason they could not all be successful, if those were the standards. Today success is measured more in terms of social achievement than in money.

To create a desire among men to have a productive soil and the kind of a home to which the youngsters will want to hurry home from school, and which the farm women can spend the whole day without becoming embittered, is the goal of land use planning.

From 1894 to 1910, when most of the soil was highly productive potato land and when it was being most rapidly depleted, Waushara County farmers were among the most prosperous in the state. An earlier generation of wheat farmers had likewise "skimmed" the open prairies of their virgin fertility. But today due to competition from farmers in other parts of the nation, to soil depletion, wind erosion, drought, and low prices, the county is in financial difficulty.

It is true that there is a wide difference in the living standards of the individual farmers in the county, but it is also true that practically all the farmers in the county are having difficulty in earning enough farm income, year in and year out, to:

(a) provide the farm family with an adequate living;
(b) maintain the farm plant and pay reasonable returns on the investment;
(c) pay its proportionate share of the cost of reasonable good public services.

The fact that it is costing the public over $100,000 of relief money a year to help support many formerly self-sustaining farmers in this county; and the fact that most of these farmers live on that land which this committee has classified as non-agricultural or questionable for farming, is substantial evidence that the public can no longer shut its eyes to the fact that its occupants should be putting much of the land to a better economic - hence, social use. Most of these farm families suffered severe hardships before they accepted relief, others have secured loans to operate uneconomic farms, so that extension of credit was merely another way of extending relief. Many have been victims of drought. But the great majority are in distress, either because they have been farming unproductive lands, or because they have been following methods which could be successfully continued only with a relatively higher agricultural price level in comparison with industrial prices.

The Waushara County Land Planning Committee has for the past eight months been working together in an intensive study of how the average farmer and other residents living in Waushara County might provide a better living for their families through a wiser use of the land and other resources, and through a wiser use of the services and financ es of the local, state, and federal government.

This report first divides the county into three natural divisions and then shows a classification of the land within each area as to its best future use.

It contains an appraisal of the present land uses and natural resources and makes recommendations of steps which should be taken in order to realize the objectives of every good farmer.

This report should act as a guide for the coordination of the various public agencies which are at work in the county.

Individual farmers have always made individual plans for their own farms for the future, but group planning for individual and public action thereon is new in Waushara County. Whether this new kind of agricultural planning be brief or prolonged - simple or detailed - directed toward action of tomorrow, or that of ten years from tomorrow - the essence of planning is thinking ahead --

This committee is firmly convinced that the progress and prosperity of Waushara County depends on the individual progress and prosperity of those who get their living from the soil, and is vitally interested in helping to develop a program which will enable an average farmer to go ahead, --

Fred Weymouth

Fred Weymouth, Chairman

II
ORGANIZATION AND PROCEDURE

The Land Use Planning Project in Waushara County was sponsored by the County Agricultural Committee.

The Agricultural Committee selected a county land use planning committee from the various agricultural agencies in the county and ten leading farmers from each of the temporary agricultural communities which they set up. They selected F. R. Weymouth to act as chairman of the committee, and county agent E. A. Jorgensen to act as secretary.

The personnel of the county committee is as follows:

Member legal County Agricultural Committee--	Fred Weymouth
Representative of County Agr'l Conservation Association--	Dan W. Davies
Farm Security Administration--	E. D. Darlington
District Forester of the Wis. Conservation Commission--	Clyde T. Smith
Commercial forest land owner--	Will D. Kimball
County Highway Committee--	E. S. Hamilton
Smith Hughes--	V. E. Richter
Hancock Experiment Station--	A. R. Albert
4-H Club Federation Leaders--	Elmer Wandrey
Homemakers Clubs--	Mrs. Glenn Detlor
	Mrs. Burnett Johnson
	Mrs. Albert Beutler
Ten farmer members--	Vilas Follett
	Albert Mundinger
	George Hoeft
	W. L. Wilson
	Allie Draves
	Joe Piechowski
	Burnett Johnson
	James Buchanan
	Glenn Detlor
County Agricultural Agent--	H. N. Haferbecker
Public Welfare Department--	Arthur Johnson
Secretary--	E. A. Jorgensen

The county land use planning committee met early in the year with Walter A. Rowlands, the state land use planning leader, and Ray Pallett, the district extension supervisor, and reviewed the objectives of land use planning, and procedures to be followed in making the land use classification map and in preparing this report.

They instructed the secretary to prepare as much county and township basic informational material as possible and put it in map and chart form; and this material be used in conducting township meetings where all of the farmers in the township would be invited. They also decided to hold an election before the close of each of these meetings for the purpose of selecting a township committee to assist the county committee with the land classification of their respective town and to make suggestions as to recommendations for the future.

The following township committees were elected:

AURORA
Ernest Thomas
Grant Shead
Chet Cate
Henry Morrow

DAKOTA
Elmer Wandrey
Allie Draves
Walter Johannes
Herman Matthias
Carl Bielmeier

LEON
Will Kimball
John Hayek
Elmer Greenman
Joe. Meyer
Ed. Jewell

OASIS
Frank Trickey
C. S. Pickering
Mrs. Glenn Detlor
Will Grimm
Alvin Martin
Fred Timm
Mrs. Chris Miller
Chris Miller

RICHFORD
Carl Bartel
Ervin Nulton
Aug. Groskreutz
Herman Wedell
Emil Matz
Gus. Bruchs

SPRINGWATER
W. L. Wilson
L. H. Christensen
John Brooks
Ed. Sommers
Junior Mumbrue

BLOOMFIELD
Albert Mundinger
Louis Wendt
Martin Koehler
Emil Bartel
Paul Steinke
Clarence Koehler

DEERFIELD
S. R. Bray
James Searles
Morland Spaulding
Harry Chilsen
Rolland Eager

MARION
Col. Ellsworth
Jay Eagan
Martin Mushall
Oscar Thorstad
Ed. Steinke

PLAINFIELD
Fred Weymouth
John Indermuehle
Albert Urban
Irving Bartels
Glenn Walker

ROSE
Dan W. Davies
Ed. Newton
John Swendrzynski
Carl Zellers
Elmer Williams

WARREN
Joe Piechowski
Wm. Decker
Cliff Finnerty
Ed. Jones
Harry Paulsen

COLOMA
Vilas Follett
Albert Bartz
Holden Lietz
Alfred Chatfield
Emil Ploetz

HANCOCK
James Buchanan
Franklin Wetmore
Justin Fitzgerald
Everett Gear
Bill Barker

MT. MORRIS
Leo Arveson
Sever Anderson
Mrs. Lewis Bell
R. O. Williams
Oscar Peterson
Otto Thompson
Mrs. John Witt

POY SIPPI
Geo. Hoeft
Aug. Doro Jr.
Henry Olsen
Ted. Gehrke

SAXEVILLE
Albert Frater
Walter Moldenhauer
Ross DeGolier
Dan Chase
Peter Peterson

WAUTOMA
Burnett Johnson
Chas. Bridgman
Chester Wandrey
Chas. Anderson

The town assessor and a member of the A.A.A. Community Committee were represented on all of the above township committees and generally a young farmer was included.

On the average these township committees met three times. They used a town map and a plat book in classifying the land in accordance with the instructions provided with the work outline No. 1 B.A.E.-U.S.D.A. In classifying

the land there was generally a discussion about the history of each tract as well as its present condition and what the committee thought was its best future use. The Secretary made both written and mental notes of the conversation which took place and incorporated these ideas into this report.

Joint township committee meetings were held in each of the designed farming areas for the purpose of discussing the recommendations for their particular area before they were presented to the county committee.

The county committee had two meetings at which times the map and various proposals in this report were discussed. All of the recommendations made were unanimously adopted by vote of the county committee.

III
GENERAL DESCRIPTION OF DESIGNATED AREAS

Waushara County is located a little to the south of the central part of Wisconsin, and covers an area of 643 square miles.

Waushara County was settled largely by Eastern people, augmented by a mixed population of Germans, Welsh, English, Danes, Norwegians, Poles and Swedes. Most of these came from the adjoining counties to the south and east; a few came directly from the Eastern States and Europe. Nearly all were home-seekers who began to till the land as soon as they settled upon it. The Germans, who first settled the northeastern corner township, are now the predominant stock.

The area of the county may be divided into three natural divisions:

Plainfield	Oasis II_3	Rose	Springwater	Saxeville	Bloomfield
Hancock III	Deerfield	Wautoma II_2	Mt. Morris II_1	Leon	Poy Sippi I
Coloma	Richford	Dakota	Marion	Warren	Aurora

The eastern division, Area I, borders on Lake Poygan and includes the three eastern townships, the southeast corner of Leon, the eastern half of Warren, and that part of Saxeville lying east of County Trunk E. The topography of this division is level to gently rolling, and most of the land is good and under cultivation and highly improved. The drainage is eastward into Lake Poygan with the exception of a small corner in the southeast part of Aurora where the Fox River flows.

With the exception of the two northern tiers of sections of Bloomfield the soils in this area are either of the Poygan or Superior series.

The Poygan soils are essentially the same as the Superior soils, with the difference of a considerable amount of organic matter accumulated through the growth of vegetation, the decomposition and loss of which has been, to a considerable extent, prevented by the wetness of the soil. The total amount of phosphorus is comparatively low, but the other elements, potassium, nitrogen, and organic matter occur in large amounts. In fact, so far as fertility is concerned, phosphorus is probably the only element which will require much serious attention. The surface soils are frequently quite acid, but this will not reduce their fertility on account of the fact that there is a good supply of organic matter; and except where clover or alfalfa are to be grown, the use of lime will not be necessary, as a rule. Some of this land is not at present sufficiently drained, and it is too heavy in texture to permit the most satisfactory growth of alfalfa. Where an effort is to be made, however, to grow this crop, determinations of acidity should be made and lime applied if an acid condition is found. The subsoil of both of these types if well supplied with lime carbonate, and except for a moderate application in starting alfalfa, liming will not be necessary. The Poygan soils have a high organic content and are not in need of green manuring crops to supply nitrogen. Such crops, however, if turned under would loosen the soil and thus assist in establishing better tilth.

The central division, Area II, embraces a series of glacial hills, lying in the Fox River Valley, crossing the area from the Wisconsin River Valley nearly to Bloomfield, Poy Sippi, and Aurora townships. It is made up of numerous hills, pot-hole depressions, and narrow, irregular ridges and valleys. The hills vary in height from 30 to 100 feet or more about the Wisconsin River Valley. This rough, rolling topography is most pronounced in the northern part, and breaks up into more gentle slopes and more open valleys southward and eastward. The largest of these valleys - lying almost entirely within Oasis township - was doubtless at one time a lake with its outlet to the southwest. The many streams flowing through these fields now drain this division. Many beautiful lakes are scattered throughout this belt; and areas of muck are found along most of the streams. The soil for the most part is very sandy and numerous granitic glacial bowlders are scattered over its surface.

In chemical composition these sandy soils show less of practically all the important elements than do upland silt or clay loam soils. The total phosphorus in the 8-inch surface of this group of sandy soils averages about 800 pounds per acre, while in the silt loam and clay loam soils there are approximately 1,050 pounds of this element. The total amount of potassium in the surface 8 inches of the sand soils of Waushara County is, in round numbers, approximately 21,000 pounds per acre, while that in the heavier soils is approximately 45,000. The total amount of organic matter in sandy soils is about one half of that in the light colored silt and clay loam soils.

Since Potsdam sandstone is the source of essentially all of these soils, they are very low in lime carbonate, having less than one half of the amount contained in the surface soils of the limestone section of the state: and the subsoils of this group have less than one-tenth of the amount usually found in the subsoils of the eastern division. It is evident, therefore, that these soils have less of all the essential elements required by plants than is contained in heavier and more fertile soils. They have, of course, certain advantages for special crops, and it is possible to profitably supplement their natural supply of plant food material by the use of fertilizers.

This division, for the purpose of making it easier to make recommendations as to its best uses, has been subdivided into:

Area II_1 which includes the townships of Springwater, Mount Morris, Marion, and all of Leon excepting the southeast corner, and the western half of Warren.

Area II_2 is composed of the townships of Dakota, Richford, Wautoma, Deerfield, and all of Rose excepting the western tier of sections.

Area II_3 which is that part of Oasis known as the "Big Prairie" which comprises the western tier of sections of the town of Rose, and all of the town of Oasis excepting the western tier of two sections.

Of a total of 17,600 acres of Waukesha sandy loam there is over 12,000 acres of it in this area which is known as the "Big Prairie". Similar areas of this soil are found in Plainfield and Coloma.

The surface soil in Waukesha sandy loam consists of 8 to 15 inches of dark brown to black sandy loam of medium texture and is comparatively rich in organic matter. It is underlain to a depth of 24 inches by a brownish-yellow, gravelly, sandy loam, becoming lighter in color to 36 inches. From 36 to 48 inches the subsoil is a yellowish, heavy, gravelly sandy loam. In places the subsoil to 24 inches is a yellowish sandy clay, and this is underlain by a yellowish, sandy, gravelly loam. Along the margin of the area of this soil the surface frequently becomes somewhat lighter in color, owing to the mixture of lighter colored material from surrounding soils.

On the "Big Prairie" the surface is level with occasional slight depressions and a few slightly elevated terraces. In places where there is a little change in elevation small gravelly, sandy ridges or knolls occur. Over the remainder of the type the surface is level to gently undulating. The natural drainage is good, and where properly cultivated this soil retains moisture very well, except where the subsoil is more sandy than usual.

The soil type as found on the "Big Prairie" has the appearance of being an old glacial lake basin, though it is probable that this region was at one time connected with, and formed a part of, the Wisconsin River Valley, and was cut off from it during glacial time by the dumping of glacial debris in the form of a moraine just east of Plainfield. The material forming the soil is in an acid condition as is indicated by soil tests and the growth of considerable sorrel.

The portion of Waukesha sandy loam in Oasis Township never supported a growth of timber. The type near Plainfield supported a scattering growth of Oaks, while the small area west of Coloma was a prairie.

The western division, Area III, embraces most of the three western townships, Plainfield, Hancock, Coloma, and two western tiers of sections in Oasis--all lying within the Wisconsin River Valley and having a level to a very gently undulating topography. Very few bowlders occur in this division, and the only sandstone outcrop covers a few square rods in Section 31 of Hancock township.

Geologists tell us that practically all of this area at one time was the bottom of Lake Wisconsin, which later drained when the Wisconsin River cut through at the Dells.

Approximately 60,560 acres of the 70,000 acres of crop land in this area is composed of Plainfield, Waukesha and Coloma sands. These soils have as the farmers say, "no bottom" and are of very low water-holding-capacity.

These sands consist of glacial material derived chiefly from Potsdam sandstone and deposited in this old Wisconsin River valley at a time when the waters were flowing at a much higher level.

These soils are easily tilled, and in years of normal rainfall moderate to good yields are obtained, except on the lighter phases. (Some of these fields have been abandoned, after many attempts to produce satisfactory crops upon them.) It is difficult to get a stand of clover on this land and the hay crop is always limited. Alfalfa when properly grown gives the best results. Potatoes are the best truck crop to raise and are generally superior to those grown on heavy soils. Sweet corn, beans and garden peas are well suited. Rye grows better than other grains on these soils.

LAND USE CLASSIFICATION

The County Land Use Planning Committee, in an attempt to classify the land as to its probable best future uses, suggested that a meeting be held for each township in Waushara County, and that at these meetings local committees be elected by the group for each township to classify the land.

These eighteen committees have met and have classified the land into the following classifications, indicated by the use of the following colors:

A - (BLUE color) - Land now in farms which are not suited for arable farming and in which the land should be put to some other uses;

B - (GREEN color) - Land not now in farms and which should not be used for arable farming. In this class is included all of the unimproved marshes and swamps and farm woodlots. It is assumed that the land now covered by woods would have been cleared and plowed years ago if it had been suitable for farming. Because every farm needs a woodlot, it is assumed that this land should stay in its present uses;

C - (RED color) - Land now in farms and which are questionably suited to arable farming. In this class is included all of that land which has been misused, seriously depleted, and which should be placed in Class A (Blue) unless it is improved through the use of liming materials and the application of phosphate and potash fertilizers and the seeding of legumes, preferably alfalfa. Where farms are colored Red, the committee feels that these farms should not remain as farming units but should either be put into Class A (Blue), or added to an adjoining farm which is under good management and which has equipment and financial resources to rebuild the land so that it might be classed as E (Yellow) in the future;

D - (ORANGE color) - Land not now in farms but which is suitable for development into either part-time or full-time farms. Drained peat land and muck soils, some of which is now partially under cultivation, have been put into this class. Most of these soils need better drainage, fertilization, and much of it needs clearing before it can be put to its most profitable use;

E - (YELLOW color) - Land which is now in farms and which should remain in arable farming, either with or without some changes or shifts in the size and type of farming, cropping systems, and soil conservation practices followed, or by adjustments in the farming system. These, generally, are areas in which past farming experience has demonstrated that farms of some types can produce, under

WAUSHARA COUNTY STATISTICAL INFORMATION

(LISTED IN ORDER OF TAX DELINQUENCY)

	Township	Total Land	Acres Tax Delinquent	% Total Land of Tax Dealing	% of Tenancy	% AAA Productivity	Total Acres per Farm	Crop Acres per Farm	% Crop Acres per Farm	No. Milk Cows per Farm	Crop Acres per Milk Cow	Total Acres per Milk Cow	All Cattle per Farm	Crop Acres per Cattle	Total Acres per all Cattle	Hours per Farm	Laying Chickens per Farm	% of Corn	% of Potatoes - Tomatoes - Cucumbers	% Total Harvested Crops	% of Oats	% of Rye	% of Winter Barley - Buckwheat - Flax	% Total Grains	% Clover and Timothy	% Alfalfa	% Canning Peas - Kidney Beans - Sweet Corn	% Total Harvested	% Land Rotation Acres	% Land Rotation Acres to Farmland
Area III	Plainfield	15028	3090	20.6%	34	78.5	152.2	56.9	57	5.4	10.5	28.2	8.2	6.9	18.6	0.6	59.6	28.6	8.9	37.5	13.1	32.2	0.6	45.9	7.8	7.0	1.8	16.6	39%	15%
	Colonia	15132	2970	19.6%	39	77.6	148.9	72.3	80	5.1	14.2	33.1	7.9	9.1	21.4	0.5	59.1	26.3	8.8	35.1	4.8	42.2	0.5	47.5	1.6	12.9	2.9	17.4	27%	25%
	Hancock	15857	2610	16.4%	37	77.6	159.4	73.3	75	4.6	15.9	34.6	7.1	10.3	22.4	0.7	54.3	25.8	7.9	33.7	6.4	34.7	1.9	43.0	3.9	12.6	6.8	23.3	36%	14%
Area II	Rose	18511	2960	16.0%	24	85.6	152.6	62.0	54	6.8	9.1	22.4	9.8	6.3	15.6	0.4	58.3	20.0	14.4	34.4	22.7	11.7	2.2	36.6	15.0	12.0	2.0	29.0	30%	11%
	Deerfield	16293	2500	15.3%	31	79.4	156.4	81.0	79	5.5	14.7	28.4	8.8	9.2	17.8	0.7	68.9	20.7	12.9	33.6	10.7	33.1	1.3	45.1	4.8	12.9	3.6	21.3	38%	14%
	Springwater	14193	2160	15.2%	32	81.2	160.5	55.6	62	6.6	8.4	24.3	10.3	5.4	15.6	0.5	44.6	24.4	9.7	34.1	15.1	11.7	1.9	28.7	11.8	18.2	7.2	37.2	19%	24%
	Leon	12544	1620	12.9%	28	86.5	123.4	43.1	43	8.2	5.2	15.0	12.1	3.6	10.2	0.7	64.7	32.1	4.6	36.7	11.7	12.9	4.0	28.6	11.3	18.2	5.2	34.7	22%	12%
	Saxeville	15975	1980	12.4%	17	87.4	158.9	56.3	57	10.6	5.3	15.0	15.9	3.5	10.0	0.9	74.8	24.1	5.7	29.8	20.2	7.9	4.3	32.4	11.8	21.9	4.1	37.8	11%	4%
	DaKota	16939	1930	11.4%	26	81.2	215.5	64.6	80	7.6	8.5	28.3	11.8	5.5	18.3	0.5	92.5	24.3	10.1	34.5	8.9	38.6	0.2	47.7	4.9	11.9	1.0	17.8	19%	11%
	Oasis	18487	2060	11.1%	32	86.5	157.6	91.1	81	5.4	16.9	29.2	9.3	9.8	16.9	0.8	62.5	19.0	13.0	32.0	22.3	21.0	1.1	44.4	10.9	7.8	4.9	23.6	22%	20%
	Mt. Morris	19236	1930	10.0%	29	83.8	168.5	57.4	50	6.3	9.1	26.7	9.5	6.0	17.7	0.4	64.2	24.2	6.4	31.6	13.3	15.8	1.3	30.4	9.8	18.9	9.3	38.0	14%	21%
	Warren	17860	1490	8.3%	25	99.7	157.4	60.6	55	13.4	4.5	11.7	17.9	3.4	8.8	0.9	63.4	30.1	4.0	34.1	22.0	7.6	1.1	30.7	14.7	6.3	14.2	35.2	4%	5%
	Wautoma	16406	1235	7.5%	25	82.1	139.1	54.4	49	5.7	9.5	24.4	10.2	5.3	13.6	0.5	76.1	25.5	12.3	37.6	17.7	15.9	0.7	34.3	9.0	14.0	5.1	28.1	19%	14%
	Richford	20946	1560	7.4%	20	84.7	209.2	72.3	71	6.9	10.5	30.3	11.8	6.1	17.7	0.6	85.0	22.6	6.8	31.4	7.9	32.9	0.4	41.2	3.9	20.3	3.2	27.4	22%	7%
	Marion	18062	1260	7.0%	21	86.5	152.7	50.7	45	7.7	6.6	19.8	11.8	4.3	12.9	0.7	73.0	29.7	6.5	36.2	11.5	25.0	0.6	37.1	6.3	15.7	4.7	26.7	29%	21%
Area I	Bloomfield	19330	820	4.2%	10	110.3	124.8	50.3	33	13.6	3.7	9.2	18.0	2.8	6.9	1.6	71.7	24.4	3.3	27.7	26.1	4.4	5.6	36.1	20.3	14.4	1.5	36.2	11%	4%
	Poy Sippi	17250	620	3.6%	26	113.9	132.7	53.8	44	15.2	3.5	8.7	25.2	2.1	5.3	0.6	85.6	27.1	1.1	28.2	22.1	0.6	6.9	29.6	18.7	17.3	6.2	42.2	0	0
	Aurora	19092	170	.9%	31	114.8	119.0	49.8	31	12.7	3.9	9.4	18.9	2.6	6.3	0.8	64.0	30.3	1.2	31.5	22.4	0.9	7.5	30.8	17.0	16.0	4.7	37.7	0	0
	County Average			10.7%	27	88.6	153.1	60.6	58	8.5	8.9	22.1	12.6	5.7	14.2	0.7	68.6	25.1	8.0	33.1	15.9	19.3	2.4	37.6	10.3	14.1	4.8	29.3	20%	12%

managerial ability, a normal farm price level; and under a conservational method of farming, can produce enough farm income year in and year out to make both ends meet.

The following chart indicates the acreage of each of the above classified types of land lying within each of the five (5) designated AREAS. It is agreed among most of the community committee members that they would probably classify more of the land colored yellow as red, or blue, if time permitted them to review their work.

ACREAGE TOTALS IN EACH OF THE ABOVE DESCRIBED CLASSIFICATIONS BY AREAS

AREA	"A" BLUE	"B" GREEN	"C" RED	"D" ORANGE	"E" YELLOW	TOTAL
AREA I	1,360	20,540	3,520	2,840	63,960	92,220
AREA II_1	18,280	9,240	20,200	4,880	49,620	102,220
AREA II_2	12,840	2,960	28,360	-----	65,680	109,840
AREA II_3	1,600	-----	4,440	-----	13,480	19,520
AREA III	14,720	-----	23,430	-----	33,420	71,570
COUNTY TOTALS	48,800	32,740	79,950	7,720	226,160	395,370

IV
LAND USE PROBLEMS AND RECOMMENDATIONS

General County Wide Recommendations

Class "A" - BLUE --

The committee recommends that the land colored Blue "A" - a total of 48,800 acres, regardless of what area in which it is located, be retired from cropping or put into some form of permanent grazing or forest land. Whether or not it be suitable for grazing will depend on the ability of the soil and agronomic scientists to develop a kind of grass which will grow on light soil and be drought-resistant. If this land is to be reforested agencies and policies for accomplishment should be created.

This kind of land, which comprises 12% of the total land in farms, undoubtedly never should have been broken for farming purposes, and the members of the committee feel that if the problems connected with this kind of land can be solved that we can at the same time solve some of the social and economic problems, as will be noted from the following information:

25% of this land is now tax-delinquent;
19% of the direct relief cases live on this land;
20% of the WPA workers live on this land;
16% of those people receiving surplus commodities live on this kind of land.

All of the Farm Security Administration clients who live on this land are delinquent.

Recommended Use

Farming is probably the most competitive business in the world and it is generally conceded that the cost of production is lower on productive soils than on land which has been put into this classification. The uses which this land might be put and which the Committee feels it is more adaptable than farming are:

(1) forestry (school, private, municipal);
(2) public or private hunting grounds;
(3) public or private fishing grounds;
(4) other recreational uses.

In all large cities there are persons in all stages of wealth, (It is estimated that there are eighteen million people living within a driving radius which would permit many of them to spend their week ends in Waushara County. The concrete roads of Waushara County tap all of these metropoli), ---- The first requirement of all these people is food and shelter, but people do not care to live on bread alone, -- those who can afford it like to have some place to go and something to do when they get there. They want to play, hunt, fish, and spend some time out-of-doors. Yet the central and western divisions of this county, which could provide them with one of the finest playgrounds in the middle west, insists on using their non-agricultural land for the production of food. Of course, society could tax these people who have a little extra money and pay it out in the form of grants to those living in areas such as this who need food, but nobody likes that way of redistributing the wealth. This redistribution must be made a "sporting" proposition.

Development Needs

Before the above mentioned recreational grounds can be developed the following steps must be taken:

1. Need better Fire Protection -- Neither private nor public interest will proceed on any adequate reforestration program until they are assured of a better fire protection. This is the reason the Committee recommends that each township set up better facilities and organizations for fire protection and that all fires be put under regulations.

2. The County should be Zoned, -- A county wide zoning ordinance should be enacted to protect the progress which might be made in putting this class of land to the above recommended usage and to prevent the reoccuring of the above mentioned relief costs. These relief costs are not only expensive to the public but they are associated with a serious human erosion. This Committee would like to make the following recommendations to the Waushara County Board.

(a) That Walter Rowlands appear before the County Board and explain the Wisconsin Zoning law;

(b) that the Waushara County Board appoint a zoning committee to assemble data dealing with the physical characteristics of the land, road and school costs, relief burden, tax status, and other pertinent matters about the poorer tracts of land of the county; (many of these facts are included in this report);

(c) the committee then prepare and sponsor a zoning ordinance and a map outling the tracts on which certain uses are prohibited; and --

(d) this committee conduct preliminary meetings in the rural communities to discuss the pros and cons of zoning in general; after which --

(e) county-wide hearings be held where those who object to the specific provisions of the proposed ordinance and the tentative boundaries laid out in the zoning map may state their case.

(f) then if the ordinance -- perhaps modified by this time -- receives the approval of the county board, the county enacts the ordinance, publishes the text and the accompanying map, proceeds to its enforcement which implies among other things --

(g) the public recording of "nonconforming uses" of land in restricted districts - that is, establish uses that are not affected by the ordinance until they are discontinued.

3. Should enter land under Forest Crop Law, -- That as much of this class of land as is permitted by the State Conservation Department be entered under the Wisconsin Forest Crop Law. At the present time the county is losing the 10¢ an acre which the State pays the county on land which is placed under the forest crop law and in established county forest. These funds might well be applied for and used for the development of this kind of land. Either private parties, or the villages, towns or the county may take advantage of the Wisconsin Forest Crop Law. If private parties enter land under this law they are required to pay 10 cents an acre tax to the township and the State also pays to the township a like amount. The township under this system would receive approximately 20 cents per acre tax on each acre entered under the Forest Crop Law. The Town is required by Statute to pay to the County Treasurer 20 per cent of the amount the State pays to the Town. When the County is the owner of the land and it has been duly entered under the Forest Crop Law the State Pays the entire amount to the town and the county. The payment being approximately 10 cents to the township and 10 cents to the county for development work on the forest area.

In view of the fact that 25 per cent of this land is tax delinquent and a burden to the other people in the county, it would seem advisable that these steps be taken as soon as possible.

4. Land Purchase Committee Needed,--- The Committee further recommends to the Waushara County Board of Supervisors that a County Land Purchase Committee be appointed and providedwith authority and sufficient appropriations to obtain title to as much tax delinquent land as possible, and some other tracts, which need development. Now, it takes six years before the county can obtain a good title to tax delinquent land. The persons who own the land which is being "dropped for taxes" knows whether or not they intend to redeem it. After the land is purchased it should be put to one of the above mentioned non-farming productive uses as rapidly as possible.

If the ~~$116,~~100,000 which Waushara County has borrowed because of tax delinquent property is to be paid out of this land it must be put to work; otherwise, this indebtedness will fall on the good agricultural land of Waushara County which is already carrying all of the tax load it should carry.

The land purchase committee should have authority to resell the land to which they have obtained title to private parties or municipalities providing the purchaser will agree to put it into any of the non-agricultural farming uses. Before reselling the committee should remove such buildings as are located on the land. (Our relief problems can not be satisfactorily solved by turning these kind of buildings and this kind of land over to this unfortunate group.)

5. Stream and Lake Improvement, -- The streams and lakes of Waushara County should be improved and stocked with an abundance of fish. These streams are naturally excellent for self propagation, but soil erosion and the clearing of timber has spoiled some areas. There is also an increasing number of fishermen who visit these waters each year; and it, therefore, takes more fish than will naturally reproduce. These waters should be stocked as the Yellowstone river and lake in the Yellowstone National Park.

6. Farm Security Administration can help, -- The Committee further recommends that until the zoning ordinances have been enacted that the Farm Security Administration be advised not to make any further loans or establish any more clients on this kind of land.

7. AAA can help, -- The Committee recommends to the Agricultural Conservation Association (AAA) that the benefit payments allotted to this kind of land be continued in at least the same aggregate amounts but that the benefit payments be paid entirely on soil building basis, and furthermore that soil building practices be limited to:

(a) establishing solid forest plantings
(b) planting shelterbelts and snowfences
(c) building of fire lanes and cropping the same for game and bird food
(d) fencing wood lots
(e) planting and cultivating crops for game food
(f) improving stands of forest trees.

Setting up these limitations on benefit payments is not "class legislation", any more than it is to have a different schedule of payments for the "range country" and for the "corn belt".

Class "B" GREEN --

That the land colored Green "B", 32,740 acres, should probably remain in its present use regardless of what area in which it lies. Most of this class of land is low and ordinarily called "swamps". These low land areas should remain in their present use. This lowland lies along the streams and provides pasture for livestock during the dry periods of the summer season, and in years of severe drought farmers find it profitable to cut these areas for hay. In other words, they act as a drought insurance policy.

Recommended Uses

Most of this land which lies in the township of Warren and Aurora belongs mainly to the Deltox Rug Company and is not suitable for drainage and should remain in its present use which is mainly that of water storage since the Rug Company does not use its products for the making of rugs. The land lying in Poy Sippi and northern part of Aurora and surrounding Lake Poygan can not profitably be drained because of the high water level of the Lake. Some of this land is at present in use for Fur farming, but all of it has great possibility for development for game bird hunting. Certain areas of the swamp land should be set up as game refuges and the balance of it can be opened to hunters under the supervision of the Conservation Commission. There is plenty of cover and feed for a great many more birds than now occupy this land.

Class "C", RED --

The land colored Red on the map "C", of which there are 79,950 acres in this county, is put into this questionable classification because of its questionable value for farming in its present state of fertility and under its present management. It is probably more of a human classification than one of land.

The committee feels that much of this land, especially that not lying adjacent to other good farm land; or that lying in an area surrounded by land put in Class A (Blue) should be handled the same as has been recommended for Class A land.

In view of the fact that a majority of the farms in Waushara County which have good land are too small in size to be operated most economically, it is the opinion of this committee that approximately 60,000 acres of this Class C land could profitably be added to these good farms so as to make them of a more desirable size. It should be pointed out, however, that before this land, which is colored red, can be profitably farmed it should be improved through the use of lime, fertilizer, and the plowing under of legume sod.

Estimated cost per acre of rebuilding:

3 yards of marl @ 20¢ per yard	$ .60
Hauling @ 50¢ per yard	1.50
100 pounds of 45% phosphate	2.50
200 pounds of muriate of potash	4.00
10 pounds of alfalfa, grass or legume equivalent @ 40¢ per pound	4.00
	$12.60

The labor, power, and machinery cost will probably be very close to the above mentioned out-of-pocket costs so that it can be estimated that it will cost approximately $25.00 per acre to fit the land in this classification for legume hay production after which it will be suitable for other crop farming.

The use of this class of land in its present condition for farming has resulted in depleted resources and farm poverty: this in turn has bred tax delinquency, excessive cost for local services, such as roads and schools, and increased relief as is indicated by the following statistics:

16% of this kind of land is now tax delinquent and 40% of all tax delinquent land falls in this classification;
54% of the direct relief cases live on this kind of land;
50% of the WPA workers live on this kind of land;
47% of those people receiving surplus commodities live on this kind of land;
65% of the Federal Land Bank delinquencies are associated with this kind of land and 50% of their potential real estate falls in this classification.
All of the Farm Security Administration clients who live on this land are delinquent.

If the above percentages are added to those listed in connection with the Class A land it will be noted that about 70% of our most urgent social and economic problems of this county are associated with an unwise use of these classes of land. It will also be noted that Waushara County can solve most of its relief problems if it can solve the problems connected with these A&B classes of land, therefore, this committee recommends as follows:

Recommended Uses and Suggested Methods

1. Whereas, at present there is no way of stopping uninformed and careless persons from plowing up large tracts of this land and farming it unprofitably, and exposing it to wind erosion which not only is a damage to the adjoining land owners, but also a "curse" to the community; and whereas there is no way of preventing land owners from reselling this kind of land in its present unimproved state for farming purposes which experiences indicate create not only local tax and relief problems but also creates serious human erosion and all of the consequences which follow farm poverty. The following land use recommendations should be incorporated in connection with the recommended zoning ordinances referred to in connection with the Class A land.

(a) land owners should be advised against and the public be informed as to ecnomic and social loss which results from reselling this class of land for farming purposes before it is improved;
(b) strip farming should be practiced on those fields which are subject to wind erosion;
(c) evergreen shelterbelts should be planted on this land every 40 rods, preferably 3 rows wide, and running in a north and south direction.

2. Whereas, much of this land is owned by either absentee land owners or indifferent local owners the proper usage of this land can best be encouraged by assessing it for approximately the same value as that land whichis classed as E (good land) in the same community. Farmers are not encouraged to make improvements when they find their assessed valuation increased as soon as improvements are made. (This procedure will either cause its improvement or place it under the Forest Crop Law or accomplish liquidation.)

3. The Federal Land Bank and other corporations and individuals should be requested to either liquidate their loans on this kind of land, especially where they are delinquent, or extend sufficient credit to rebuild the soil in line with these above recommendations, and refinance on an ability to repay basis.

4. The Farm Security Administration might well discontinue to set up new clients on this land unless they also make provisions for rebuilding the land as above recommended, and furthermore grants might be discontinued to farmers living on this kind of land as rapidly as is possible without serious human consequences.

5. The Agricultural Conservation Association (AAA) should class the farmers which have in excess of 30 per cent of their crop land in this class as a non-allotment farm and should make their benefit payments entirely on the following soil building practices, and certainly not in any smaller total amounts than are now being granted. Benefit payments should be made in kind rather than cash.

(a) strip farming
(b) shelterbelt planting and maintainance
(c) applying fertilizer
(d) applying lime
(e) seeding alfalfa, other legumes and grasses
(f) solid forest plantings
(g) improving stands of forest trees
(h) planting cultivated crops for game food
(i) fencing woodlots to keep out livestock.

Class "D", ORANGE --

The land colored orange of which there is a total of 7,720 acres, is primarily marsh land of either peat or muck. It occupy low lying irregular areas and narrow belts along stream courses. The greater share of it lying in the town of Warren, the balance in the towns of Marion, Aurora, and Poy Sippi. There is another drained muck area in the town of Springwater but this has been developed and is at present the most profitable potato and onion land in Waushara County.

The material in this area varies in depth from 10 inches to 10 feet or more being shallower near the margins of the area and vary in color from brown to black. The underlying materials vary from sand to sticky clay. These areas were once lakes or channels for the water of melting glaciers. When the water receded some lakes were formed in the depressions, and fibrous plants and water loving grasses soon filled the depressions with their roots and their decaying fibers. The first stage in this process gives Swamp, the second Peat, and the third Muck.

Most of that part of the land lying in the towns of Marion and Warren is at present adequately drained through regularly constructed drainage systems, additional ditches can readily be dug if necessary. The tract under cultivation in the town of Poy Sippi is also drained but needs a pumping system to remove surplus water because it lies lower than the drainage outlets and it is, therefore, expensive to remove the excessive water from this area. That area lying in the town of Aurora is not valuable for cultivated crops unless a drainage system is installed. There may be some question regarding advisability of draining into the Fox River, because this river has been known to back up during periods of heavy rainfall.

In dry periods when the water table is lower than usual and the surface becomes dry, fires have frequently burned over some of this area leaving the underlying land and rough projections exposed. This usually leaves the land unfit for anything except grazing .

About one-third of this acreage, 2770 acres, is covered with timber and brush consisting mainly of tamarack, poplar, birch, and willow and will need to be cleared before it can be used for agricultural purposes. It would take several years to clear a tract of land and, therefore, it would be desirable if an individual, or a group of individuals, are to start operating this kind of land for them to acquire some acreage which has already been cleared and broke. It is estimated that about one-seventh, or about 1000 acres, of this classification is at present being farmed, most of which has been put into the growing of Reed Canary Grass.

It will be noted from the map that most of this class of land lies adjacent to the destitute villages of Redgranite and Lohrville. These villages were at one time the most prosperous in the county due to the quarry industry, but new developments in road building have removed (at least for the present) the need for paving blocks. For the last eight years most of the families living in the villages of Redgranite and Lohrville have been receiving some form of relief. There are also many families in the rural areas of the towns of Marion and Warren who have been more or less dependent on the quarry industry for part-time employment, who are also receiving public assistance because of the shut down of the quarry industry.

It has been estimated by the Public Welfare Department of the county that an average of over $30,000 per year has been spent for various forms of assistance as a direct result of the lack of employment in the quarry industry. There has probably been an additional $20,000 expended annually for assistances to other families who have been living in the surrounding rural area on unproductive soil: and to families who have moved in for the purpose of getting WPA employment. This makes an eight year total of nearly a half million dollars, most of which has come from the Federal government. Today there are still 103 families on relief in Redgranite plus 19 families who live in the outskirts, and 27 in Lohrville. Many of the other families living in these villages live off the business created by these relief expenditures.

This committee is of the opinion that many of the able bodied persons receiving this assistance can be rehabilitated through a proper development of the land in this classification.

Recommendations for Future Uses

This land has an almost unbelievable possibility for development into commercial vegetable land, including such crops as potatoes, onions, tomatoes, and cabbage. The high-sugar content beets which are being developed will provide another profitable crop for this land.

The Committee, therefore, makes the following recommendations:

1. That the Farm Security Administration or some other agency, public or private, who has available money should take the leadership in acquiring, and in the development of this land; furnishing the heavy machinery which will be needed to clear and prepare the land for cultivation; and to supply the needed mineral fertilizers.

The content of nitrogen in this land is high but the amount of phosphate and available potash is low. The first year which this land is put under cultivation it should have an application of 800 to 1000 pounds of a 1-3 mixture of phosphate and potash, such as is found in the 0-9-27 analysis. About one-half of this fertilizer should be broadcast and the other half drilled in with the cultivated crops.

2. The Farm Security Administration might also advance the funds needed to build greenhouse and storage facilities, if private funds can not be obtained. These storage facilities should include an artificial refrigeration plant which will be needed to store the surplus vegetables grown during the summer, which unquestionably will find their best market during the fall, winter and spring months. At present the Fox River Valley and the larger cities of southern Wisconsin and northern Illinois are required during winter months to import needed vegetables from distant areas. The high price which the consumers pay for these represent, mainly, handling and transportation costs.

In other words, the market for these crops is closely available and the development of this area would be an attempt to produce a product for which there is a ready demand. There has been a trend among the city consumers to reduce their demands for heavy foods and to increase their purchases of fruits and vegetables. Practically all vegetables including tomatoes, potatoes, onions, and cabbage, can be profitably produced on this land if:

(a) proper cultural and fertilization methods are followed;
(b) if proper storage facilities are provided, and
(c) adequate water level control is established

The quality of properly produced muck vegetables has never been excelled.

Class "E", YELLOW --

The land colored yellow on the map, of which there are 226,160 acres in this county, should according to community recommendations remain in arable farms with the exception of some isolated tracts which lie adjacent to or within the previously mentioned Class A land.

It will be noted that this class of land represents the arable farm land of Waushara County. The problems associated with its best uses fall into two categories:

1. Those which lie within the line fence and are of a technical nature,
2. Those which lie beyond the line fence and are of an economic nature.

Because of the lack of time and complications which arise with these external economic problems, many of which require public action, this report deals primarily with the technical problems and it is with these problems that the average farmer can do the most to increase his net farm income.

The farmers in the county who are operating this land can be divided into two groups,

1. The non-commercial, -- those farmers who primarily live on the products of his farm and who may have special crops or markets. In many cases this group of farmers have a great deal of farm labor and much of their work is done by hand, others have outside sources of income which make it unnecessary for them to engage in a business farming.

2. Commercial farmers, -- this includes that group who operate the farm as a business. In this group are those who use modern equipment and the new power driven machines. It also includes those who specialize in certain enterprises.

The land which has been put into Class E can roughly be divided into three grades:

1. That land lying in Area No. 1 which is commonly known as heavy soil;
2. The light soil which has been improved through the use of good farm practices; and
3. That light soil which needs improvement of some kind, such as liming, fertilization, or protection from wind erosion.

V
TECHNICAL PROBLEMS ASSOCIATED WITH CLASS "E" FARM LAND

Grade 1 --

Practically all of the first grade of Class E land lies in Area No. 1 and is heavy soil.

It is important that this soil should be carefully handled and the mechanical conditions so maintained as to permit the circulation of air through the surface material.

Applications of 200-300 pounds of super-phosphate per acre are needed for each rotation, under the dairy farming system now existing.

All poorly drained places should be drained and the major portion of these types would be greatly benefited by tiling.

A rotation of crops well suited to these soils is one year of small grain consisting of oats, barley, or wheat seeded to clover or alfalfa with a little timothy mixed in. The second year the clover from the first crop may be saved for hay, and the second allowed to go to seed. The third year the hay may be cut: and the fourth, the field may be pastured. Following this the sod should be plowed for corn. Pasturing may be omitted if there is other grazing land on the farm. This makes a four or five year rotation, with 50 per cent or over of the crop land into hay land or rotation pasture. Possibly a longer rotation would be used if alfalfa is used instead of clover.

The following table indicates the recommended shift, which the committee thinks should be eventually made on this kind of land, if farmers are to have the most economically operated farm in the future:

	Assessors Figures for 1938	Community Committeemen Recommendations	Shift Desired
Crop Land per Farm	54.2	78	+
Percent of Crop acres in grain crop	32	24	-
Percent of crop acres in cultivated crops	30	24	-
Percent of crop acres in hay and rotation pasture	38	52	+
Percent of hay land in alfalfa	27	51	+
No. of milk cows	13.1	21	+
No. of laying hens	65.4	195	+
No. of brood sows	.8	3	+

The light sandy soils in the northern part of Bloomfield, colored blue, on the enclosed land classification map, should be reforested by the local farmers mainly with white pines which natively grew well on this soil. That land colored red, unless it lies adjacent to good farm land and can be quite regularly covered with stable manure, should also be reforested with White Pine. It might be well for the farmers living there to leave unplanted strips on this land as fire lanes. These fire lanes could be cultivated and sown to buckwheat and corn, and left for winter feeding for game in that area, thereby providing better hunting grounds.

Grade 2 and 3

The second and third grade of Class E land lies mainly in Area II and III (the central and western sections of Waushara County) and are of a sandy type.

The Plainfield sand (45,230 acres) and the Coloma sand (141,190 acres) is the poorest for farming purposes, -- it is low in humus, low in water holding capacity and has "no bottom" to it. Higher net agriculturalreturns are needed if this type of sand is to be profitably improved.

The Coloma sandy loam (30,540 acres) has a good bottom and is generally considered good agricultural land if its productivity is maintained. This type of soil, if improved with humus and mineral fertilizers makes good potato land.

The most important differences between these sandy types of soil and heavier classes, such as silt loams and clay loams, however, are not of a chemical nature, but of a physical nature, having to do with their water holding capacity, drainage, and tillage.

Suggestions for the improvement of these types are based upon field experiments, chemical and mechanical analyses, and upon studies and observations covering a variety of sandy soils.

Cultural Practices

In the management of these sandy soils it should be kept in mind that they are naturally low in organic matter, and in the mineral elements required, the water holding capacity is poor and the soil is acid. As all of the types in this group are in an acid condition they would be greatly benefited by the application of lime. Every farmer should have his soil tested for acidity.

When the amount of organic matter of humus forming material in the soil is increased, the water holding capacity is also increased. The humus forming material can best be increased by applying stable manure and by plowing under legumes as manure. Of the legumes, alfalfa, sweet clover, red and mammoth clover are perhaps better adapted to sandy soils than any of the others, but none of these will make the most satisfactory growth until the acid condition is corrected. The mineral elements required mustbe supplied by the use of commercial fertilizers.

When a soil can be made to produce a fair crop of alfalfa, or clover, without an excessive expenditure, that soil can be successfully and profitably improved. It is, therefore, important that the first efforts in building up a soil should be directed toward the establishing of conditions which will be favorable for the growth of legumes.

From experiments conducted it seems advisable to sow alfalfa and clover without a nurse crop, where the humus and fertility of the soil is low, since it will then have all of the moisture in the soil for its own growth. There is also some danger of the young plants being damaged by the hot sun when the nurse crop is removed. The field intended for seeding should be plowed in the fall, or as early as possible in the spring, and a top dressing of ground limestone applied at the rate of 2,000 pounds per acre, or 4 yards of marl before seeding, 8-12 pounds of seed should be sown per acre and covered to a depth of 1 to 1½ inches in depth. It may be desirable to add brome grass to the seeding as it is drought resistant and does help to build a better sod. The seeding should be followed by a roller to compact the soil around the seed, and the roller should be followed by a light harrow to roughen and loosen the immediate surface to check evaporation and blowing of sand by the wind. Where it can be secured a top dressing of well rotted manure should be applied before the last harrowing. If manure is not available about 100 pounds of super phosphate and 300 pounds of muriate of potash should be applied at the time of seeding to clover. The amount of commercial fertilizers containing phosphorus and potash which should be subsequently applied will depend on the crops to be grown and especially on the amount of manure produced on the farm.

Late in summer it may be necessary to clip the weeds which are sure to come. The cutting bar should be run high and the clippings left on the field as a mulch.

Rotations

In selecting a rotation of crops to follow on the sandy soils it should be kept in mind that the soil is low in organic matter, and that this must be supplied either by applying manure, or by plowing under green manure crops or legume sods. When the soil has been built up to a fair stage of fertility, a nurse crop may be used in seeding clover and alfalfa to better advantage than when the soil is very poor; and it is frequently desirable to seed with spring wheat or oats. This system is considered by many to be more desirable, since an extra crop can be secured.

When the land is plowed in the spring it is often advisable to pack the soil with a roller, but this should be followed by a light harrow to secure a mulch on the surface. Where the fields are exposed, and the soil is blown by the wind, an effort should be made to prevent damage from this source. The most effective plan is to lay out the land in long narrow fields, alternating hay land with cultivated crops.

With the successful growing of clover and alfalfa, the livestock may be developed to a much greater extent than at present.

By plowing under a crop of clover sod every few years and by following a definite rotation and approved methods, the yields of potatoes will be greatly increased; and this crop may well be depended upon as one of the chief sources of income for the sandy soils of the area. Beans, peas, sweet corn, etc. could be profitably grown to a much greater extent, and the trucking industry could be extended if proper arrangements were made for marketing. The soil warms up early and is well suited to cucumbers, strawberries, and all quick maturing vegetables.

In the management of this group of soils it will probably be found that Coloma sandy loam and the heavy phase of Coloma sand will respond more quickly to careful treatment than the other types, chiefly on account of their containing a higher percentage of clay in the subsoil.

Those farmers living in these areas who wish to engage in commercial farming should make the shifts recommended by the community committee of this area and are indicated in the following chart. It will be noted that the Committeemen have recommended doubling the size of farm business. In doing so they have had in mind the use of more of the modern farm equipment and they have tried to set up the business on the size that would warrant the employment of hired help. There is a desire among committeemen to provide apprenticeship among young men on good farms who want good experience in good farm management.

	AREA II_1			AREA II_2			AREA II_3			AREA III		
	1938 Assessors figures	Com. Committeemen Recommend.	Shift Desired	1938 Assessors figures	Com. Committeemen Recommend.	Shift Desired	1938 Assessors figures	Com. Committeemen Recommend.	Shift Desired	1938 Assessors figures	Com. Committeemen Recommend	Shift Desired
Crop Land per Farm	51	136	+	66	137	+	91	217	+	67	201	+
Percent of Crop acres in grain crop	31	20	-	41	23	-	44	25	-	45	23	-
Percent of crop acres in cultivated crops	35	22	-	34	22	-	32	27	-	35	25	-
Percent of crop acres in hay and rotation pasture	34	58	+	25	55	+	24	48	+	19	52	+
Percent of hay land in alfalfa	56	46	-	60	53	-	43	41	-	52	52	0
No. of milk cows	7	16	+	7	13	+	5	15	+	5	11	+
No. of laying hens	56	185	+	67	160	+	56	383	+	49	175	+
No. of brood sows	.6	2	+	.5	2	+	.8	5	+	.6	3	+

VI
LOCAL ECONOMIC PROBLEMS

In order to arrive at the most desirable size of business for the commercial farmer operating in each of the designated areas, a blank form was mailed to each of 109 farmers and farm women who are members of the community and county Land Use Planning Committee. The average of their recommendations were computed and are shown in the following table. It will be noted that the recommended size of business is much larger in the lighter soil area which is most easily tilled. It will also be noted that the recommended size of business is nearly double that which was reported by the Assessors in 1938.

RECOMMENDED SIZE OF BUSINESS

	AREA I		AREA II$_1$		AREA II$_2$		AREA II$_3$		AREA III	
	1938 Assessors	Committeemen Recommended	1938 Assessors	Committeemen Recommended	1938 Assessors	Committeemen Recommended	1938 Assessors	Committeemen Recommended	1938 Assessors	Committeemen Recommended
No. of crop acres needed (Includes only land colored yellow)	54.2	78	51.7	136	66.9	137	91.1	217	67.5	201
Rotation		4		5		4		4		5
Approx. acreage needed for permanent pastures		41		30		21		30		21
No. of hired men needed		1		1		1		1		1
No. of horses needed		3		3		3		2		3
No. and type of tractors needed		1		1		1		1		1
No. of milk cows	13.1	21	7.2	16	6.5	13	5.4	15	5.0	11
No. of young stock	6.1	11	4.1	9	4.0	6	3.7	14	2.8	8
No. of brood sows	.8	3	.6	2	.5	2	.8	5	.6	3
No. of pigs to raise for market		33		16		14		44		21
No. of laying hens	65.4	195	55.9	185	67.0	160	55.5	383	49.1	175

One of the most effective ways which all farmers can supplement their farm income or make their farms pay better is by having a good garden and by producing as much as possible of the food which is needed for the farmer to live in a healthy condition.

The following table is a summary of the opinion of 55 homemakers in eighteen townships of Waushara County which indicates the amount of home grown products needed per person to maintain good health, from a questionnaire which they filled in and which included the following yearly amounts per person.

Milk - 365 quarts per child, 183 quarts per adult
Butter - 40-45 pounds
Cheese - 23 pounds per person
Eggs - 30 dozen
Poultry - 20 pounds, dressed
Meat - 120-165 pounds in all
Potatoes - 4-8 bushels
Tomatoes - 2 bushels (20 quarts canned)
Fruit - 1½-4 bushels (30 qts. canned)
Vegetables - 6-11 bu. (20 qts. canned)
Cereals - 20-30 lbs. may be produced
Sweets - 18 pounds may be produced.

FOOD	PER CENT OF OPINIONS IN REGARD TO AMOUNT				PER CENT OF HOMEMAKERS SAYING THAT FARM FAMILIES CAN PRODUCE ENOUGH FOR THEIR OWN NEEDS				PER CENT OF HOMEMAKERS SAYING THAT FARM FAMILIES DO PRODUCE ENOUGH FOR THEIR OWN NEEDS			
	O.K.	Too Much	Not Enough	No Answer	Can	Can't	Don't Know	No Answer	Do	Don't	Don't Know	No Answer
Milk	84%	10%	3%	3%	97%	2%		2%	93%	5%	2%	
Butter	75	14	9	2	98	2			89	9		2
Cheese	40	54	4	2	84	11		5	60	31	2	7
Eggs	78	2	13	7	91			9	82	7	2	9
Poultry	77	14	2	7	94	2		5	79	14		7
Meat	49	42	4	5	87	5		7	49	42	2	7
Tomatoes	75	16	4	5	87	7	2	4	67	25	4	4
Vegetables	73	14	3	10	87	4	2	7	58	33	2	7
Potatoes	87	2	2	9	95			5	91		2	7
Fruit	80	3	6	11	76	20		4	35	60	2	3
Cereals	55	18		27	60	20	2	18	9	73	2	16
Sweets	78	7	2	13	84	4		13	47	42		11

It may be necessary to include a practical system of irrigation if productivity is to be increased. Irrigation is, of course, only practical where irrigation water is available from wells or open water. The Committee recommends that every farm on sandy soil should have a garden under irrigation of from one-half to one acre and containing small fruits and vegetables, including early potatoes.

The greatest local problem which farmers have next to that of increasing the size of their business is that of productivity. The following table which is taken from Bulletin 188, Wisconsin Agricultural Statistics, shows that the productivity of the farms is too low. The problems of productivity can partially be solved by the elimination of the poorest of our crop land and the poorest of our livestock and poultry, and by improvement of our soils - livestock, and poultry.

PRODUCTIVITY TOO LOW

	Yield per Acre Waushara County	Yield per Acre Av. for state	Yield per Acre Winnebago Co.
Corn (20 yr. average)	26.3	32.2	34
Oats (20 yr. average)	25.7	34.0	38.5
Barley (20 yr. average)	24.0	28.2	30.7
Rye (20 yr. average)	8.6	12.0	16.3
W. Wheat (20 yr. average)	16.1	18.1	20.1
S. Wheat (20 yr. average)	12.6	17.1	19
Potatoes (11 yr. average*	79.4	97.9	102
Clover and Timothy Hay (20 yr. av.)	1.1	1.3	1.4
Alfalfa (13 yr. average)	1.7	2	2.1
Milk per cow (cwt.)	54	56.3	61
Eggs per hen (1927)	88	90	90

Waushara County will, of course, need to be content with lower productivity than is true for the average of the state because of its lower grade of soil. However, this does not mean that the productivity can not be improved, nor does it mean that the cost of production, because of this lower productivity, need to be higher for two reasons:

(1) the capital investment in land values are less:
(2) the land can be more cheaply operated.

Prof. A. R. Whitson, of the Wisconsin College of Agriculture, has graded the land as follows:

	Grade A	Grade B	Grade C	Grade D
Waushara County	0	26	55	19
Winnebago County	33	26	25	16
State	17.1	27.0	21.6	34.4

It will be noted from the following table, which is taken from Bulletin 188, Wisconsin Agricultural Statistics, listing sources of gross farm income, that diversity is not a problem in Waushara County. This does not mean that individual farms are all sufficiently diversified.

Diversity of Farm Business

	Gross Income per Farm	Milk	Cattle and Calves	Hogs	Poultry and Eggs	Sheep, Wool, Honey, Beeswax	Potatoes	Fruits	Peas for Canning	Hay	Grains	Seeds	Other Miscellaneous Items
Waushara County	$1,520.	38	8	10	13	.3	14	.6	.1	1	3	1	11
State Average	$1,764.	48	10	15	10	.8	5	.8	.7	.8	3	.3	5

VII
LONG TIME PLANNING

The following recommendations are of a long time nature. They are beset with many obstacles, traditions and human relationships, but they are not impossible of attainment. They may appear like visionary new frontiers, but it must be admitted that they point the way to a better rural life in Waushara County; built on a program of working with nature and working with the natural resources of Waushara County rather than trying to "buck" nature as has too often been true in the past.

Area II_1

This area has been called the Recreational Farm area.

With its many lakes, streams, and natural growth of pine, this area is a natural outdoor playground and with the expenditure of little money it could be developed into one of the best in the middle west, especially because of its assessibility to large cities (closeby and good roads).

Nature never intended that this area should be developed into intensive agricultural cultivation, even though there are a few scattered tracts of land through the area of exceptionally good farm land, mostly Colona sandy loam (17,880 acres).

The land problems of this area, such as soil depletion, and wind erosion are man-made, and can be solved by man.

It has often been said that the place to raise children is in the country and most city families would prefer to do this if conditions were made attractive. As has previously been stated, the good concrete roads of today make it possible for many city families to live in the country during the summer months when their children are not in school. This area of the county affords locations for hundreds of summer homes. Development along this line will (1) create a better direct market for such commodities as dairy, poultry, fruits, and vegetables (a diet which is becoming very popular today); (2) create a wider tax base because most of the people who can afford summer homes can also afford to pay reasonable taxes to help develop the kind of playground in which they are interested. They will not object to additional taxes if the taxes are used to provide better fishing, hunting, and desired out-of-doors for their children.

Area II_2

This area has been called the Diversified Non-Commercial Country Life Farming Area. By non-commercial is meant a system of farming which first supplies the food needs of the family and then something to sell, and a system of farming which does not require expensive power machinery. Here is a good place for the horse and horse drawn equipment, cooperative ownership of machinery, or custom use of machinery.

The fields in this area are generally too small or too rough for the most economical use of power equipment. The use of power equipment also brings into the system the necessity of growing more cash crops. This area is not particularly adapted to that kind of farming.

There are several tracts of land within this area which are exceptions. In general these tracts of land are composed of a high quality of Coloma sandy loam of which there is approximately 22,660 acres scattered throughout the area.

With an exceptional farm here and there where the fertility has been maintained through the application of liming materials, phosphate, and potash and the maintenance of over 50 per cent of the crop acres into legumes, the crop land in this area is seriously depleted of these essential plant foods.

It might also be said of the majority of the soil in this area that it is "fatless" and the crops which can most successfully be grown in this area are of a high protein content; which makes it possible to use them for obtaining growth rather than fat in connectionwith livestock and poultry feeding. The Committee, therefore, makes the following long time recommendations as to how the land in this area can best be used in the future;

(1) at least 60% of the crop acres should be put into alfalfa, red clover, and sweet clover. (Brome grass should be sown with the alfalfa)

(2) that each new seeding of the above soil building plants should be adequately fertilized with lime, phosphate and potash. The soil in this area can most rapidly be built up through the fertilization of these soil building crops.

(3) that no more corn or potatoes should be grown per farm than can be adequately covered with stable manure (at least 6-8 tons per acre).

(4) Waushara County dairymen are out of the milk shed area and, therefore, can not expect to receive the highest price for their milk. As far as the cow business is concerned, they are in a by-product producing area and for this reason this Committee feels that until there is a more profitable demand for skim milk, that it be retained on the farm.

(5) That this is an ideal area for the production of pullets, feeder pigs, and for the growing of young dairy cattle. The soil is generally free from disease and parasites and the legume hay and pasture, corn, plus the available skim milk makes ideal growing feeds.

(6) Each farmer should have woodlot which is large enough so that by selective cutting it will reproduce itself indefinitely and yet supply enough fuel for the farm. If this reproduction is to go on most rapidly and satisfactory, cattle should be fenced out. Some underplanting may be necessary and some of the poorer trees weeded out.

(7) Each farm should also have a garden which is adequate to produce most of the foods for home use. This garden should include all of the vegetables which are needed for good health -- a good strawberry bed, raspberries, hybrid filbert nuts, cherries, plums, currants, gooseberries, and an orchard which is large enough so that it will command care, (most of the orchards in this area are composed of antiquated trees of poor varities). The orchard trees in this area would benefit from the annual application of a few pounds of amonium sulphate. Irrigation should be used if necessary.

The following chart indicates the amount of money that a farm family of five might save per year by producing as much as possible of their food for home use.

A FAMILY OF FIVE CAN PRODUCE THESE YEARLY NEEDS		FARM VALUE in dollars	PURCHASE COST in dollars
Milk	365 gallons	52	73
Butter	210 pounds	63	69
Cheese	105 pounds	15	27
Eggs	150 dozen	32	38
Poultry	100 pounds	15	30
Beef ($\frac{1}{2}$)	250 pounds	36	50
Lamb (1)	40 pounds	7	10
Pork (3)	480 pounds	42	61
Veal ($\frac{1}{8}$)	36 pounds	6	8
Potatoes	20 bushels	9	12
Tomatoes	11 bushels	8	17
Vegetables	1730 pounds	46	115
Fruits	940 pounds	30	54
Flour and Cereals	700 pounds	11	20
Syrups and Honey	90 pounds	4	12
TOTAL FARM VALUE		$376.00	
TOTAL PURCHASE VALUE			$596.00

All of the committeemen in this area recommended the planting of evergreen shelterbelts, however, there was some difference in opinion as to the need of strip farming depending on whether or not the farm was affected by wind erosion.

In general the committeemen feel that hillsides which might be affected by water erosion should be reforested rather than cropped and therefore terracing is not recommended.

Country Life Farming

The statement has often been made that, "Waushara County is one of the finest places on earth to live and enjoy life, but it is one of the hardest places to make any money". If this statement be true it would appear that the farms in this area might be suitable for a kind of country-life farming, wherein the farmers would produce most of the food required for his family and would have some outside cash coming in, such as might be derived from teachers retirement fund, annuity, or other source.

Practically all the farms in this area as well as Area II_1 and Area III lie on good roads which are kept open for travel the year around. Electric high-lines and telphone lines also go through these areas and could be used, making it practically as desirable, from a convenience side, to live in the country as in the city.

Area II_3

This area has been designated as a Highly Commercial Farming Area. It is adapted to dairying, hog and beef production, and the growing of cash crops, especially potatoes.

The ease of tillage and its level topography makes this area ideal for the use of the most recently developed power-farming-rubber tire equipment. For this reason the community committeemen have recommended a rather large size of business, with over 200 crop acres per farm.

A very large porportion of this type of land is under cultivation; it is considered a good soil, and most of the farmers living upon it are in a fairly prosperous condition. The soil is comparatively easy to cultivate and no difficulty is experienced in securing a good tilth.

The chemical analysis indicates that the total phosphorus is distinctly lower on the average sandy soil, which is probably due to the fact that their higher amount of organic matter, and consequently greater original fertility, has permitted the growth of heavier crops which have removed a larger amount of phosphorus than is the case of other sandy soils. The total quantity of potassium is also low probably due to the extensive potato growing operations of the past. The total amount of nitrogen is higher than in most sandy soils, but it must be recognized that a large portion of the nitrogen now found in soils of this class, which have been farmed for a number of years, is of a resistant character and does not become available to crops readily, so that the use of barn yard manure or green manure is important.

Because of the above mentioned soil conditions this soil before it can be profitably farmed needs an application of from 2 to 4 tons of ground limestone or its lime equivalent plus 200 pounds per acre of superphosphate plus 200 pounds per acre of muriate of potash. The fertilizer applications are needed at least once during the crop rotation. Farmers living in this area who have for the past few years followed this practice are getting their farms into a higher productive state which makes it profitable for them to continue farming this land.

Wind erosion is one of the most serious problems of this area. However, Scotch pine has been found to grow quite well on this prairie soil and may be used for shelterbelt plantings every 80 rods. The most effective way to control wind erosion in this area is by strip farming. The fields should be laid out in narrow strips 20 rods or less wide and from 80 to 160 rods long. The prairie lends itself well to the highly efficient tractor-power farming because of the large level fields which are possible on this prairie.

Potatoes have for years been grown on a large scale in this area and with the improvement of the soil as has been indicated in this report, potato growing can become an even more important cash crop than has been true in the past.

By soil improvement and through the use of the latest developed potato growing machinery the growers on this prairie can favorably compete with the growers of most any other area in Wisconsin, and they have the advantage of being closely located near the market.

Area III

This area has been entitled Forestry-Hunting-Farming. Because the greatest share of the soil in this area is Plainfield, Coloma, and Waukesha sand; practically all crop growth needs to be encouraged through the use of fertilizers, thereby raising the cost of production per unit and placing these farms in an uneconomical position even at normal farm prices.

If the size of the farm is increased in line with the recommendations as has been previously mentioned in this report it would require about 360 acres, or half a section, of total land per farm. With only the better grade of land being devoted to farming it would leave one-third to one-half of the acreage of poorer soil for forestry purposes. A few examples of this type of farming are already in existence in Waushara County and the farmers are deriving practically as much income from their forested acres as they are from their acreage in farm crops. This forest cover might also be used to encourage the propagation of game birds and the unforested area which would be left as fire lines, might well be planted to crops which could be left in part unharvested for winter feed for birds.

Nearly everyone agrees that game will propagate in a direct proportion to the amount of cover and food that is available in an area, and it was also commonly agreed that hunters will be attracted to good hunting grounds and that they are not reluctant to help pay the bills if they can enjoy the desired experience. A definite plan of farmer remuneration should be worked out.

A development along this line will, of course, require promotion either by Public or Private interest. It is our opinion that the local municipalities or the county should take the leadership in this development.

If the farmers living in this area could be provided with at least 1,000 hours of labor annually at the "going" rates during the fall, winter, and spring months of the year, - rapid progress could be made at the above described development and the income from this outside labor would pay most of the out-of-pocket living expenses which in turn would relieve the farmers of the necessity of attempting to grow cash crops.

In other words, agriculture in this area would be most prosperous if each farmer could produce enough food on his farm for his own use and then obtain his money for the out-of-pocket expenses from the above mentioned outside employment.

By mixing the farms and forests we do not obtain the effects which might be desired in a primeval forest but we do lessom the danger of the entire area being destroyed by fire. It may be argued that these farmers living in this future forest area would increase the fire hazard. This cannot be substantiated from the records, and, moreover, this could be guarded against by the municipalities establishing fire regulations and by owning the necessary fire fighting equipment, and by requiring each farmer to be prepared to fight fire.

The revenue for the development of an ideal hunting and forest area might be derived from two sources:

(1) The income from the forest crop law,

(2) The income from a fee schedule which those enjoying hunting in that area would be required to pay.

Eventually the farmers in this area would have less developed work, but the revenue from the sale of pulp would then be forthcoming; and hunting fees might be continued and divided on a pro-rated basis to the farmers in the area.

Irrigation

Approximately half of the land in this area lies within fifteen feet of the water table and it may be possible through research to develop a practical irrigation system for many of the farms in this area. If this were possible it would completely revise the above mentioned long time plans.

Irrigation together with fertilization and power equipment might again make this level easily worked sandy soil one of the important potato growing areas of the state, as it once was.

VIII
EXTERNAL ECONOMIC PROBLEMS
(Solution Needed)

Because of the shortness of time involved in preparing this report it has been impossible for the committee to give due consideration to those external economic problems which they know affect their farming operations.

The committee recommends that a subcommittee be selected to give further thought to the problems which are listed herewith which the committee feels need solution before the good farms of Waushara County can again be operated in line with the objectives set forth in the Foreword of this report.

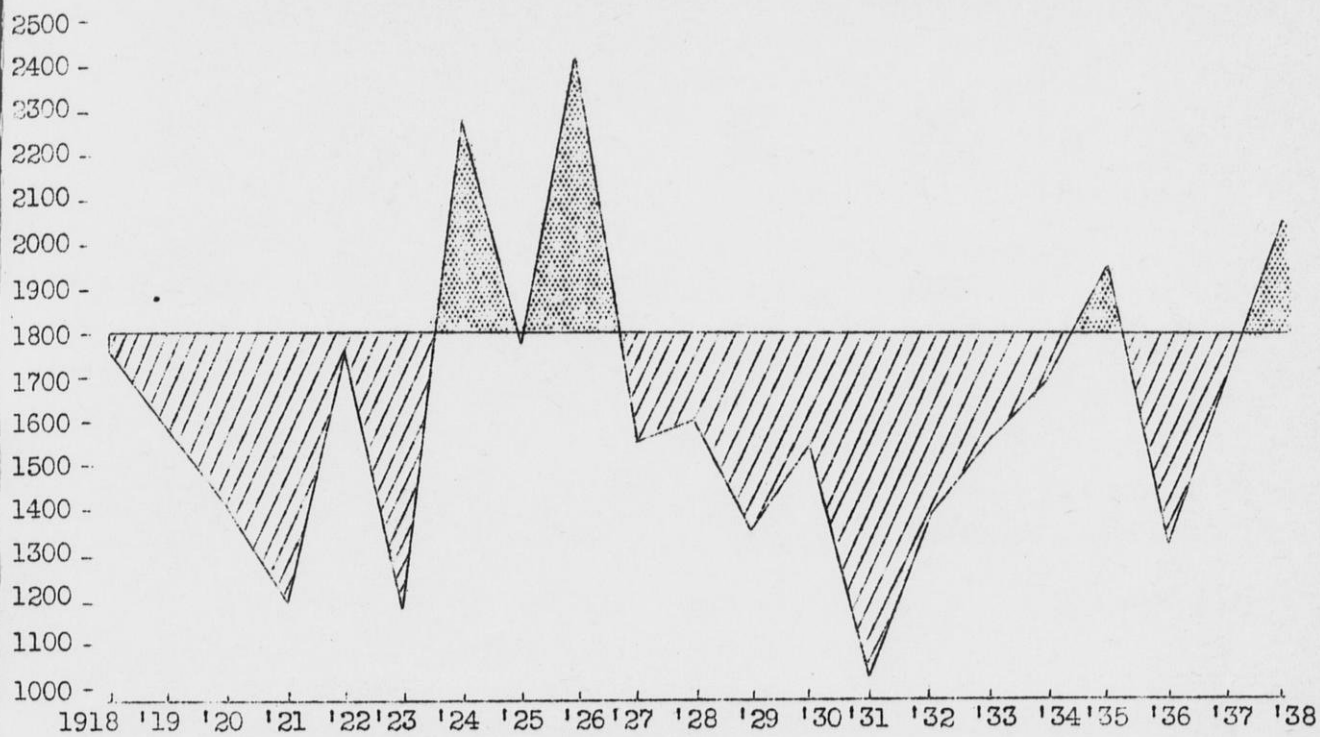
1. Farm indebtedness too high compared with net income, -- example (Federal Land Bank Delinquency).

2. Need for consolidation of production loaning agencies.

3. Unbalanced price level - Farmers pay 120% pre-war prices for commodities purchased and receive only 89 per cent of pre-war prices for commodities sold according to July 1, 1939 figures published by Bureau of Agricultural Economics U.S.D.A.

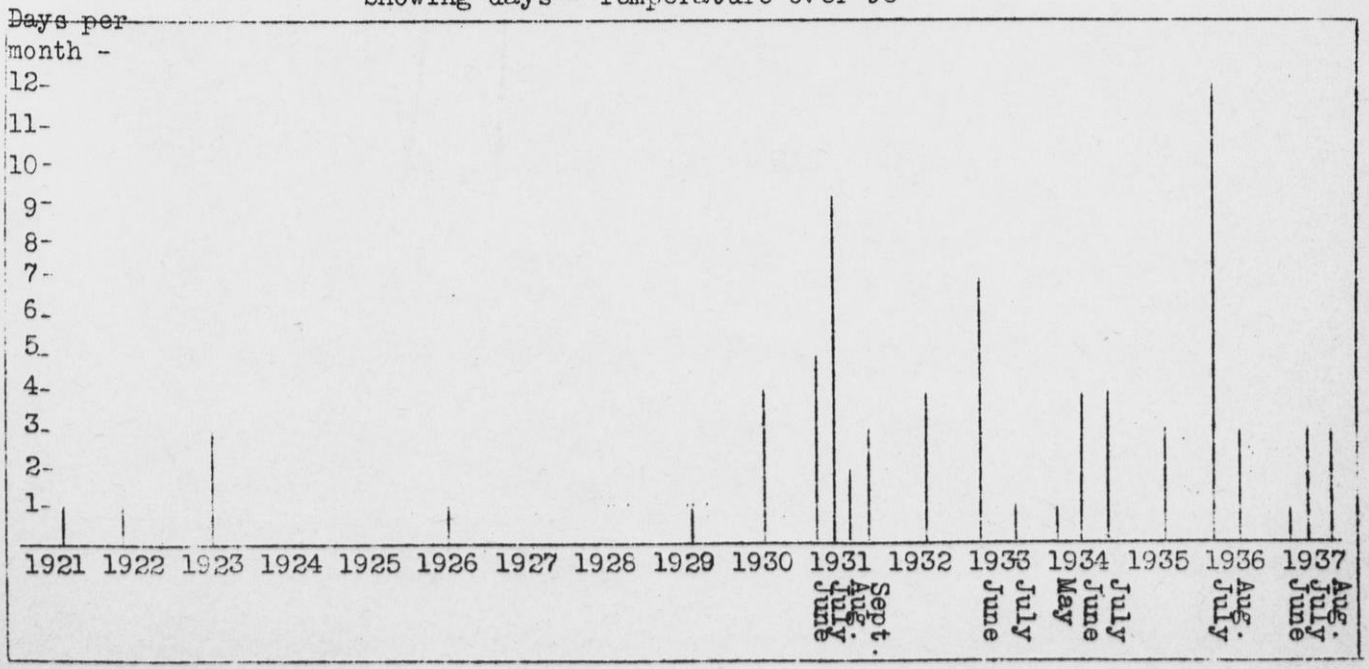
4. Farm machinery prices too high for individual farmer to own needed equipment. Need cooperative ownership or custom use of special machinery.

WAUSHARA COUNTY GROWING SEASON RAINFALL
20 Year Annual Averages Showing Variation from Normal
(Records taken from Hancock Experiment Station)

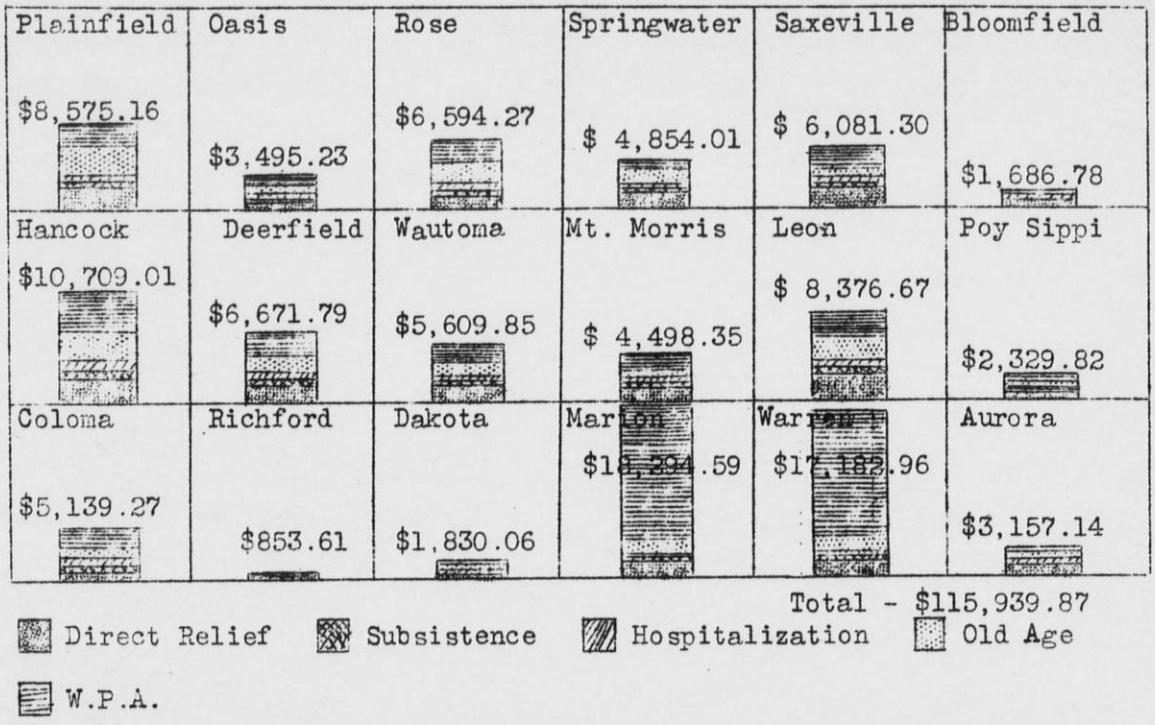


Normal as given in monthly U.S. Weather Bureau report.

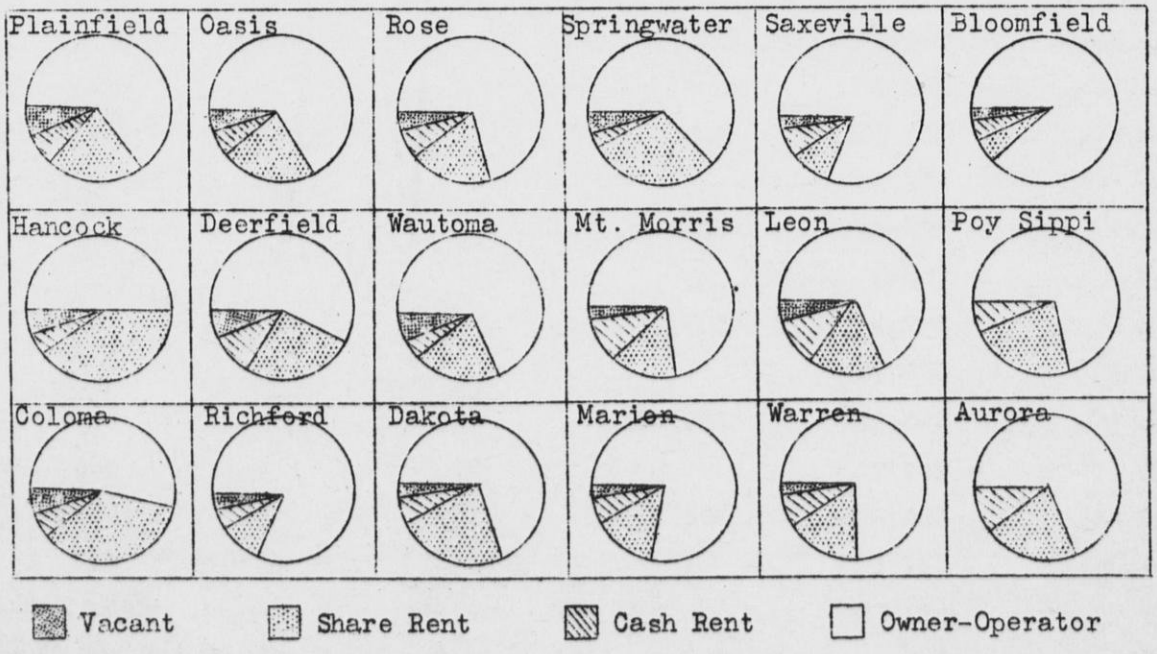
TEMPERATURE CAUSING DROUGHTS
(Records taken from Hancock Experiment Station)
Showing days - Temperature over 96°



RELIEF AIDS



FARM TENANCY PER CENT



Trend and Size of Farm Business

	1860	1910	Today
Total number of Farms	1,105	2,622	2,396
Average acres per Farm	125	140	147.6
Improved acres per Farm	40	86	87
Average acres Woodland per Farm	74	39	32
Average Population per Square Mile	13.7	26.3	22.5
Number Farms operated by Tenants		374	408
Number Farms Free from Mortgage Debt		1,040	1,316
Number Farms Mortgaged		1.179	1,080
Average Mortgage per Farm		1,500	3,360
Average Value Land and Buildings	1,026.50	6,434.33	4,845.00
Average Value of Farm Machinery	51.70	288	756
Number Dairy Cows per Farm	2.2	6.0	8.0
Number Sheep per Farm	2.0	1.8	.6
Number Swine per Farm	3.8	7.0	4.0
Number Hens per Farm		50	83
Total Acreage of Alfalfa		35	27,093
Total Acreage of Clover		2,516	12,580
Total Acreage of Wild Grass	12,202	12,264	15,880
Total Acreage of Potatoes		21,599	10,520
Total Bushels of Potatoes	65,178	2,255,887	568,080
Total Acres of Rye		22,699	24,910
Total Bushels of Rye	33,337	231,430	249,480
Total Acres of Buckwheat		1,131	410
Total Bushels of Buckwheat	444	10,675	9,680
Total Acres of Wheat		337	740
Total Bushels of Wheat	142,855	4,704	13,200
Total Acres of Corn		26,990	31,570
Total Bushels of Corn	130,539	619,433	1,012,680
Total Acres of Oats		27,279	19,860
Total Bushels of Oats	61,560	544,433	534,960
Total Acres of Barley		1,151	1,790
Total Bushels of Barley		27,274	50,540
Average Butter Production per Farm	268	754.7	889.6
Average Cheese Production per Farm	7.4	59.4	521.5
Total Whole Milk Production (gallons)		7,795,969	10.223,712