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August 31, 1930

Dean H. L. Russell
College of Agriculture
Madison, Wisconsin

Dear Dean Russell:

Herewith follows the report of the Department of

Farmers' Institutes: **THE FARMERS' INSTITUTES** 1929-30, to July 1st,
1930.

ANNUAL REPORT

1929-1930

To

H. L. Russell, Dean

By

E. L. Luther, Superintendent

August 21, 1930

Dean H. L. Russell
College of Agriculture
Madison, Wisconsin

Dear Dean Russell:

Herewith follows the report of the department of Farmers' Institutes for the year July 1st, 1929, to July 1st, 1930.

Survey of the Year

As weather has a lot to do with successful farming so it has a lot to do with success in institute work. We had a splendid year of it and especially during the fall and winter season. The weather was wonderful, the staff worked very harmoniously and there were few, if any, blank institutes as far as attendance was concerned. There was less sickness and epidemics. Farmers were interested. It was a year of successful educational work.

66 of the 71 counties were served with some form of institute activity.

The almost universal service of the institutes indicates that the farmers' institutes are still important in agricultural extension service.

Cooperative marketing institutes were held as follows:

3	three-day institutes	on	butter	
2	"	"	"	" American cheese
3	"	"	"	" dairy products
3	"	"	"	" live stock
1	"	"	"	" milk
2	two-day institutes	on	American cheese	
1	"	"	"	" live stock
11	"	"	"	" tobacco
7	one-day institutes			
90	one-session institutes			

Four important surveys were made as follows:

- (a) In Langlade county
- (b) In Shawano county
- (c) In the vicinity of Osseo in Trempealeau county
- (d) Of a dairy plant at Darlington

Mr. A. H. Cole again assisted with the regular institutes and the Superintendent arranged for the cooperative marketing institutes and conducted the majority of the scheduled marketing institutes.

In the cooperative marketing institutes 51 persons, among whom were 13 county agents, appeared on programs, all being selected for their especial fitness for the subjects involved.

The department is indebted to a very generous amount of assistance from the new State Department of Agriculture and Markets.

The regular institute corps consisted of practicing farmers who served a total of 431 days and of extension specialists who served a total of 337 days.

A very limited number of Women's institutes were conducted, as it seemed desirable to have the women attend the men's institutes. It is quite evident that there are many problems in agricultural adjustment upon which women should become informed.

The superintendent will report more fully upon some phases of cooperative institute work while Mr. Cole will report in the same manner upon the regular institutes.

COOPERATIVE MARKETING INSTITUTES

Classification

According to duration these institutes may be classified as three-day, two-day, one-day and one-session institutes. For the department now arranges marketing institutes to suit various needs.

But for purposes of reporting the marketing institutes are classified as:

1. Major institutes, which are arranged in a regular schedule for the winter season, are for the most part longer, cover larger areas, and are attended largely by representatives and leaders of creameries, cheese factories, shipping associations and communities. These develop leaders.
2. Minor institutes, which are arranged on occasion, are shorter, more democratic and restricted to single communities. These are for the purpose of reaching individual farmers.

MAJOR COOPERATIVE MARKETING INSTITUTES

Twenty⁹-nine major cooperative institutes were held:

- 3 three-day institutes on butter at Clear Lake, Prescott and Ogema.
- 2 three-day institutes on American cheese at Catawba and Wayside.
- 3 three-day institutes on dairy products at Antigo, Richland Center and Stoughton.
- 3 three-day institutes on live stock at Plum City, Waupaca and Whitehall.
- 1 three-day institute on milk at Reedsburg.
- 2 two-day institutes on American cheese at Freedom and Stratford.
- 1 two-day institute on live stock at Sparta.
- 11 two-day institutes on tobacco at Albion, Chaseburg, Deerfield, De Forest, Fulton, Independence, LaFarge, McFarland, Orfordville, Soldiers Grove, Westby.
- 2 one-day institutes on tobacco at Ferryville and De Soto.

Butter Marketing Institutes

The Clear Lake institute on butter has resulted in a clearer conception of the needs of creamery cooperation and marketing butter cooperatively. The creamery was controlled by a management which got the creamery into the financial grasp of a private marketing company. At the annual meeting of the creamery a change was made in directors who have an attitude more sympathetic towards creamery cooperation and cooperative marketing with the result that there were changes in management. But the new board find themselves in the toils of a rather long contract and financial obligations to the company holding the contract.

The creamery at Prescott is endeavoring to carry thru the principles of creamery cooperation, cooperative marketing and quality improvement. Some short sighted patrons

have deserted the creamery and have made it somewhat more difficult to raise their aims. This institute was desired to increase morale among the patrons. One result of worth to the creamery at this time was to prevent it from going into the expense and effort of marketing sweet cream, already overdone.

The institute at Ogema came in a cold stormy period and was not largely attended. But it resulted in a combined butter and cheese marketing institute at Phillips, at which those present passed a resolution requesting the County Agricultural Committee and County Agent to get busy and encourage creameries to join Land O' Lakes and cheese factories to join the Federation.

American Cheese Marketing Institutes

These institutes were all held with the active support and assistance of the National Cheese Producers' Federation. The County Agents of the counties in which these institutes were held also favored the department with assistance.

These institutes were held at Catawba, Wayside, Freedom and Stratford.

The institute at Catawba stimulated the holding of a butter and cheese marketing institute at Phillips which passed a resolution directing the county agricultural committee and county agent to get busy and get creameries to join the Land O' Lakes and cheese factories to join the Federation.

The institutes at Wayside, Freedom and Stratford were very successful and stimulated sufficient interest to get several factories to join the Federation later.

The National Cheese Producers' Federation through its house organ "The Federation Guide" has commended the work of these institutes.

The Cooperative Marketing Institutes on Dairy Products

Three such institutes were held at Antigo, Richland Center and Stoughton.

These institutes were in communities having problems involving several phases of dairy marketing and consequently had to cover several rather than a single commodity in order to clear up some uncertain and rather complex dairy situations.

The institute at Antigo will be dwelt upon further along in the report under the "Antigo Project".

The institute at Richland Center was held under the auspices of the creamery and live stock shipping association. The very first meeting of this creamery was attended by the superintendent of this department, who was the speaker on the occasion. The creamery was a new farmer project in a territory already occupied by cheese factories, a private creamery, a condensary, cream stations and a cream route of another creamery. But the creamery had 435 patrons at the time of the institute and a larger operating force than the condensary and twice as many patrons. The institute was well attended and those present were very favorable to creamery cooperation and to a sales association. In due season the creamery will no doubt join a sales association. Those who attended from cheese factories thought that such an institute ought to be held on cheese the coming winter.

The institutes at Stoughton was also a successful institute, being especially so for the farmers' creamery at that place. It aroused interest enough in the idea of cooperating creameries and a sales association to prompt representation of the creamery at the state meeting of creameries at Land O' Lakes annual meeting March 14 and at the state meeting of creameries at Marshfield March 26.

The state is ready for a forward movement among the creameries when some one with authority can organize them. This department can't do that.

Live Stock Marketing Institutes

Live stock marketing institutes were held at Plum City, Waupaca, Whitehall and Sparta.

In all of these institutes we enjoyed the assistance of J. M. Coyner, field representative of the Wisconsin Meat Improvement Council, who approaches improvement in live stock production and shipping from the needs of packers from what he observes in the refrigerators, in the local stock yards, on cattle trains, and in the handling at the terminal yards. Mr. Coyner is the outstanding specialist in dairy veal calf improvement of which Wisconsin has about one million every year.

These three institutes were all successful. Several shipping points and shipping associations were represented at each institute and a real desire for associations to work together and to ship to terminal cooperative commission companies was manifested.

L. G. Kuenning, County Agent, and leading cooperator in arranging for the Sparta institute, followed up the institute with a movement to arrange for a county organization of shipping associations. Successful meetings were held on the matter and there is little doubt but that Mr. Kuenning will accomplish the desired result.

A. N. Howalt, agricultural instructor in the high school at Waupaca, is very active among the farmers of Waupaca county and is endeavoring to secure cooperative action among the shipping associations in that county.

Tobacco Marketing Institutes

Most of the tobacco marketing institutes were of two-days' duration. It was the desire of the Northern Wisconsin Cooperative Tobacco Pool that the department should reach more points than three-day institutes would permit. The Pool desired the same amount of time put in on two-day institutes so as to reach more places.

Tobacco institutes were held at Albion, Chaseburg, Deerfield, De Forest, Fulton, Independence, La Farge, Orfordville, Soldiers' Grove, Westby, Ferryville and De Soto.

The educational department of the Pool is becoming very efficient and assists us very generously with advice and with speakers. The field work of the pool is being very well taken care of by C. W. Murwin.

The tobacco institutes were attended very well with a couple of exceptions and those who attended were interested in the discussions. The unanimity of thought among pool members is splendid. This no doubt accounts for the fact that nearly 600 more members have joined the pool since January first, 1930, and it is confidently expected that the new 1930 membership will reach 1000. This is a wonderful change in sentiment since the first tobacco marketing institute was held in February 1927, when it was expected the pool would fail.

The Milk Marketing Institute at Reedsburg

The farmers patronizing the condensary at Reedsburg became restless under economic conditions that obtain in connection with marketing milk at the condensary. They called upon the state department of markets then under Commissioner Vint for assistance. A meeting was held by that department and a temporary organization was set up. Then the department of Farmers' Institutes was invited in.

This has proven to be a very discouraging situation. It is easy to rush into a field, swear a little, get out a crowd, pick out some men to fill paper positions and claim credit. But it is a very different thing to handle a matter so that progress is made. The superintendent believes that had things been handled right at the start something might have been accomplished though there is a discordant element in that vicinity having interests to be served. This situation will no doubt render impossible affirmative action by farmers for some time.

However, several meetings were held in 1929. The agricultural instructor at Reedsburg took hold of the matter and assisted in organizing the cooperative marketing institute. The institute was fairly successful. Good interest was shown by those who attended.

But little can be expected in the way of results when the president of the temporary organization appears to be more interested in fighting (as he is reported to have said) a large cooperative dairy marketing organization in a neighboring state.

Minor Marketing Institutes

The minor marketing institutes were institutes carried on as occasion demanded outside of the regular schedule. They had to do more particularly with communities in which the rank and file attended. 97 places were reached. They were all one-day or one-session institutes.

These were all meetings with which the department was asked for assistance in such a variety of forms that it will be impossible to name and describe them all. Space and time will be taken to present a few of these meetings in order to show kind of educational service and direction offered.

The success of the organization meeting of the Antigo Dairy Products Cooperative depended in considerable measure upon the attendance, oversight and work of the superintendent. Such meetings offer possibilities of educational work of large worth.

The address of R. K. Froker at the meeting of representatives of the creameries of the state was one of the three sound and substantial addresses with something to them of that important day.

The one-session meeting at Black River Falls resulted in the organization of a cooperative live stock shipping association.

The one-day meeting at East Farmington participated in by the department, at which seventeen cheese factories, half of which were already in the Federation, were represented, resulted in factory meetings in which seven factories joined the Federation.

Ten meetings participated in by Froker and Sondergaard resulted in some two hundred or two hundred fifty

contracts with the Antigo Dairy Products Cooperative and the signing for \$30,000 or \$40,000 worth of stock in the new enterprise.

The seven single session institutes carried on for the Madison Milk Producers' Association were very beneficial in getting the membership solidly back of two or three propositions of large worth to the association.

The four one-day institutes in the Swiss cheese territory surely helped to inform the members of the Federation and others as to the value of cooperation to Swiss cheese producers.

The four one-session meetings with patrons of the creamery at Arcadia creamery in which Mr. H. T. Sondergaard considered better cream production and grading cream and paying by grade were surely helpful to the patrons of that creamery.

Mr. Sondergaard was invited to address four butter-makers conventions. As a man who has been a practical field man of a group of cooperating creameries which made 93-score butter, he would be valuable to buttermakers.

The vocational agricultural instructors of Wisconsin were addressed by Mr. Froker and Mr. Sondergaard. This was institute work of a very high order as it acquaints about 100 agricultural instructors in 100 different communities with the greater needs of the present time.

These will sufficiently illustrate the general character of the work done in our minor institutes. Such institutes while educational could also be called service institutes.

Several cooperative enterprises covered a wide area and were for a specific purpose and are called projects.

Wool Marketing Project

In the spring of 1930 it looked as if there would be no market at all for the clip and that the producers would sell on a very low market. About the only resource they seemed to have was to store, and about the only way to realize anything on the wool was to arrange for an advance. This meant storage in a bonded warehouse. This meant cooperation.

The Federal Farm Board and the Wisconsin Department of Agriculture decided to assist wool and make advances on it. The advance was to be eighteen cents a pound.

The Wisconsin Department of Agriculture and Markets sponsored the movement in this state and asked the cooperation of the College of Agriculture. The department of Farmers' Institutes agreed to finance two men for a period. One of the men desired could not accept, but James Lacey of the department of Animal Husbandry carried on the work. Eight meetings attended by 173 farmers were held in eight counties. The total amount of wool pooled as a result of these meetings was pounds. The department of Agriculture and Markets did the rest of this work.

Any way the general result of the enterprise was to bring about some sort of market wool buyers paying as much as twenty-four cents a pound for wool.

Things like these substantiate the contention that if farmers would organize to look after the business side of the matter agriculture would look up.

Now, 1945, the Wisconsin Wool Grower's Assn, is a going concern, marketing wool in Boston, Mass. It handles a large volume of Wis. wool. No longer does the 10¢ price of junk dealers obtain. Members of this association have never appealed to the Federal government for relief.

The Herd Culling Project

This was an experiment.

It is generally felt that practically all farmers keep cows which are uneconomic.

The department of Animal Husbandry and the Wisconsin Live Stock Breeders' Association approached the department of Farmers' Institutes with a project which they would like tried out.

They knew of a very reputable and well informed buyer of dairy cattle who had been connected with the University herd at Urbana, Illinois. His name was George B. Brown. They desired to secure his services to go out in some county and help the farmers dispose, not of their good cows, but cows of poor production ability. The cows so selected were to be branded and delivered at the terminal stock yards in car load lots.

Marathon county was selected as the county for the experiment. Mr. Brown accepted employment in the department of Farmers' Institutes. The experiment began on April first and ended on May twenty-eighth. In all cars of cattle consisting of poor milkers, hard milkers, cows which had lost a quarter, or were affected with abortion, and so on, were branded, shipped and slaughtered. The highest priced animal brought the farmer. The market slumped so before the project closed. Had the farmers acted quickly in the early stages of the project they would have been several thousand dollars ahead on the lot.

Around 400 farmers consigned 521 cows which were shipped in 22 cars. The highest price received for a cow was \$81. There are about 5,000 farmers and 67,000 cows in Marathon county. The project reached the principal parts of the county. About one

farmer in a dozen consigned cows. So the value of the project will soon become apparent to the farmers of that county.

The cost of the project was as follows:

\$430.00 salary and \$157.60 expenses, making the educational cost ~~per~~ ^{for} cows sold \$587.60, or \$1.12 per head of cows sold.

A number of funny experiences happened during the project, two of which will be given for illustration.

One farmer was going to consign five animals.

When they were called for, he disclosed that these animals had been sold to a man just coming into the county to start farming who "could not afford to pay high prices for cows." We wonder how successful that new comer will be.

Perhaps the funniest incident was the meeting opening the project. About 125 farmers attended this matter at Spencer. It was hardly possible to present the matter on account of the constant hackling indulged in by a few in the audience.

For a few minutes it looked as if there would be fist fights. Some were out to "get the County Agent's goat." But they didn't though the meeting was a "bust." So the project started out under most unhappy and discouraging auspices.

At a little later date, however, when the project had experienced pronounced success another meeting was held at Spencer and a full car of cows shipped from that point. The "Goat-getter" will have to await another opportunity.

The following letter attests the value of the project:

July 3, 1930
806 West Green Street
Urbana, Illinois

Mr. E. L. Luther
Madison, Wisconsin

Dear Mr. Luther:

Your letter of June 30th received. I can truly say have never assisted in any project for the betterment of the dairy-farmer whereby the effort put forth gave greater returns, both present and future.

From every viewpoint, the individual farmer, County and State, each were benefitted.

It surely was a pleasure to do work when every person learning of its merits would agree the idea was a good move to make dairying more profitable (not with an additional cost) but at a less expense.

The cows we shipped out the first six weeks made the farmer from \$25 to \$40 more than they would if they had held them until Fall as they usually do, owing to the great drop in beef prices.

It seems to me there never has been a time when the dairy farmer will be required to give real thought to his business, as at present.

The culling out of the unprofitable cows has been the advice of all Agencies of Agriculture interested in dairying for years. Farmers has heard the Instructors lecture many times and have been shown many tables proving facts, then go home and forget every word had been spoken at the meeting.

All lectures that may be given will not put any project over if left to the farmers to finish.

After all trouble and expense of cow-testing, or H.I.A. work, not five per cent of all the unprofitable cows are ever sold from herd.

If facts could be shown, am sure more cows that were actually kept at a loss were properly disposed of in the two months in Marathon county than any year's work has ever accomplished.

I wish to thank you for making it possible thru the funds of your department for the work, time and expense given me. Trusting I may be of service to you again, I remain,

Very truly yours

(Signed) Geo. B. Brown

Breeders' project

This was a production project which depends for its success not upon the action of a single farm but of a community action of farms.

A historical preface is necessary to give a setting for reporting upon the project.

The breeders' project is one of the neighborhood production and standardizing of dairy cattle.

After Barron county had passed the T.B. test and had cleaned up it was apparent that there would be a good market for the dairy cattle produced in that county. As Barron county was then in the district supervised by the superintendent, he knew that they did not have dairy cattle to meet the coming demand. The county wide breed organizations were little more than local neighborhood affairs. It seemed that some more far reaching organization was necessary.

The superintendent contrived the neighborhood breed club plan and took it up with the County Agent, W. A. Duffy. The plan consisted in organizing neighborhood clubs with a president and secretary as officers and federating the clubs into a county organization in which the club officers would become members of a county board of directors. Production would rest with the clubs, marketing with the county organization.

Several institutes were placed in Barron county and Holstein and Guernsey clubs were organized at each institute. Mr. Duffy, the County Agent, followed the matter up splendidly. The neighborhood clubs made exhibits at the county fair and county show herds made fair circuits. Just as was expected the cattle business began to boom in Barron county. The com-

missions of the county sales organizations soon began to be \$3,000 or \$4,000 annually. At times there would be a half-dozen outside buyers in the county at a time. Barron county became the mecca of cattle buyers.

The County Agent was attracted to another county and was succeeded by Arlie Mucks. Mr. Mucks pushed the neighborhood herd club idea so well that he was finally selected as secretary of the Wisconsin Live Stock Breeders' Association. Mr. Mucks actively advocates the neighborhood clubs.

This spring at a time when agriculture was very dull and breeding, on account of very low butter and cheese prices, seemed neglected, a breeders' project was organized by the animal husbandry department and placed under the direction of Mr. Mucks. The department of Farmers' Institutes financed the project, which consisted of breeders' meetings in various counties and conferences in others, in all of which the neighborhood breed club plan was advocated to arouse new interest in breeding.

As this is part of a maintenance and development proposition substantial results cannot be expected at once. Educational results are slow of fruition as a rule.

At the time this report is approaching completion, Mr. Duffy, who is now county agent in Douglas county, is requesting forms for the organization of neighborhood breed clubs in that pioneer county.

The Antigo Dairy Products Cooperative

In the summer of 1928 the superintendent took up with County Agent J. T. Omernik of Langlade county and F. G. Swoboda, Educational Director of the National Cheese Producers' Federation, the matter of holding a cooperative marketing institute on American cheese at Antigo. There were several cheese factories in Langlade county and until that time very little, if anything, had been done to interest Langlade county farmers in studying the cooperative marketing of cheese.

Mr. Omernik took on the institute and named a local committee consisting of Otto Otnehmer of Maple Hill cheese factory, Antigo, John O'Brien of the American Dairy and Produce Co., Antigo, and William Wegner of Deerbrook as members of the local committee. He also sent the name of the officers and directors of cooperative factories and the names of several farmers in proprietary factories for the department to circularize. This was done. The institute was set for Wednesday, Thursday and Friday, January 23-24-25, 1929.

The institute was held. But a terrible cold, stormy period spoiled the institute. However, County Agent Omernik was not satisfied to let the matter drop there and persisted in his demands for a two-day institute on the matter in March 1929. This was granted and a successful institute was held.

This started something. In the early spring through the activity of County Agent Omernik a committee consisting of Stephen Palmer, Otto Wirth, Martin Devine, Fred Kakes, M. Brandt and J. T. Omernik was arranged. The interest was augmented by the fact that a large private company was so largely occupying

the local territory that farmers were becoming aroused. The cheese factories were being forced out of business. It was becoming evident that sooner or later the farmers' factories would be gone. The farmers looked with no little concern to the future when there would be no farmers' factories and when they would be creatures of a monopoly.

The committee provided petitions which were signed by 500 farmers asking the University of Wisconsin to make a survey of the Langlade county milk shed as a basis for determining whether they might with economic propriety establish a farmer owned and operated flexible milk plant at Antigo.

The Survey

The survey was made by R. K. Froker and H. T. Sondergaard, two employes of the department of Farmers' Institutes cooperating with the Economics and Dairy departments of the College of Agriculture. A copy of the report upon the survey follows:

DAIRY MARKETING IN LANGLADE COUNTY

R. K. Froker (Agricultural Economics) and
H. T. Sondergaard (Dairy Husbandry)

At the request of 500 farmers in Langlade county a study of the dairy marketing conditions was made, upon which the following report is based. Some of the outstanding points of interest are these:

1. Dairying in Langlade county has largely been developed since 1910. Milk used for manufactured products increased from 20 million pounds in 1915 to 80 million in 1929.

2. One-fourth of the milk in the county is produced within a five-mile radius of Antigo and three-fourths within a 10 mile radius.

3. Cheese factories increased in number from 9 in 1910 to 33 in 1921 and then decreased to 17 in 1929. The amount of American cheese manufactured has remained relatively constant since 1923.

4. The chief competitor of these cheese factories is the large milk plant, commonly called the "Kraft" plant, at Antigo. This factory increased rapidly its volume to about 33 million pounds of milk in 1929.

5. Prices paid producers at the Kraft plant and the average of cheese factories follow rather closely from month to month during the 45 months' period, January 1926 to September 1929. Allowance of 15 cents is made for differences in hauling costs and value of whey. On this basis the cheese factories averaged \$1.97 and Kraft plant \$2.00 for milk testing 3.5 per cent fat.

6. Cheese prices have been relatively low compared with butter during late 1928 and the major part of 1929, although near the close of 1929 and the early part of 1930 butter prices dropped more severely than cheese prices.

7. Barron Cooperative Creamery which markets sweet cream under Chicago inspection, paid 18 cents over the Antigo plant during 1928 and 1929.

8. Calculated prices for a large cooperative plant receiving whole milk, manufacturing butter and powdering skim-milk and buttermilk, indicate an average advantage of 9 cents over the Antigo prices for January 1926 to September 1929. This figure is substantiated by actual cases for shorter periods.

9. The small cheese factory has difficulty meeting price competition during low cheese price periods and the convenience of commercial trucks.

10. The large manufacturing plant can make better use of by-products and often has a lower operating cost per unit of volume.

11. There appears to be a rather general dissatisfaction among farmers in the county with present marketing conditions and a rather wide interest in a large cooperative plant.

12. The market situation may be strengthened by combining some of the cheese factories to secure larger volume per factory, by organizing a bargaining and check testing association among the patrons of the large Antigo plant, or by the farmers uniting and establishing a large cooperative manufacturing plant of their own.

MARKETING CHANGES which take place from time to time in a great industry, such as dairying, are often of vital importance to those engaged therein. Farmers in Langlade county have watched the closing of several small cheese factories in the last few years and have witnessed the development of a large private milk plant in their place. They have seen the development of commercial trucks and their use in gathering milk over nearly every highway in the county. They have heard much about cooperative marketing and have read of the appointment of a Federal Farm Board to sponsor and assist the cooperative movement among farmers. However, before blindly attempting any large marketing program, they have desired an analysis of their conditions. This study is an economic analysis of available information and may aid farmers of Langlade county in deciding their future course.

Among the many factors which should be considered in judging dairy marketing conditions are the type and size of farms, development of the industry, potential volume of milk in a given area, attitude of the farmers, road conditions which affect assembling costs, distance from market and railroad service, present marketing facilities, advantages of other market outlets and probable cost of making desired changes.

Type of Farming

Langlade county, with Antigo as its county seat, is located in the northeastern section of Wisconsin. In general it is made up of cut-over land, part of which has gradually been developed into small farms. Dairying and potatoes offer the principal means of livelihood for the farmers, with dairying providing about half of the annual farm income. Over one-sixth of the crop acreage is planted to potatoes, and the county ranks fifth in the acreage and fourth in production of this crop in the state in 1928.

The 1925 census gives 1958 as the number of farms in the county with 86 acres as the average size. It is doubtful if over 1800 of these farms enter

into dairying on a commercial scale because the newer farms are not yet developed. Only 11 per cent of all land in the county is in crops and plowable pasture, according to the State Crop and Livestock estimates, although 32 per cent of the land in farms is so used. Of the plowable land, 48 per cent, or nearly one-half, is in clover and timothy which grow abundantly in the old lake bottom area called "flats." Seventeen per cent is planted to potatoes, 23 per cent to oats and 10 per cent to the combined acreage of corn and barley. One-third of the farms are reported to have silos. Dairying with potatoes as a cash crop make up the two important sources of farm income, and are well suited to the soil and climatic conditions.

Dairying is done in slightly smaller units than the average of the state. As small farms predominate in Langlade county, so do small herds. From cards that were filled out by 270 farmers in July, 1929, it is possible to get a close index as to the number of farms with different sized herds.

Table I. Number of milk cows per farm in Langlade county¹

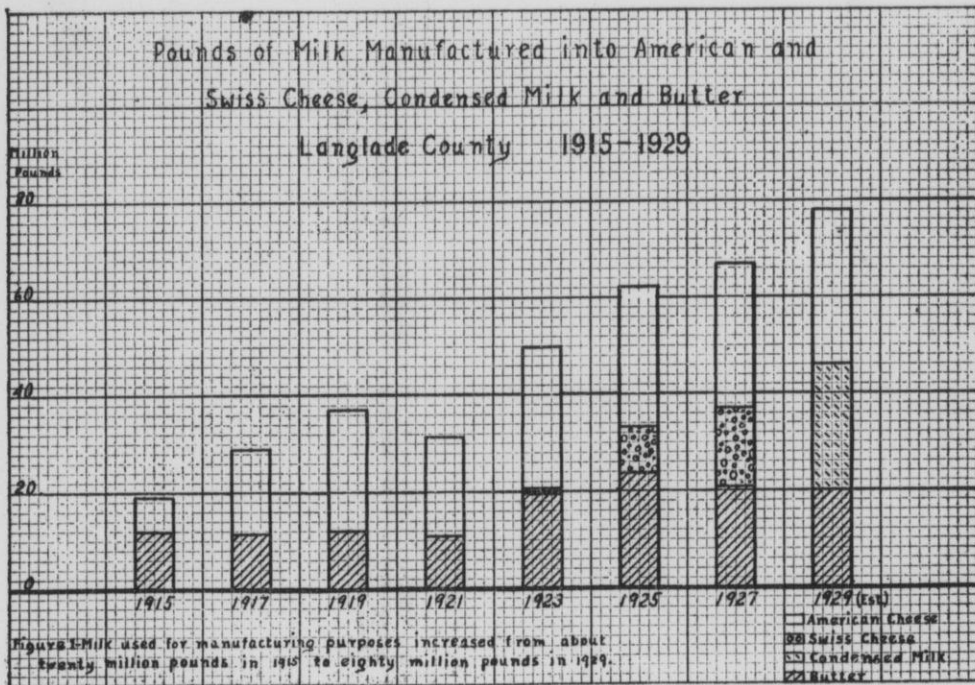
Groups	Farms		Cows	
	Number	Per cent	Number	Per cent
3-7 cows	51	19	253	8
8-12 "	135	49	1357	44
13-17 "	59	22	1025	34
18-22 "	23	9	314	10
23 and over	4	1	117	4
Total	270	100	3066	100

¹Based on records of 270 farms.

These figures indicate that over 65 per cent of the farms have 12 cows or less, 22 per cent have from 13 to 17 cows and 10 per cent have 18 or more. The average of this group is 11.6 milk cows per farm and compares with the estimated state average of 14. The average butterfat content of the milk is somewhat higher than is usually found in the state, and especially higher than in most cheese areas, being 5.78 per cent in 1928 for the 17 cheese factories.

Development of Dairying

Dairying in Langlade county has had its principal development since 1915. During the decade and a half from 1915 to 1929, production of milk has increased nearly 400 per cent or in amounts actually manufactured from slightly less than 20,000,000 pounds of milk to nearly 80,000,000 pounds annually as illustrated in Figure 1. Part of this development has come about through the development of new farms as lumbering declined. Part of it is due to the more prominent place that dairying now has in the older farming sections of the county. The uniform increase from year to year readily suggests that the industry will develop somewhat more during the next few years.



Antigo with a population of about 9,000 is the only town of over 500 inhabitants in the county. Elcho, Deerbrook, Polar and Lily are towns of from 200 to 500 people. The importance of Antigo in the agricultural development of the county is clearly shown in the table of carlot shipments from 1924 to 1929.

Table II. Carlot shipments of agricultural products from Antigo, 1924-1929¹

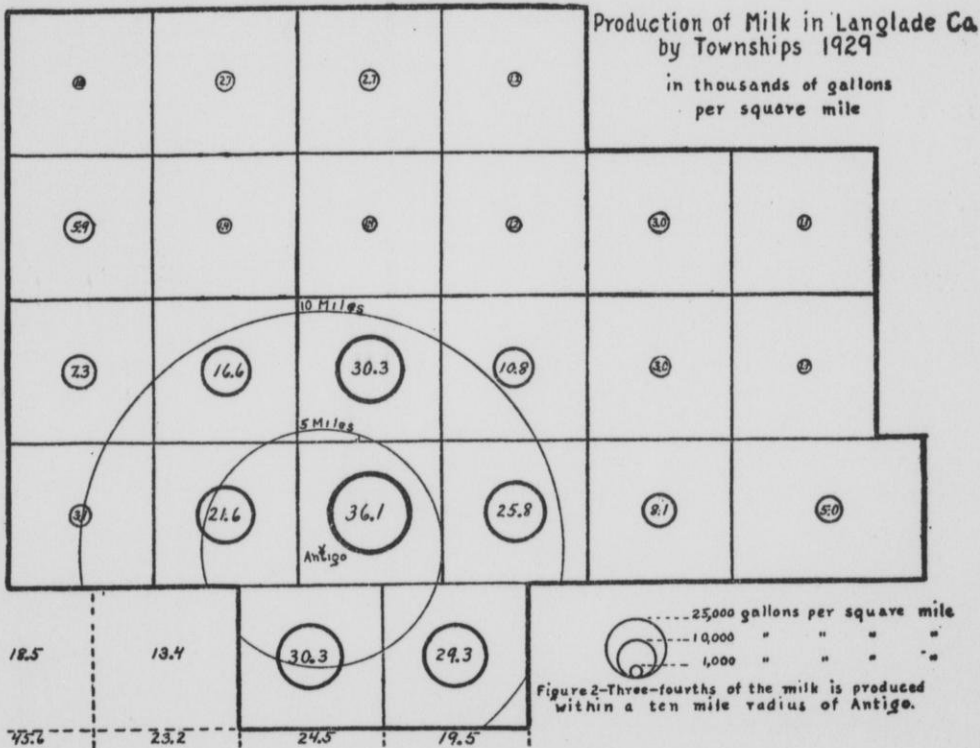
Year	Cheese	Condensed milk	Butter	Powdered milk and whey	Canned goods	Potatoes	Livestock	Hay
1924	145	0	6	0	40	733	51	291
1925	169	0	8	0	84	815	68	145
1926	184	0	0	0	45	784	116	171
1927	196	0	0	21	31	994	140	67
1928	209	2	0	24	18	1575	151	97
1929 (9 months)	102	166	2	21	21	1290	125	41

¹Data furnished by the Chicago and Northwestern Railway.

Increase in cheese shipments from 145 cars in 1924 to 209 in 1928 is due largely to the production of Swiss cheese. In 1929 this milk was partially condensed and shipped out in tank cars. Shipments of butter are mainly in less than carload lots. Potatoes and livestock shipments increased markedly while shipments of hay showed a very sharp decline.

Intensity of Dairying

A glance at Figure 2, showing the production of milk in thousands of gallons per square mile by townships, readily indicates that the bulk of the milk supply centers in the south central part of the county. In fact, one-fourth of the total milk in the county is produced within a five mile radius of Antigo and over three-fourths within a ten mile radius. If the bulk of the milk in the county is to be brought to one central point, no better location could be chosen from the standpoint of convenience and of intensity of production than the city of Antigo. A ten mile radius from Antigo would include part of the corner townships in Marathon and Shawano counties.

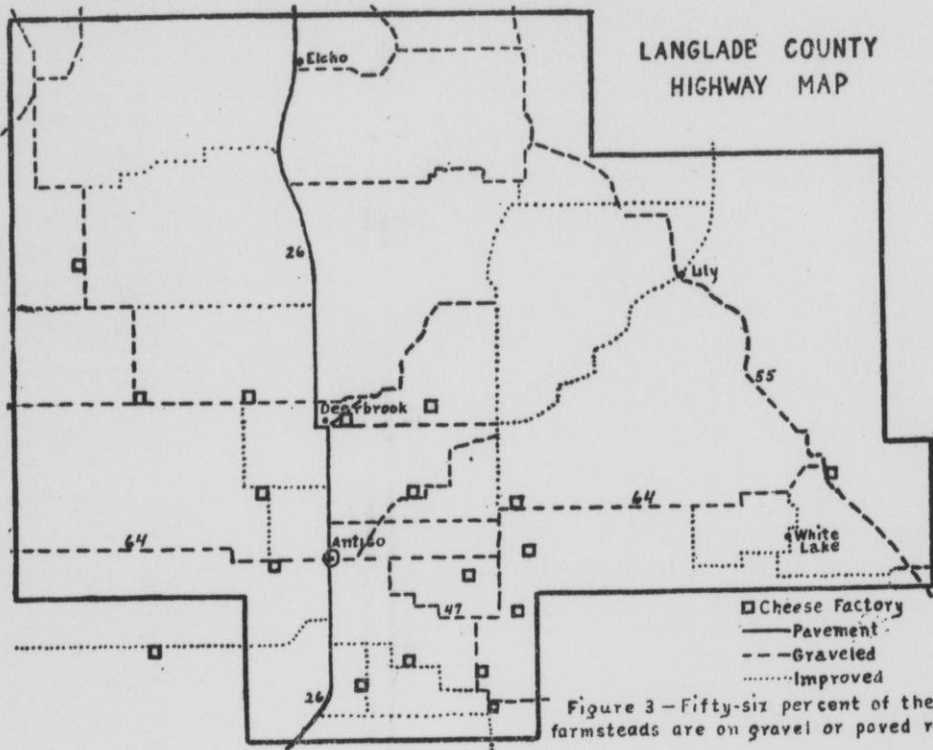


Trucking Conditions

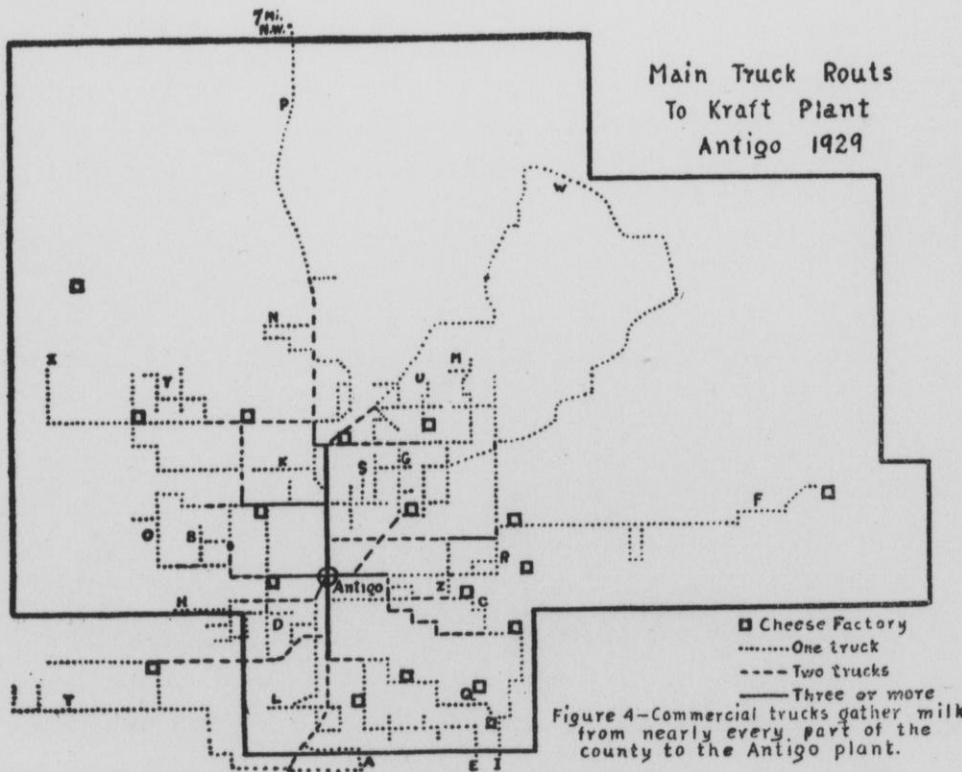
The cost of trucking milk to one or two central points is determined not only by the road surfaces but also by the degree and earliness with which snow is removed following storms in the winter and the condition of the highways during the thaw and rains in the spring. It would appear that trucking costs in Langlade county are about equal to the average for the state.

A paved highway, number 26, runs almost directly north and south the full length of the county and connects the towns of Elcho, Deerebrook and Antigo. State highway number 64 which is fully graveled, intersects number 26 at right angles at Antigo. Other graveled and improved roads are largely "feeders" to these two as is shown in Figure 3. Seven per cent of the farmsteads in the county are on surfaced roads, 49 per cent on gravel, and 44 per cent on dirt

roads according to the Crop and Livestock Estimates report for 1927. This compares favorably with the average for the state.



The Kraft-Phenix Company, which gathers milk from all parts of the county to its plant at Antigo, deducts 15 cents per hundred pounds of milk from the farmer's check, but it is claimed that this charge does not cover the full cost particularly on the outlying routes and during unfavorable seasons. This is also the experience of other large plants with which comparisons are made in this study. A map showing the general routes of the fleet of trucks hauling milk to the Kraft-Phenix factory is shown in Figure 4.



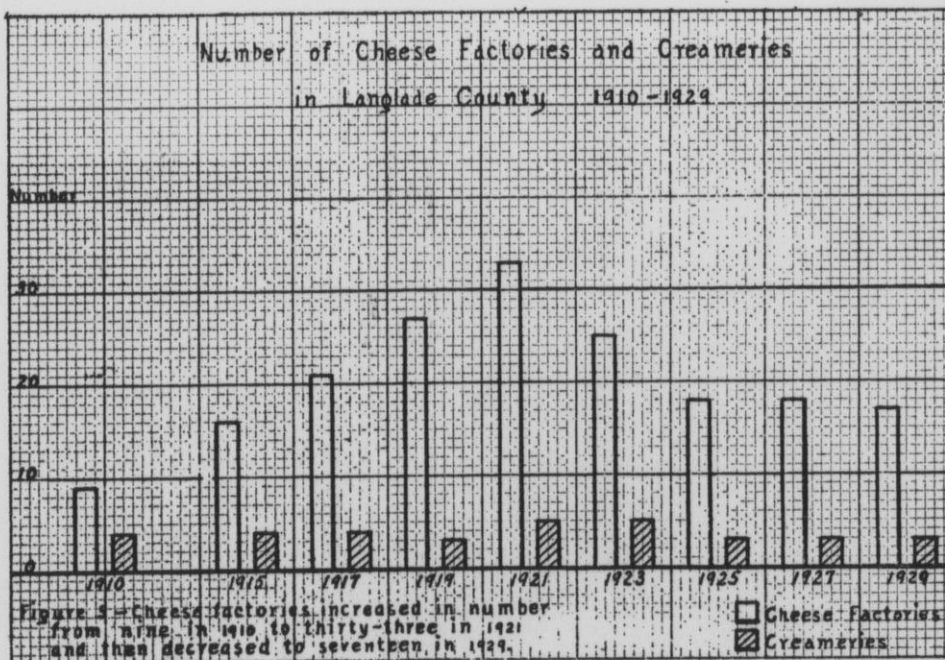
Railroad Facilities

Two main railroad lines with short branches serve the county. The Chicago and Northwestern divides the county north and south with its main line from Ashland to Fond du Lac and is on a direct line to Milwaukee and Chicago. This road serves the towns of Elcho, Deerbrook and Antigo. Three passenger and express trains travel each direction daily and furnish a twelve hour express service to the city of Chicago. In fact, carlot express leaving Antigo in the evening will arrive in Chicago early the next morning. Carlot freight rate on butter to New York is \$1.395 per hundred pounds via Chicago on the all-rail route, while via Green Bay on the lake route it is \$1.545. The freight rate on cheese to Chicago is 36.5 cents per hundredweight in carlots, 24,000 pound minimum. Tank car express rate for milk from Antigo to Chicago is 40 cents per hundred pounds compared with 24 cents at Janesville in the southern part of the state.

A branch of the Soo line running from Shawano to Crandon crosses the east part of the county and serves the communities of Lily and White Lake. Trains are much less frequent on this line, but there is also only a small amount of dairying in this section of the county.

History of Cheese Factories

The number of cheese factories in the county, as shown in Figure 5, increased from 9 in 1910 to 33 in 1921, and since then has decreased to 17 in November, 1929. These factories all make American type cheese. The principal decline in the number of factories was from 1921 to 1925 when there was a loss of 15 plants or 45 per cent of those operating at the earlier date. It was during this period that the plant now known as the Kraft plant started its expansion program. Butter factories were not as numerous as cheese factories at any time during this period although in 1915 over one-half of the milk was manufactured into butter. In recent years the three plants manufacturing butter were all located in Antigo and received their cream from surplus milk in the city market, whey cream from cheese factories and a small amount from a few scattered cream stations. The Kraft plant also manufactured butter from the cream receipts of 150 patrons in 1929 and from as many as 300 in 1926.



Cheese factories in the county have decreased in number largely because competition has cut the volume of business of many of them to a point where it was no longer profitable to operate. This competition is largely from the large Antigo plant which with use of commercial trucks gathers milk from nearly all parts of the county. There is relatively little competition among cheese factories in county for patrons, because with few exceptions, they do not overlap in the territories they serve. Some of the cheese factories have attempted to meet the truck competition and make up for lost membership by hiring trucks to gather milk for them. This experience has not been very successful for the reason that loads are small and when once assembled there is little additional cost of trucking a few extra miles to a larger plant. Some of the factories discontinued the practice of operating trucks.

The present position of several cheese factories in the county is not very bright. One owner said he would readily sell his plant for one-half its normal sale value. Another was calling a meeting of the neighboring farmers because he could no longer afford to run his plant with the small volume of milk he was receiving, and he contemplated closing it. Yet he had several thousand dollars invested in the factory, and adjacent house. Two instances were found where the maker had taken part of the money allowed him for making costs to meet competitive prices and to keep his patrons in line. One factory in the northwest corner of Marathon county, which is similarly located in the Antigo trucking area, closed its doors November 1, 1929. Three of the seventeen factories will have less than a million pounds of milk during 1929 and only three have over three million pounds each. The average of the 17 factories is about 1,900,000 pounds.

One cheese factory attempted to better its position during the summer of 1929 by separating the whole milk at the factory, selling sweet cream and casein. The experience was not encouraging. In the first place, the sweet cream could not be sold advantageously in the local market, either for local use or for shipment to other markets by a larger company. The icing necessary to keep its high quality is too expensive for small shipments. The railroad objected to the small lot shipments of moist casein because of its objectionable odor. The result was that the association trucked both the sweet cream and casein to Marathon City and discontinued the practice early that fall.

The cheese factories which appeared least hard pressed from the standpoint of volume and number of patrons were in the more densely settled and fertile section near Antigo. This seems explainable on the ground that the number of farms within a reasonable hauling distance is relatively greater. It is also true that the majority of the factories which went out of business were located in this same area.

The production of American type cheese as shown in Figure 1, has remained relatively constant since 1923 and readily shows that the production per factory has increased and that the larger plants have been in a better position to survive.

History of the Kraft-Phoenix Plant

The large milk plant in Antigo, commonly called the "Kraft" plant is one of the five factories in the Wisconsin milk division of the Kraft-Phoenix Cheese Corporation. The other four plants are located at Wausau, Birnamwood,

Wittenberg and Milan and are directed from division headquarters at Wausau.

The Antigo plant was originally a creamery operated by Antigo-Sheboygan Dairy Products Company. In 1923 it was taken over by Kraft Cheese Company, and for two years was operated as the Langlade County Creamery Company before the name was changed to Kraft Cheese Company of Wisconsin.

Shortly after purchasing the creamery the Kraft Cheese Company also purchased the brick building housing the bottling department of the Antigo Brewing Company. All the equipment was moved immediately from the creamery to the new location. A short time later the large brewery building across the street was purchased for use as cheese curing rooms and for a creamery department. The smaller building purchased first, was then used only for cheese manufacturing and was equipped to take care of an increasing volume of milk. Improvements in the equipment and interior arrangements were made from time to time. A large condensing pan was added. In 1927 a Grey Jensen Spray Dryer was installed in the large building and equipped to powder either whey, skimmilk or buttermilk.

Considerable experimental work on different types of cheese, domestic and foreign, was done here at different times and included some work with American Camembert and Norwegian whey cheese. However, most of the cheese manufactured was of the drum and block Swiss type. At one time this plant was widely known as the largest Swiss cheese factory in the world.

From a modest beginning of 1700 pounds of milk on the opening day at the new location, the plant has increased its volume to a point where it now received 33 million pounds of milk annually. In January 1924, the plant made 4 Swiss cheese a day, weighing around 200 pounds each. During the flush season of 1927 as many as 40 Swiss cheese were made daily.

Table III. Number of patrons, volume of milk and disposition of milk at the Kraft-Phenix plant 1924-1929.

Year	No. patrons		Pounds of milk (000)	Disposition of milk			
	Milk	Cream		Pounds into cheese		Pounds sold as	
				Swiss	American	Cream	Milk
			(000)	(000)	(000)	(000)	(000)
1929 (10 months)	660	150	29,287	--	--	6,896	22,201 (into cond.)
1928	659	150	33,598	17,302	12,962	1,915	1,415
1927	509	250	26,094	26,094	--	--	--
1926	300	300	24,286	24,286	--	--	--
1925	250	--	--	--	--	--	--
1924	--	--	9,039	--	--	--	--

The number of milk patrons has increased from 250 in 1925 to 660 in 1929. Cream patrons number 150, or exactly one-half of the number in 1926. The volume of milk increased from 9 million pounds in 1924 to about 33 million in 1929. Up to 1928 most of the milk received at this plant was manufactured

into Swiss cheese. In the latter year, however, only half of the milk was used for this purpose and the remainder was made into American cheese or sold as whole milk and sweet cream. In 1929 the milk was manufactured into condensed products or sold as sweet cream.

Consolidations and mergers in which the Antigo plant has been involved, together with changes in the management, have no doubt had a bearing on local feeling toward the plant. As stated previously, the plant was purchased by Kraft Cheese Company of Wisconsin in 1923. This firm acquired numerous other plants in the state and was merged with other companies such as the Phenix Cheese Company, C. A. Straubel Company and Southern Dairies. The Kraft-Phenix Cheese Corporation is looked upon by many as a powerful corporation which has its principal ownership and control in distant cities. Local management of the plant was changed in 1928. The general management is carried on from the Wausau and Chicago offices. For a time all of the banking relative to this plant is said to have been done through out-of-town banks. Thus on the one hand the factory now has non-resident management, except for actual plant direction, and distant, centralized ownership and control. On the other hand, commercial trucks which gather milk direct from farms have not only made possible the assembling of milk from a larger area, but they have also built up a situation in which few farmers come in direct contact with the plant itself. There has been little done to bridge this gap between the two principal parties and local criticism appears to run unusually high in spite of the fact that the volume of business has increased yearly.

Quality of Milk

Milk is judged as to quality by its acidity, bacterial count, sediment, taste and smell. The quality of the manufactured product is also an index, but the grade of workmanship and condition of the factory as well as the grade of the raw material enter into the quality of the finished product.

Samples of milk were taken at the Neva Farmers' Cheese Association factory at Deerbrook and at the Kraft plant in Antigo. Methylene blue tests were made of these samples. A tabulation of the readings of these tests is given in Table IV. It is well to remember that the number of hours it takes the bacteria in the milk to turn the blue indicator to white is a measure of the number of bacteria and hence the keeping quality of the milk.

Table IV. Methylene blue tests of milk at Kraft and Neva factories.

Number of hours	Kraft plant		Neva farmers' cheese produce assn.	
	Samples	Per cent	Samples	Per cent
1 hr.	none	--	1	2
2 "	"	--	none	--
3 "	7	23	1	2
4 "	none	--	2	5
5 "	22	74	none	--
6 "	1	3	38	91
Total	30	100	42	100

The thirty samples taken from four milk trucks at the Kraft plant and 42 samples at the Neva factory represent only a small percentage of the milk in the county and is not a complete index as to its quality. Moreover, these samples were taken in early November when weather conditions were favorable for producing high grade milk. But considering these factors, the samples were representative of other territories not operating on a grading program. Cheese factory operators reported that most of their cheese was sold as Number 1 grade and "fancies."

Samples remaining blue over four hours indicate a "good" grade of milk, and those remaining over five hours are of a "fine" grade, of the quality that is usually required in city milk markets. Most of the samples showed good quality under the Methylene blue test. In regard to taste and smell, the milk was generally satisfactory. No sediment tests were made. The fact that there are few farm separators in the county would simplify any program for quality improvement that might be undertaken. Whole milk is delivered not only to the cheese factories but to the Antigo plant.

Seasonal Production

Langlade county has more summer dairying and less winter dairying than is common in most butter districts. It also has greater seasonal variation in production. This is generally true in cheese districts of Wisconsin.

Data were available on monthly receipts of milk at most cheese factories in the county and at the Kraft plant from 1926 to 1928. A monthly index of these figures is shown in Table V. in contrast to the variation during the same years in monthly butter pools of Land O' Lakes Creameries, Inc., which receives the bulk of its butter from Wisconsin and Minnesota:

Table V. Seasonal production of milk in Langlade county compared with monthly butter pools of Land O' Lakes Creameries, Inc.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Langlade county	60	61	78	88	126	162	157	139	114	92	64	59	100
Land O' Lakes	96	97	113	111	130	143	123	97	76	69	64	81	100

Production of milk in Langlade county is higher from June to October and lower from December to April. Production in June is 2.7 times the lowest month, December. For the member creameries of Land O' Lakes, June has 2.3 times the production in November.

This greater variation in production will mean slightly higher plant costs, because a plant that is equipped to handle a greater peak load in June is run at a lower percentage of its capacity in November and December. However, it also means that a greater proportion of the milk will be hauled to the factory during the months from June to October when road conditions are most favorable for trucking.

Competitive Situation

Nearly half of the milk in the county which enters into manufacturing channels is sold to the Kraft plant in Antigo. Cheese factories receive the bulk of the remainder. However, at the time of this study (November 1929) the cheese factories all sold their cheese to C. A. Straubel Company, a subsidiary of the Kraft-Phenix Company, or to another subsidiary of the same company at Birnamwood. This one company, then, receives nearly all of the milk entering manufacturing channels either as whole milk or cheese.

Several cheese factory managers and operators voiced their dissatisfaction with this situation, but when asked why they did not sell to some other cheese buyer or to the Federation, they invariably replied that with so small a volume as they had it hardly paid for the extra trouble. Two or three operators reported that they had at different times tried to ship their own cheese, but the convenience of selling it locally seemed to offset any gain that might be realized on so small a volume in shipping it to another market.

Figures compiled by H. H. Bakken, Department of Agricultural Economics, University of Wisconsin, show that for the years 1926 and 1927, prices received for cheese in Langlade county compare favorably with other counties despite the fact that there is not as intensive cheese buying competition. It is altogether probable that the same conditions prevailed in 1928 and 1929, and very doubtful, if any price advantage would have been realized by shipping the cheese to other local markets.

The criticism which was more universally voiced among the factory operators was against the practice of persistently soliciting cheese factory patrons for the Kraft milk plant when the same company eventually got the product in another form. One possible answer is that the company owned the milk plant but not the cheese factories, or that additional volume was needed to operate the large plant efficiently and keep the cost per unit down to a minimum.

Price Comparisons

Price comparisons are difficult to make among factories of different types and among factories of the same type which operate under different sets of conditions. Moreover, where skimmed milk or whey is returned to the farms in some cases and not in others, one has the varying values put on this product by the farmers themselves. Where hauling is done by individual farmers to nearby factories one finds another array of costs. The price comparisons that are made in this report have taken these factors into consideration. All price comparisons in this study are made on the basis of 100 pounds of milk testing 3.5 per cent fat, f.o.b. factory. Simple averages are used because they are more easily understood and because there appears to be no seasonal price factor between plants.

In comparing market outlets and types of plants it has seemed advisable in this analysis to compare only prices paid producers. Analysis of costs is too complex a study to be undertaken here. Moreover, the relative advantage of one plant over another will be reflected in prices realized by producers over a period of several months in cooperative associations because they are non-profit institutions which usually do not build up large surpluses and in

which dividends on stock are limited.

Prices Paid By Cheese Factories

The average price paid by the 17 cheese factories in the county for the first nine months in 1929 was \$1.75. The prices varied between factories from \$1.68 to \$1.82 for this period, although nine of the seventeen had average prices differing not more than 2 cents per hundredweight from the composite price of \$1.75. Figure 6 shows the monthly prices paid by these factories during this period. Part of the variation in these figures is due to the effect of volume on cost of making, part due to variation in charges for the same service, part due to quality of cheese and part to miscellaneous factors entering into the cost of operating plants of this type. Little attempt was made to analyze these costs in this study. These data nevertheless show that the factories are by no means equally efficient.

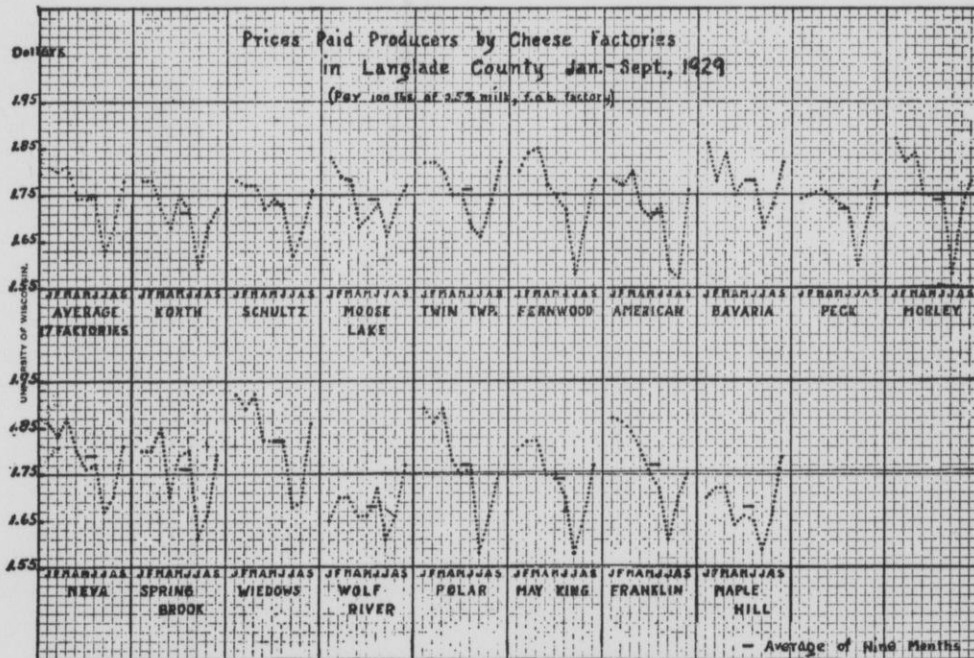


Figure 6—The range in average prices for the seventeen factories was from \$1.68 to \$1.82 for the first nine months of 1929.

Cheese and Butter Prices

Cheese and butter prices do not have a fixed relationship from month to month and are far from moving along parallel lines. An attempt is made here to show graphically how the prices of these two important dairy products fluctuate from time to time in their relationship to each other, because such changes have an important effect on the relative position of the small factory and on monthly returns to farmers who sell their milk on cheese or butter basis. This variation in relative prices may explain a difference of 10 to 15 cents

per 100 pounds of milk entering cheese channels above or below the price for the same quantity of milk sold on butter price basis when the two products are temporarily out of line with each other.

For the purpose of showing this relative change from month to month, rather than to show what might be termed "a proper price relationship," the period 1922 to 1929 was chosen. The monthly price of one-half pound of butter, Chicago "extras," is used as a base and the variation from this base in the price of a pound of cheese ($\frac{1}{2}$ cent over single daisies at Plymouth) is shown in Figure 7. Each bar represents one month. The average figures for cheese and butter for the entire period are nearly identical, and hence any change in their relationship from month to month is readily shown in this chart.

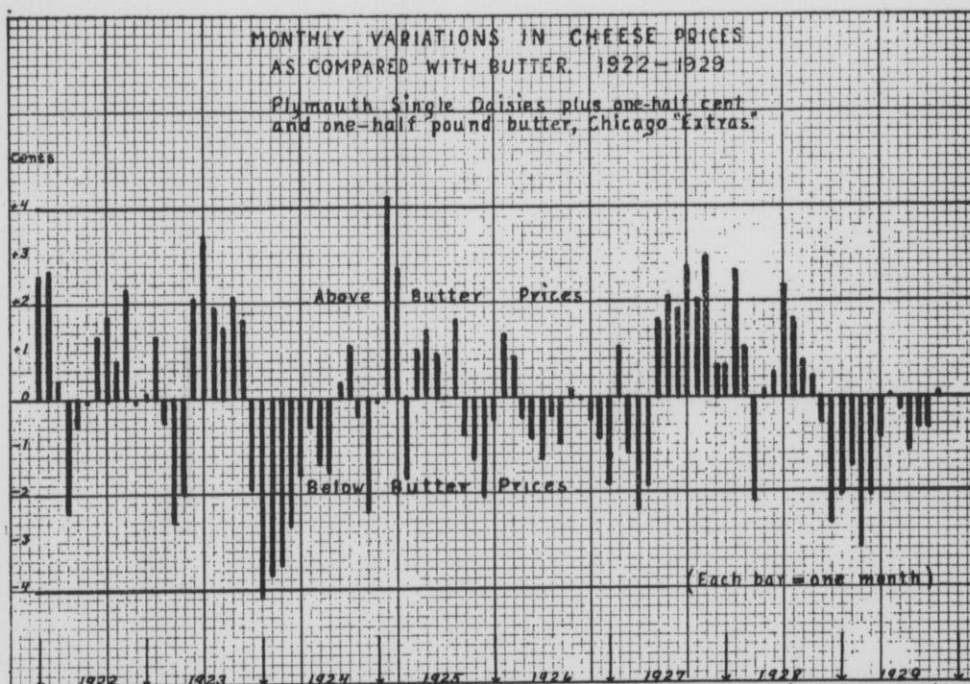


Figure 7-Variations in the relationship of monthly cheese and butter prices to each other may easily cause a difference of ten to fifteen cents per hundred pounds of milk.

Cheese prices, as indicated here, averaged higher than butter during the major part of 1922 and 1923 and again from May 1927 to September 1928. Cheese prices were lower than butter during 1924, the early part of 1927 and again from October 1928 to September 1929. The relationship during other months was very irregular. No definite cycles appear evident and the high and low cheese periods as well as their length of duration are difficult to forecast. The relatively low cheese prices from October 1928 to September 1929 have no doubt been a factor in the general discontent among dairy farmers in Langlade county who are paid for their milk according to the cheese market. It is well to bear in mind that cheese prices are likely again to be more favorable in comparison with butter prices and that there may be periods when milk manufactured into cheese will bring the greater returns. In fact, this relationship had

again changed in the latter part of 1929.

Prices Paid by Kraft Plant and Cheese Factories

A comparison of prices paid producers by the Kraft plant in Antigo and by the average of cheese factories in the county is made here because these plants are in active competition for patrons. As already suggested, such comparisons are open to considerable interpretation inasmuch as the plants are of different type and render different services. The bulk of the milk going to the cheese factory is hauled by the farmer himself and only relatively a short distance. The whey is returned to the farm. The large Kraft plant receives milk which is gathered by commercial trucks from nearly every part of the county and trucked to Antigo. The cans are washed at the factory. No whey or skimmilk is returned to the farm as is the case with the smaller plant. Opinions will vary as to the value of this by-product and these services.

It is considered best to compare prices f.o.b. factory, because at this point all milk of one grade is of similar value. At the Kraft plant 15 cents is deducted as a hauling charge per 100 pounds of milk for that which is brought in by commercial trucks. It would appear that this charge is higher than what several nearby farmers consider their hauling cost to be, as the bulk of the milk at the cheese factories is delivered by the farmers themselves and about 7 per cent of the Kraft patrons deliver their own milk to the Antigo plant. For comparative purposes 15 cents is added per hundred pounds of milk to the cheese factory price because of the shorter hauling distance for the patron and value of the whey returned to the farm. On this basis, as shown in Table VI., prices paid at the Kraft plant averaged 5 cents higher per 100 pounds of milk in 1926, 4 cents higher in 1927, less than a half cent above in 1928, and 3 cents above for the first 9 months of 1929. The average for the entire 45 months, January 1926 to September 1929, was 3 cents per hundredweight above the average cheese factory price, or 6/7 cent per pound of butterfat. While these data show that prices averaged higher at the Kraft plant, it is nevertheless true that there were months when prices paid at Antigo were lower than the average of the cheese factories. On the above basis monthly prices paid by the Antigo plant were usually within the range paid by the surrounding cheese factories and do not seem to explain fully the rapid growth of the large plant. Active solicitation of patrons appears to be an important factor in this growth. A graphic presentation of these monthly prices is shown in Figure 8 and indicates how closely they compare from month to month.

Table VI. Comparison of monthly prices paid at the Kraft plant and the average of cheese factories in the county 1926-1929.

	Prices paid at Kraft plant	Average prices of cheese factories	Prices of cheese factories plus 15 cents ¹
1926	\$1.87	1.67	1.82
1927	2.12	1.93	2.08
1928	2.07	1.92	2.07
1929 (9 months)	1.93	1.75	1.90
Average 45 months	2.00	1.82	1.97

¹15 cents is added for comparative purposes because of the shorter hauling distance to the cheese factories and the value of whey returned to the farm.

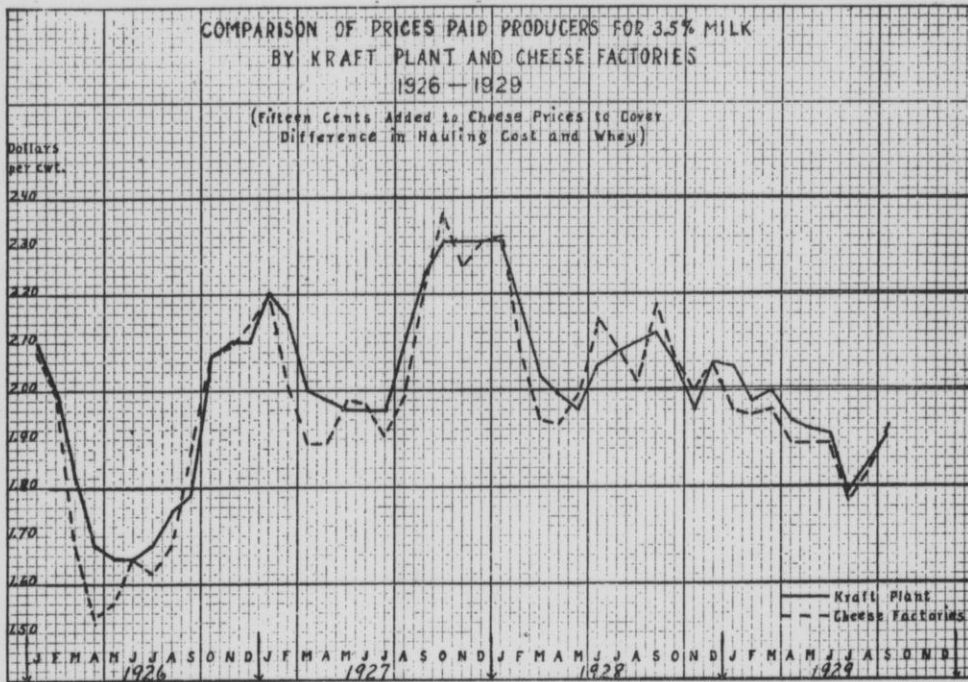


Figure 8—Prices paid producers at the Kraft plant follow rather closely the average of the cheese factories in the county.

Inspected Sweet Cream Prices

When one compares the prices paid producers by cooperative plants with more favorable market outlets than butter or cheese, such as inspected sweet cream, the margin widens considerably. A comparison of prices paid producers by the Barron Cooperative Creamery and by the Kraft plant clearly shows this difference: The Barron prices are representative of the prices paid by similar type plants at Cameron and Rice Lake because they are in the same competitive territory and by the Eau Claire Milk Producers' Cooperative which has the same market outlet. Incidentally, these five plants at Barron, Cameron, Rice Lake, Eau Claire and Antigo have approximately the same volume of business and the trucking deductions are all 15 cents per hundred pounds of milk. Barron and Eau Claire plants are under Chicago inspection and must comply with the provisions of the Chicago Health Department both in farm and factory equipment and methods of handling. The cream is shipped to Chicago and the skimmilk either powdered or made into cottage cheese.

Table VII. Monthly prices paid at the Barron Cooperative Creamery at the Kraft plant in Antigo, 1928-1929.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1928													
Antigo	2.31	2.17	2.03	1.99	1.96	2.05	2.08	2.10	2.12	2.06	1.96	2.06	2.07
Barron Creamery	2.33	2.28	2.36	2.15	2.05	2.12	2.17	2.22	2.29	2.22	2.29	2.28	2.23
1929													
Antigo	2.05	1.98	2.00	1.94	1.92	1.91	1.79	1.85	1.91	--	--	--	1.93
Barron Creamery	2.22	2.35	2.24	2.14	2.07	2.03	2.01	2.05	2.10	--	--	--	2.13

Figures in Table VII. readily show the advantage in price by the Barron plant. This difference is 16 cents for 1928 and 20 cents for the first nine months of 1929. The average for the 21 months is 18 cents per hundred pounds or 5 cents per pound of butterfat. Members of the Barron Cooperative not only were paid 16 cents more per 100 pounds of milk during 1928, but the Association itself added \$24,000 to the general surplus fund. However, there may be some question as to whether or not as favorable a market can be had immediately for sweet cream as the one which Barron county farmers have developed over a period of years. Some changes in farm buildings and equipment may also have to be made if the cream is to be sold to markets requiring farm inspection. Sweet cream shipments that are not under contract are often irregular and highly seasonal in character.

Prices Paid by Large Whole Milk Creameries

Interest in cooperative marketing of dairy products, and more particularly a desire to promote an organization to establish a large farmer-owned dairy plant in the county, has been manifest on numerous occasions. An attempt is made here to compare prices with a large plant taking in whole milk and manufacturing all of the fat into butter and powdering the skimmilk and buttermilk. Figures which are available on plants so operated are suitable for only relatively short periods, because these plants were in a position to take advantage of higher sweet cream markets during part of the year or have only recently changed from farm-separated cream to whole milk. Calculated prices on the basis of market quotations are therefore used to supplement these figures, and are also used for comparative purposes.

One creamery which manufactures approximately 1,200,000 pounds of butter annually began taking in both whole milk and cream in August 1928 and has since received about 45 per cent of the butterfat in the form of whole milk. The plant is located in an inland town with no rail connections, and marketing costs would therefore be somewhat higher. This creamery paid producers an average of \$2.11 at the factory during 14 months, August 1928 to September 1929 against a calculated figure of \$2.12 for the same period. Higher marketing costs due to the distance from a railroad and also slightly higher manufacturing costs because of a smaller volume of whole milk would more than offset the one cent in price per hundredweight.

Another creamery manufacturing a million pounds of butter annually but taking in only farm-separated cream paid its patrons an average of 54 cents per pound of butterfat at the factory from January 1928 to September 1929. This would correspond to \$1.89 for 3.5 per cent milk with no allowance for skim milk. If the suggested figure of 25 cents is added for this by-product an average price of \$2.14 would have been paid and would compare with the calculated price of \$2.11 for this period.

Reasonable deductions were made by both creameries cited here for such factors as depreciation, interest on capital stock and permanent reserve.

Calculated prices were based on the monthly average New York prices per pound of 93 score butter and the price to the producer each month for 3.5 per cent milk was determined by using the following formula:

$$\begin{array}{r}
 \text{(Price} \\
 \text{(93 score} \quad - \quad 1.763 \quad \quad \quad - \quad 2.75 \quad \quad \quad) \times 3.5 \\
 \text{(butter} \quad \quad \quad \text{(selling cost)} \quad \text{(making cost))} \quad \text{(test of milk)} \\
 \hline
 \quad \quad \quad \quad \quad \quad \quad \quad 81 \text{ (per cent fat in butter)} \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad + \quad .25 \quad = \text{price to} \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{value} \quad \text{producer} \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{sk. \&} \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{butter-} \\
 \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{milk}
 \end{array}$$

Allowance of 1.763 cents per pound as selling cost includes carlot freight to New York plus tare, icing and handling charges. The 2.75 cents for cost of manufacturing is well within the average making cost in creameries with an annual production of over 500,000 pounds of butter (Wis. Bul. 401). A butter standard of 81 per cent fat is one per cent above the legal requirement and has proven to be within the reach of both small and large factories. Creameries taking in both whole milk and farm-separated cream usually pay from 8 to 10 cents more per pound of butterfat or 28 - 35 cents more per hundred-weight for the whole milk at the factory. Variations in powder milk prices will affect the value of these by-products, but in a reasonably large plant 25 cents would have been a reasonable amount to add for skim and buttermilk during this period. Some factories would consider this figure too low. The quality standard is not too high for a whole milk plant when one realizes that some creameries receiving only farm-separated cream maintain this standard for all of the butter manufactured.

A plant operating within the limits suggested above would have been able to pay an average of 9 cents more per hundred pounds of milk testing 3.5 per cent fat than was paid by the Kraft plant and 12 cents over the average prices paid by the cheese factories in the county from 1926 to 1929. The difference in 1926 was 15 cents, 1927 only 2 cents, in 1928 it was 7 cents, and during the first nine months of 1929 the average was 14 cents in favor of the whole-milk-butter factory over the Kraft plant. It should not be inferred that these prices are representative of all creameries taking in whole milk as small factories do not have sufficient volume of business to bring about the necessary economy in manufacturing costs.

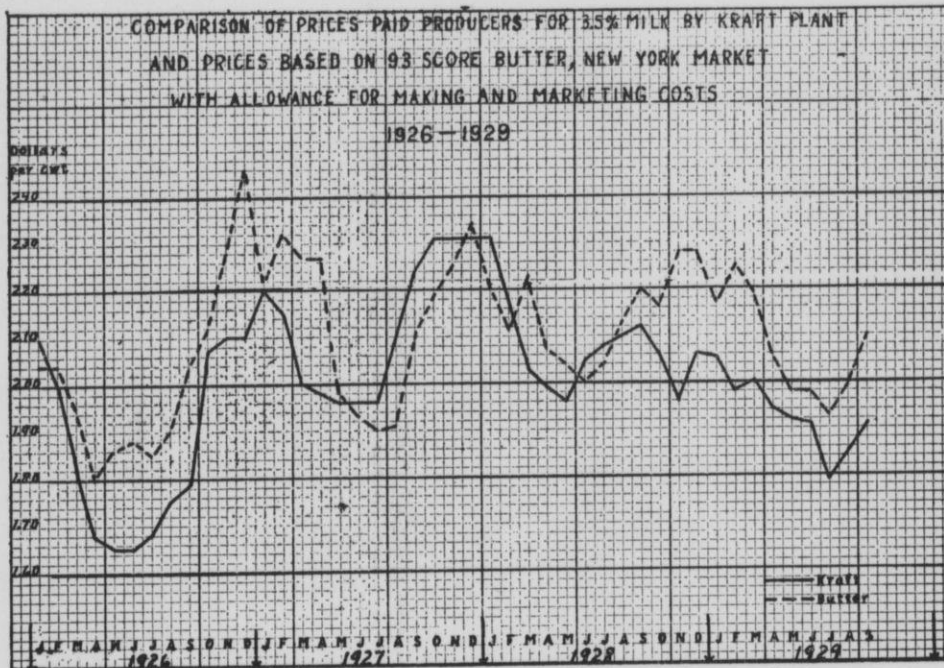


Figure 9—Calculated prices for a large cooperative plant manufacturing butter, powdered buttermilk and skimmilk, averaged nine cents higher than prices paid by the Kraft plant in Antigo.

Summary of Price Comparisons

A composite table of the prices used in this report may give a clearer picture of the relative position of each type of plant during the period analyzed. A summary of this type is shown in Table VIII. and gives the simple average prices by years. For the 45 months, January 1926 to September 1929, prices paid producers at the Kraft plant averaged 3 cents higher than the cheese factories in the county when 15 cents is added to the cheese factory price because of shorter hauling distance for the patrons and value of whey returned to the farm. Calculated prices for a large, whole milk plant manufacturing butter and powdered milk were 9 cents above those paid at the Kraft plant. The Barron Cooperative Creamery which sells inspected, sweet cream paid 18 cents above the Kraft factory during 1928 and 1929 per 100 pounds of milk testing 3.5 per cent fat.

Table VIII. Average prices paid producers for milk at various factories 1926-1929.

Factory	17 cheese ¹ factories	Kraft plant	Barron Creamery	Calculated butter prices
Year				
1926	1.82	1.87	--	2.02
1927	2.08	2.12	--	2.14
1928	2.07	2.07	2.23	2.14
1929 (9 mo.)	1.90	1.93	2.13	2.07
Average 45 months	1.97	2.00	2.18 (21 months)	2.09

¹ 15 cents is added to cheese factory prices because of shorter hauling distance to the factory and value of whey returned to the farm.

It may be argued that the differences in these prices are due to quality and trucking cost factors. Quality is no doubt a factor in the higher prices paid by the Barron Cooperative Creamery which is under Chicago inspection, but it is not an important factor in the other price comparisons. The relationship of butter and cheese prices is an important factor during periods when cheese is low in price relative to butter. Trucking may be slightly higher in Langlade county for the milk drawn from the distant corners of the county, but it should also be remembered that three-fourths of the milk in the county is produced within a ten mile radius of Antigo where the main roads are improved and kept open. Moreover, as pointed out earlier, 7 per cent of the farmsteads are on paved roads and 49 per cent on gravel and that this figure is higher than the average of the state.

The price comparisons made here are not made as a criticism of existing agencies, but are made to show what might be expected if the farmers of Langlade county are equipped to market more advantageously their milk. No comparison is made with prices paid in fluid milk markets, such as Milwaukee or Chicago, because these cities can be amply supplied with milk from much nearer sources.

Small Plant Versus Large Plant

The small cheese factory has certain advantages that should be recognized in making a decision involving their continuance or abolishment. It is usually a plant located in the country near the farms it serves. The whey is a valuable feed for livestock and where one's farm operations permit its proper utilization, it is commonly considered to be equal to one-half the value of skim milk. The small cooperative cheese factory calls for a relatively small organization in which officers and members are in close contact with the

business itself. Relatively small amount of capital is needed, although the per unit requirement may not be less than in a larger plant. Some of the duties such as bookkeeping, clerical work and occasionally even the general managerial duties are performed by officers of the organization, whereas in a larger association these details are cared for by specially paid employees.

The small factory, however, is essentially a very specialized plant equipped to do only one particular thing - namely, make cheese, and is seldom in position to manufacture the by-products, whey and whey cream, into such products as powder and butter. As pointed out earlier in this report the price of cheese varies in its relationship to other dairy products, and when cheese prices are low it cannot effectively compete with factories having other market outlets. The smaller the factory the less flexible it becomes as to costs and volume. Little can be done to adjust labor and equipment to the seasonal flow of milk or in its variation due to better or poorer opportunities for sale at other plants. Where commissions are paid operators these factors must necessarily be taken into account in establishing the rates.

The large dairy plant with expensive machinery involves more risk, but it likewise offers greater opportunity for gain. Building and equipment costs are high but if planned in accordance with the volume to be handled they should not exceed and may be lower than the per unit cost of the small plant rendering the same services. However, additional services such as better use of by-products, require additional equipment and floor space. The unit cost of manufacturing butter decreases rapidly up to 500,000 pounds annually and more gradually from there on up to approximately a million pounds, after which the reduction is very slight. The effect of volume on the cost of manufacturing cheese is less well known and cheese factories commonly handle a much smaller amount of butterfat per plant than do creameries. A preliminary report on a study of the cheese industry appears to show that the same principle holds true, and that a cheese factory receiving three or four million pounds of milk has an advantage over smaller factories in operating costs of about $\frac{1}{2}$ cent per pound of cheese.

Other advantages of the large plant are the greater opportunity for complete use of the by-products, for some flexibility in market outlets and for closer adjustment of variable factors such as labor to the volume of business. In the first instance it means the possibility of drying skimmilk, buttermilk or whey. It may place the association in a position to take advantage of carlot shipments of butter or cheese and to accept favorable contracts for sweet cream shipments.

It is doubtful if any one has attempted to say just how large a plant should be to manufacture most efficiently two or more dairy products. Much depends on the amount of milk that can be conveniently assembled at one point. In other sections of this report an analysis of intensity of production and of number of cows per farm is given. If a large association is to be organized and the number of farmers signing membership agreements is known, the volume of milk to be handled and a desirable size of plant can be closely determined.

Possibilities of Improvement

The foregoing analysis indicates that relatively better prices can be obtained for milk, if farmers in Langlade county are willing to adopt a quality program and are equipped to manufacture more efficiently their milk. The probable advantage while by no means startling is nevertheless substantial when taken over a period of time. The fact should not be overlooked that 45 per cent of the cheese factories operating in the county in 1921, closed within a period of four years and that many of those remaining have difficulty in securing a desired volume of milk.

It should be clearly understood that if any improvement is brought about, it will likely mean the elimination of several small factories now operating. An improvement in price may not easily be seen because competitive plants operating in the same territory are likely to pay similar prices for the same grade of product. Likewise, cheese prices may again be expected to be more favorable in comparison with butter prices than they were during the major part of 1929.

The situation does offer possibilities for improvement. Some of the cheese factories with small volume might be closed and the milk trucked to other nearby plants to increase the amount of milk manufactured per plant. However, the use of commercial trucks by the factories now operating has not been very successful, as pointed out earlier. Besides low manufacturing costs, quality is also an essential factor in securing highest prices for milk. Local cooperative cheese associations in the county may well consider the advisability of becoming members of the National Cheese Producers' Federation and extending their cooperative program to the selling as well as the manufacturing of cheese.

A bargaining association might be organized around the Kraft plant, and check testing and check weighing service offered its members. Bargaining associations have been successful in many fluid milk markets, but it may be open to question just how much bargaining power an association will have around a private manufacturing plant. The service of check testing and weighing can remove any reasonable criticism as to correct weights and tests. Moreover, sufficient deduction may be made so as to build up a sizable reserve in the association to be used if building or purchase should be desired at a later date. A bargaining association would have the advantage of requiring little initial investment and risk.

An association may be organized and stock contracted by its members with the plan in mind of erecting or purchasing a large whole milk plant equipped to manufacture butter or cheese and powdered milk. Such a plan would involve more risk and large immediate investment, but it would also offer greater opportunity for gain. The fact that the bulk of the milk is produced in a rather limited area would make easier such an undertaking.

If plant ownership and operation should be undertaken farmers must be willing to provide a liberal amount of capital. Even more important is adequate assurance of a sufficient volume of milk to operate it efficiently. Three or five-year membership agreements should be signed by individual producers together with an agreement to purchase a definite amount of stock.

This will be tangible evidence of the degree of interest in such an undertaking, and careful plans can then be worked out accordingly. Possibly a factory might be built so that other sections could be added later, if required, and without greatly disturbing the interior arrangements or efficiency of the plant. Details of such a plan will have to be worked out when more is known regarding the willingness of farmers to back such a marketing program. If a cooperative association is to be organized, consideration should also be given to the desirability of uniting with a cooperative sales agency handling the products to be manufactured.

The plan of action which will be chosen must finally rest with the farmers of Langlade county. An analysis of the present situation together with a few possibilities for improvement is made in this report. No one can predict with certainty future conditions, but if the dairymen of Langlade county are willing to support a constructive marketing program they can be reasonably assured that their dairy products will bring all that market conditions warrant.

The local committee called at the College of Agriculture to consider the survey and were met by a college group. It was decided to present the survey in a three-day cooperative marketing institute on dairy products the last week of January 1930.

The following program was arranged:

COOPERATIVE MARKETING INSTITUTE ON DAIRY PRODUCTS
ANTIGO, WISCONSIN
WEDNESDAY, THURSDAY and FRIDAY, JANUARY 29-30-31, 1930

P R O G R A M

Wednesday - January 29

- 10:00 A.M. The present farm situation calls for a new deal in agriculture - Mr. Luther
11:00 A.M. Steps which led up to this institute - Mr. Omernik
1:00 P.M. High quality milk the first requirement of a dairy cooperative - Mr. Sondergaard
2:00 P.M. Effective cooperative organization for marketing dairy products - Mr. Froker
3:00 P.M. Summary of the day's proceedings - Mr. Luther
3:30 P.M. Adjourn until 10:00 A.M., January 30

Thursday - January 30

- 10:00 A.M. Plans in mind for farmer control of dairy products - Mr. Peterson
11:00 A.M. Developments in the dairy industry which affect the farmers' markets for dairy products - Mr. Froker
1:00 P.M. Report of survey of dairy marketing conditions in Langlade county - Mr. Froker
Mr. Sondergaard
Discussion and recommendations by Farmers' Committee.
Questions, suggestions and criticisms by dairymen and others.
In discussing the proposition of a farmers' cooperative dairy plant Commissioner H. M. Knipfel and R. A. Peterson of the State Department of Agriculture and Markets have been asked to speak. They will be present.

3:30 P.M. Adjourn until 10:00 A.M., January 31

Friday - January 31

- 10:00 A.M. Essentials of a sound cooperative organization - Mr. Froker
11:00 A.M. The need for farmer control of butter as a basis for price determining of all dairy products - Mr. Brandt
1:00 P.M. The Land O' Lakes and its patron factories - Mr. Brandt
2:00 P.M. What ought to be done?
Final conclusion of Farmers' Committee and dairymen.
Follow-up arrangements - Mr. Luther
Mr. Peterson
3:30 P.M. Adjourn sine die. Mr. Omernik

E. L. Luther, Conductor, Superintendent Farmers' Institutes, Madison
R. K. Froker, Economist, College of Agriculture, Madison
H. T. Sondergaard, Dairy Specialist, College of Agriculture, Madison
John Brandt, Land O' Lakes Creameries Inc., Minneapolis, Minnesota
H. M. Knipfel, Commissioner of Agriculture and Markets, Madison
R. A. Peterson, State Department of Agriculture and Markets, Madison
John T. Omernik, County Agent, Antigo
Farmers' Committee: Otto Wirth, M. Devine, Stephen Palmer, Fred Kakes,
M. Brandt and J. T. Omernik, all of Antigo.

The institute was held. There was an aggregate attendance for the six sessions of 2,095 persons, among whom were a liberal number of farm women. In this institute the department of Farmers' Institutes was assisted by the Dairy and Economics departments of the College of Agriculture, the department of Agriculture and Markets of the State of Wisconsin and a representative of a large dairy commodity sales association. One of the six sessions was devoted entirely to a presentation and general discussion of the survey. Each evening a meeting was held with the local committee and all matters were thoroughly discussed and arrangements were made for the succeeding day's program. On the evening after the institute details of organization work were discussed.

Lists were kept of those in attendance. Cards were passed out at the last session for those favorable to the project to sign. It was practically the unanimous decision to proceed with the plans.

Special emphasis were laid in the institute upon the "set up" of the organization, incorporation, the membership contract to deliver milk to the plant, quality of milk to deliver, location of plant, securing a manager, and "hookups" with cooperative sales agencies. In fact every detail that could be thought of which would have a bearing upon the success of the organization was considered.

The membership contract was reviewed by a local attorney, by the attorney for the department of Agriculture and Markets, the attorney for the Land O' Lakes Creameries Inc., and by the attorney for the Northern Wisconsin Cooperative Tobacco pool. It will stand the test.

A field educational effort was put on following the institute in which the two persons who made the survey assisted.

A membership and contract signing campaign was put on by the local committee.

Very soon 350 farmer milk producers had signed contracts and also notes for stock amounting to \$50,000. The notes were signed under the plan to pay them off by the check-off method at the plant. When this point was reached the drive was stopped and subsequent volunteer signatures were secured that brought the total number of signers nearly to 700 and the total amount of notes signed to \$80,000.

During the membership campaign the private company, which according to local reports had been paying the farmers eleven cents under New York Extras for the butter fat in their milk, began to pay two cents above Extras for butter fat in the milk delivered. This only seemed to inspire the producers to come in and sign up to make sure of the new organization.

April 28 was set for the organization meeting. The superintendent of Farmers' Institutes arrived at Antigo at 2:00 A.M. and early in the day had a conference with the County Agent concerning the procedure to follow in securing an organization which would handle the new business successfully. This was carefully worked out and the County Agent arranged with various individuals to present motions. This all proved worth while as some loose ideas were presented later which, had there been no plans laid, would have proved destructive of successful organization.

The doors of the meeting place were guarded and no persons except members or who were needed for their assistance were permitted in the hall.

R. A. Peterson, a representative of the department of Agriculture and Markets arrived as the forenoon meeting was about to open.

The right man was chosen for chairman of the organization meeting. The program opened by Mr. Peterson and the Superintendent with discussions of the things which were necessary in organizing with the emphasis placed on the incorporation papers, the constitution and by-laws and the selection of the board of directors. A lawyer presented and discussed the articles of incorporation and the constitution and by-laws. These were adopted.

The next step was to elect seven members to the board of directors. It was moved that the chairman appoint a committee of five to nominate persons for these positions. This was done as there were some 400 members from widely scattered communities and very much unacquainted with each other. A member of political prominence objected and said that the people there were able to select the board of directors and no matter if it took a week every person there had a right to express his choice. He begged those present to stand up for their rights. He received a liberal applause. In the minds of the knowing one it was evident that he was making political capital. Should he be selected as a member of the board the enterprise was foredoomed. But three or four farmers immediately followed with good reason to the effect that they did not know the qualifications of everybody present and that a good board must be picked. They thought that a committee representing all parts of the county could receive suggestions from everybody and then look up those suggested and present suitable names for election. The chairman decided to cut out acrimonious debate and limited one's discussion to one appearance. Finally a committee

of ten from all parts of the county was appointed by the chairman. This committee was to name fourteen persons. The County Agent at the suggestions of the superintendent was all ready to prepare a ballot. During the noon hour the committee met.

The copy of the ballot follows. It contains the names of those nominated, the vote of each one received, and the tenure of office of each one elected according to the vote he received.

BALLOT

Vote for any seven (7)

(Mark an X after the name you vote for.)

					<u>Period of Years</u>
Sec'y.-Treas.	1. Otto Wirth	<input type="checkbox"/>	350	3	3
President.	2. James Prosser	<input type="checkbox"/>	358	1	3
Vice-President.	3. J. P. Schroepfer	<input type="checkbox"/>	357	2	3
	4. Martin Devine	<input type="checkbox"/>	217	4	2
	5. Frank Denk	<input type="checkbox"/>	111		
	6. Ludwig Stieber	<input type="checkbox"/>	147	7	1
	7. Henry Lade	<input type="checkbox"/>	197	5	2
	8. William Weishahn	<input type="checkbox"/>	146		
	9. Emil Schraeder	<input type="checkbox"/>	185	6	1
	10. Art Strandberg	<input type="checkbox"/>	85		
	11. Joe G. Jilek, Jr.	<input type="checkbox"/>	145		
	12. John Mach	<input type="checkbox"/>	132		
	13. Robert Seering	<input type="checkbox"/>	115		
	14. Steve Palmer	<input type="checkbox"/>	28		
	15.	<input type="checkbox"/>			

A splendid board was elected.

Among other things which the meeting did was to vote unanimously to employ the Land O' Lakes Creameries Inc. to act as sales agent for the products of the new organization.

The superintendent was again called on to speak and advocated a campaign of milk improvement so that the day the new plant opens it will receive the best milk ever delivered to a plant on opening day. This was well received.

In the evening the superintendent met with the new board and the county agent to consider ways and means.

The board elected officers as follows: James Prosser, president, J. P. Schroepfer, vice-president, and Otto Wirth, secretary-treasurer.

The superintendent warned the board against talking too much or listening to long stories, and above all to discuss all angles of matters openly and thoroughly in directors' meetings, to vote upon all matters and then to abide faithfully by majority rule. When policies are decided upon it is up to the minority, if there is any, to fall in line and work to put things across. The members of the board agreed to do this.

Next the law protecting cooperatives from having their contract signers taken away from them by private companies was called to the attention of the board and steps were taken to make the law applicable to the membership of the new organization.

Some attention had already been given to a site for the plant. An amusing thing had happened. Soon after one site had been visited it was discovered that three enterprising men had an option on the site. The superintendent advised the board to spend some time paying visits to a site which was not wanted

and meantime to get some one to secure an option on the site desired by the plant. This worked out satisfactorily and a good site was secured reasonably.

There was some doubt about the Federal Farm Board's loaning money to the new plant as the private plant was able to handle the present production of milk. The superintendent advised making an inquiry of the private plant to see if it was for sale. Up to about June first no reply had been received.

The matter of securing a competent person to manage the plant was considered. The superintendent suggested that the board refrain from giving encouragement to applicants as they appear, but to open the position to everybody and to require each applicant to make a written application. When some twenty or thirty had applied to hold a board meeting and, if they so desired, some of us who had helped so far would be glad to sit in. Out of the whole number about five should be sorted out for thorough investigation. A business like sort of man with fair education and successful experience who had been found sold upon farmer cooperation and loyal to the cooperative which he had served and who would work with the board conscientiously, would be the sort of man wanted. It was not wise to be caught by an applicant who wanted the job too anxiously, or by a man having little sympathy with farmer cooperation.

Finally, the board was advised that the members were expected to attend meetings and that under no circumstances should the board or any members "pass the buck" to the manager or anybody else. They should not let the manager own the plant and run it all alone. They should understand everything done and pass upon all policies. They must work with the manager. In no way could they, or would they, be allowed to shift responsibility. The members

of the board agreed to this.

On April 28 R. K. Froker, who is employed cooperatively by the Economics department of the College of Agriculture and the department of Farmers' Institutes, and the superintendent met with the president and the secretary and the County Agent, to consider several matters.

Among other things we learned that representatives of the banks of Antigo met with the directors to go over the notes which contract signers had advanced to cover stock purchases and had accepted all but about one-half dozen. Here it might be said that the banks and business men of Antigo are in entire sympathy with this enterprise.

The following letter from Otto Wirth, secretary-treasurer, brings the matter up to July 2nd, 1930:

"After all the good work and cooperation we have had thru your department I feel it is in order that we keep you informed as to how we are progressing with our milk plant. Our board directors were at Minneapolis to make final arrangements so now we are not only set to go but are going. We have arrangements made thru Land O' Lakes to get a loan in case the federal loan is not granted. We have more than \$80,000.00 of our subscriptions paid into the bank.

I received the plans and specifications for the plant today. We sent our advertisements for proposals on the general construction. We also have the deeds on our site.

Kindly pass this news on to our friends, Mr. Sondergaard and Mr. Froker."

It has been a most pleasant experience to work with these Langlade county farmers. They have been a most interested and interesting lot. The committee in charge of the preorganization work was made up of men who sacrificed to make the project successful. The county agent worked early and late and showed the metal of a real man all the way. The effort put forth and the work done by R. K. Froker and H. T. Sondergaard of this de-

partment, in making the survey, in meeting with the committee, in appearances on the institute program, and later in the educational project before the drive for membership are worthy of the highest commendation.

The department acknowledges with much appreciation the assistance loaned by the Wisconsin Department of Agriculture and Markets and the Land O' Lakes Creameries Inc.

In the near future we hope to arrange for a field force under Mr. Sondergaard to visit the farm of every producer who has signed a contract with the new organization, to get a high quality milk delivered. This work will start about October first, 1930. It would be a very wholesome thing if it could be advertised that the milk of every farmer graded fancy on the opening day in January 1931.

This enterprise will be watched as carefully as possible to make it a successful example for farmers to follow.

Thus it is seen how our agricultural service can operate to initiate and follow up a project to a substantial conclusion.

The Badger Cooperative Consolidated

The invasion of the milk truck and other matters disturbing to the cheese industry of Shawano county led the County Agent to initiate measures for more farmer control of the situation. Consolidation of plants, construction of a large flexible plant and other things were grouped into a movement which resulted in the endeavor to organize. The Badger Cooperative Consolidated on a membership contract foundation.

This movement is rather complex in its aims and set up. Some of the people interested in it attended our cooperative marketing institute at Antigo in January and appeared to like the work which was being done. Sometime in February application was made for a survey of the Shawano county dairy industry. As soon as the men who made the Antigo survey were at liberty they were assigned to the Shawano county task. The survey was made and a copy of the report is submitted herewith;

BADGER COOPERATIVE CONSOLIDATED

DAIRY MARKETING IN SHAWANO COUNTY

R. K. Froker (Agricultural Economics) and
H. T. Sondergaard (Dairy Husbandry)

This study is a brief survey of the dairy marketing conditions in Shawano county. Some of the outstanding points of interest are these:

1. Milk sold from farms increased from 105 million pounds in 1915 to 210 million pounds in 1929. The growth in dairying was most rapid previous to 1925. Three-fourths of this milk was manufactured into cheese during 1929.

2. The number of cheese factories increased from 65 in 1910 to 109 in 1922 and then decreased to 102 in April 1930. Many of these factories were near each other and actively competed for patrons; in 31 instances factories were two miles or less distance from each other.

3. Commercial trucks gathered milk from about 85 per cent of the territory and competed with cheese factories for patrons. Large plants at Shawano, Wittenberg and Birnamwood, within the county, and at Nichols, Clintonville and Mosling from outside the county, used trucks extensively in this territory. Few cheese factories have been able to use commercial trucks to advantage in assembling milk.

4. The production of milk was quite general throughout the county and did not center about one or two strategic points.

5. Most of the milk brought to the factories was of a good grade, but methylene blue samples taken at five factories and the expression of cheesemakers themselves suggest that many factories had a few patrons who brought milk that did not come up to desired standards.

6. The cheese was sold to nine companies, but the three of these with warehouses within the county received the cheese from 74 per cent of the factories.

7. Five large milk plants drawing milk from Shawano county paid an average of 56.6 cents per pound of butterfat for milk during 1929, but a hauling charge of 15 cents per hundredweight or about 4.3 cents per pound of butterfat was usually deducted from the farmer's check. Seventy-eight cheese factories paid an average of 50.7 cents during the same year.

8. Prices paid by cheese factories for the year 1929 ranged from 47 to 54 cents per pound of butterfat. Size of factory was an important factor affecting manufacturing costs, although there was a wide variation among factories of equal volume relative to costs of making cheese and prices paid producers.

9. The yield of cheese increased slightly with size of factory and caused the total receipts per pound of butterfat also to increase.

10. The price received per pound of cheese did not show any relationship with size of plant. The selling problem appeared to be one of wider scope than that of the individual cheese factory.

11. The most successful cross-road cheese factory, from the standpoint of prices paid patrons, appeared to be the one that had at least three million pounds of milk annually and secured its patronage from a nearby, compact territory.

SHAWANO is one of the leading counties in Wisconsin in the production of cheese. Data gathered in this survey show that 158 million pounds of milk were manufactured into cheese by 102 factories during 1929, and netted the farmers nearly three million dollars. This represented three-fourths of the milk sold to dairy plants in the county during this period, the other one-fourth going into butter, condensed milk, cream and whole milk.

While small "cross road" cheese factories have furnished almost the complete outlet for milk for a number of years, they have decreased slightly since 1925 in number and in amount of milk handled, although the total production of milk in the county has been on the increase. This change of circumstances has led to a request for information upon which to better judge the relationship of different types of plants represented in the territory and upon which to base plans for future development of marketing facilities.

Type of Farming

In general, Shawano county is made up of cut-over land, a large part of which has been developed into farms. While lumbering is still an important industry, its leadership has been replaced by agriculture. In fact, the county may be classed as distinctly rural since only one town has over two thousand inhabitants and the total population of the county is less than forty thousand.

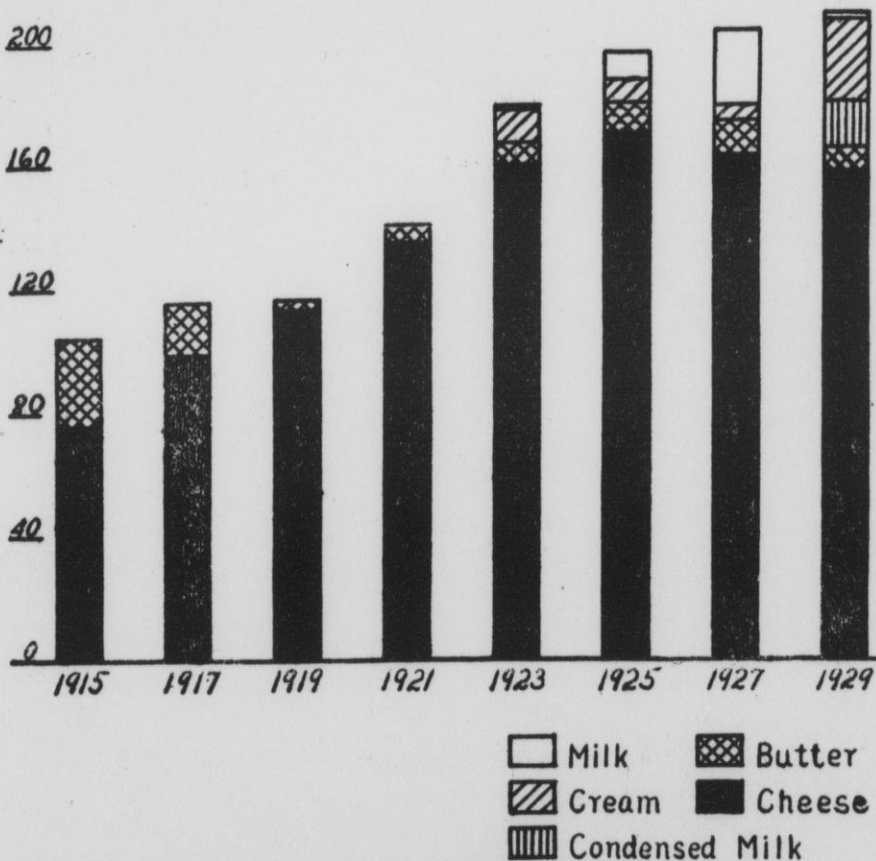
The 1925 census gives 3,891 as the number of farms in the county with 108 acres as the average size, compared with 113 acres as an average for the state. Only 25 per cent of the total land was in crops and plowable pasture, although 45 per cent of the land in farms was so used. Of the crop acreage, the census figures showed 21 per cent in corn, 27 per cent in oats and 40 per cent in tame hay. Seventy-two per cent of the farms had silos. These data clearly indicate the predominance of the livestock industry in making up the farm income and dairying is easily a major part of this industry in northeastern Wisconsin.

Milk production in Shawano county is very irregular due to a predominance of summer dairying. The monthly distribution of milk receipts of 10

factories showed production in June to be 2.9 times the production in November, the low month of the year. October, December, January and February were also relatively low in the amount of milk produced. This high seasonal variation largely accounts for the cheese factories making a practice of operating only on alternate days during the winter months, and also tends to make manufacturing costs slightly higher than if production were more uniform. The seasonal production in this county is not unlike that of other cheese sections in the state.

POUNDS OF MILK MANUFACTURED INTO CHEESE,
BUTTER AND CONDENSED MILK OR SHIPPED
AS SWEET CREAM OR WHOLE MILK.
SHAWANO COUNTY

Million
Pounds
Milk
240



Data from Dairy and Food Commissioners Reports.

Figure 1 - Yearly production of milk in Shawano county doubled from 1915 to 1929. Cheese manufacturing predominated, with the actual amount of milk used for this purpose increasing up to 1925 and then decreasing slightly during the next four years.

Development of Dairying

Dairying in Shawano county has had a rapid development since 1915. During the decade and a half from 1915 to 1929, production of milk doubled. In amounts actually manufactured the increase was from 105 million pounds to 210 million pounds annually, as illustrated in Figure 1. Part of this increase has come about through the development of new farms as lumbering declined, and part of it is due to the more prominent place that dairying now has in the older farming sections of the county. An interesting and important feature, clearly brought out in Figure 1, is the rate of increase which was much more rapid previous to 1925 than after that date. This would give some reason to believe that one must look to less rapid development, as measured by production, in the industry in the county from now on.

A glance at Figure 2, showing the production of milk in thousands of gallons per square mile by townships indicates that dairying is quite general throughout the county and does not center about one or two strategic points. Five of the twenty-five townships are relatively low in the amount of milk produced, while intensity of production is greatest in the southeastern part of the county.

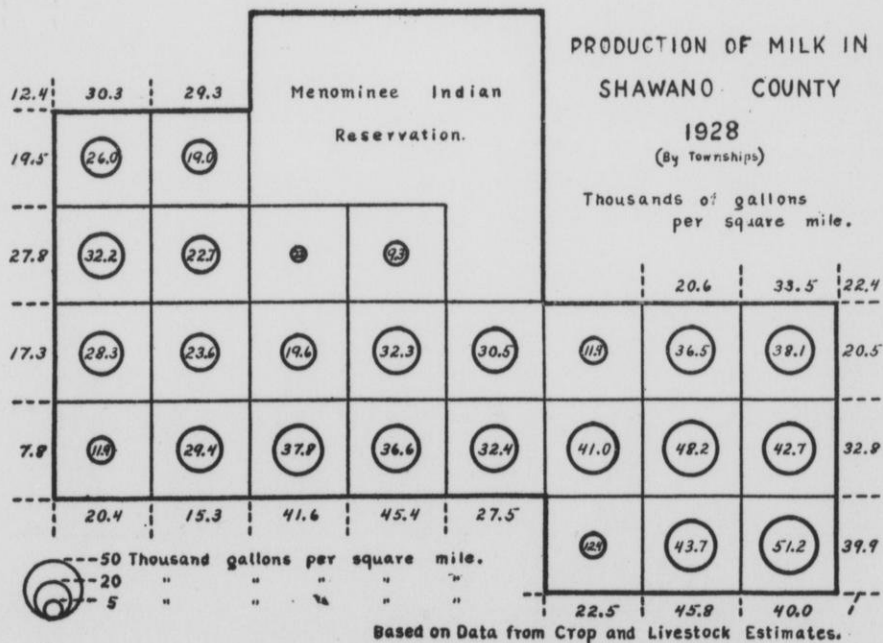


Figure 2 - Production of milk was quite general throughout the county, although it was heaviest in the southeastern townships.

Transportation

Transportation facilities are important both from the farm to the factory and from the factory to distant markets. Most of the milk was brought to the cheese factories by farmers themselves while that going to larger plants, such as at Shawano and at Wittenberg, was hauled largely by commercial trucks. Good roads, while important to both small and large plants, are nevertheless of greatest importance to the factory relying most on commercial trucking. As is pointed out in another section of this report, commercial trucks gathered milk from 85 per cent of the territory.

Shawano county has a network of state and county roads reaching nearly all parts of the county. Four per cent of the farmsteads were on surfaced roads, 56 per cent on gravel and 40 per cent on dirt roads, according to the Crop and Livestock Estimates report for 1927. These figures compare favorably with the average for the state, being lower on paved roads, but higher on gravel in Shawano county.

Two main railroad lines with short branches served the county and connected the principal towns with Green Bay, Fond du Lac, Milwaukee and Chicago. Tank car express rates on milk to Chicago, for example, were 35 cents per hundred pounds compared with 24 cents at Janesville in the southern part of the state.

Dairy Plants in the County

The number of cheese factories in the county, as shown in Figure 3, increased from 62 in 1910 to 109 in 1922, and since then has decreased to 102 in April 1930. Two of these factories were not operating at the time this survey was made but were fully equipped so that they could be operated again on short notice. The cheesemakers of these factories were trucking milk for their patrons to larger plants. Two factories were making brick cheese and the other 98 were making American type cheese.

Eighty-one per cent of the factories were privately owned, usually by individuals. However, in 57 per cent of the total number, farmers were represented at least to the extent of having a secretary or treasurer who figured the monthly statements and issued the farmers' checks. To a considerable degree, then, over half of the factories were operated cooperatively.

In 1910 there were 18 plants manufacturing butter, and one-fourth of the milk was used for this purpose as is illustrated in Figure 3. In 1930 only six factories were equipped to make both butter and cheese, but with one exception, these factories limited their operations mostly to cheese. There are no factories in the county which make only butter.

In addition to the 102 factories mentioned above and classed here as cheese factories, there are three large milk plants at Shawano, Wittenberg and Birnamwood. This latter group is under Chicago inspection and has been disposing of a large part of its milk supply as whole milk, sweet cream, and condensed products. However, during the early part of 1930 the plants at Wittenberg and Birnamwood were making American type cheese and for a short time the Shawano plant was manufacturing cheese. An ice cream plant is also located at Shawano but received its milk supply from other factories. A few scattered cream stations were not included in the description above.

NUMBER OF CHEESE AND BUTTER FACTORIES IN SHAWANO COUNTY

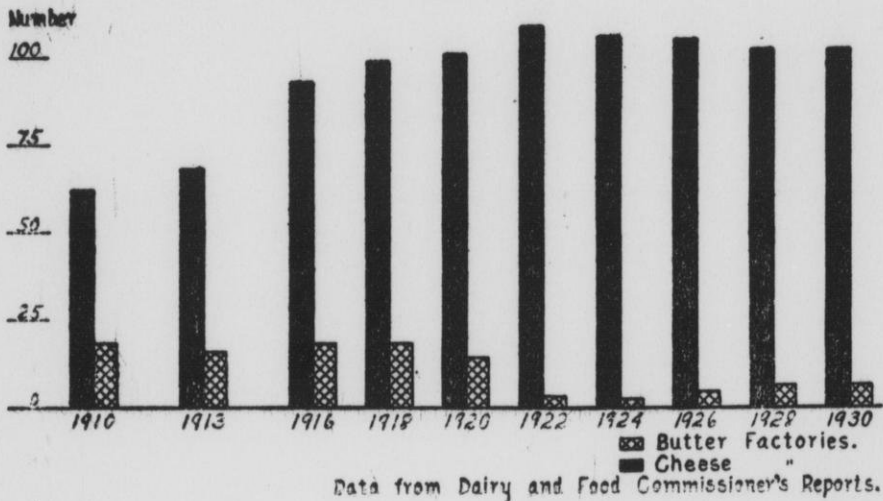


Figure 3 - Cheese factories increased from 65 in 1910 to 109 in 1922 and then decreased to 102 in April 1930. The number of plants equipped to manufacture butter was relatively small during this period.

Competitive Situation

Two main types of factory competition exist in Shawano county - competition among cheese factories for patrons and competition between the large plant, which makes extensive use of commercial trucks, and the small cross-road cheese factory which relies almost entirely on individual or exchange hauling of milk. Figure 4 gives a general picture of the competitive situation. It shows the location of all the cheese factories in the county and the large milk plants together with an outline of the territory which the large plants serve by trucks. As the large circles indicate, there is little competition for patrons in this territory among the larger plants. One exception to this statement is found in recent months in the western end of the county where the Nelsonville creamery draws milk from as far north as Eland, a distance of 30 miles from Nelsonville. The Mosling plant near the northeast part of the county, began operation March 1, 1930.

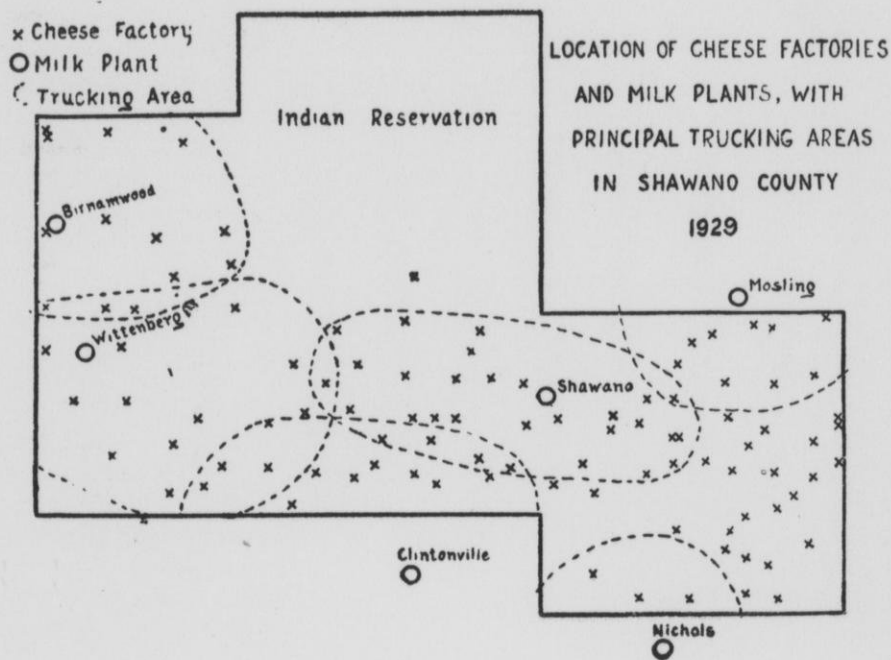


Figure 4 - Cheese factories and large milk plants competed for patrons in 85 per cent of the territory, the latter plants drawing milk from wide areas with the use of commercial trucks. In 31 instances cheese factories were two miles or less distance apart.

The competition among cheese factories themselves should be further analyzed. In 31 places in the county, cheese factories were two miles or less apart. In three instances factories were less than a half a mile apart. Perhaps it is needless to say that some of these factories were not constructed or located in accordance with any real need on the part of the farmers. Some of them were built by individuals or groups of individuals who saw possible opportunities for entering the cheese business and without reference to existing factories and the total production of milk in the region. A few factories were built on account of personal differences among owners or operators and still in a few other instances because of disagreement among the patrons of a factory over the manner in which the cheese should be sold.

Nine companies purchased cheese in the county, but three companies which had warehouses within the county receive this product from 74 per cent

of the factories. They cream was purchased by seven individuals or companies and was gathered by trucks at the cheese factories.

Quality of Milk

Milk is judged as to quality by its acidity, bacterial count, sediment, taste, smell and general appearance. The quality of the manufactured product is also an index, but the grade of workmanship as well as the grade of the raw material enter into the quality of the finished product.

Much discussion has taken place in the county relative to the quality of milk delivered to different types of plants which receive their supply from small or large areas. Some attempt was made in this study to get an index of the quality of milk. In this connection it is well to remember that quality depends more upon the cleanliness of the utensils and the manner in which milk is handled than upon the distance to the factory. City markets are usually more exacting in their quality requirements than manufacturing plants, and moreover, draw milk from greater distances.

Three plants within the county, and two just beyond the county line, are under Chicago inspection and patrons of these factories are required to meet the provisions of the health department of that city. One hundred and forty samples of milk were taken at four cheese factories of varying sizes and one creamery in different parts of the county. Methylene blue tests were made of these samples, and the readings of these tests are shown in Table I. Samples remaining blue over four hours indicate a "good" grade of milk, and those remaining over five hours are of a "fine" grade, of the quality that is usually required in city milk markets.

Table I. - Methylene Blue Tests of Milk at Five Factories

Hours remaining blue	Factory A	Factory B	Factory C	Factory D	Factory E	Total	
						Number	Per cent
1	--	--	--	1	--	1	1
2	--	--	1	--	1	2	1
3	3	--	--	4	--	7	5
4	8	1	7	7	2	25	18
5	3	15	3	2	13	36	26
6 or over	--	1	19	16	33	69	49
Total	14	17	30	30	49	140	100%

While these samples indicate that the bulk of the milk was of a good grade, yet they also lead one to believe that many factories had a few producers who did not meet this standard. This conclusion is in line with the expressions of the cheesemakers themselves, some of whom reported little or no trouble with quality while a large number stated that they could not actually enforce quality standards for fear of losing patrons to competitive factories. The milk inspected was generally satisfactory in regard to taste and smell. No sediment tests were made.

Cheese factory operators claimed varying percentages of cheese in the "fancy" grade. As is shown in a later section, the average price received for cheese for the year varied a great deal among factories and this is further evidence that cheesemakers were not equally successful in securing high grade milk and high grade cheese. Moreover, these data would indicate that over ninety per cent of the patrons bring a good grade of milk and that a quality program would inconvenience only about a tenth of the farmers in the county. This proportion of the milk is, however, sufficient to seriously affect the quality of the remainder when mixed in the vat.

Price Comparisons

Two types of price comparisons appear desirable in this study. One is a comparison of prices paid producers by the large milk plants and by cheese factories, together with a description of the services rendered by them. The second part of the price study is an analysis of the prices paid producers by various cheese factories and of the factors which make it possible for some plants of this type to pay more than others.

A comparison of prices paid by the large milk plants at Shawano, Wittenberg, Birnamwood, Clintonville and Nichols in contrast to prices paid by a representative group of cheese factories in the county needs careful consideration.

The great bulk of the milk going to the cheese factory was hauled by the farmer himself and only relatively a short distance. The whey was returned to the farms. The large plants received milk which was gathered by commercial trucks, sometimes from considerable distance. The cans were washed at the factory, but no whey or skim milk was returned to the farms as was the case with the smaller plant. Opinions will vary as to the value of this by-product and these services, but for comparative purposes 15 cents per hundred pounds of milk or 4.3 cents per pound of butterfat were added to cheese factory prices in this analysis. This was in accord with the common basis of comparison made by farmers themselves.

Table II. Comparison of monthly prices paid by five large milk plants receiving milk from the county and the average of 78 cheese factories during 1929.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Simple Average
5 milk plants	59.4	58.6	57.9	57.2	56.1	55.1	54.0	55.0	56.1	57.8	57.5	54.1	56.6
Cheese factories	52.8	51.7	52.1	50.1	50.7	50.4	46.3	49.0	52.1	53.6	51.2	48.4	50.7
Cheese ¹ factories + 4.3 cents	57.1	56.0	56.4	54.4	55.0	54.7	50.6	53.3	56.4	57.9	55.5	52.7	55.0

¹Four and three-tenths cents per pound of butterfat or 15 cents per 100 pounds of milk were added for comparative purposes because of the estimated difference in hauling cost and value of whey returned to the farm.

On the above basis the five milk plants averaged 5.9 cents over the cheese factories with no allowance for kind of service or by-products. If 4.3 cents (15 cents per 100 pounds of milk) were added to the cheese factory price as an allowance for extra cost in hauling and value of whey, the difference in the type of factories would be 1.6 cents per pound of fat or about 5.6 cents per hundred pounds of milk. Some differential is logical because the five large plants were under Chicago inspection and presumably had more exacting requirements as to the care of the milk. Moreover, it is well to remember that this comparison is on the basis of the average for each type of plant represented here, and individual plants may be higher or lower than these averages.

Prices Paid by Cheese Factories

Cheese factories vary widely in the prices they pay producers for milk. This is clearly brought out in Table III. which shows that prices ranged from 47 cents to nearly 54 cents per pound of butterfat as a yearly average per factory, or a range of nearly 25 cents per hundred pounds of milk. The factors bringing about this difference in prices warrant considerable study. Data covering a longer period of time might be desirable but there is little reason to believe that the conclusions would be altered. Comparisons were made here on the basis of price per pound of butterfat, because with the exception of one factory making brick cheese, all dairy plants in the county used the straight-fat method in paying producers.

Table III. Number of cheese factories paying various prices per pound of butterfat to producers during 1929.

Price in cents	47-47.9	48-48.9	49-49.9	50-50.9	51-51.9	52-52.9	53-53.9	Total
Number of factories	7	10	15	19	18	10	4	83
Per cent	8	12	18	23	22	12	5	100%

A grouping of the prices paid producers by size of factory as shown in the scattered diagram in Figure 5, brought out two very important things. Within any group of factories of the same size there was a wide variation in the prices paid producers. This range was so great in the case of factories having a volume of milk from one to one and a half million pounds annually, that two factories within this group paid a difference of six cents per pound for butterfat or over twenty-one cents per hundred pounds of milk.

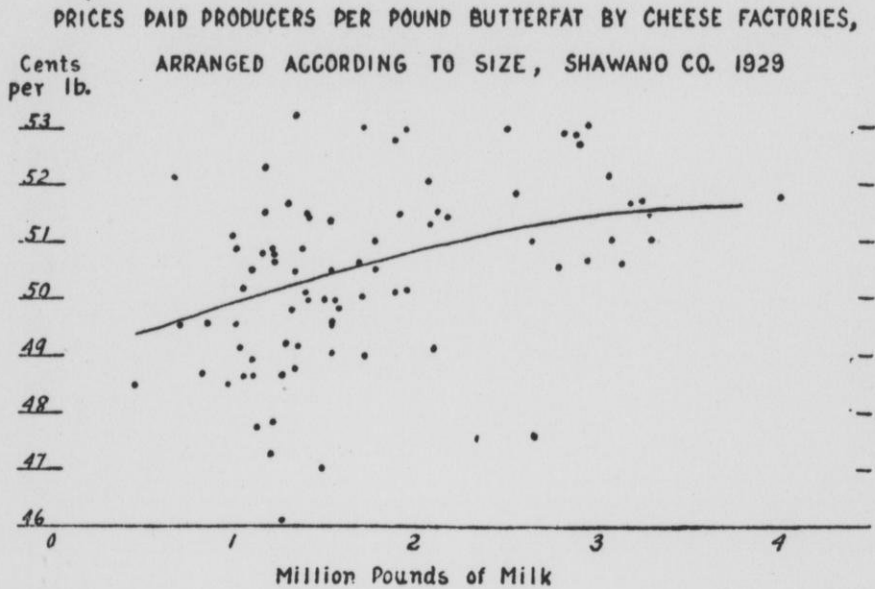


Figure 5 - A wide variation was found in the prices paid producers by cheese factories. The largest cheese factories as a group paid the highest prices, but there was also a wide range with each size group.

The second important factor illustrated in Figure 5, was the tendency for the factory with a large volume of milk to pay producers a higher price than the factory with a small volume. Every factory having 2,750,000 pounds of milk or more, paid above the average of the 83 factories. The factory with the large volume was therefore in the best position to meet competition effectively. The importance of volume in efficient operation can scarcely be denied. Several instances were found where cheesemakers had voluntarily cut their allowance for making one-eighth to one-half cent per pound of cheese in order to maintain their volume. Where trucking was attempted, the factory association or the cheesemaker himself frequently paid part of this cost, because of the advantage of a larger quantity of milk. Seven of these 83 cheese factories had less than one million pounds of milk each, 7 had between three and four million pounds each, while the average for the entire group was 1,748,000 pounds.

Manufacturing Costs

The costs of manufacturing cheese, like the prices paid producers,

vary widely among plants. Only part of this variation can be explained by the size of plant, altho there is a pronounced tendency for the cost to decrease as the size of the plant increases. This is more clearly demonstrated in Figure 6. The importance of a fraction of a cent per pound of cheese is more clearly appreciated when it is remembered that the yield of cheese is roughly 10 pounds per 100 pounds of milk or 2.7 pounds of cheese per pound of butterfat.

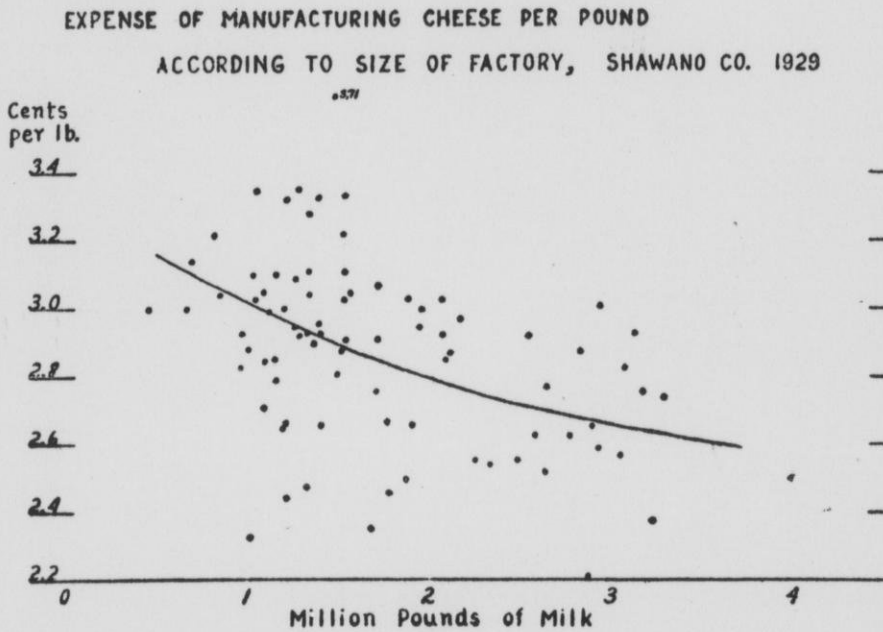


Figure 6 - Cost of manufacturing cheese tended to decrease as the volume of milk per factory increased. The average factory with three million pounds of milk, manufactured cheese at .33 cents less per pound than the typical factory with only one million pounds of milk annually.

In some instances the plant operator, who is frequently also the owner, was willing to accept a low operating commission in order to meet competition and to continue the use of his plant and to maintain his home in connection with it. One must admit, then, that a major part of the operating costs discussed in this analysis were more truly manufacturing "charges" which would likely differ somewhat if these men were more free to move from one place to another. It is interesting to note that three operators had a gross income for labor,

plant and equipment of less than \$2000 during 1929. One of these factories with a volume of milk considerably less than one million pounds operated for a payment of two cents per pound of cheese and half the whey cream. On the other hand, four operators had a gross income of between nine and ten thousand dollars. No further discussion is given of the total income of operators as it is believed that the cost per pound of cheese is a better basis of analysis.

The fat content of milk was found to be a factor which influenced the price relationship among some of these factories, inasmuch as the yield of cheese per pound of butterfat tended definitely to decrease as the test increased. This is illustrated in Figure 7. A factory receiving milk testing 3.9 per cent fat was therefore at a disadvantage in a comparison of prices paid producers with a factory of the same size receiving milk testing 3.4 per cent fat. This difference in the cheese making properties of milk is likewise a factor in determining the proper basis for payment to patrons of a single plant.

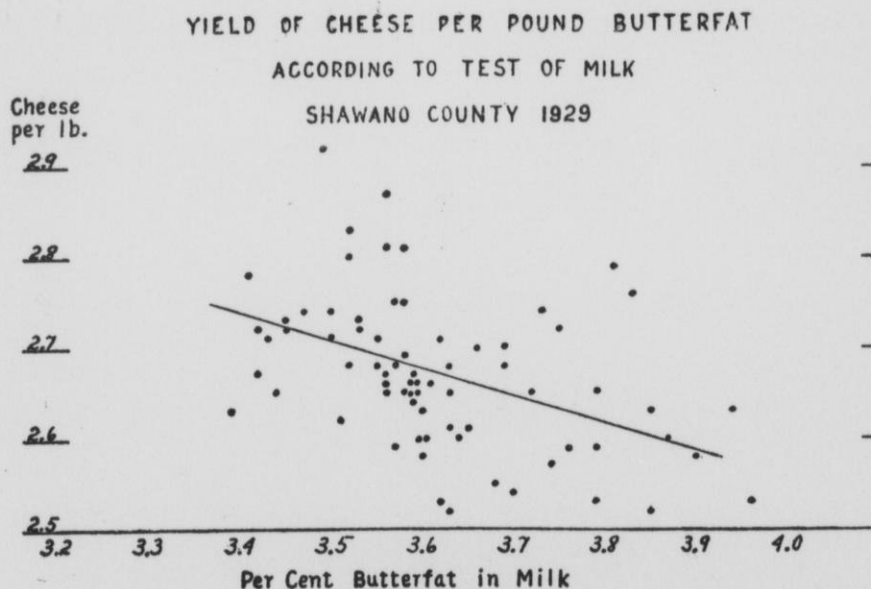


Figure 7 - Yield of cheese varied widely among cheese factories. One reason for this variation is that the total solids in milk do not increase in direct proportion with the fat content and the yield of cheese per pound of butterfat therefore tends to decrease as the test of the milk increases.

Among these factories, however, there was no relationship between the fat content of milk and the size of plant. The price received for cheese by the various factories showed no relationship with test of milk; cheese made from 4 per cent milk brought no higher price than cheese made from milk testing 3.3 per cent fat.

Another factor which influences manufacturing costs, and to some extent also the prices paid patrons, is the style of cheese. All the factories made American type cheese such as daisies, cheddars, loughorns and a few miscellaneous styles. While this factor would lend itself to a detailed analysis, it is not of special interest here. Perhaps it is sufficient to state that the general conclusions presented would not be altered by the style of cheese and that factories making these respective styles were well scattered among size groups. For example, a scattered diagram of 40 factories making "daisies" showed a distribution not unlike Figure 6 which includes 83 factories with all styles represented.

There appeared to be little relationship between size of factory and price received for cheese among these plants. There was, of course, considerable variation within these groups and the price received for cheese by 40 factories making daisies ranged from 19.1 to 21.8 cents. This appeared to be due to grades and to quality premiums, and not due to size of plant. In other words, the size of plant was not a sufficient bargaining factor to be of importance in selling cheese. The larger plant, however, because it was able to get a slightly higher yield of cheese from a given quantity of milk, had greater total receipts per pound of butterfat. The higher yield in the larger plant is probably due to less proportional mechanical loss in handling. The yield of cheese in its relationship to size of factory is illustrated in graph "C" in Figure 8. Moreover, this increased yield could not be attributed to differences in test of milk, inasmuch as the test did not vary with size of plant.

Just how large a cheese factory should be to most efficiently manufacture cheese is not shown in this study, because the manufacturing cost still tends to decline among the large cheese factories included in this study. It is quite likely that this tendency extends somewhat farther.

A factor that will have an important effect on the economical size of plant is the hauling cost. Only 12 factories reported using or having used commercial trucks for gathering milk and only two of these were able to keep the trucking charge down to 10 cents per 100 pounds of milk. Ten cents was the common deduction from the patron's check where trucks were used in assembling milk, but the factory association or cheesemaker provided an additional amount either as equipment, gasoline and oil or in cash payment. It is therefore evident that if commercial trucks are to be used in gathering milk for the cheese factory very careful routing will be necessary to keep the total expense down to 10 cents. The more common total hauling cost was 15 cents to these plants.

SUMMARY CHART SHOWING FACTORS AFFECTING PRICES PAID PRODUCERS, ACCORDING TO SIZE OF FACTORY SHAWANO COUNTY 1929

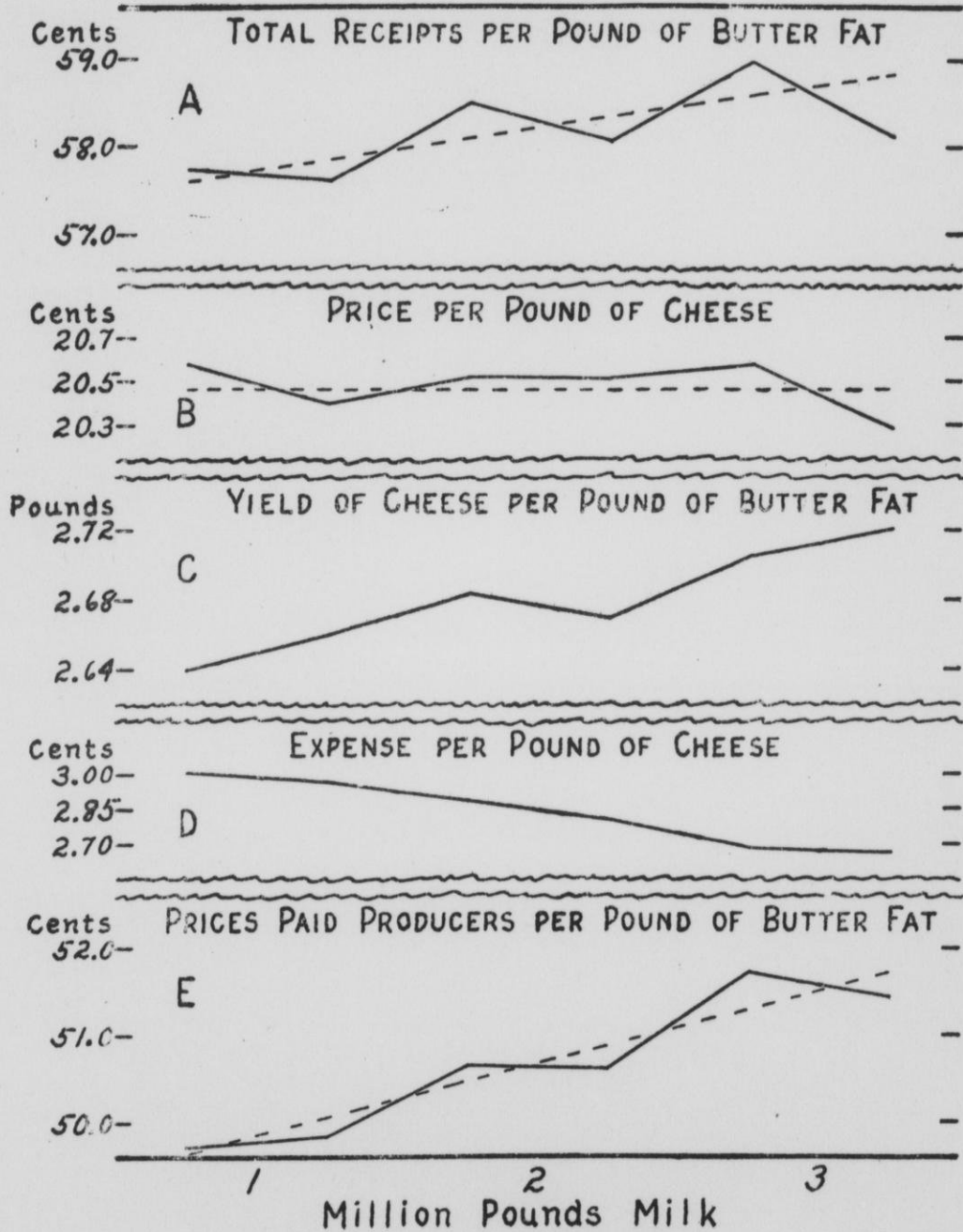


Figure 8 - Size of factory was found to be an important factor in the operation of cheese factories. Graphs A, B, and C show how size affected the total factory receipts, largely because the yield of cheese tended to increase as the volume of milk per plant increased. The tendency for expenses to be lower in the larger factory is shown in graph D. The combined effect of all factors on the prices paid producers is shown in graph E.

General Factory Conditions

Some attempt was made in this report to analyze the general cheese factory conditions in the county as these general factors also have a bearing on any program that might be developed. As stated earlier, Shawano county is one of the leading cheese producing counties in the state. Among the cheese-makers in the county there are a few who have won wide recognition in state and national cheese contests. A few factories in the county have won prizes for beauty and attractiveness. In classifying 100 of these factories according to general upkeep of the plant, sanitation and general attractiveness, the authors of this report classed 8 as "poor," 42 as "fair," 38 as "good" and 12 as "very good" or "excellent." For assessment purposes 97 of these factories were valued by the assessors for 1929 as follows: three less than one thousand dollars each, 29 from one to two thousand, 26 from two to three thousand, 18 from three to four thousand, 12 from four to five thousand, and nine over five thousand dollars each. Five of these larger factories were constructed of hollow tile and each of the five plants had a capacity of from 15,000 to 30,000 pounds of milk per day. Four were equipped with ice storage and ice cooled, curing rooms.

Summary

An important problem facing the Shawano county farmer in the marketing of his dairy products is whether or not he should support a plan of consolidating and making larger the cheese factories in the county. Figure 8 containing graphs A to E, shows how size of plant was an important factor in the operation of these factories during 1929. The price received per pound of cheese as illustrated in graph "B," had little or no relationship with size of factory, the selling problem appeared to be one of wider scope than that of the individual cheese plant. Yield of cheese as shown in graph "C," increased slightly with size of factory and caused the total receipts per pound of butterfat also to increase. Manufacturing expense, see graph "D," which includes here all expense connected with the operation of the plant, tended definitely to decrease with size of plant even to the largest factories included in this study. The larger cheese factories as a group also paid producers higher prices for milk than those with small volume. This is indicated in graph "E." The average cheese factory receiving 3,000,000 pounds of milk paid producers about one and one-half cents more per pound of butterfat or five cents more per hundred pounds of milk than the average plant with only 1,000,000 pounds of milk. Factories within each size-group also showed considerable range in costs and prices.

Whether or not these respective cheese factory associations should be united into a county organization to pool factory receipts and expenses, and to pay uniform prices to producers, is a matter of policy on which this study can give little direct light. The feasibility of using the cheese factory as a receiving station for a larger plant is questionable because of extra plant and labor expense. This practice is very limited at the present time. The manufacture of whey into commercial products is still in its early experimental stage both as to market uses and cost of manufacture, although it holds interesting possibilities for future development. If equipment and

plant are provided for the drying or condensing of whey, it should be done with an understanding of the business risk involved. The estimated value of this product for feeding purposes varies widely among farmers in the county and from season to season. Probably one-fourth of the whey in the county is now wasted.

It is significant that cheese factories in the county have been decreasing in number and in amount of cheese manufactured since 1925, and that these factories have not been equally successful in meeting the competition of the larger plant. The most successful cross-road cheese factory, from the standpoint of prices paid patrons, appears to be the one that has at least three million pounds of milk annually and secures its patronage from a nearby, compact territory.

If a close, compact factory set-up of this type is to be worked out, it would seem to the interest of the farmers to have more cooperative effort as assurance that the benefits from such a program will reflect to them in higher prices. Membership agreements or contracts should be considered as a means of adding strength and permanence to any association that might be formed.

On May 13 ten men from Shawano county came to Madison to consider the report and to meet with representatives of the National Cheese Producers' Federation, the sales association with which a hook-up was anticipated. This conference closed in a manner quite unsatisfactory to the Shawano group. They voiced discouragement and some a notion to discontinue the project.

The superintendent met informally with some members of the group and urged a study of the situation and an approachment to the National Cheese Producers' Federation.

The result was a meeting at Shawano on May 28 attended by about twenty leaders from about Shawano county, representatives of the Cheese Federation, a representative of the department of Agriculture and Markets and Mr. Froker and the superintendent from this department. This meeting changed the complexion of things considerably and better relations between the Badger Cooperative Consolidated and the Cheese Federation.

Before any further educational effort should be made, the set-up and aims of the Badger Cooperative Consolidated should be clarified and perfected.

The Darlington Project

some 170 swiss cheese factories have joined the National Cheese Producers' Federation. As soon as a number of these factories had joined, the benefits of cooperation began to appear in different forms. The whey cream problem was solved in a unique way.

There was a building at Darlington which was available for butter manufacture. The Cheese Federation wanted the matter looked into and Mr. Froker and Mr. Sondergaard were soon on the job.

As the result of their review of the situation the building was secured and equipped to make whey cream into butter. Whey cream has been gathered from a large number of cheese factories and very fine butter has been made. The Federation employs the Land O' Lakes Creameries Inc. to sell the butter.

A copy of the survey and a letter from the general manager of the National Cheese Producers' Federation, showing how the survey was accepted, follow:

Darlington Creamery Company

A. H. Krog, Manager, Darlington, Wisconsin

Equipment of plant:

- 1 - 15 H.P. Horizontal boiler bought April 1929, not insulated.
- 1 - 6 H.P. " steam engine, only used in emergency.
- 1 - pump and jack, water supply state tested, pure and good supply for present use.
- 1 - ice box, inside dim. 8 x 11 ft., holds 100 tubs when full, use ice bunkers.
- 1 - National cash register (old).
- 6 - 90# Friday butter boxes, 3 new, fair to good condition.
- 2 - 300 gal. Wizzard ripeners, poor condition, 1 out of order.
- 1 - 300 gal. Simplex churn No. 9 cast frame, good condition, speed too low.
- 1 - 38 bottle Facile steam turbine tester, good condition. glassware for tester.
- 1 - 4 bottle Torsion cream test scale - old - fair condition.
- 1 - c. p. Automatic acidmeter (acid test).
- 1 - 700 lb. Howe platform scale, cream scale - slow action. Fairbanks platform scale - old - of little value.
- 1 - 30 lb. hanging butter scale - good condition.
- 1 - 5 H. P. Three Phase motor - 7 or 8 years old - good condition.
- 1 - wash tank - fair - old.
- 50 - 10 gal. cans - fair to good condition
- 1 - 2000# Ford truck, Warford Trans., 1924 model.
- 50 ft. 3/4" hose with connections, good condition.
- 2 - steam radiators.
- 1 - rotary butter - milk pump - good condition.
- 1 - office desk and chair.
- 1 - check protector.
- 1 - square D. safety switch.
- 1 - acid siphon.
- 1 - water tank - 600 gallon, steel tank, fair.
- 1 - buttermilk tank - 400 gallon, vertical, heavy stave, practically new.
- 2 - line shafts with pulleys and belting - only fair, ceiling very poor and sagging.
- 1 - set pipe tools - Toledo, complete.

Land and Building

Lot

On paved street - 1 block off of main street.
Rather low and water backs up into creamery in spring.
One block from river.
Unattractive surroundings - old iron junk pile in the rear on adjacent lot.
Not well suited for new creamery, because it is off the railroad and a little too low.

Building

Old frame building.
40x60 feet.
Connected with city sewerage and city water.
Well in creamery - 70-80 feet deep, 6 inch tubular well.
Roof in very poor condition - will have to be resingled before it is suitable for use.
Weigh room very poor - needs repair.
Smoke stack made of brick, 35 feet high; it seems to give good draft although a little small.
Upstairs floor of creamery is rotted in places and needs repair and bracing.
Inside walls lined with matched lumber.
Floor in fairly good condition.
Building and engine room need more light.

Making about 75,000 pounds of butter annually.

From the above description of this property, you will note, it is not very satisfactory for a creamery making about 400,000 pounds of butter annually. However, it can be repaired and equipped to serve this purpose for a while. We believe that before the building is suitable for use the roof must be resingled and the ceiling supported and new timber put in where it is rotted under the water tank. The present weigh room is badly rotted and should be torn down and an outside weigh room built in its place so as to leave more room in the creamery.

The interior equipment might be rearranged to more efficiently utilize floor space and make room for a new churn which may be needed in the near future. Cream ripeners are in poor condition and it would be desirable to put in a large one immediately.

It is reported that the owners are willing to rent this property in its present condition for \$125 per month or sell for \$5500 cash or \$6000 option. However, this is not given as final. The rent is unduly high in relationship to the cash offer. Moreover, if the property is to be rented the two parties should take into consideration the repairs and improvements that appear necessary to put the plant in efficient working order.

H. T. Sondergaard

R. K. Froker

December 24,
1929

Mr. F. A. Corniea, Manager
National Cheese Producers' Federation,
Plymouth, Wisconsin

Dear Mr. Corniea:

We herewith enclose a report of our call on the Darlington creamery. In addition to the general report we wish to make a few private statements for your benefit and for the farmers involved.

The creamery building is old, and at best is suitable only for temporary use covering a few years. If one should contemplate buying he could hardly consider the location as the best for a modern dairy plant, mainly because the lot is low and off the railroad. The price is high, considering that the building is so old and there is little machinery in it of real value. You will note that there is only one of the cream vats in use and the coils of this one leak, so we believe it would be useful only for second grade cream. Therefore, you will need a good sized cream vat at the start.

Regarding the Simplex churn, it can well be stated that its working and turning speed is very low, and we doubt if it will incorporate necessary moisture at working speed. If you expect to have a fair sized run we believe you will want another churn immediately and you can use the present one for emergency. You will note that the boiler is small, but it is probably large enough to start with, and it is in good working order.

It may interest you to know that the assessed valuation of this property is \$4650, with the lot listed as \$600, improvements \$3400, and personal property \$650. We believe that this figure will be high for its actual resale value. The property tax in 1927 was \$126. There was a \$500 pavement assessment against this property last year, and it may be well to keep this in mind if purchase should be contemplated.

In regard to buying or renting this plant, we would rather favor renting it for the present and delaying purchase, if at all, until your business is well established in the community.

We trust that this report may be of some value in making a decision regarding this property.

Yours very truly

H. T. Sondergaard

R. K. Froker

RKF:m
Encl.

NATIONAL CHEESE PRODUCERS' FEDERATION

(Incorporated)

(Co-operative)

Main Office
Plymouth, Wis.

December 26, 1929

Mr. R. K. Froker
College of Agriculture,
Madison, Wisconsin

Dear Mr. Froker:

We thank you very sincerely for your very good report covering the proposed creamery enterprise at Darlington, Wisconsin.

Without question, the only use that could be made of the present plant and equipment would be as a stepping stone to something better.

We feel however, that before we should risk an investment in a new modern plant, we should get the temper of the farmers toward cooperative enterprises such as this and learn something about the quality of the cream being produced as well as other factors which must be taken into consideration before a heavy investment is justified.

We thank you sincerely for your prompt reply to our request for assistance and will keep you advised as we go along of all developments.

Yours truly,

NATIONAL CHEESE PRODUCERS' FEDERATION

F. A. Corniea (Signed)

General Manager

FAC:B

The creamery has been running and producing whey cream butter, a considerable amount of which has scored 93, as graded by the Land O' Lakes Creameries Inc., which is employed by the Federation to market the butter.

Creamery Projects

When a creamery applies for assistance Mr. Sondergaard and the superintendent go over the matter carefully and arrange to do the work.

Two letters which Mr. Sondergaard wrote to the secretary of the creamery at Cashton will indicate the nature of the work done.

June 3, 1930

Mr. Henry N. Erickson, Secretary,
Cashton Cooperative Creamery Co.,
Cashton, Wisconsin.

Dear Mr. Erickson:

I wish to give you an outline of the work for the three days I spent at your creamery checking up on the overrun, composition of the butter, etc.

I made out a short receiving and daily composition record for the creamery, and I left a copy of this with Mr. Mac Mullen and asked him to show this to you. I am inclosing a report of my findings at this creamery for your files. Kindly note that on Vat 3, May 27th, I have reported the fat content as 82, but it should have been 80.2. You will note that I have spaced this report in four parts. The first space shows the receiving of the cream, the butterfat, the butter and the percentage of overrun. In the second space, the report shows the temperatures and the tests of the buttermilk and skimmilk. The third space is devoted to the composition of the butter, and the fourth is a space for recording the stock in the refrigerator. I carried out in this department the number of tubs in the creamery and added to this amount every day the number of tubs made to show the boys that it would be well to have a place to figure the tubs and always to know what was in the refrigerator. I wish to say that Mr. MacMullen is doing that work now, but I think it would be a little more plain if he had a daily record stock account.

I would also suggest that you have a daily record stock account of the prints in the creamery. For instance, the amount of butter in prints in the morning of June 1st is _____. Then add the amount of butter printed to this and also subtract the amount of butter sold so that you will always know the amount of butter on hand when closing the creamery and when opening it in the morning. Mr. MacMullen is keeping such a record, but I think it could be improved.

I might give you some suggestions about the working of the plant. For testing cream, I believe it would be well to use Red Reader so as to check over the test and see that the patrons get all that is coming, but not any more.

I find that the tester is wobbling considerably and that too much steam is leaking into the tester. In this way, there may be a danger of getting some of this steam in with the butterfat and reading the test too high. Then, too, there is no speedometer for the tester, and there may be a danger of not running it fast enough so as to get a complete test. The can steamer valve is leaking considerably so that the steam is shooting way up, and no doubt, if this keeps on, the plaster will fall down. If it is hard to get a foot valve on there, you might put on a common check or globe valve.

It would be nice if you could get a painter to paint the cream vat and churns and also get the number 4 cream vat piped up so that it could be used. It is needed in the business. I notice that at times they have to fill the churns overnight which is not good for the churns or for the quality of the butter. I was asking Mr. MacMullen about when they would have time to paint over the vats and churns and some of the pipes, and he said that they could not do it this summer. You have such a nice creamery, and no doubt you will agree with me that the little work required for the finishing touch would be very valuable.

In regard to the overrun in the creamery, I might say that it is more a question of finding time for carefully weighing the cream into each vat and taking a sample of the cream to test, calculating the butterfat in each vat and also weighing up the butter from each vat to figure the overrun each day which you will note that we did during my visit to your creamery and then too it is important that the composition of the butter be watched very carefully, and not only that the tests be made, but a complete record kept of all the tests which are made, as you will note in my daily composition record.

In connection, with this, it is important to have a salt test. A salt tester can be bought for a few dollars. In taking the salt test, we just add 90 cc. of water to the butter that has already been tested for moisture and use a 9cc. pipette, put it into a white cup and titrate with the salt solution. This test is very quick and accurate. The way we took the salt and casein test was by the gasoline extraction method which is much slower and so the boys will not get time to take this test very often.

The Land O' Lakes Creameries Inc., have a daily churn account which is quite simple and good, and is in book form. A carbon sheet can be added for the creamery and one for the secretary for the whole week's work. Keeping such a record will certainly give you a good check-up on the overrun. This book is about 75¢ and will last for nearly a year.

Regarding the butterfat coming from the milk plant over into the churning plant, I wish to say that one day we took a drip sample from the milk so as to ascertain the average test of the milk and also weighed the cream so that we figured out the amount of butterfat received. We also took a sample of the same cream for testing and checked that amount and the amount of fat in the vat as compared with the amount of fat received. This did not check so very well. However, there was only 34 pounds of fat difference which is considered quite good when we have only one test of cream to go by.

In checking daily composition and overrun in a big plant like yours, you will understand that it takes some time, and the two men in your creamery are quite crowded with work. Money they had seven churnings, besides weighing in the cream, pasturizing it and printing a little butter, etc., so that I believe that it would pay you to get a boy for the summer to help you in the churning plant so that Mr. MacMullen will have time to do the work up in the way it ought to be done so as to prevent losses which you are very liable to have if the overrun is not carefully figured in each vat and the composition of the butter is taken before the butter is

packed so that you are sure that there is no less. At the present time, the boys are testing for moisture only, but as a rule the test is made after the butter is packed so that it would be too late to correct the composition. By having a boy come in during the busy season, there would be more time for all to give in cleaning up in the plant which also is important in creamery work.

I am inclosing a little cut of a bench for use in front of the churns for packing the butter. We find it right handy where there is lots of work in the creamery. It saves considerable work in getting the butter out of the way and getting the churns ready for the next churning. Mr. MacMullen figured out that this table will hold a full churning of butter, but of course I cannot say whether you want such a bench or not. I will leave this for your consideration.

I trust that you will consider all these suggestions as given by an outsider and that this creamery work is your program and not mine. I was simply working for you for a few days, and I am herewith giving you a complete report and trust that you will take it in the same free spirit as it is given and not as a criticism.

I shall keep your plant in mind, and when an opportunity avails itself, I shall call again to help the boys and to see how they are getting along.

Very truly yours

(Signed) H. T. Sondergaard

DAIRY EXTENSION SPECIALIST

HTS:RN

date	Moisture	Salt	Casein	Fat	Total	Tubs butter on hand	Tubs butter made	Total tubs butter	Boxes
ay 27	15.8	3.5	Casein	80.7	100				
	2-16.0	3.80	"	80.2	100				
ay 27	1-16.0	3.80	"	80.2	100				
ay 27	15.8	3.5	"	80.7	100	P.M. 204	30	234	
at 1	15.8	3.4	"	80.8	100				
ay 28	15.8	3.5	"	80.7	100				
at 2	16.0	3.3	"	80.7	100				
ay 28	15.6	3.2	"	81.2	100				P.M. 3
								A.M. 234	
								P.M. 273	4

date	: Churning :	pounds :	Test :	Butter :	Butter :	% Over :	Cream :	Temp. :	Temp. :	Test
:	: Cream :	:	: fat :	:	:	: run :	: Cooled :	Butter :	wash :	Butter
:	:	:	:	:	:	:	to :	milk :	water :	milk
ay 27:	Whole Milk	: 20,284 :	Drip: 3.55	: 719.3 :	925 :	24.32 :	41 :	53 :	52 :	S.M. .03 15/100
ay 27:	vat 3	: 3,788 :	26.0 :	984 :	1216 :	23.67 :	46 :	54 :	54 :	20/100
ay 27:	Whole Milk	: 2,657 :	28.0 :	743.9 :	925 :	24.32 :	41 :	53 :	52 :	20/100
ay 28:	vat 1	: 2,581 :	28.0 :	722.5 :	884 :	22.4 :	41 :	53 :	52 :	20/100
ay 28:	vat 2	: 2,702 :	26.0 :	702 :	830) :	23.6 :	46 :	56 :	52 :	---
ay 28:	vat 3	: 3,672 :	25.0 :	917 :	1183) :	46 :	57 :	52 :	52 :	---

C O P Y

July 24, 1930

Mr. Henry N. Errickson
Secretary
Cashton Cooperative Creamery Company
Cashton, Wisconsin

Dear Mr. Errickson:

As you know, I worked several days last week with your men in your creamery, mostly for the purpose of checking up over-run and assisting them in producing the right amount and a uniform over-run from time to time.

The first work done was taking the compositions of churnings made July 15th, which were as follows:

Butter Composition

No.	Moisture	Salt	Casein	Fat
1	15.8	---	---	---
2	15.9	2.8	1.0	80.3
3	16.2	2.7	1.0	80.1
4	15.8	3.5	1.0	79.7
5	15.8	4.0	1.0	79.2

You will note that the percentage of fat in these churnings are not very close to the 80 per cent mark, and two a little below. I cautioned Mr. McMullen in not going below the 80 per cent fat mark, because it might cause you considerable trouble.

I was very pleased to note that you had secured a salt test, because we can determine much quicker the correct amount of salt in the butter.

The same day we added up the milk from the milk plant and took composition trip sample of the same so as to ascertain the amount of butter fat received for the day. The following day it was my intention to have the cream from the milk plant and the separator cream received churned separately, so as to check over the over-run separately, but evidently Mr. Allen did not understand that it was mixed in the morning. This caused a little trouble in estimating the correct amount of fat in each churning. The record of the following day's report is as follows:

Butter CompositionMilk Composition

No.	Moist.	Salt.	Casein	Fat	Lbs. Milk	Test	Fat	But- ter	Skim- milk test	B. M.	Total over- run.
2	15.9	2.8	1.0	80.3	18,104	3.9%	706	174.6	.02	.36	23.9%

Cream Department

1 2812 pounds 25 per cent test 703.

Regarding checking over-run in the factory, I might state that the churner, who is only doing the churning, could only guarantee the composition of the butter he makes, so that it looks as though the plant manager has a decided responsibility regarding the over-run as he has charge of the weighing of milk, the testing of the milk, thoroughly separating the fat from the whole milk, correct weighing of the cream, and correct testing of milk and cream. All of these factors enter into the over-run question.

I note that in testing milk and cream, I was glad to see that they were using the red reader and have a very nice test. It looks to me that if the over-run problem is watched on every point, that you should have no trouble in securing the correct percentage of over-run.

I should be pleased to hear from you how this work is going, and should you desire my assistance at any future time, please be free to write to me.

With kindest regards, I am,

Very truly yours

(Signed) H. T. Sondergaard

HTS:MS

Dairy Specialist

Surveys

It is encouraging to find that farmers want to know before they leap.

This year we were asked to make four surveys. These were made in Langlade and Shawano counties and in the vicinity of Osseo and at Darlington. The one in Langlade county and at Darlington bore fruit and substantial enterprises are now under way as the result.

A survey of the Rhinelander milk shed has been asked with the view of determining what should be done for dairymen in the resort section of Oneida and Vilas counties. This will be made by Mr. Froker and Mr. Sondergaard in the early fall with the view of a marketing institute at Rhinelander if such a project seems wise.

There are several other communities which are considering reorganization of their cooperative enterprises and which will require surveys if they conclude to go ahead. As this work becomes better known there will surely be a lot to do along this line.

The Dairy Marketing Survey in the Osseo Vicinity

There is a private dairy plant at Osseo. It is a rather well appointed structure capable of shipping fluid milk and condensing the surplus.

In the general tax increase which has been necessary the plant has objected to increased assessment claiming that net returns did not warrant appreciation of physical valuation.

This appeared to offer opportunity for farmers to secure the plant and thus have control of quite a large section without having the distraction of private competitive operation to contend with.

A request for a survey was made. As this is a butter territory the number of plants was sufficiently small to permit a survey, in the limited time at our disposal, sufficiently comprehensive to supply the farmers interested with information enough for a basis of judgment whether the undertaking of purchasing and operating such a plant would be favorable to success. The project included the abandonment of a number of small creameries in the vicinity.

The survey and suggestions thereupon follow:

DAIRY MARKETING IN OSSEO VICINITY

A brief survey of the feasibility of consolidating existing creameries

Osseo appears to be a natural concentration point for a rather large quantity of milk. There is a condensary and a creamery located in the town of Osseo and four other creameries within a radius of ten miles.

A ten mile radius includes an area of 315 square miles or sections. This area around Osseo produces annually about 75,000,000 pounds of milk from 15,000 cows. It would seem reasonable to expect that half of this total production could be brought to a central lo-

cation by a well organized cooperative, and this would give considerable operating margin. Production is heavier west and south of Osseo than north and east.

Transportation facilities are good. A system of gravel and improved roads link the surrounding farms with Osseo. Six trunk highways enter the city from different directions. Two mixed trains daily connect the town with the main road of the Northwestern Railway at Fairchild.

Osseo, York, Price, Foster and Allen creameries have each an annual output of about 250,000 pounds of butter. The Osseo condensary handled the equivalent volume of about three of these creameries in 1929 which is clearly well under its capacity. Some consideration might well be given the purchase of this plant by the farmers if the creamery associations should be consolidated.

The Osseo condensary, owned by the United Milk Products Corporation, was built in 1918. Considerable improvement in the manner of machinery and additions have been made from time to time. In 1927 a 100 foot smoke stack was built, and in 1929 a new wing, 48 feet wide and 100 feet long, was added to east end of the plant. The building is well constructed, light and neatly kept. It is in very good condition and could be made to handle upwards of 200,000 pounds of milk daily. The plant is reported to have been a losing proposition for its owners chiefly because of lack of volume. The building is constructed of brick and it is reported to have a good supply of fine water from two wells. It is well located and appears to have good drainage.

The creameries in and near Osseo are comparatively small in volume of business. Their buildings, with one exception, will need improvement in the next few years. If these plants could be combined and a large plant, such as the Osseo condensary building,

purchased or constructed and operated at capacity by a large farmers' cooperative, the association could reasonably expect to save from one-half to one cent per pound of butterfat in manufacturing costs and would be in a better position to manufacture the by-products economically and to take advantage of favorable market contracts.

R. K. Froker

May 12, 1930

H. T. Sondergaard

The plant was approached by the farmers interested, but exigency did not appear sufficiently acute to the owners to interest them in the disposal of the plant. Probably the assessment will stick.



Marketing Insts.
• One-Day
◦ Two-Day
○ Three-Day

Cooperative Marketing InstitutesThe Cooperative Institutes Staff

The following persons appeared on the programs of the cooperative institutes:

Marketing Institutes Staff

E. L. Luther, Conductor, Superintendent Farmers' Institutes, Madison
 H. W. Ullsperger, Conductor, Door County Fruit Growers' Union, Sturgeon Bay
 Rudolph K. Froker, Economist, College of Agriculture, Madison
 Marvin A. Schaars, Economist, College of Agriculture, Madison
 H. T. Sondergaard, Dairy Specialist, College of Agriculture, Madison
 J. M. Coyner, Wisconsin Meat Improvement Council, Madison
 Chas. D. Egley, Manager, Farmers' Union Live Stock Commission Co., South St. Paul, Minn.
 Peter Gilles, Manager, Farmers' Union Association, Plum City
 B. E. Billington, National Cheese Producers' Federation, Wausau
 John Hvaas, Kennan, Wis.
 H. W. Stiehm, Catawba, Wis.
 Alex Johnson, Land O' Lakes Creameries Incorporated, Minneapolis, Minnesota
 Frank Stirratt, Prescott Cooperative Creamery, Prescott
 F. G. Swoboda, National Cheese Producers' Federation, Plymouth
 Charles Grode, Director, National Cheese Producers' Federation, Kaukana
 Jens Jensen, Director of Land O' Lakes, Luck, Wisconsin
 Henry Arens, Land O' Lakes Creameries Incorporated, Minneapolis, Minnesota
 E. E. Kennedy, Farmers' Union Live Stock Commission, Chicago, Illinois
 A. J. Brovold, Director District 24, Land O' Lakes, Ettrick, Wis.
 A. C. Johnson, Northern Wisconsin Cooperative Tobacco Pool, Madison
 W. B. Ogden, Specialist, College of Agriculture, Madison
 James Johnson, Specialist, College of Agriculture, Madison
 R. A. Peterson, State Department of Agriculture and Markets, Madison
 H. E. Thew, Madison Milk Producers Association, Madison
 H. M. Knipfel, Commissioner of Agriculture and Markets, Madison
 C. W. Murwin, Northern Wisconsin Cooperative Tobacco Pool, Madison
 Emerson Ela, Northern Wisconsin Cooperative Tobacco Pool, Madison
 John Brandt, Land O' Lakes Creameries Incorporated, Minneapolis, Minnesota
 J. J. Lamb, Equity Live Stock Sales Association, Milwaukee
 Albert Fickler, Farmers' Union Live Stock Commission, Chicago, Illinois
 A. N. Howalt, Agricultural Instructor, Waupaca
 R. P. Ames, Pure Milk Products Association, Madison
 W. K. Mickelson, Courier-Hub, Stoughton
 Otto Onstad, Conductor Farmers' Institutes, Cambridge

Brown, Geo. B., Urbana, Illinois
County Agents

C. F. Claflin
 W. S. Comings
 R. T. Glassco
 A. M. Jacobson
 J. N. Kavanaugh
 L. G. Kuenning

L. J. Merriam
 John T. Omernik
 T. A. Parker
 W. J. Rogan
 E. W. Schelling
 G. A. Sell

H. G. Seyforth

1929-1930

STATISTICAL REPORT
on
COOPERATIVE MARKETING INSTITUTES

Attendance on Major Marketing Institutes

Three-day Cooperative Marketing Institutes on Butter

Clear Lake	262
Ogema	155
Prescott	<u>275</u>
Total	692

Three-day Cooperative Marketing Institutes on American Cheese

Catawba	152
Wayside	<u>703</u>
Total	855

Three-day Cooperative Marketing Institutes on Dairy Products

Antigo	2,092
Richland Center	464
Stoughton	<u>384</u>
Total	2,940

Three-day Cooperative Marketing Institutes on Livestock

Plum City	565
Waupaca	451
Whitehall	<u>341</u>
Total	1,357

Three-day Cooperative Marketing Institutes on Milk

Reedsburg	<u>340</u>
Total	340

Two-day Cooperative Marketing Institutes on American Cheese

Freedom	742
Stratford	<u>750</u>
Total	1,492

Two-day Cooperative Marketing Institutes on Livestock

Sparta	<u>351</u>
Total	351

Two-day Cooperative Marketing Institutes on Tobacco

Albion	108
Chaseburg	176
Deerfield	188
De Forest	192
Fulton	430
Independence	91
La Farge	189
McFarland	193
Orfordville	149
Soldiers Grove	234
Westby	<u>345</u>
Total	2,295

One-day Cooperative Marketing Institutes on Tobacco

Ferryville	105
De Soto	<u>72</u>
Total	177

Summary of Attendance

Major Marketing Institutes

Three-day Butter institutes	692
Three-day American cheese institutes	855
Three-day Dairy products institutes	2,940
Three-day Live Stock institutes	1,357
Three-day Milk Marketing institutes	340
Two-day American cheese institutes	1,492
Two-day Live Stock institutes	351
Two-day Tobacco institutes	2,295
One-day Tobacco institutes	<u>177</u>
Total	10,499

Attendance on Minor Marketing Institutes

One-day Cooperative Marketing Institutes

Luxemburg, American cheese	216
East Farmington, American cheese	160
Phillips, Butter and American ch.	260
Madison, Cheese organization convention	<u>140</u>
Total	776

Antigo, Dairy products for Antigo Dairy products Coop.	<u>400</u>
Total	400

Swiss Cheese

Juda	45
Winslow, Illinois	55
Argyle	75
Darlington	<u>200</u>
Total	375

One-Session Cooperative Marketing Institutes

For Madison Milk Producers' Association

Madison	150
Cottage Grove	50
McFarland	12
Gannon School	22
Waunakee	13
Burke	48
Cottage Grove	<u>12</u>
Total	307

One-Session Cooperative Institutes

For Antigo Dairy Products Cooperative

(Educational preparation for the "drive" to organize the association.)

Valley School	42
Antigo	25
Neva Town Hall	35
East Ackley Grange	18
Little Chicago School	24
Mayflower School	40
Grange Hall	21
Bryn Town Hall	20
Rolling Hall	<u>8</u>
	233

For National Cheese Producers' Federation

American Cheese

(In Polk County)

Elm Grove	10
Oak Hill	<u>50</u>
Total	60

For Arcadia Creamery

Cream Improvement

4 Rural meetings were held in school houses	18
	25
	55
	<u>35</u>
Total	133

One-Session Cooperative Institutes

Cow Culling and Marketing Project in Marathon County

Spencer	121
Stratford	85
Edgar	62
Athens	49
Knowlton	100
Colby	25
Wausau	125
Marshfield	40
Dorchester	12
Unity	18
Marathon City	40
Marathon City	56
Wittenberg	12
Dover	28
Wittenberg	35
Rush Farm	<u>120</u>
Total	928

Wool Marketing

Chippewa Falls	11
Washburn	10
Raddison	35
Spooner	30
Hammond	10
Plymouth	35
Greenwood	30
Darlington	18
Elkhorn	<u>5</u>
Total	184

One-Session Cooperative Institutes

Cooperative Dairy Herd Improvement

Milk and Cream Improvement and Dairy Organization

Amery	95
Chippewa Falls	95
Shawano	85
Fond du Lac	<u>95</u>
Total	370

Creamery Meetings (Sondergaard)

Butternut, Annual Meeting	665
Westby, Annual meeting	1,200
Stoughton	18
Sumpter	12
Fairwater, Annual meeting	275
Price, Plant improvement	55
Price, Plant improvement	85
Viroqua, Annual meeting	<u>2,000</u>
Total	4,310

Creamery Group Meetings (Sondergaard)

Menomonie, 7 creameries	50
Lancaster, 11 creameries	60
Whitehall, 7 creameries	<u>20</u>
Total	130

One-session Cooperative Institutes

Breeders' Meetings

Cooperative Production & Marketing (Mucks)

Neillsville, Holstein Association	15
Menomonie, General organization meeting	12
Algoma, Kewaunee county, Guernsey Ass'n.	30
Liberty Grove, Door County General Or- ganization Conference	14
Chippewa Falls, Directors of Holstein, Guernsey and Brown Swiss Ass'n.	20
Hayward, Holstein Association	9
Greenwood, Holstein Association	30
Prairie du Chien, Crawford County Live Stock Association	<u>25</u>
Total	155

One-Session Cooperative Institutes

Miscellaneous

Black River Falls, Live stock shipping	113.
Prairie du Sac, Organization of production	150
Tigerton, Cheese organization	250
Ft. Atkinson, Dairy organization	35
Osseo, Flexible plant group	5
Grange Hall, Outagamie county, cheese organization	200
Stevens Point, Milk distributors group	4
Antigo, Milk marketing group	10
Rhineland, Milk marketing group	8
Madison, Butter Makers Convention	40
Chippewa Falls, Butter Makers Convention	125
Pleasant Branch, Dane County Milk Marketing	100
Brantwood, Dairy Cooperation	450
Reeve, Dairy Improvement and cooperation	55
Brandon, Buttermakers convention	40
Whitehall, Buttermakers convention	20
Madison, Vocational instructors	65
Whitehall, Women's Clubs	<u>26</u>
Total	1,696

Summary of Attendance

Minor Marketing Institutes

One-Day Institutes

On American Cheese Institutes	776
On Dairy Products for Antigo Dairy Products Cooperative	400
On Swiss Cheese for National Cheese Producers' Federation	375

One-Session Institutes

For Madison Milk Producers' Ass'n.	307
For Antigo Dairy Products Cooperative	233
For National Cheese Producers' Federat.	60
For Arcadia Creamery	133
For Cow Culling Project	928
For Wool Marketing	184
For Cooperative Dairy Herd Improvement	370
For Creamery Meetings	4,310
For Creamery Group Meetings	130
For Breeders' Meetings	155
For Miscellaneous	<u>1,696</u>
Total	10,057

Grand Summary

Major Marketing Institutes	10,499
Minor Marketing Institutes	<u>10,057</u>
Grand Total	<u>20,556</u>

Froker and Sondergaard

During the year ending June 30, 1930, these two men certainly rose to the stature of real workers in the cause of business and economic education and service. The superintendent believes that Wisconsin dairying would suffer almost irreparable loss at this time should these two men be lost to our staff. The superintendent hopes that the University will not let some other institution or organization get these two men away from us, but will provide ways and means of advancement which will not only keep these men but some others like them.

Mr. Sondergaard came to this country from Denmark and worked on a farm in Minnesota. He had helped to make butter in Denmark. He became a butter maker in Minnesota and in due season made butter in the Litchfield creamery where John Brandt, now president of Land O' Lakes, the largest butter sales association in the world, delivered cream from his farm. For some years Sondergaard was a butter buyer for a large dealer in Philadelphia and had opportunity to learn the butter trade and to know the ways of butter boards. But he liked the West and when Unit No. 1 of the Wisconsin Cooperative Creameries Association needed a fieldman, Mr. Sondergaard accepted the position and turned the trick of producing 93-score sweet cream butter in the creameries of that unit. That unit is one of two units grading cream and paying by grade, and both of these units now belong to the Land O' Lakes.

When the matter of securing an extension specialist in dairying was under consideration, the superintendent was asked to supply some of the funds. This was done with the reservation

that we did not want a mere butter tryer who understood and favored the exploiting interest, but that among his other qualifications he must be a man entirely sold upon cooperation and protection of the cow-milker's interests. We got Sondergaard and he fills the whole bill.

Mr. Sondergaard is a self-made man of genial disposition, unquestioned integrity and thorough knowledge of farm dairy production and creamery operation. He certainly is just the man to mix well with the farm folks and all respect him. When he completes a piece of work he has won and all are satisfied.

R. K. Froker is a Wisconsin man of Danish parents. He is a graduate of the University of Minnesota in agricultural economics. When this and the economics department needed a man in place of Theodore Macklin, who was granted a leave of absence to help the prune growers to reorganize in California, we looked about a long time and were about hopeless when the University of Minnesota proposed this young man, as yet untried in a college position. He was asked to visit Madison. He met Dean Russell and the superintendent. From that meeting he and the superintendent went away together and were afforded an opportunity to go over the extension work carefully and know what he would be expected to do. Finally he said "If you will call me to the position, I will not disappoint you. I will come through." It was some time before we were ready to accept a man so untried but we did the best we could and the superintendent is here to say that we could not have done better.

Mr. Froker prepares for every occasion. He is a good scholar and a thorough economist. He was given the re-

sponsibility of making a study of the fluid milk situation in Wisconsin and is doing a splendid piece of work in that study. When that study is completed he will be one of the outstanding economists in the whole country in this line.

Mr. Froker is a good speaker, very plain and clear, and capable of meeting any opponent of our work who appears in our meetings, and he does it not as a belligerent, but as an economist.

Froker and Sondergaard are a great pair, a great team.

Schaars

Marvin Schaars of the agricultural economics department has helped us off and on, and this year assisted the department continuously in our major economic institutes on cheese and tobacco up to the close of the first semester when he was needed in the instructional work to fill the place of Mr. Macklin who was loaned to the Federal Farm Board for work in Florida.

Mr. Schaars is another young man of exceptional worth, especially in live stock and butter marketing. His continuous work with this department was along the line of American cheese and tobacco marketing, and was very satisfactory. When we were deprived of an economist in our tobacco institutes in the second semester, we soon learned what we had when we had Mr. Schaars. As he is so thoroughly acquainted with Wisconsin conditions he is another who should be kept here.

Bakken

H. H. Bakken is a worthy successor to Theodore Macklin, who has severed his connection with the College of Agriculture. Mr. Bakken was in absentia this year attendant upon advanced work in Harvard University.

Bakken was assigned as assistant to the superintendent in economics in 1925 when the cooperative marketing institutes were launched and served under the superintendent for two years until it was necessary to conduct two series. Then Bakken was a veteran and was turned over to H. W. Ullsperger, who was taken on to conduct the new series of institutes in 1927-1928. The superintendent took on Froker, who was new to the work.

It was Bakken who was assigned to survey the Northern Wisconsin Cooperative Tobacco Pool, when that organization in its distress requested assistance from the College of Agriculture and it was Bakken who persevered in prompting the superintendent to put on our first cooperative marketing institute on tobacco, which saved the Tobacco Pool. Bakken is a veteran, thoroughly understands Wisconsin conditions, and is a good man anywhere. The superintendent understands that Bakken will be assigned to assist with cooperative marketing institute work again the coming year. Mr. Bakken should surely be kept in our institution.

Mortenson

In 1928-1929 Mr. Bakken was assigned to take up instructional work in place of Mr. Macklin who was granted

leave of absence. This made it necessary to secure some one in Bakken's place in the institutes. Again we were lucky and secured W. P. Mortenson, who assisted with cheese and tobacco marketing institutes that year. He proved a distinct success right off and became very popular with the other institute workers and his audiences. Then he went to Kansas in 1929-1930. At this writing he is back again with the economics department. We are all glad of that.

While Mr. Schaars and Mr. Mortenson will probably be assigned to instructional work, they are here and no doubt available for emergencies on institute work.

So we have Sondergaard, Froker, Bakken, Schaars and Mortenson, five splendid men who ought to be retained and advanced as fast as provisions can be made. These men are abreast the new day requiring a new and more economic agriculture. The state needs them and they will add prestige to the University of Wisconsin, and especially to the College of Agriculture.

Specialist Needs

The superintendent wishes he had the funds to employ two men whom he would use in two lines of work the same as he uses Sondergaard. One man for cheese and another for tobacco. These men should not only be competent in cheese and tobacco productions, but should also, like Sondergaard, be heart and soul to the cause of cooperative marketing and the organized farmer. A great work is possible along these two lines.

Ullsperger

Herman W. Ullsperger is a Wisconsin man and a product of the College of Agriculture. He graduated in 1911 and at once was employed by the soils department for field work in the light, sandy sections.

When the superintendent arranged a schedule of special Light soils - Live Stock Institutes Ullsperger was assigned as soils specialist in these institutes, a position which he filled until he resigned to practice fruit farming near Sturgeon Bay.

His thorough experience in the institutes and his success as Manager of the Door County Fruit Growers' Union immediately suggested him as a conductor of cooperative marketing institutes to lead one of the two series of such institutes then required to meet the growing demand. He was approached and accepted. His success was immediate and he now stands as one of the best men not only in cooperative practice but in cooperative instruction as well.

Mr. Ullsperger is now a University regent.

Recognized Assistance

The department is very much indebted to the Equity Live Stock Sales Association for the valuable assistance of J. J. Lamb in locating and carrying on cooperative marketing institutes on live stock and to the Wisconsin Meat Improvement Council for the services of J. M. Coyner, fieldman, with subject matter and other assistance in the institutes. Both of these men spent a lot of time in the live stock institute work.

C. W. Murwin of the Northern Wisconsin Cooperative Tobacco Pool is another man without whose assistance we would have been unable to do the work we have done with that organization and for tobacco farmers in general. Mr. Murwin is one of the strong pillars of the pool.

We are also indebted to the Wisconsin Department of Agriculture and Markets, the Land O' Lakes Creameries Inc., the National Cheese Producers' Federation, and the Farmers' Union Commission Companies of Chicago and South St. Paul.

A. H. Cole, Assistant Superintendent

Mr. Cole is to be commended most highly for the good work he did in the office and out in the institutes under his immediate charge this year. Having been a county agent, he is also able to counsel with the county agents. He is also adept as a good will builder. His report which follows is given in full and will show a very successful piece of work done.

THE FARMERS' INSTITUTES
ANNUAL REPORT
1929-1930

To

E. L. Luther, Superintendent of Farmers' Institutes
By
A. H. Cole, Assistant Superintendent

September 30, 1930

Superintendent of Farmers' Institutes
Madison, Wisconsin

Dear Superintendent Luther:

I herewith submit the following report upon the Farmers' Institutes under my direction from July 1, 1929, to June 30, 1930. This is a report upon 14 Major Farmers' Institutes, 51 Two-Day Farmers' Institutes, 288 One-Day Farmers' Institutes, 198 days of One-Session Farmers' Institutes and 16 Women's Institutes. Total number of institutes held 567. Total number of days of institute work 648. Aggregate attendance 108,503.

Purpose

Life upon the farm has not been as prosperous and happy as it might be. This can be improved by more efficient farm practices. Soil improvement, better crops, better live stock, more intelligent management and a more comprehensive method of marketing will lead to greater prosperity. This in turn will make life more worth while upon the farm. The Farmers' Institutes Department is assisting the farmers to bring this about.

Types

Four types of Farmers' Institutes were given this year as follows:

The One-Session, the One-Day, the Two-Day and the Major Farmers' Institute. Different communities require different types of institutes. Also different purposes determine the types of institutes to be given. These different services are offered to meet the demands of the County Agents and different communities. It is the aim of the department to meet any reasonable demands made upon it.

One-Session

The One-Session Farmers' Institutes were designed primarily to assist County Agents with their project work. They have been given only on call of County Agents. The County Agent and one other worker constitute the staff. The County Agent selected the project upon which he wished assistance, made all the arrangements, advertised the institute and was its chairman. Some of the projects taken up were "Cow testing", "Poultry management", "Poultry culling", "Barn feeding of dairy cattle", "Better use of fertilizers", "Crop tours", etc.

The Farmers' Institute Department sent four men to assist County Agents in strengthening their mail order cow testing associations. These men talked to 3220 dairymen in six counties at 201 meetings and helped to secure 709 new members.

County Agent Davis, Iowa county, wished to have a certain number of farmers in each town of his county use phosphate fertilizers. He then arranged two institutes per day in as many places. Professor Chapman went to him and assisted him with this work. Talks were given, pictures shown, samples of

soil analyzed, samples of fertilizers shown and the farmers signed up for a definite number of acres to be fertilized for the coming year.

County Agent Divan, Green county, scheduled nineteen one-session institutes in four days upon poultry management. Poultry houses and grounds were inspected and post-mortem examinations made with the audience present. The illustrative materials found upon each farm were used for instruction in the talks that followed.

One-Day

These institutes are two or three sessions in length. They are similar to the first day of the two-day institute, a two-day institute cut in two, each of the two days work being held in a different place. When sufficient publicity was given these institutes were very successful. To illustrate:

Port Wing Farmers' Institute

Port Wing is a small isolated community on the south shore of Lake Superior in Bayfield county. The institute was held February 25, 1930. In advertising this institute the newspaper, circular letters, and a very efficient local committee were used. The institute opened as advertised at 10:00 o'clock. There were 57 men present. They listened and asked questions until 12:00 M. The men and institute workers went over to the community church to dinner. In the afternoon there were 75 men present. The lectures were finished at 3:40, but each speaker was kept busy until 5:00 o'clock answering questions. The County Agent writes: "Farm visits this summer find that many farmers are following the suggestions giv-

en by the speakers on poultry, fruits, soils and crops, and dairying. The cultivation of small fruits and fertilizing of orchards has made considerable advancement; more interest is being taken in culling and poultry sanitation; the planting of sunflowers for silage, alfalfa and clover for hay, and clean seeds are on the increase; more attention is being paid to dairy production and better feeding methods. Excellent results are generally obtained from an institute in Port Wing due largely to the interest in cooperation furnished by the farmers."

Two-Day

This type of an institute has been with us for forty-five years, and is still very successful. Fifty-one of these were held this year with an aggregate attendance of 32,798. These institutes enable the department to have a state wide program. This furnished the opportunity for the institute department to start work upon such state wide subjects as "Control of Noxious Weeds", "Eradication of Contagious Abortion".

The institute staff of these institutes consists of a practical Farmer, an Agricultural College Specialist, and a County Agent. They manage the institute and furnish the program. These institutes continue for five sessions, two the first day, one in the evening, and two the next day. This not only furnished instruction but inspiration to the farmers. To make a success of this type of institute takes the time, thought, work, and inspiration of many people.

To illustrate: County Agent Jorgenson met with the local committee three weeks before the institute was to

be held and helped plant the advertising campaign for the institute in Poy Sippi January 16 and 17, 1930. The County Agent had found this a difficult and unresponsive part of his county.

The institute was placed here to help the County Agent to become efficient with these people. Committees of farmers and business men met together and talked over plans for the institute. The interest of the community was aroused. Poy Sippi gave a dinner the first day. The M. E. Church furnished a dinner the second day at a nominal charge. The second day's attendance was larger than the first day.

The institute Conductors arrived in town the evening of January 15, 1930. They visited several places of business in the village. This was telephoned around by those most interested. However, the roads had been cleaned with snow plows the day before. The hall was large but warm, and very suitable for the meeting.

At 10:00 o'clock the institute opened up with a piece of music by the school band. Farmers and their families to the extent of 85 were there at the opening. The following program was given:

Poy Sippi

THURSDAY - JANUARY 16

- | | | |
|------------|---|-----------------|
| 10:15 A.M. | Music | - Local talent |
| 10:30 | Control and Eradication of
Contagious Abortion in Cattle | - Mr. Kolb |
| | Music | - Local talent |
| 11:15 | From Egg to Laying Hen | - Mr. Cole |
| | INTERMISSION | |
| 12:30 P.M. | RADIO PROGRAM | |
| 1:15 | Music | - Local talent |
| 1:30 | What Cow Testing Associations
Tell Their Members | - Mr. Jorgenson |
| | Music | - Local talent |
| 2:15 | Poultry Diseases, - Prevention,
Symptoms and Treatment | - Mr. Cole |
| 3:00 | Recreation | - Mr. Jorgenson |
| 3:05 | Dairy Herd Improvement by
Breeding and Feeding | - Mr. Kolb |
| | 8:00 P.M. | |
| | Evening Program | - Local talent |

FRIDAY - JANUARY 17

- | | | |
|------------|--|-----------------|
| 10:15 A.M. | Music | - Local talent |
| 10:30 | How to Raise a Good Heifer Calf | - Mr. Kolb |
| | Music | - Local talent |
| 11:15 | Soil problems in Waushara County | - Mr. Jorgenson |
| | INTERMISSION | |
| 12:30 P.M. | RADIO PROGRAM | |
| 1:15 | Music | - Local talent |
| 1:30 | Methods of Controlling Quack
Grass and Canada Thistles | - Mr. Kolb |
| | Music | - Local talent |
| 2:15 | How and When to Feed a Dairy Cow | - Mr. Cole |
| 3:00 | Recreation | - Mr. Jorgenson |
| 3:05 | The Present Status of Federal
Farm Relief
Service in Materials | - Mr. Kolb |

At the luncheon each institute worker gathered a group of interested farmers around him and they ate and talked over the subjects given in the forenoon program. After lunch not only did the institute workers have groups around them but farmers and business men became better acquainted and more friendly. The afternoon program opened up with 175 ready for work.

Throughout sessions free, pleasant and earnest discussion took place. There was no attempt "to catch anybody". Questions were asked because information was desired. The program closed at 3:45 P.M., but the work continued until 5:00 o'clock.

The evening program was attended by about 350. The hall was crowded. The institute men gave two 20 minute speeches which were listened to with interest. The rest of the program was musical in nature.

The second day was one of the coldest of the winter, but the forenoon program opened at 10:00 with 149 listeners. The same attitude of good feeling continued. At noon all went to church for dinner and returned to the hall for conferences. The afternoon session was best of all, 220 earnest friendly people in the audience looking for instruction. The feeling of good fellowship and cooperative community spirit was very pronounced. One old farmer put it this way. "I sure am glad I am here, but I am sorry that we have not had a Farmers' Institute every year for the last ten years."

Some of the results of this institute in this community are very apparent. The County Agent is in high standing in that community. He has many projects that started at

that institute. The farmers are using many of the ideas received at the institute. One of the institute workers returned to the community this summer and was received as an old friend, was taken to many farms, and advice was called for upon the subjects given at the institute. County Agent Jorgenson says: "You should be satisfied. 100% of the farmers within a radius of 8 miles were at the institute the second day."

The Major Two-Day Farmers' Institute

This type of institute is like the regular two-day institute, but is for the larger communities. The farmers and the business men of the community work together for the success of the institute. Weeks before this, they are working together for a common end, the success of the institute. This year 14 Major Institutes were held with an aggregate attendance of 24,895, or an average of 1778 per institute.

To illustrate: Mr. L. C. Johnson, Chairman of the committee, came to Madison to talk over the advantage of an institute in Mayville. Mr. Johnson came into the office three times to talk over the institute. The writer went to Mayville, met with local committee, and planned the publicity work for the committees. Committees upon publicity, entertainment, finance, personal contact, telephone, arrangement, refreshments, and personal comfort were appointed. Every school district had a committee, and everybody was enthusiastic over the institute. The Rural Normal School at Mayville dispensed with its regular daily program. It taught the boys and girls from the district schools their regular lessons while their parents were at the institute.

When time came for the institute it was cold and snowing, but the farmers put shovels in their cars, and came any way. The Mayville High School gymnasium is a new building and seats about 2,000 people. The center of the room was filled with chairs. Long tables were placed on each side of the room upon which dinner was served. The High School orchestra furnished music during the noon hour. The bankers of Dodge county contributed not only to the finances of the undertaking but also to the program. The business men of Horicon attended as a group and made a

financial contribution to the success of the enterprise. The era of goodfeeling had arrived not only between Mayville and its farmers but between Mayville and its neighboring cities.

The subjects upon the program were selected with the help of the local institute committee. The needs of the community were very carefully considered in selecting subjects and men for this program. Throughout the program local talent furnished musical numbers. After each session and during the noon hour each institute man was busy instructing farmers upon his subject. Each man conducted, as it were, a round table discussion of his own.

The following program was rendered:

Mayville

THURSDAY - JANUARY 9

10:00 A.M.	Music	- Orchestra
10:15	Welcome	- Mayor Schmidt
	Response	- Mr. Pattison
	Announcements	- Chairman Johnson
	Song - Vocal Duet	- Mr. R. W. Christensen
		Mr. H. A. McMahan
		- Mr. Graber
10:45	Profitable Summer Pasture	
11:25	The Place of Commercial Fer- tilizers on a Dairy Farm	- Mr. Pattison
	INTERMISSION	
	RADIO PROGRAM	
12:30 P.M.		
1:20	Song	- Male Quartette High School Boys
1:30	Eradication and Control of Contagious Abortion in Cattle	- Mr. Pattison
2:10	Music	
2:20	Alfalfa - How to State it- How to Keep it	- Mr. Graber
3:00	Recreation	- Mr. Johnson
3:05	Address	- Mr. Knipfel

8:00 P.M.

Evening Program - Local talent

FRIDAY - JANUARY 10

10:00 A.M.	Music	- Orchestra
10:15	Care and Feed of Brood Sow and Litter	- Mr. Pattison
	Saxophone duet	- Vivian Steger Lucille Gleisner
11:00	Address	- Representative of Banks
	INTERMISSION	
	RADIO PROGRAM	
12:30 P.M.		
1:00	Music	- Local talent
1:10	Dairy Herd Improvement by Testing and Feeding	- Mr. Pattison
1:45	Modern Trends in Agriculture	- Professor Hatch
2:20	Methods of Controlling Quack Grass and Canada Thistles	- Mr. Graber
3:00	Recreation	- Mr. Johnson
3:10	Development in Agriculture Service in Materials	- Mr. Riordan

The aggregate attendance at this institute was 3,654, apportioned as follows: first day, forenoon 524, afternoon 790, evening 800; the second day, forenoon 640, afternoon 900.

Results

It is impossible to determine the results of this institute.

A number of letters have come in from farmers and County Agents commending the institutes in their community or county. A few excerpts follow:

Mr. John R. Bollinger, Buffalo County Agent, writes:

"As a result of our institutes, I am sure that more colony houses were secured and some certified chicks were purchased. More commercial fertilizers were used for grains and new seeding than before. There has been more interest in testing for abortion, and control of poultry diseases.

I hope we may be able to have some good institutes again this coming year."

Mr. Lynn Matteson, Sawyer County Agent, says:

"As far as I am concerned I find the institutes of immense value in putting over project work. I think Mr. Gehrman did much to keep the cooperative creamery at Exeland going, and helped get one started at Winter."

Mr. Emmons Accola, farmer, Alma, Wisconsin, writes:

"I think that the outstanding benefit which has come from the Farmers' Institutes in our community is the increased acreage of alfalfa and also the use of sweet clover. The poultry sanitation program, which was stressed at our last institute at Tell, has been carried out wonderfully during the past summer and there isn't hardly a farmer in the community which hasn't a brooder house and kept the young poultry upon clean range."

Mr. Dan Shaffer, Taylor County Agent, reports:

"As a result of these meetings we have at least a hundred farmers who are testing with a view of having their herds accredited."

Mr. E. A. Jorgensen, Waushara County Agent, says:

"Plainfield sold 400% more commercial fertilizer than a year ago, for legumes and potatoes. This was a result of the institute."

The following letter is given as received:

"R.F.D. No. 1
Bayfield, Wis.
Aug. 4, 1930

Mr. A. H. Cole

Dear Sir: In regards to Farmers' Institutes. I no they are a good thing. Their is no ywy of telling How Much good they have don. From a Dollar and cents stand point.

But I no at one institute I was present where sucktash, grain mixture and sun flowers was disgust. And all the Farmers that tried them out are well pleased. They see where they can rais more feed per acre

That ondy one, at other Meetings where soil was tested for assit. And general analises to corect soil so to be useful raising alfalfa and feed rations. And Better sires Fruit demonstration. Fertilizer the kind to use and how to use it. All those and meny more. So I think it is money well spent And what more a great menny Farmers are following those Methods of farming.

Yours Truly

(Signed) J. J. Drinvill

Bayfield, Wis."

Mr. R. J. Holvenstot, Bayfield County Agent, says:

"As far as the value of institutes in general are concerned I might cite the following examples:

1. Several farmers this year are growing a grain mixture of oats, peas, barley and wheat as a dairy ration to overcome winter feed bills.
2. Probably 100 or more farmers now raising sunflowers for silage as a result of the last two years' institutes.
3. About double the acreage of alfalfa sown this spring as compared to last year.

4. practically all of this year's chicks raised on clean ground. More attention being paid to culling and winter egg production. A much better understanding of internal parasites.
5. A well defined step toward the feeding of better balanced rations to dairy cows. Also more attention given to production records of the new herd sire.
6. Better crop practices. More attention being paid to rotation and method of applying fertilizer."

Mr. L. G. Sorden, Oneida County Agent, writes:

"At the institute at Harshaw, Prof. Musbach was present. The subject for discussion at this institute was fertilizers and since the farmers there are interested in potatoes, it of course interested them. The meeting at Harshaw was held on Thursday and three fertilizers salesmen sat in the hotel at Rhineland waiting until after this institute had been held, as the farmers would not buy until after the meeting. The fertilizer salesmen report this themselves. The farmers substantiated this statement stating that they wanted the results of the experimental information before they would buy."

The following are necessary to a Farmers' Institute:

1. A program
2. An audience
3. A place to hold it

The Program

To provide the program a staff of eight farmers and twenty-three specialists were employed most of the winter. The farmers were selected upon the basis of their success in making money upon the farm, of their standing and usefulness to their communities, of their part in farmers' associations, and their ability to stand before an audience and tell of their experiences in such a way that their listeners will go home and do likewise.

The College specialists are selected according to the needs of the community where the institute is held. They too should be able to inspire their audiences to the extent that their suggestions will be followed.

The County Agents, the local committees, the County Agent Supervisors are consulted upon substance of the program. In many cases the program of the project work of the County Agent is consulted and where possible the County Agent actually assists in making out the programs for the institutes in his county. The County Agent is used to the fullest extent where possible. Each program has five or six agricultural numbers each day. It begins at 10:00 A.M. and extends to 3:30 or 4:00 P.M. with an hour for lunch. However, much work is done during the noon hour and after the program has closed. Most programs begin with a musical number, one more such number was furnished in the morning, and two or three in the afternoon. This made the day both profitable and pleasant.

The Evening Meeting

Many things have been tried at the evening meetings to make them more effective. As one of the great problems of the institute is to create better feeling and more cooperation between the trade centre and the surrounding country the evening meeting is used for this purpose, believing that any unkind feeling that may exist between the two groups, if such exists, is caused by the lack of understanding of each other's conditions and problems, both classes come to the meeting to get instruction upon the actual problems of the farmer for the best interests of the community.

In order to do this the evening program is composed

of two parts, the local program, and a lecture by institute conductor. The local program is entertainment. The institute speaker is requested to give a good substantial talk on some agricultural problem. He deals with some problems that are important, if not acute, in the community in which the institute is held, and in this talk he gives the storekeeper and the clerk instruction upon the more serious problems with which the farmers are confronted. The evening program, especially at the larger institutes, is the most important session of the institute.

In the one-session institute, where from two to five meetings are held in as many places each day, the local men take no formal part in the program. The County Agent calls the meeting to order, presents his subject and introduces the institute worker, who then presents his subject. Farmers ask questions, give opinions, and cite experiences that relate to the subject. The County Agent then assigns, or signs up some of the farmers for project work.

In all institutes, the best arrangements are made that can be made, for the farmers to get the materials necessary to use, to put into practice the ideas given at the institute.

Farmers' Institute Programs

The following subjects were discussed at the institutes this year:

Seed Treating Demonstration
How Our Good Pedigree Seeds are Developed
What Good seeds Mean for Good Crops
Getting the Most Out of Our Home Grown Grains
Good Seed for Greater Profit
Home Grown Grains for Poultry Profits
Good Garden Seeds
Building Better Dairy Herds

Our Cow Testing Service
How to Find Better Seed Stock for Profitable Dairy Herds
Breeding and Raising Better Dairy Calves
Use of Good Hays
Cooperative Marketing of Dairy Products
Summer Feeding of Dairy Cattle
A Few Poultry Dont's
Plant Diseases and their Control
Dairy Feeds and Feeding Dairy Cows
Weed Control
What a Cow Testing Association Tells its Members
Let's Kill the Warble Fly
How to Maintain Better Pastures
Feeding Dairy Cattle
The Seed of Commercial and Farm Fertilizers on the Dairy Farm
Economic Control of Weeds by Machines and Chemicals
Increasing Milk Production by Breeding
The Place of Mineral Feeds
How to Get and Keep a Good Stand of Alfalfa
Federal and State Farm Relief
General Roundup By Farmers of Farm Problems of Washington Island
Dairy Herd Improvement by Testing
How to start and Keep a Good Stand of Alfalfa and Clover
The Agricultural Program for Chippewa County for 1930
Dairy Herd Improvement by Better Feeding
Better Cultural Methods for Better Crops
Dairy Herd Improvement by Better Breeding
Wisconsin Method of Controlling Contagious Abortion
How to Preserve and Use Barnyard Manure for the Greatest Profit
Federal and State Farm Relief
From Chicks to Eggs in Six Months
Feeding for More Milk at Less Cost
Making Sure with Alfalfa
Better Dairy Cows by Weeding and Breeding
Early Care of Chicks
Easy Ways of Killing Quack Grass and Canada Thistles
200 Pound Hogs at Six Months or Making Whey Pay
Fertilizers for Corn
Good Calves Raised Without Milk
How to Raise a Better Heifer
The Selection of a Better Sire
An Agricultural Program for Buffalo County
How to Produce Eggs in the Late Fall and Winter
Milk and Cream Testing Problems
Poultry Diseases - Symptoms and Prevention
4-H Club Work in Buffalo County
Contagious Abortion - its Nature and Control
Control and Eradication of Quack Grass and Canada Thistles
Easy Method of Quack and Canada Thistle Control
Care and Use of Barnyard Manure
Do We Need Commercial Fertilizers on Dairy Farms
Better Seeds
Feeding Some Dairy Cows at a Profit
Improving Iowa County Pastures
Agricultural Problems of Iowa County
Does It Pay to Use Lime and Commercial Fertilizers on a Dairy Farm
An Agricultural Program for Buffalo County

An Agricultural Program for Eau Claire County
Better pastures for Eau Claire County
The Secret of Maintaining a Good Stand of Alfalfa
Raising and Feeding Healthy Hogs
Building and Culling the Dairy
Liming Soil, Growing Alfalfa
Making Poultry Pay
What 4-H Club Work Is
More Milk from our Pastures
Feed the Crop for Yields and Profit
Outagamie County's Agricultural Problems
Safeguard the Winter Feed Supply
Lime and Fertilizer Profits
Building More Profitable Herds
What Home Grown Feeds Are Most Profitable
Selling End of the Dairy Industry
A Liming Program for Taylor County
Economical Control of Quack Grass and Canada Thistles
The Farm poultry Flock
Commercial Fertilizers and Soil Improvement
Taylor County Dairy Sanitation Program
Alfalfa and Legumes
Control and Eradication of Contagious Abortion in Cattle
Poultry Sanitation
Weeds; Their Economic Control and Eradication
Making Some Farms Pay
Farm Inventory
Commercial Fertilizers for Corn and Grain
Present Outlook for Farm Livestock
More profit from Legumes
How Chemicals are Used to Kill Canada Thistles and Quack Grass
Care and Feed of Brood Sow and Litter
Modern Trends in Agriculture
Development in Agriculture
House the Hen, Efficiently and Economically
The Calf Makes the Cow
Feed your Soils and They Will Feed You.
Rations at present Prices.
Cull and Feed for Profitable Egg Production
How to Maintain Summer Egg Production
How to Keep Up the Flow of Milk in Summer
Wisconsin's Weed Tax
Know Where your Dairy Herd Stands with You
The Chick Makes the Hen - Raise it Right
What Cow Testing Associations Tell their Members
Poultry Diseases - prevention, Symptoms, and Treatment
Soil Management Program
Our 4-H Girls in Action
Dairy Herd Management
Phosphate for Farm Soils
Growing Truck Crops
Tile Drainage
Raising Baby Chicks
The Business Side of Farming
Economical Housing of Poultry
Credit and How to Maintain It
The Relation of your Bank to your Community
Better Legumes for Cheaper Winter Feed
Good pastures for the Summer Feed Supply

Preparation for Egg Production for October, 1930
Some Agricultural Problems in Barron County
Why and How to Control Soil Erosion
Some Agricultural Problems in Vernon County
4-H Club Work for Barron County
Some Agricultural Problems in Polk County
Shall We Stay in Dairying
Destruction of Noxious Weeds
New Facts on Alfalfa
Our Goal in Cooperative Marketing
Baby Chicks pointers
Basis of Crop Production - Soil Fertility
Know your Cows - Keep Only the Best
Profitable Work Production
Avoiding Troubles in Chick Rearing
Modern Farm Water Supply
Safeguard the Winter Feed Supply with Alfalfa
Feeding and Managing the Laying Flock
How to Make pastures pay
Putting the 5 H.P. Motors to Work
Soil Improvement Work for Marathon and Clark Counties
New Facts on Farm Electrification
Herd Improvement Work for Polk County
Herd Improvement - A Five Year Program for Marathon and Clark Counties
Feeding Dairy Cows Efficiently
Abortion and its Costly Results
Cooperative Marketing of Dairy Products
Why Should Farmers Keep Farm Records
Some Agricultural Problems of 1930
Poultry House Construction
Oats or Alfalfa on \$100 per acre Land
Some Agricultural Problems in Fond du Lac County
Present Activities of our Future Farmers
4-H Club Work in Trempealeau County
How to Raise a Better Crop of Tobacco
Better pastures for Richland County
Federal Farm Board and present Markets
Brooding Chicks
Spraying to Control plant Diseases
Feeding and Testing Dairy Cows
Better Yields by Testing Seed Grain
The Importance of Good Sires
The Blood Test and Contagious Abortion
Our Livestock Program
How to Eliminate Quack Grass
Poultry Raising as a Business
What Shall We Raise as a Cash Crop
Proper Care of Young Chicks
What Milwaukee Milk Producers are Doing
The Dairy Situation
Truck Garden Crop Diseases
Potato Diseases
Cut your Brooding Losses
Can Winter Moults be prevented
Better Pastures in Ozaukee County
4-H Club Work Program for Ozaukee County, 1930
Cooperative Marketing of Live Stock

- The Future Farmers - 4-H Club Work
- The Draining of Flats and pot Holes
- The What and How of Fertilizers Upon Dairy Farm
- What Help Can the Farmer Expect from the Federal Farm Board
- Keeping your Flock Healthy
- Raising Chicks that Will pay
- Can Cooperative Work Stabilize Dairy Prices
- Electricity on the Farm
- Success with Alfalfa
- Value of Records in Dairying
- Orchard Management
- Breeders' Clubs
- Pasture Improvement
- Cutting Costs with Machinery
- Soil Needs for Shawano County
- June Grass and Sweet Clover for Pasture
- Alfalfa, A Cheaper Better Winter Feed
- Occidiosis, and Worms in Poultry
- The Weed Menace of Wisconsin
- Hens for Profit
- Lime, Legumes and Commercial Fertilizer
- Greater Profits from Swine
- Summer Feeding of Dairy Cattle
- Diseases of Poultry
- How the College of Agriculture Helps the Farmer
- Controlling Weeds
- 4-H Club Work in Buffalo County
- Alfalfa - How to Grow It Every Year
- Planthe Management of Your Soil
- Home Grounds Beautifications
- Why and How to Control Soil Erosion

service in Materials

Two-Day Institutes

Bulletins	1,249	
Cow Testing	44	
Abortion Test	16	
Corn	1	bushel
Barley	20	"
Wheat	20	"
Oats	35	
Soil Testing	43	
Soil Improvement Association	96	
Breeders' Association	60	
Soil Analysis	3	
Phosphate Test	17	
Formaldahide	250	pint cans
Fertilizers	5	tons
Farm Account Books	4	
phosphate	22	tons
Lime	61	"
Terracing	6	

One-Day Institutes

Bulletins	580	
Poultry Bulletins	44	
Mail Order Test	1,019	
Dairy Herd Improvement	42	
Corn	10	bushels
Oats	330	"
Soybeans	1	"
Wheat	40	"
Barley	25	"
Soil Analysis	1,139	
Cow Testing Association	592	
Spray Ring	15	
Fertilizer Treatments	45	
The Agricultural Situation	5	
Wisconsin Soil Improvement	45	
Farm Account Books	52	
Commercial Fertilizer	24	
Certified seed Potatoes Tests	2	

Single-Session Institutes

Bulletins	589	
Cow Testing Association	327	
Barley	16	bushels
Oats	20	"
Quack Pullers	12	"
Hay Mowers	3	"

Advertising

The Publicity department of the College of Agriculture sent to the newspapers circulated in each community a notice of the institute, giving place and date. The next article gave information concerning the local men or organizations sponsoring the institute, also gave a characterization of the institute conductors, often running a picture of the men, and inviting the public to attend. The third number carried the program, also commendations of the subjects to be presented and the need of the community for information upon these subjects. They then urged every one to attend, pointed out how it will enrich the community. Some editors published special institute numbers, others prevailed upon their advertisers to mention the institute in their regular advertisements. Some times whole front pages were given over to the institute. The material was often furnished by County Agent, High School teachers,

some local citizen, or the Editor himself. The editors of the local newspapers have given unselfishly to the support of the institutes. In a majority of cases the loyalty and hard work of the editor, was the greatest force for success. Much credit is due these men.

The institutes have been further advertised by the local committee putting up posters in stores, post offices, garages, creameries, cheese factories, and other public places. Tags have been placed upon automobiles and milk cans, announcing place and date of institute. Circular letters have been sent to the farmers, urging them to come to the institute. These letters or postal cards have been sent by County Agents and local committees. However, printed matter appears at best only to the reader, and induces only a small percentage of them to attend the institute. The common practice of using high pressure salesmanship has developed a resistance to this method of advertising.

Contests and Prizes

In many places the local committee put on contests, some times of an agriculture nature. In Manitowoc county the first twelve in the room after 10:00 o'clock the first morning, received a prize. This had the desired result, as it did in Pepin county. One farmer brought in a load of 36 persons, expecting to get the prize, but was beaten by one who named 44 persons that rode to the institute with him at Whitelaw, Manitowoc county. These devices are effective in increasing attendance. The free dinner was another device which attracted attention to the institute. There is a universal appeal in "breaking bread" together. Mayville served over 1150 people in the hall, Poy Sippi over 300. These devices were effective. They should be used wisely,

for if it is only the prize they wish to win, or the dinner is all they are after, then poor management or a false conception of its purpose has defeated its very object, to increase the effectiveness of the institute.

Committees

The most effective method of arousing the interest of the local public in the institute was the appointing of many large committees, and giving each committee a piece of work to do. This always assured us of a successful institute wherever success was possible. The committee having general charge of the institute was known as the Institute Committee. They appointed all other committees with the assistance of the County Agent and assigned them their work. The County Agent met with this committee a month or six weeks before the institute and helped organize the advertising campaign.

In case of the Major Institutes the Assistant Superintendent of Institutes and County Agent met with them.

Different communities used different committees. The following suggestive letter was sent to all local institutes committees and County Agents:

THE UNIVERSITY OF WISCONSIN
Madison

College of Agriculture
Department of Farmers' Institutes
E. L. Luther, Supt.

Chairman of Local Committee

Dear Sir:

One of the essentials of a successful institute is whole-hearted cooperation between the business men of the city and the farmers around that city. We are interested in the whole community and not in a part of it. An increase in the prosperity of the farmers means an increase in the prosperity of the city. That which is good for the one is good for the other. For the greatest progress of the community it is necessary for both groups to work hand in hand for common interests. Your committees should be composed of both, working to make a bigger and better community.

THE BIG PROBLEM OF THE LOCAL COMMITTEE is to arouse the interest of the public in the INSTITUTE. You have plans for doing this very efficiently. However, a few suggestions may be helpful.

There are four methods of arousing the public interest in your INSTITUTE. Each method has its limitations.

First: THE PRINTED OR WRITTEN PAGE, as circulars, postal cards, newspapers, posters, personal letters or tags.

Second: A CONTEST, all enjoy a fight, an exhibit of agricultural products, a ten minute entertainment by various rural schools, men sewing on buttons, women driving nails, the one who brings the largest load the longest distance, the tallest woman, the fattest man, etc. You may think of better ones.

Third: TO GET SOMETHING FOR NOTHING, as a free dinner. A free dinner always brings a crowd. Prizes always help. Many small prizes are more efficient than a few large ones. These may be given in connection with the contests.

Fourth: PERSONAL COMMUNICATION. This will always fill the hall regardless of roads or weather. However, in order to make this method effective much work must be done. Everybody in the community must be talked to not only once but many times by different people. Appoint many large committees and give each something to do. The secret of successful committee work is to see that each committee has a big job, and does it. The following committees are suggested:-

COMMITTEES

- | Number | |
|--------|--|
| 3 | EXECUTIVE OR INSTITUTE COMMITTEE to take general charge of institute. Appoint and assign all other committees. |
| 3 | COMMITTEE ON FINANCES to collect funds to pay for hall, light, heat, prizes or free lunch. |
| 10 | GENERAL PUBLICITY COMMITTEE to post posters, circulate letters, publish articles in newspapers, tie red tags on autos, milk cans, etc. |

Number

25

PERSONAL PUBLICITY this committee should be composed of both men and women from the city and the country. They should talk to every one they meet about the INSTITUTE and get them to talk to their friends about it, always giving an invitation to attend. This should be talk on the street, on the farm, in the schools, after church, at the parties, in short everywhere. Get everybody talking about the INSTITUTE. This committee should have at least one member from each school district.

20 TELEPHONE COMMITTEE two women or men should be selected on every telephone line to call up her friends and invite them to the INSTITUTE.

5 COMMITTEE ON ENTERTAINMENT to furnish the evening program and furnish musical numbers for the REGULAR INSTITUTE.

7 COMMITTEE ON REFRESHMENTS to provide meals for those who attend the INSTITUTE. This may be through the church societies, hotels, restaurants or free lunch at the hall, as seems best.

10 COMMITTEE ON PERSONAL COMFORT to see that the women and children who come to the INSTITUTE are personally comfortable and that all are welcome.

5 COMMITTEE UPON ARRANGEMENT to see that the hall is heated by 9:00 o'clock the first day, that the seats are properly arranged before each session starts, that the room is well ventilated at all times.

In some communities they make their institute very successful by using one of these ways as they did in Fox Lake, in which they appointed 79 men and woman on committees. Another was in Baraboo, in which the business men gave a dinner to the farmers on the first day. The second day the farmers gave a dinner to the business men. In Portage, where they had an institute of nearly 3000 in attendance, they used all methods. They had a large committee composed of men from the city and men from the country. They gave prizes and had a contest between the various district schools in the community.

If there be anything further that we can do to assist you, please write us.

With best wishes for a large, interested, profitable institute, I am,

Yours very truly

A. H. Cole
Assistant Superintendent

AHC:C

No institute used all of these committees, but more were used in building a regular two-day institute and a Major two-day institute, than in the shorter institutes.

One-Session and One-Day Institutes

These were not sufficiently advertised. The least that should be done, the County Agent should appoint a local committee, meet with them and outline the work for them to do, such as using the telephone, putting up posters, sending circular letters, and putting an article in the newspaper.

Two-Day Farmers' Institutes

These are more pretentious, cost more, and are more beneficial to a larger community. They need more advertising. Notices were made of them at least twice in the local paper, and hand bills, posters and letters were sent out by the County Agent. The local committee met with the County Agent. Advertising campaigns were planned and committees appointed. The success of the institute depended upon the efficiency of the local committee, as described at the Poy Sippi institute.

The Major Farmers' Institute

The Major Farmers' Institute is the largest, and possesses the greatest possibilities for effective improvement of farm practices, that is offered by the department. These are for only a few large communities. There is a strength in numbers. This type of institute has been undertaken only by farmers and business men working together for a common end, the improvement of their community. This type of an institute is not considered a success unless there are more than 1,000 in aggregate attendance. All methods of arousing the interest of the public were used. Newspapers, letters, circulars, tags, and a large number of people upon committees working for a better and larger

institute. This brings the objectors the indifferent as well as the usual, to listen to means of improvement.

Very often the very men that could profit most by following the teachings of the institute do not come. In every community we have farmers in poverty, men who have struggled along in the same old way. They have inherited their farm practices along with their religion and politics. Because they do not prosper they are disgruntled and pessimistic. They are undesirable citizens. We are often told that we do not help these farmers.

Again the prosperity of a community depends upon the prosperity of all its people. Any farmer who does not prosper is a hindrance to community progress. Therefore, every effort should be made to get this class of farmers to the institute. Then give the best information in the most effective way.

These methods assisted in making the institute a success in the following places:

Monroe; About three weeks before the institute 52 farmers of the community gave a luncheon to 61 business men of Monroe. Professor George Briggs and the Assistant Superintendent of Farmers' Institutes were invited to the luncheon to place before the diners the ways and means of running a successful institute. All committees were appointed and started work that night.

Appleton spent some time building up an historical exhibit and an historical play which added interest to the institute. In Baraboo the business men banquetted the farmers one day and the farmers banquetted the business men the next. Each group furnished their own toastmaster and speaker. In Dodgeville the farmers and business men shared equally the expenses of the institute. At Evansville the committees were composed wholly of women.

Any unusual or original effort brought success to the enterprise.

Women's Institutes

The demand for Women's Institutes in the state has fallen off greatly. This is due in a large way to the larger point of view that the farm woman is taking in their problems. They are much more interested in the real problems of the family, such as increased income due to better management and increased production on the farm, better marketing through the production of higher quality products, and they seem to want to stay in the farmers' institutes to get last word on these subjects.

The time is now past when much time will be given, to how to bake a new cake, or cut a dress pattern. The problem is not how to increase the amount of work in the house, but how to decrease it. With women's activities centering around civic problems, community and family health problems, and increased comforts that come from more efficient solution of economic problems, have made the Women's institutes less popular. We have held 16 Women's institutes this winter.

The Farmers' Institutes Staff

The following men were employed for more than ten days on the regular Farmers' Institutes staff:

Walter C. Brill	Otto Onstad
B. J. Gehrman	T. J. Pattison
C. H. Imig	C. S. Ristow
R. A. Kolb	P. C. Swartz

The farmers employed this year are men of prominence and worth in their own community, men of unusual ability. They have been of public service. They have been prominent in local organizations. They are men who have a hopeful optimistic view

of the future. Their farms are profitable and look it. The following is a short summary of their lives:

Walter C. Brill, Oostburg

Mr. Brill was born and lived his life to the present time in one community. He has been a great home student. This has given him power to keep his farm practices up to date.

He has been Town Clerk, Secretary of the Local American Society of Equity, Secretary of Cooperative Cheese Factory for six years and for two years was its Vice-President, a member of Sheboygan County Holstein Breeders' Association and a life member of Holstein Friesian Association of America.

His farm consists of 40 acres of Sheboygan clay loam soil. He has eighteen herd of pure bred Holstein cattle, and has a thousand to eleven hundred White Leghorn laying hens each year.

He is unusually able in telling what he has done to his audience in such a way that they will go home and do likewise.

B. J. Gehrmann, Mellen

Mr. Gehrmann was born and lived in Germany until he was 13 years old. By heroic efforts he has acquired an education at night school at home and in the rough school of experience. He moved to Neillsville, Clark county, 1896, where he helped clear up an 80 acre farm. He moved upon that same farm in 1904. He sold it and bought another farm near Hudson. Sold that in 1915 and bought a farm near Mellen. Raised 6 boys and 5 girls. He has a good farm and it is in fine condition.

He has been Assessor five years, Town Chairman six years, Assemblyman 1927-1928, under-sheriff two years, and will be returned to the Assembly this fall. He is interested in farmers organizations and cooperative enterprises. He is now Vice-President of American Society of Equity.

He never fails to attend farmers' institutes, nor Field Days at Experiment Station. He is one of our most effective workers.

Charles H. Imig, Junction City

Mr. Imig was born on a farm near Fort Atkinson and lived there during all of his boyhood days.

He graduated from Whitewater Normal School and taught school seven years. He then purchased a hundred sixty acre farm near Waupaca which he farmed for twelve years. He sold this and purchased his present two hundred acre farm near Rudolph, which he has farmed for eighteen years.

He has been Chairman of his town, School Clerk, Secretary of a Cooperative Creamery, President of Central Wisconsin Holstein-Friesian Breeders' Association, and is President of a Cooperative Creamery now.

He has belonged to a cow testing association for many years and has a herd average of 437# butterfat of eighteen cows. He has used four carloads of ground limestone and large quantities of commercial fertilizer. He raises alfalfa, cold resistant Golden Glow corn, Wisconsin No. 7 oats and Wisconsin No. 37 barley. He is one of the most successful farmers of his community.

R. A. Kolb, Chelsea

Mr. Kolb spent his boyhood days on a farm in Manitowoc County. Graduated from High School and County Normal School. Taught rural school. Graduated from Long Course in Agriculture, University of Wisconsin.

He was Farm Manager of Manitowoc County Asylum Farm two years. Then he was promoted to Superintendency of the institution. He was County Agricultural Agent, Taylor county, from 1914 to 1925. Has run his farm of 140 acres since 1919. He has always been

closely affiliated with the farm and farmers.

He is now president of the Rib Lake Cooperative Creamery Company, which is one of the Land O' Lakes creameries.

His preparation by training, experience and sympathy makes him a very strong institute worker.

Otto Onstad, Cambridge

Mr. Onstad spent his boyhood on a farm near Cambridge. Went to country school, Albion Academy and Lutheran College at Decorah, Iowa. Taught school six years. Took over his father's homestead in 1898 and has farmed it ever since.

Organized and served as Secretary-Manager of Prairie-Queen Cooperative Creamery Company in 1895. Organized Farmers' Local Telephone Company. Served eight years as Town Clerk, four years Town Chairman, Member of Assembly 1909-13, Superintendent of Public Property, State Capitol, 1914. Organized and was officer of the Cambridge Cow Testing Association 1912-24. Took active part in organizing Northern Wisconsin Cooperative Tobacco Pool and is serving fifth year as Director of the same.

Mr. Onstad is an effective institute man, especially in the southern part of the state.

T. J. Pattison, Durand

Mr. Pattison has lived on a farm all his life. He is a graduate of the Short Course in Agriculture of this College in 1903.

In 1911 he purchased a farm five miles east of Durand, 500 acres of black loam soil. Paid \$62,000 for it. He paid in all he had and owed \$50,000. He has paid this from his profits from the farm.

At this time he has 150 head of milking Short Horns,

200 Duroc Hersey Hogs, 100 Shropshire ewes, 100 lambs and 8 work horses. He also rents 200 acres of pasture land. He practices the new methods in agriculture.

He is Director in the First National Bank of Durand and Chairman of County Agricultural Committee.

He has a very comfortable farm home with all modern equipment and conveniences. He has these things, knows how he got them, and takes pleasure in telling others how to get what he has.

He is one of the most popular and successful of our workers.

Charles S. Ristow, Black River Falls

Mr. Ristow is a man of broad experience. Spent his boyhood on a Wisconsin farm. He has run a meat market, shipped livestock, ran a feed mill, president of North Bend Creamery Company, Member of County Board, President of Black River Falls Cooperative Creamery Company, President of Jackson County Farm Bureau, President of Farmers' Cooperative Packing Plant of La Crosse, and was President of Jackson County Fair Association for fifteen years.

He purchased and moved on a farm near Black River Falls in 1907, which he has farmed ever since. He practices the most modern methods in farming. He has won the following prizes: silver cup, Jackson County Bank, best ten ears of corn, Silver Cup National (Corn Show St. Paul, Minnesota, Gold Medal) was won at the Panama Pacific International Exposition on corn.

He has a very fine herd of Guernsey Cattle and has produced some very outstanding animals of the breed.

Mr. Ristow is a very pleasant and convincing speaker. He passes on his experiences to the farmers of the state

to their great advantage.

Peter C. Swartz, Waukesha

Mr. Swartz's academic training went as far as the first two years in Carroll College. Since 1909 he has been in Madison every year for information on how to farm.

He and his brother own and operate a 253 acre farm. Modern farm machinery, ground limestone fertilizers, apples and alfalfa tell the story of the success of Mr. Swartz. Recently they have started raising Karakul sheep for fur. They now have 80 head. Mr. Swartz's farm practices are right up to the last minute.

He has been President of Wisconsin Alfalfa Order and Treasurer of the Wisconsin Experimental Association, Director of Waukesha Farm Bureau, Director of Farmers' Bank, Waukesha, and Clerk of School District.

His alfalfa and grains have won many prizes in Wisconsin. In 1914 his sheaf of alfalfa won first place in Wisconsin. Then it was sent to San Francisco to the Panama-Pacific International Exposition, where it won first and a gold medal.

He is one of the outstanding alfalfa and apple men of the state. He has a very convincing way in presenting his subject at the institutes. Farmers go home and do what Mr. Swartz tells them is the right thing to do.

The following men were employed for temporary and emergency service for less than ten days:

Bibby, Allen	McDonald, Roy
Bollinger, John R.	Murray, H. A.
Brown, A. A.	Reynolds, Roy T.
Kasierski, J. F.	Woyak, Nick

The following specialists connected with the College of Agriculture took part in the institute work:

Annin, G. E.	Graul, Edw. J.	Moore, R. A.
Beach, B. A.	Harris, R. T.	Mucks, Arlie
Bohstedt, G.	Hatch, K. L.	Musbach, F. L.
Briggs, G.M.	Hayes, J. B.	Richards, G.
Chapman, C. J.	Hull, Harold H.	Sutton, Erwin
Cramer, A. J.	Humphrey, Geo.	Vaughan, R. E.
Delwiche, E. J.	Hunt, Franklin	Zeasman, O. R.
Graber, L. F.	Kuehner, C. L.	

The following were employed to conduct Women's institutes:

Hopkins, Mrs. L. D. Sears, Mrs. Verlyn

Institutes Force

<u>Name</u>	<u>Two-Days</u>	<u>One-Day</u>	<u>S.S.</u>	<u>Total</u>
Bibby, Allen L.	1			1
Brill, W. C.	20	6	5	31
Cole, A. H.	12	35	41	88
Gehrmann, B. J.	12	10	8	30
Imig, C. H.	4	14	36	54
Kasierski, J. P.	2	4		6
Kolb, R. A.	29	10	17	56
McDonald, Roy	4	12	1	17
Onstad, Otto	14	14		28
Pattison, T. J.	21	7	8	36
Ristow, C. S.	14	12	15	41
Swartz, P.C.	17		12	29
Woyak, Nick	<u>1</u>	<u>1</u>	<u>12</u>	<u>14</u>
	151	125	155	431

Specialists

<u>Name</u>	<u>Two-Days</u>	<u>One-Day</u>	<u>S.S.</u>	<u>Total</u>
Annin, G. E.		14	6	20
Beach, Dr. B. A.	4			4
Bohstedt, G.		3		3
Briggs, G. M.	18	32	4	54
Brown, A. A.		5		5
Chapman, C. J.	5	28		33
Cramer, A. J.	6	7	8	21
Delwiche, E. J.	6	7	3	16
Graber, L. F.	10	4	7	21
Graul, E. J.			1	1
Harris, Roy T.	3			3
Hatch, K. L.	2			2
Hayes, J. B.	5	7		12
Hull, Harold H.		4		4
Hunt, Franklin		12		12
Kuehner, C. L.		16	14	30
Moore, R. A.	2			2
Mucks, Arlie			4	4
Musbach, F. L.	4	16	2	22
Reynolds, R. T.			4	4
Richards, Griffith	7	13		20
Sutton, Erwin			7	7
Vaughan, R. E.	4	10		14
Zeasman, B. R.	<u>10</u>	<u>11</u>	<u> </u>	<u>21</u>
	86	191	60	337

Number of Days Employed

	<u>Specialists</u>	<u>Institutes Force</u>
Two-Day Institutes	86 days	151 days
One-Day Institutes	191 "	125 "
Single session	<u>60</u> "	<u>155</u> "
	337 "	431 "

Proportional Employment

Specialists were employed 337 days and Institutes Force 431 days. The force of workers are composed of 25 Specialists and 13 Institutes Force. The proportion of work done by each of them was as follows:

Specialists	43.9%
Institutes Force	56.1%

6 Two-Day Women's Institutes

Ashland Junction	183
Fountain City	285
Leopolis	350
Waumandee	115
Whitehall	92
Wittenberg	135

Number of Two-Day Women's Institutes	6
Total Attendance	1,160
Average Attendance	193

10 One-Day Women's Institutes

<u>County</u>	<u>No. Days</u>	<u>Attendance</u>
Crawford	2	197
Crawford	2	230
Florence	4	126
Manitowoc	2	306
Number of One-Day Women's Institutes		10
Total Attendance		859
Average Attendance		85

Attendance Two-Day Women's Institutes	1,160
Attendance One-Day Women's Institutes	859
Total Aggregate	<u>2,019</u>

455 One-Session Farmers' Institutes

<u>County</u>	<u>No. Days</u>	<u>No. Sessions</u>	<u>Attendance</u>
Bayfield	7	14	172
Brown	15	26	876
Chippewa	4	6	197
Clark	24	58	964
Columbia	5	11	806
Dane	1	1	38
Eau Claire	4	12	215
Florence	3	7	86
Forest	4	11	144
Grant	4	6	404
Green	4	17	293
Langlade	9	20	485
Manitowoc	3	5	104
Marathon	16	43	912

<u>County</u>	<u>No. Days</u>	<u>No. Sessions</u>	<u>Attendance</u>
Marinette	8	18	237
Milwaukee	2	2	32
Oconto	8	22	546
Oneida	10	21	667
Portage	10	27	547
Price	8	16	428
Rock	4	5	398
St. Croix	8	13	353
Sawyer	4	10	249
Shawano	3	6	165
Taylor	6	17	291
Vilas	3	5	73
Washington	5	13	814
Waukesha	4	7	287
Waupaca	1	1	110
Waushara	1	1	78
Winnebago	1	1	8
Wood	<u>9</u>	<u>33</u>	<u>349</u>
	198	455	11,328

Number Single Sessions Farmers' Institutes 455
 Total Attendance 11,328
 Average Attendance 24

288 One-Day Farmers' Institutes

<u>County</u>	<u>No. Days</u>	<u>Attendance</u>	<u>County</u>	<u>No. Days</u>	<u>Attendance</u>
Ashland	8	548	Marquette	4	950
Barron	8	887	Milwaukee	7	1,959
Bayfield	20	1,226	Monroe	5	636
Buffalo	5	1,072	Oneida	2	258
Burnett	2	1,265	Pepin	1	35
Chippewa	12	1,241	Pierce	7	322
Clark	1	181	Polk	12	1,341
Columbia	2	292	Portage	7	433
Dane	10	1,691	Price	9	1,230
Door	3	56	Racine	1	150
Eau Claire	5	312	Rock	5	531
Fond du Lac	5	1,320	St. Croix	2	145
Grant	4	1,140	Sauk	1	133
Green	3	707	Sawyer	14	3,202
Green Lake	5	213	Shawano	12	1,549
Iowa	4	1,078	Sheboygan	5	1,163
Kenosha	10	736	Taylor	6	212
Kewaunee	15	651	Vernon	9	879
LaCrosse	3	467	Vilas	4	451
LaFayette	8	1,924	Washburn	1	67
Langlade	4	210	Washington	1	60
Manitowoc	4	1,661	Waukesha	6	522
Marathon	11	641	Waushara	5	1,019
Marinette	5	410	Winnebago	5	441
Number One-Day Farmers' Institutes				288	
Total Attendance				37,517	
Average Attendance				130	

51 Regular Two-Day Farmers' Institutes

	<u>Attendance</u>		<u>Attendance</u>
Arkdale	485	Merrill	730
Athens	290	Mishicot	960
Bangor	561	Muskego	515
Berlin	1,140	North Clayton	405
Big Spring	365	Picketts	439
Brown Deer	693	Pigeon Falls	574
Chetek	750	Poy Sippi	980
Cleveland	365	Prairie Farm	315
Colburn	403	Rib Lake	1,225
Colby	580	River Falls	189
Cuba City	1,326	Southwest Mequon	721
Dresser Jct.	748	Spencer	745
Durand	357	Steuben	210
Elderon	880	Tell	470
Eldorado	1,261	Tennyson (Potosi)	251
Etbrick	300	Valders	1,265
Evansville	973	Viola	1,110
Franklin	487	Viroqua	328
Hillsboro	454	Washington Island	135
Indian Creek School	145	Waubeka	705
Leopolis	661	Waumandee	742
Maiden Rock	330	Waupun	1,200
Marathon City	965	Winchester	328
Markesan	1,040	Winneconne	358
Menomonee Falls	300	Wittenberg	1,324
	Woodstock	661	

Number Regular Two-Day Farmers' Institutes	51
Total Attendance	32,744
Average Attendance	643

1929-1930

14 Major Farmers' Institutes

	<u>Attendance</u>		<u>Attendance</u>
Appleton	1,585	Mayville	3,654
Baraboo	1,460	Medford	1,125
Campbellsport	2,408	Monroe	1,638
Dodgeville	1,175	Mt. Horeb	1,310
Eau Claire	1,075	Plainfield	3,050
Fountain City	1,370	Ripon	1,870
Hortonville	1,175	Stevens Point	2,000
Number Major Farmers' Institutes		14	
Total Attendance		24,895	
Average Attendance		1,778	

Summary

	<u>Attendance</u>	<u>No. Days</u>
Major Farmers' Institutes	24,895	28
Regular Two-Day Farmers' Institutes	32,744	102
One-Day Farmers' Institutes	37,517	288
One-Session Farmers' Institutes	11,328	198
Women's Institutes	<u>2,019</u>	<u>22</u>
Total Aggregate	108,503	638



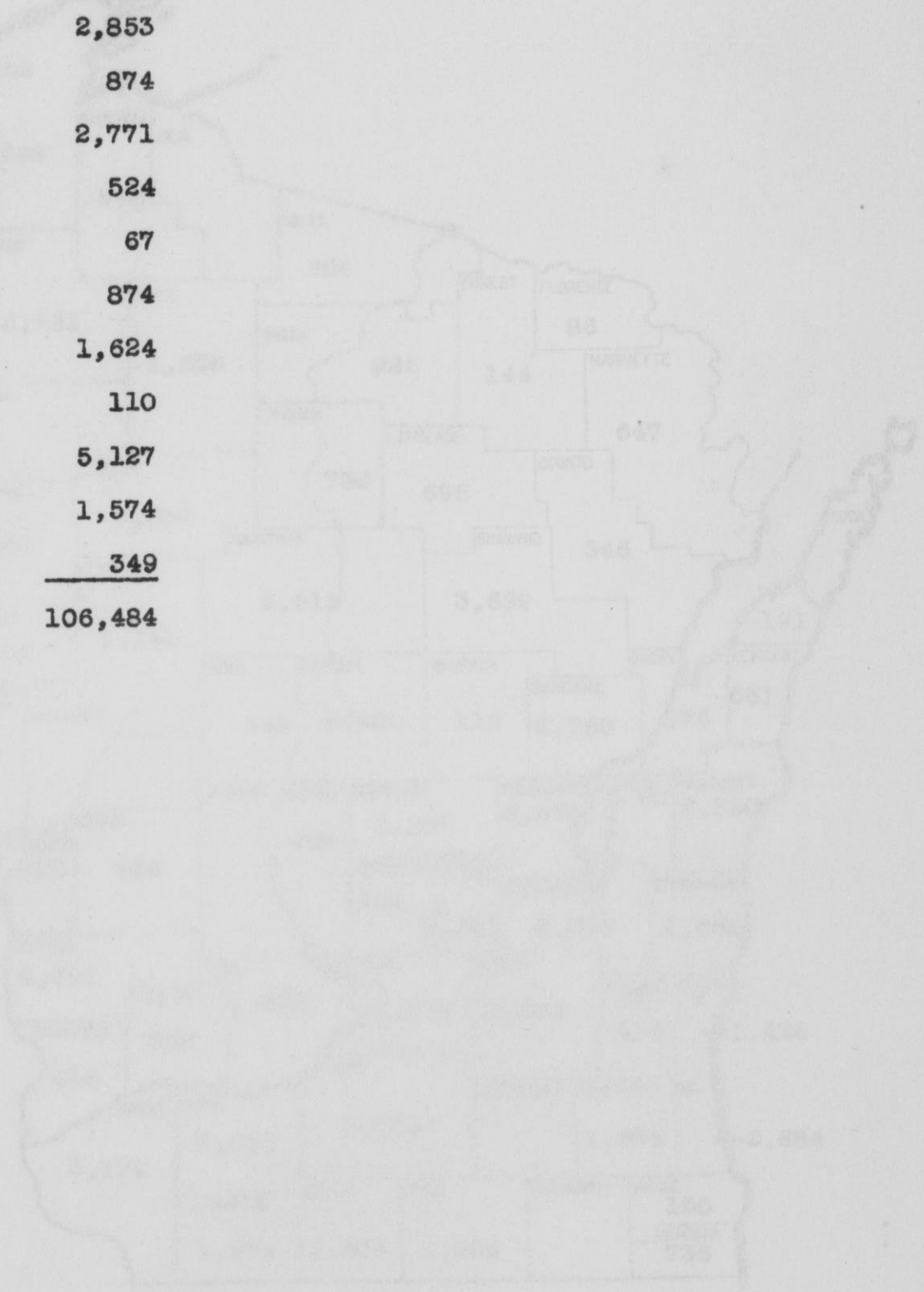
One-Day Farmers' Insts
Two-Day Farmers' Insts

Attendance at Farmers' Institutes by Counties

	<u>Attendance</u>		<u>Attendance</u>
Adams	850	Kenosha	736
Ashland	548	Kewaunee	651
Barron	1,902	La Crosse	1,028
Bayfield	1,398	La Fayette	1,924
Brown	876	Langlade	695
Buffalo	3,654	Lincoln	730
Burnett	1,265	Manitowoc	3,890
Chippewa	2,206	Marathon	5,013
Clark	1,145	Marinette	647
Columbia	1,098	Marquette	950
Crawford	615	Milwaukee	2,684
Dane	3,039	Monroe	636
Dodge	3,654	Oconto	546
Door	191	Oneida	925
Douglas	—	Outagamie	2,760
Dunn	—	Ozaukee	1,426
Eau Claire	1,602	Pepin	392
Florence	86	Pierce	841
Fond du Lac	8,059	Polk	2,089
Forest	144	Portage	2,980
Grant	3,121	Price	1,658
Green	2,638	Racine	150
Green Lake	2,393	Richland	858
Iowa	—	Rock	1,902
Iron	—	Rusk	—
Jackson	—	St. Croix	498
Jefferson	—	Sauk	1,593
Juneau	—	Sawyer	3,451

Attendance

Shawano	3,699
Sheboygan	1,650
Taylor	2,853
Trempealeau	874
Vernon	2,771
Vilas	524
Washburn	67
Washington	874
Waukesha	1,624
Waupaca	110
Waushara	5,127
Winnebago	1,574
Wood	<u>349</u>
Total	106,484





Farmers' Institutes
Attendance by
Counties

Distribution of Assistant Superintendent's Time

From

June 30, 1929, to July 1, 1930

County Agents Conference	4 days
Advanced Agent Work	8 "
County Agents Work Adams County	12 "
Two-Day Farmers' Institutes	12 "
One-Day Farmers' Institutes	35 "
One-Session Farmers' Institutes	41 "

Field Work	112 "
Office	174 "
Vacation	27 "
Sundays	<u>52</u> "
Total	365 "

Respectfully submitted

THE UNIVERSITY OF WISCONSIN

MADISON

COLLEGE OF AGRICULTURE
DEPARTMENT OF FARMERS' INSTITUTES

E. L. LUTHER, SUPT.

September 30, 1930

Dean H. L. Russell
College of Agriculture
Madison, Wisconsin

Dear Dean Russell:

There have been so many angles to this report that it has taken a lot of time to assemble all of the information we desired to have in it. The report has had to be prepared by piecemeal. There are no doubt quite a number of imperfections in it.

However, it does give the scope of the work and some of the details.

sufficient to say that I deem the year the greatest one in my term as superintendent. As far as this department is concerned, I hope you can turn over your administration with considerable satisfaction.

The outlook for the coming year is better than ever before.

Yours very truly

E. L. Luther
Superintendent

ELL:C

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