

Wisconsin Farmers' Institutes : a hand-book of agriculture. Bulletin No. 33 1920

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WISCONSIN

FARMERS' INSTITUTES



BULLETIN NO. 33

Marketing Farm Crops





PLOWING MATCH, TAYLOR COUNTY, 1919 Yes, Uncle Sam was there and did a good job of plowing, too.

ILLUSTRATIONS

The illustrations in this Bulletin are not in any large part particularly pertinent to the general subject matter. It has been difficult to secure cuts appropriate to marketing.

The College of Agriculture never in its history accomplished as much with its summer extension work as it has this summer of 1920. Summer demonstrations were held at all of the Station and Sub station farms, several demonstration trips were put on in counties having County Agents and the Horticultural Department conducted a field trip across northern Wisconsin, starting from the Sub station at Spooner. In the neighborhood of ten thousand people were in attendance upon these various demonstrations. Pictures were secured of these activities and will be presented in this Bulletin with the hope that they will either convey some lesson or arouse interest in attendance upon future demonstrations.—Superintendent.



WATCH US

WE ARE THE PRODUCT OF THE NEW SKILL OF WISCONSIN FARMERS IN GROWING PURE BRED, HIGH PRODUCING, DISEASE FREE, CERTIFIED SEED POTATOES. WILL WE GAIN NEW MARKETS FOR WISCONSIN FARMERS?

SURE

WISCONSIN FARMERS' INSTITUTES

A HAND-BOOK OF AGRICULTURE



BULLETIN No. 33

"Farming is a business; agriculture is a science. The tiller of the soil who blends these two is the man to whom the future offers success."—CYRUS H. McCORMICK.

Edited by E. L. LUTHER

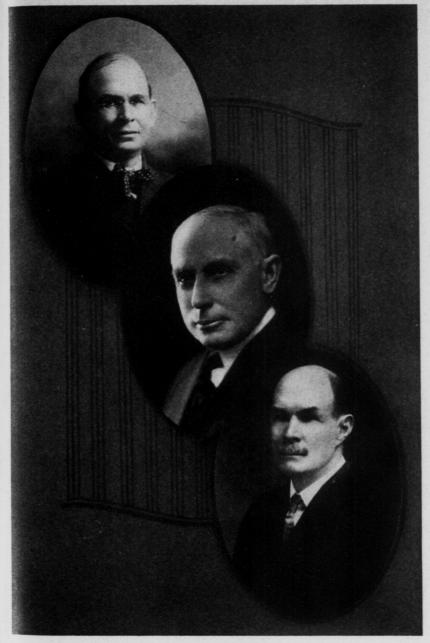
Superintendent

THIRTY THOUSAND COPIES ISSUED

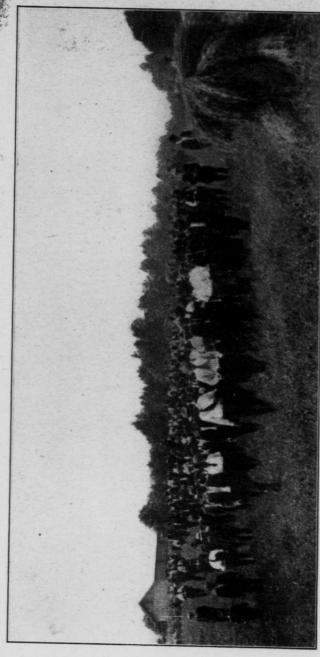
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W. L. HOUSER
A. R. POTTS
S. A. Baard
Granted Special Recognition by the University of Wisconsin for their Services
in Upbuilding Agriculture. 1920.



SPOONER SUB STATION DEMONSTRATION MEETING

Some idea of the crowds which took advantage of the Summer Demonstration Meetings on the various University Farms may be gained from this cut. A whole field full of men and still they came. Attend the meetings next year and be with the bunch.

Wisconsin Agriculture Ideal

By H. L. Russell, Dean of the Wisconsin College of Agriculture.

We are aiming high, but our goal is not beyond the reach of men fired with the Wisconsin spirit.

We would keep Wisconsin in the lead as a dairy state; as a producer of pure bred grains and in the growing of better boys and girls for its farms.

We would be known as the one hundred per cent pure bred bull state and the state where each farmer produces more nearly the maximum amount of product consistent with quality and equitable prices.

We would seek to lower cost of production as well as what to produce, for we have excelled due to our insistence upon doing well what we know best how to do.

We would conserve our field crops by combating diseases, would conserve our labor by using improved machinery; would save our efforts by using business methods and improved appliances, equipment and materials.

We would complete the development of this state by subjugating its unused acres, turning them into happy and prosperous homes as rapidly as these new lands can be assimilated with a due regard to the labor and energy spent in their reclamation.

We hope to maintain our present standard of minimum degree of tenancy, recognizing that farm ownership is the best foundation for a contented and prosperous husbandry.

We would continue to develop that team work between the farmer, the scientist and the economist, which has made the Badger State indispensable to the nation's production and improvement.

We would develop a rural life that is satisfying to rural people and their children, and a home life which seeks continual improvement.

We would increase our efforts as communities toward better roads, unified churches with resident pastors, better schools and a more responsive and responsible organization.

We would overlook nothing that would tend toward better farming and better farm living.



POTATO IMPROVEMENT IN WISCONSIN

As the fancy Bliss Triumph seed potatoes lay behind the diggers at Sunset Farm, at Clearwater Lake—the Farm of a Thousand Acres.

WISCONSIN FARMERS' INSTITUTE IDEALS

- ¶ EVERY SIRE IN WISCONSIN A PURE BRED
- ¶ EVERY DAIRY COW IN WISCONSIN UNDER TEST
- ¶ A SILO ON EVERY DAIRY FARM
- ¶ ALL CROPS GROWN IN A LIVE STOCK SYSTEM OF FARMING
- ¶ WISCONSIN PEDIGREE GRAINS ON EVERY FARM
- STANDARDIZATION OF WISCONSIN FARM PRODUCTS
- ¶ FARM MACHINERY PROPERLY HOUSED
- ¶ DECENT OUTHOUSES AT EVERY RURAL SCHOOL
- FARM ACCOUNTING ON EVERY FARM
- ¶ EVERY FARMER HAVING THE USE OF A
 ROAD DRAGGED ROAD
- ¶ FEEDS HOME GROWN
- FARM CROPS FARMER MARKETED

WISCONSIN FARMERS' INSTITUTES

In order that the people of Wisconsin may realize the most good from the Farmers' Institutes it seems wise to set forth the general plan under which institutes are conducted.

KINDS OF INSTITUTES

- Regular Farmers' Institutes: These will be of two days' duration and will be conducted for the most part in a regular winter series of institutes. While in these institutes two main lines of work will be carried on, a number of subjects in which it is desired to arouse interest will be presented. For instance, dairying and poultry, dairying and potatoes, live stock and fruit, and so on, may be carried on as the two lines. Then subjects like roads, libraries, cooperation, and so on, may be introduced to furnish information in regard to single subjects. By carrying on two lines it is hoped to go a little deeply and more thoroughly into subjects.
- Regular Women's Institutes: In conjunction with the regular farmers' institutes as many regular women's institutes will be conducted as the two women workers can conduct. These institutes will continue two days and will consist in lectures and demonstrations upon household subjects.
- Special Women's Institutes: These institutes will be of one-day duration and consist in lectures and demonstrations upon canning and other household problems.
- Special Crop and Live Stock Institutes: To develop in communities community growing of various crops with a view to standardizing them for better marketing, special one-day institutes will be conducted. For instance in communities where the people desire to improve the potato crop a day will be devoted to this one subject and will wind up with the organization of a community potato growers' association. Subjects like the following will be discussed:
 - Potato Growing in a Dairy System of Farming
 Varieties of Potatoes for Wisconsin
 Selection of Seed Potatoes

 - Handling the Crop
 Potato Diseases and Their Treatment
 - How to Prepare a Bushel of Potatoes for exhibit The Value of Exhibiting at Potato Shows Marketing Potatoes
 - 7.

 - 9. Community Potato Growing
 - The Organization of a Community Potato Growers' Association
 - The Wisconsin Potato Growers' Association

Demonstrations:

- 1. Well selected exhibits—poorly selected exhibits
- How to prepare spray materials
- Tuber cutting for seed
- Preparing potatoes for market

If a number of people in a community desire to make more of the poultry business, then a special one-day poultry institute in which the following subjects may be considered will be conducted:

Breeds of Poultry for the Farm

Selecting Eggs for Setting Incubating and Brooding

- The Care of the Growing Pullet
- 6. Feeding for Winter Eggs
 7. Poultry House Construction
 8. Some Common Diseases of Poultry and Their Treatment

Insect Pests and Their Treatment 9.

Community Poultry Associations and What They Can Accom-10.

The Organization of a Community Poultry Association 11.

Demonstrations:

Trap nests

- 2. Poultry records
- 3. Caponizing
- 4. Dusting for pests Dressing poultry 5.
- Judging poultry

Likewise at special institutes the extension of sheep husbandry, swine husbandry, beef production, breeding farm draft horses, cowtesting (with the view of organizing a cow-testing association), horticulture, bee-keeping, alfalfa, drainage, and so on, may be taken up and enough time put upon them to get the community into active work with them. Special assistance will be given communities taking up this work and definite and sure results arrived at.

Farmers' Organizations Institutes: Farmers' clubs, farmers' organizations, breeders' associations, cow-testing associations, potato growers' associations, and so on, hold meetings and desire speakers. In all such cases where associations desire the assistance of the Farmers' Institutes for special information the Superintendent will be glad to supply speakers upon proper consideration of the matter.

Demonstration Institutes: During the regular winter institutes the conductors will secure the names of farmers desiring further information upon or special assistance with any problem developed at the institute. These names will be filed at the office of Farmers' Institutes and the problem will be "followed up" as closely as possible to a successful conclusion. When the problem or problems have been solved by the farmer a demonstration institute will be held at the farm and the neighbors will be invited to inspect the results with a view to adopt the methods which secured the desired result. Thus will farmers' farms become demonstration farms.

HOW TO SECURE THESE INSTITUTES

Assistance through the various institutes named above may be obtained without further expense than furnishing a hall, if one is needed, and heat and light, by filing with the Superintendent an application signed by a liberal number of the people of any community showing that the institute is really desired. Application blanks may be secured by addressing the Superintendent of Farmers' Institutes, Madison, Wisconsin.



POTATO DEVELOPMENT IN WISCONSIN

Dr. Stewart of the U. S. D. A. explaining a problem to specialists and growers at Spooner Sub Station.

MARKETING FARM CROPS

FOREWORD

In Farmers' Institute Bulletin No. 31 (1917), the County Agent or County Agricultural Representative as he is legally called in Wisconsin, was emphasized as a rallying point for farmers in organizing a more permanent and profitable agriculture. Farmers' Institute Bulletin No. 32 (1919), was devoted pretty largely to the Organization of Agricultural Production as the basis for greater facility in marketing farm crops.

Farmers' Institute Bulletin No. 33 (1920), will be devoted to Marketing Farm Crops. It is not our purpose here to develop the scientific and theoretical phases of the subject from the viewpoint of the economist but to present the matter in its practical phases as it has been worked out

through practical cooperation.

Most people who approach this subject like to refer to the California Fruit Exchange, or marketing stunts done in Denmark, New Zealand or some other far away and mysterious land. To our mind this is impractical and unnecessary. Some farmers may market oranges. But can they market cherries? Denmark farmers may market their butter and eggs but can Wisconsin farmers market their cheese? Colorado farmers may market their alfalfa but can Wisconsin farmers market their cattle? Dakota farmers may market their wheat but can Wisconsin farmers market their potatoes?

Manufacturers of oil, fertilizers, cement, feeds, machinery and so on market their wares. While there are a good many factors to control, the factors are more or less stable and subject to control. But can the farmer market his wares? Is he capable of being organized like the manufacturers? The factors with which he has to deal are myriad and more or less beyond control. Soil, water, air, sunshine, heat, cold, frost, disease, bugs, times and seasons, all alive and out of doors! It looks like a hopeless proposition, doesn't it? California must be different if they do it out there. Denmark is a queer little country anyway and as for New Zealand, it is too far away to help our case any. Impractical and visionary.

The question is, Is it being done in Wisconsin or any states which touch us which are affected by all the factors by which we are affected?

Yes, you bet it is. There is no need of our talking in enigmas. Denmark and New Zealand can probably do it all right. California is great. But, so is Wisconsin. Why then waste time and dwell in theory and speculation? Why not be practical? No amount of Denmark, New Zealand or California conditions will help us any. Marketing can not be done by talking about it, arguing about it or by calling names. We must market in Wisconsin, if we are going to do so, by doing it. Can it be done in Wisconsin? If it can be done in Wisconsin by some farmers some places, why not by all of the farmers all over Wisconsin?

You farmers who are not doing it, we'll prove it to you. It is our purpose in the following pages to show you that marketing farm crops by

Wisconsin and neighboring states farmers, subject to the same conditions, is an established fact. When you have read what is actually being done, why not go and do likewise?

When you have gone over the contents of this bulletin, if your interest is aroused to want further information or you want any assistance along any of the lines described, please feel very free to address E. L. Luther, Superintendent of Farmers' Institutes, Madison, Wisconsin.



SUNFLOWERS

Sunflowers on Cornfalfa Farms filled the big silos in 1920. Sunflower silage and alfalfa hay will make the cattle ration on Cornfalfa Farms this winter.

THE WISCONSIN DIVISION OF MARKETS

Edward Nordman, Director, Madison, Wisconsin

Until recently all efforts to improve agriculture in this country have been directed along lines of greater efficiency and production. "Make two blades of grass grow where one grew before" has been the slogan of practically all agencies that have been concerned with bettering the financial condition of our farming class. This phase of the question of course is fundamentally important in that the progress of society depends more on the quantity and quality of agricultural products than it does on any other one factor in industry.

But it was not until recent years that it began to dawn on anyone that, if this necessary production was to be kept up, farming opportunities must be improved and opportunities for farming must be sufficiently remunera-



CUT OVER LANDS

A hay crop succeeding the timber crop right in the brush.

tive to at least make the farm as attractive as other lines of endeavor. Since this great question has attracted attention, innumerable suggestions by different authorities have been advanced to meet the situation, but a solution, it seems, has not been found.

The law which created the Division of Markets is, I believe, the first serious attempt by any state of this Union to grapple with this question in an authoritative way. It should be understood that this law is not a solution of the marketing question nor did its authors intend it as such. On the contrary, it was recognized that the popular conception of what a

marketing law should contain was not sufficiently crystallized to do anything more than was attempted in this law—that is—to correct certain of the more glaring evils in our marketing system insofar as this could be done by a single state.

Accordingly, a Director of Markets was appointed, who, with his staff, was expected to administer the law. Another thing that was expected of the Director and his co-workers was an investigation that would furnish information to the next legislature which was to serve as a basis for any alteration or extension of the marketing law that might be deemed advisable. The present Director of Markets was appointed and assumed office September 6 of last year. Besides the director, the personnel of the Divi-



CUT OVER LANDS

A bushel or two of alsike seed to the acre in uncleared brush land in Northern Wisconsin.

sion is as follows: Assistant director, another assistant in charge of fruits and vegetables, another in control of market news service, standardization and inspection, another in charge of marketing of dairy products, another in charge of poultry and poultry products, two public accountants and an attorney, making nine people, exclusive of a clerk and two stenographers.

The aim of our Division is to strive for ways and means of getting everyone at work producing wealth, to secure for all producers their fair share of what they help to produce and an opportunity of exchanging this produce in an unrestricted market. It may appear to some that the activities of the Division are rather extended for being purely a marketing proposition but a close study will show that marketing is so closely allied to other phases of industry that a separate treatment could lead to no sound or logical conclusions for, after all, when everything is considered, good marketing depends more upon customers being prosperous and having money than it does upon any other factor. Therefore an intelligent

discussion of the marketing question must include some things which may not seem to strictly belong to that subject.

It is believed that good customers for farm produce, as well as all other kinds of produce, can be had by the process of abolishing special privilege. By this it is meant that every means by which private parties get wealth which they do not earn or produce, should be taken away from them. An investigation will disclose that billions of dollars annually in the form of royalties, land values and monopoly-controlled profits are now going into the pockets of people who do not earn a penny of what they get from these sources. Such an investigation would likewise show that if this enormous wealth went to the masses who produce it instead of to the



CUT OVER LANDS

A hay crop with a little clearing and seeding.

classes who have attained it through manipulation that there would be money enough in circulation so that no useful commodity would ever need to be sold for less than a fair price. The next legislature will have its attention called to the conditions here pointed out, for until this situation is remedied, no farmer or other producer need ever expect to get fair prices for what he produces except upon extraordinary occasions.

Since assuming office our force has been doing what it could to facilitate trade relations between farmers and customers and otherwise to make this Division useful to the producers and consumers of farm products in this state. To facilitate trading in fruits and vegetables and to give an opportunity for acquiring quality in the production of these commodities, grades have been established thereon. These grades divide the commodities affected according to quality and commercial value and are of assistance in both the buying and the selling of farm crops. These grades have already been established on apples, potatoes, cabbage and honey, and other produce will be similarly graded when the demand for it arises and the necessity therefore becomes apparent.

The first trade mark ever taken out in the name of the State of Wisconsin was issued by the Secretary of State to the Director of the Division of Markets for "Wisconsin Badger Brand" potatoes. This is the highest of four grades of potatoes established for Wisconsin. The Division of Markets will issue a seal, bearing this trade mark, to packers of potatoes who handle a product which conforms to the requirements of the grade.

The law provides that, after a standard becomes effective, it shall be illegal for any person to sell a product which does not meet the requirements of the standard or which is not contained in the prescribed receptacle or marked in the manner indicated by the Division.



CUT OVER LANDS

What happens when real clearing and farming are done in Northern Wisconsin.

The Division of Markets is establishing an agricultural exchange. The agricultural exchange is a clearing house to facilitate the inter-exchange of farm products among farmers. The function of such an agency is not to act as broker in negotiating the terms of the transaction, but merely to inform the buyer and seller concerning the market for their products.

The Division will publish a list which will be issued periodically and will contain the names and addresses of farmers who want either to sell or to buy particular products, such as feeds, seeds and live stock.

The county agricultural agents, wherever they are appointed, will constitute the listing agencies within their respective counties. The Division of Markets will establish the central clearing house for statewide operation.

The Division is conducting a market news service providing information "as to supply, demand, prevailing prices, and commercial movement of farm products, including quantities in common and cold storage and such other matters as may be of service to producers, distributors and consumers."

This service is incorporated in a market news bulletin which can be had by any person upon applying to the Division therefor.

One of the duties imposed by law on the Division is the investigation of the cost of producing farm crops. These costs are being studied and will be reported when ascertained.

One of the activities of this Division is assisting in the formation of cooperative enterprises among farmers and consumers in this state. It has been found by actual experience that such enterprises, when rightly managed, are a big improvement over the old way of everyone doing business on his own account. The cooperative principle, if intelligently applied, means the cutting out of duplication, the elimination of a number of parasitical elements in our industry and otherwise gives advantages to those who really do the work. The result of this change should be that the producer will receive more for his product while the consumer should pay less for it.

To assist cooperative enterprises in our state in getting started in the right way and likewise to help them maintain an efficient management of their business, our Division has engaged the services of two public accountants. It is the duty of these accountants to visit warehouses, stores and other cooperative projects and consult with their managers relative to accounting systems and as to their method of conducting the business. The aim is to send these accountants to assist in maintaining these organizations in a high state of efficiency. There is no reason why cooperative enterprises should not succeed as well as private ones if the management is good. Our accountants propose to assist in securing this management.

The Division of Markets is working upon projects calling for the cooperative selling of livestock and potatoes, and has definitely outlined the procedure for the marketing of wool.

The plan for organized selling of livestock and potatoes embraces the organization of local shipping associations which are linked to a state central association which in turn is allied with the national federation. The method of wool marketing hinges upon a contract with the warehouse of a central market which assures a minimum charge for handling, due to the volume of business extended under a cooperative plan, and guarantees fairness in dealings by the presence of a representative of the sellers at the warehouse.

Cooperative wool marketing contemplates that a greater share of the price paid for wool by the manufacturer shall go to the producer of the wool. The direct consequence of such remedial action must be to stimulate production of wool and to increase the supply.

Cooperative wool selling to a central market, where the price paid depends upon the grade of wool, assures a recognition of the better grades of wool and offers reward to the growers of a high grade product.

Dairying is by all odds the most important industry in the state of Wisconsin and as such we believe it is entitled to the services of a specialist to assist in the marketing of the dairy products of this state. Accordingly we have secured the services of an assistant who will assist in organizing

the dairy interests of the state into associations, the object of which will be to get a high quality product and procure a fair price for the same. The condenseries and like institutions being conducted on a large scale are able to hire experts to dispose of their products. Cheese factories and creameries are small scale institutions and need to handle their product in a cooperative way in order to get the benefit of large scale production. The assistant who takes charge of this work will attempt to bring these smaller organizations together for the purpose of getting the benefits that usually come with large scale distribution.

Much the same thing will be attempted along poultry lines. There is probably no other industry within our borders that as a whole is conducted with such a haphazard disregard of plain business practices as is the poultry business. Experience in Denmark and other countries has demonstrated that the cooperative marketing of poultry and eggs can be made exceedingly profitable to those who belong to an association of this kind.

The Division of Markets is empowered "to investigate and ascertain what business acts, practices and methods of competition are unreasonable or unfair"—and "to fix and declare such reasonable rules or orders as may be necessary for the protection of producers and consumers against business acts, practices and methods of competition which are unfair or unreasonable..."

The statute provides that any person complaining of an unfair or unreasonable practice in the marketing of farm products may submit a statement of the alleged facts to the Director of the Division of Markets. The statute provides that the Director may hold a formal public hearing under such complaint and that—whenever he finds the act or practice of the person complained against to be unfair or unreasonable—he shall order such person to stop such practice. The statute further provides that—if the Director determines that the complainant has suffered damage due to the act of the party complained against—an order may be issued by the Director, requiring the party complained against to pay to the party complaining "twice the damages actually sustained by such complainant."

THE EQUITY SOCIETY—ITS AIM, WORK AND PLAN FOR COOPERATIVE MARKETING OF FARM PRODUCTS

J. Fred Larson, Ellsworth, Wisconsin

THE AMERICAN SOCIETY OF EQUITY was organized about eighteen years ago. The main purpose of the Society was to aid in improving our marketing system by promoting organization and cooperation among farmers. The founders of the organization were convinced that only through cooperation could both producers and consumers be given a square deal.

For many years farmers had devoted their efforts exclusively to production and given little or no attention to the marketing of the crops. The general opinion was that the distribution and sale of farm products could not be managed and controlled by the producers; that this was really



SUMMER DEMONSTRATION MEETING

Professor F. B. Morrison demonstrating hog feeding at Marshfield Sub Station. It was hard to get the farmers away from this demonstration.

a distinct line of work and not a part of the farmer's business. Gradually, however, farmers began to realize that they were almost wholly at the mercy of the system built up by the men who had become dealers in farm products. They found they could not lay their plans and raise their crops with any assurance of a stable market; that the prices were very generally disastrously low when the crops were leaving the producer's hands and, comparatively, very high when in possession of the large dealers and distributors; in other words, that the cost of distribution was often several times as much as the farmers received for growing the products. It became evident that the marketing of the crop is as much the farmer's busi-

ness as production is. Only by determining the method and by managing and controlling the system of marketing can the farmers be assured of a fair return for their labor.

Some scattered attempts at cooperation in marketing had been made before the Society of Equity was organized, but not until that Society began its work was there any systematic and aggressive effort in that line carried on in the central and north central states. The Society grew rapidly, at first having the largest number of members in Kentucky. Soon, however, Wisconsin took the lead in membership and that lead has been maintained up to the present time. Continually and persistently the farmers in the organization have been endeavoring to educate themselves and their fellow



SUMMER DEMONSTRATION MEETING

An auditorium was made of the large machinery shed at the Marshfield Sub Station. It was full to overflowing every day of the three through which the demonstrations continued. Come next year. You'll not be alone.

farmers in the matter of marketing and the need of organization and cooperation. This education has been sadly needed for other interests have attempted by all available means to keep the farmers from making a study of marketing and persuade them to give their thought and attention wholly to production. Not only have the farmers in the organization studied and talked cooperation in marketing, but they have endeavored to put their teaching into practice; and, in a limited way, they have been very successful. Hundreds of cooperative shipping associations, warehouses and other cooperative business enterprises have been established all over Wisconsin and adjoining states through the work and influence of members of the Society.

One of the greatest obstacles to the Society reaching the highest degree of power and usefulness has been the failure of many of the farmers to

understand that the organization is only a means of self-assertion and united effort. They have looked upon the organization as one thing and they themselves as another and have expected the Society to do something for them without any effort or responsibility on their part. This has been one of the chief reasons why many members failed to keep up their membership. They looked for something to come without any effort on their part and when it did not come they decided not to continue paying their dues. Another weak point in the organization has been the lack of a uniform "safe and sane" plan of effective business organization. The farmers in each local union, after being told in glowing terms the advantages of cooperative marketing, were usually left to work out their



SUMMER DEMONSTRATION MEETING

Forming on for a soils demonstration at the Spooner Sub Station. Maybe you were not there last summer. Be sure to attend next summer.

business venture in their own way. If they failed they blamed the Society as a whole; if they succeeded they did one of two things—either they became very loyal to the Society, or they gave themselves all the credit for the success, felt independent and failed to continue their affiliation with the propaganda organization. They did not realize that there are other localities that need the same little boost they had gotten, and that even they had only made a beginning.

The Equity Society received its hardest blows from ill-fated attempts to establish larger cooperative selling or purchasing associations. The failure of these largest efforts were usually due to loose and faulty organization and want of full, loyal support from the farmers upon whom the business depended.

Notwithstanding its ups and downs and its alleged shortcomings, the Equity Society has kept steadily on and blazed the cooperative trail. So

much so that men and interests that less than ten years ago strenuously opposed the aims and principles of the Society on the ground that they were too radical and impractical, are now advocating practically everything the Equity organization has always stood for, even to the extent of criticising it for not going far enough. The Society has to its credit a large number of such successful cooperative business enterprises as the Ellsworth Live Stock Shipping Association which averages nearly six car loads a week the year round, and the Amery Equity Exchange which handles grain, potatoes, live stock and farm supplies, and did about \$100,000 worth of business last year without including the live stock shipping Lusiness. An adequate account of the cooperative business ventures di-



SUMMER DEMONSTRATION MEETING

Professor J. G. Milward demonstrating potatoes at Spooner Sub Station. Potatoes from all over the United States were on trial here. You ought to have seen them.

rectly traceable to Equity organization work would fill a book in itself. The most of these local associations have been eminently successful and have been the means of saving the farmers of the state thousands of dollars annually. The Society lost much, however, in strength and usefulness, in not developing early in its history a definite plan of business organization. Such a plan could have been made effective in establishing the loyalty of the members to the business association, and to the propaganda Society by prescribing the requirements for affiliating the business associations with the propaganda organization.

Although the local associations have been very successful in gathering together the products at local shipping points and thus saving to the farmers the local buyer's profits and other local expenses, these local organizations are altogether powerless to do any selling at the terminal market.

All they can do is to load the cars and ship out the product and at the terminal market let them go through channels over which they have absolutely no control. The local associations, like the individual farmers, have, therefore, no power or influence in determining the method of handling beyond the local shipping point, no power to prevent the manipulation and fixing of prices, and no means of preventing the products going through an unnecessarily large number of hands.

Only by federating local associations into central cooperative marketing associations can the farmers take a hand in the sale of their products at the terminal markets. To start and assist efforts in that direction, and to establish an intelligent, safe and effective policy for promoting such efforts the last convention of the Wisconsin State Union of the American Society of Equity appointed committees and instructed them to work with the executive board of the State Union and also to consult with the State Division of Markets, and formulate a definite business plan. Equity organization work is now limited almost exclusively to presenting the plan to local associations and to farmers in communities where new associations are contemplated.

The Equity Society—the voluntary dues paying organization—will continue its educational and propaganda work and assist in organizing the local business associations in conformity with the new plan and unite them into central marketing associations. The business associations will be cooperative concerns separate and distinct from the propaganda Society, but affiliated with it to facilitate the organization work. Only by systematic and persistent organization work can a large number of widely scattered business enterprises be brought into united and harmonious action. The Society of Equity, in this state, is eminently fitted to do this organization work and is therefore entitled to the support of all farmers and others interested in cooperative marketing. To provide the funds necessary to support the organization work the business associations are asked to maintain their affiliation with the organization Society either by requiring their stockholders to be dues-paying members of the Society, or by paying directly a reasonable affiliation fee. The few specific requirements for this affiliation and for federating into the central marketing associations are the only restrictions on the local cooperative associations. The farmers in each community will hold the stock in the local association-own and control it; and at the stockholders' meeting, elect their toard of directors and decide all questions pertaining to the affairs of the business.

The central marketing associations will be composed of the local associations. The local associations will own all the stock in the central associations and representatives from the local associations—one representative from each association in the federation—will hold the stockholders' meeting, elect the board of directors, and transact all other business of the central association as instructed by their home communities. As it has been shown that specialization in marketing, as in production, tends to promote greater efficiency, a separate central marketing associa-

tion for each main farm crop and one for supplying the farmers with the raw materials that they use in their business is being organized. central marketing associations either directly or in conjunction with like associations in other states will establish, maintain and control the selling agencies at the terminal markets or elsewhere. In addition to these department marketing associations there is a main central associationthe Equity Farmers' Exchange-which governs or controls only so far as cooperative methods, audits and accounting, transportation, legal advice and credits for departments are concerned. The small amount of capital stock in the Equity Farmers' Exchange is held by the members of the executive board of the Wisconsin State Union in trust for the members of the Society. The amount of capital stock in each of the local and marketing associations is determined by the stockholders in the respective associations. Much of the business both of the local and marketing associations will doubtless be done on a commission basis. Where a greater working capital for a marketing association than that provided for by the capital stock is required advantage can be taken of the facilities afforded by the credit board consisting of the board of directors of the Equity Farmers' Exchange and a representative from each central association.

Several of the central marketing associations, including the Wisconsin Equity Live Stock Marketing Association, the Equity Produce Marketing Association, the Equity Wool Marketing Association and the Wisconsin Equity Farmers' Supply Association, have already been incorporated and more will be in the near future; and model by-laws for both the local and central associations have been prepared. The work of federating local produce associations into the Wisconsin Equity Produce Marketing Association is progressing rapidly and it is expected that a very large percentage of our potato crop and other produce will be handled this fall through agencies established by that association. The aim will be to route the crop to localities where it is wanted for consumption and not for resale and reshipment. By this means, and by distributing the sale more evenly throughout the year, the market can be stabilized, the producers assured of a fair price and the margin between what the growers get and what the consumers pay be cut down. There is at the present time a growing dissatisfaction with live stock marketing conditions and a demand for a farmers' own selling agency. Such an agency can reach the highest degree of success, if, in fact, it can be established and maintained at all, only by federating the various live stock shipping associations in each state into cooperative marketing associations, and these state central associations uniting in district terminal marketing associations. With this in view, the Equity plan provides for the formation of the Wisconsin Equity Live Stock Marketing Association which a number of local associations have already joined. When the farmers sell the bulk of their live stock through their own cooperative selling agencies they can determine the methods. regulate the marketing, bargain with the packers on prices, and, eventually, if necessary, make cooperative packing plants a success. The same principles apply to grain and grain elevators, and all other farm products.

When all the farmers' elevators are united into central cooperative marketing associations, the farmers, as well as the boards of trade, can meet and discuss crop conditions, prices and the various questions pertaining to the sale and transportation of grain. If local communities or whole counties, as is the case in Polk county, can save money by purchasing their supplies cooperatively what can not be done if we have one cooperative association to buy all the feed, fencing, machinery, etc., for all the farmers of the state? Such an association could contract for the whole output of a mill, factory or mine, and farmers would no longer need to buy their raw materials at retail. The fundamental principles are simple; all that is necessary is careful and sound business organization and management and the full, loyal and certain support of the members of the associations.

NOTE: These things will be realized just in the proportion that farmers loan their efforts and invest their money in local cooperative enterprises and these enterprises are federated into a comprehensive centralized business organization which has at its command the best business and legal talent to oversee and direct it. Farmers can do business. But business is business and must be done in a businesslike manner. It looks as if this new business organization projected by the American Society of Equity is the real thing. Anyway people from near and far over this earth are asking for information concerning it and some in distant lands are already adopting it. It ought to succeed with the sober, sound sense of the Wisconsin farmer back of it.—Superintendent.



DELWICHE---AN APPRECIATION

"YOU LIKE THE LAY OUT HERE, HEY? WELL, I HAVE LEARNED MANY VALUABLE LESSONS FROM THE PROFESSOR THERE. HE HAS HELPED ME WITH ALL YOU SEE."

SUCH WERE THE WORDS OF CHARLES LARSON, WHOSE FARM AWAY UP NORTH NEAR PORT WING WAS ON THAT DAY IN JULY A MODEL FOR WELL KEPT, WELL DRAINED FIELDS, FOR PEDIGREE GRAINS, PEAS AND CLOVER, FOR SPLENDID ORCHARD AND GRAND STRAWBERRIES, IN APPRECIATION OF THE SERVICES OF E. J. DELWICHE, AGRONOMIST IN CHARGE OF THE NORTHERN WISCONSIN SUB STATION FARMS OF THE UNIVERSITY OF WISCONSIN. SINCERE AND WELL DESERVED APPRECIATION.

LIVE STOCK SHIPPING ASSOCIATIONS

R. L. Cuff, County Agent, Barron, Wisconsin

In 1917 an agitation along the line of Live Stock Shipping Associations was started in Barron county. The purpose of these organizations was two-fold: first, to save the profits made by the local stock buyer; second, to educate the people to know the class of stock for which the market would pay the highest price.



PLOWING MATCH, TAYLOR COUNTY, 1919
William Zenner won the match and received the first prize,
a pure bred bull.

Under the regime of the stock buyer the farmers with inferior cattle or hogs were likely to receive just as much as those who had better stock received. This gave the man who raised good stock no incentive to continue building up his herd; and the man who owned poor stock knew that he had no great reason to improve his herd.

Another thing which happened in this county was that stock buyers who shipped to the terminal market would invariably receive back into this county at least one car load of grade or scrub short horns, or at least red bulls. This somewhat retarded the growth of dairying, but during the last year more pure bred bulls have been shipped into Barron county than had been shipped in for the last forty years before.

Barron county claims the unique honor of having the largest number of Live Stock Shipping Associations of any county in the state of Wisconsin. These associations are nearly all single purpose associations, devoted to one idea. Where managers are hired to handle stock and stock only there is little chance for disagreements.



PLOWING MATCH, TAYLOR COUNTY, 1919
Getting set for the great contest. County Agent R. A. Kolb has certainly done a lot for better crop seed beds in Taylor county. Great improvement in plowing equipment and plowing has been effected by these yearly contests carried on by Mr. Kolb.

The method of organizing a Live Stock Shipping Association is to call five farmers together and appoint them as a Board of Directors, each one a director representing his district. Each should be vitally interested in live stock shipping. This Board of Directors has an annual meeting and other meetings are called whenever necessary. Each director is paid from one to two dollars for each meeting he attends.

A manager is hired by the directors; he should not be a member of the Board of Directors. The success of the association depends upon the manager, upon his ability and the interest he takes in the association. If the manager does not care how things run the association is likely to fail. None of the associations in Barron county have failed.

The managers in the county are receiving on the average of ten cents per hundred pounds of live stock shipped. Each manager has the different country telephones installed in his house so he can list car loads easily, and he is always at the local stock yard on shipping day to receive all animals. The hogs are weighed and graded according to the class to which they

belong. If there are to be any cuts on the animals, such as boars, stags or piggy sows, the manager makes a note on the receipt which is given to the shipper and also on the copy which is sent to the terminal market. Each individual that is marked is sold separately. The manager usually accompanies the car to the terminal market to look after the animals as some of the smaller ones might fall or other injuries occur. From two to four cents per hundred pounds of live stock shipped is allowed for injuries. This is in the sinking fund. Barron county has had little trouble with injuries to cattle shipped.



PLOWING MATCH, TAYLOR COUNTY, 1919

Here are furrows turned by William Zenner, winner of the match. For backfurrow, straight furrow, width of furrow, covering of litter and all other things which go to show plowing workmanship, this plowing is excellent.

The shipper who has good sheep, calves and cattle is paid according to their worth. The manager goes to the terminal market with the cars of cattle on Wednesday and Thursday and on Saturday goes to the bank and pays each shipper what he has coming to him. At the end of the year, if the sinking fund is large, it is usually pro rated to the patrons according to the amount of stock they have shipped during the year. If the members do not care to do this, they have improvements made for the benefit of the association, such as installing telephones and water systems at the yards, houses built over the scales, etc.

One thing which we have noticed and that is that in Live Stock Shipping Associations, the Golden Rule is not such a bad thing to follow. As the animals are paid for by weight, it has been the custom to feed them to the

limit just before taking them to the stock buyer. Then when they reached the terminal market they could not take on another fill and were usually sick before going on to the scales. The man who fills his cattle or hogs so full before he reaches the terminal market cuts his own throat, for he is the only loser. Just feed the animals in a normal way and they will come out better than when overfed.

The following is a list of the associations up to 1920. Since then one more association has been formed. Most of the associations were formed in 1917. The table shows that in the last three years the receipts have increased 340 per cent.

Tot	al Amount 1917	Received for 1918	Shipments 1919
Almena	\$26,240	\$51,369	\$47,810
Barron	57,892	138,031	181,049
Barronett		7,161	8,159
Beaver Produce Asso. Turtle Lake	21,791	41,962	30,600
Cameron		18,738	24,464
Canton		20,122	12,416
Cedar Lake		5,283	7,127
Comstock		18,771	35,405
Chetek		26,470	116,092
Cumberland		59,361	137,505
Dallas	27,738	61,500	63,056
Hillsdale	56,262	74,563	85,758
New Auburn			46,846
Poskin		64,984	65,133
Rice Lake		48,455	41,716
Ridgeland	56,799	56,565	122,500
Total	\$302.012	\$693,335	\$1,025,636

Live Stock Shipping Associations are boosters for better stock. We hope that it will not be long before every other county in the state of Wisconsin can boast of as many benefits derived from its Live Stock Shipping Associations as Barron county can.

JEFFERSON COUNTY HOLSTEIN BREEDERS' ASSOCIATION

A. F. Gafke, Secretary, Jefferson, Wisconsin

Jefferson county is not only popular as a county with more Holsteins than any other county in the state, but as a county with Holsteins of exceptional quality. Grade breeders have been using pure bred sires for a number of years and in this way have developed a very high grade cow. Pure bred breeders have made a special effort to constantly improve their herds by using some of the best sires obtainable.

Because of the large number of Holsteins in this county it is not surprising that they have organized a Holstein-Friesian Breeders' Associa-



THE JEFFERSON COUNTY HOLSTEIN BREEDERS' MEETING
A few of the cars of the members when they gathered at their annual meeting, July 8, 1920.

tion for the purpose of maintaining and increasing their high standards and also for disposing of surplus stock. The secretary is elected by the directors of the association and gives his entire time to the association. One of the main projects is taking buyers from various parts of the United States about the county to locate the kind of stock desired. The secretary keeps in touch with the members of the association as to the stock they have for sale. He gets out a pure bred bull list every three or four months, which will be mailed to any one upon request.

The membership has nearly reached the 300 mark. It is expected that practically all of the Holstein enthusiasts in the county will become members of the organization a little later. One of the main activities of the organization is the annual picnic. This year on July 8 a crowd of approximately 5,000 people gathered at the Fair Grounds at Jefferson, Wisconsin, to be entertained by the program furnished by the Jefferson County

Holstein-Friesian Breeders' Association. The important feature of the day was the drawing for a pure bred Holstein calf. All who attended were invited to register and secure free of charge a ticket allowing them to participate in the drawing for the lucky number. Arranging for fair exhibits, conducting auto tours to visit Holstein herds about the county are also some of the things the secretary looks after. The organization has been operating in this manner a little over a year and much good has been accomplished.

NOTE:—A live stock breeders' association like the Jefferson County Holstein-Friesian Breeders' Association is a live affair and worth following as an example. These breeders make the production of better Holsteins a business and have an organization which helps sell the cattle. This is just the kind of business the Superintendent has been preaching for several years. Organize production. Then follow up with the organization to market the stock. This association also proves the Superintendent's contention that it is better to found marketing on an organized production than to try to market the heterogeneous, indiscriminate products ordinarily found in a community where production is unorganized.

A paid secretary is also an essential. The Jefferson County Holstein-Friesian Breeders' Association is right in this principle.

THE KILBOURN EQUITY EXCHANGE

Ray C. Walker, Institute Lecturer, Plainville, Wisconsin

The cooperative enterprise known as the Kilbourn Equity Exchange was successfully launched because of the universal belief of the farmers that we had no competition and that unfair and exorbitant toll was taken by our dealers for their service to us.

When the farmers' produce and live stock market is non-competitive they are helpless unless they help themselves; this we proceeded to do through our local farmers' organization. Two public meetings were held to arouse interest, and after much argument the executive committee decided to hire a man, who had applied for the job of manager, to make a house canvass to sell stock, one of the committee going along to introduce him and to help. Our local organization stood good for his pay for one month in case of failure.

At our meeting to organize it was decided to incorporate under the cooperative law, to have nine directors for a term of three years each but so arranged that three are elected each year. The shares were placed at \$25 each, twenty shares the limit to a person with no man having more than one vote. We incorporated for \$7,500, because the law says there must be fifty per cent of the capital stock subscribed and twenty per cent paid in before a corporation can do business, and we didn't want to start too high. In less than one month our manager had sold the stock and we met to elect our directors and adopt a constitution and by-laws. We had secured prices on both elevators, and as both of them were a little more than we were incorporated for it was decided to increase our capital stock to \$20,000 and buy one of the elevators. It was also decided to reincorporate under the regular corporation laws but our profits, after eight per cent was paid on the stock, were to be divided among the stock holders according to the amount of business they had done with the company. This was changed to get away from a complicated system of bookkeeping.



THE KILBOURN EQUITY EXCHANGE

Farmers can do business. These fine buildings and their tidy surroundings surely are a splendid testimonial for the farmers about Kilbourn, Wisconsin. There is more at Kilbourn than the Dells.

The fifty-car I. W. York and Company elevator, grist mill, lime bin, cement and salt shed, hay shed and office were secured for \$8,500. We also rented for \$150 a year the potato warehouse joining our elevator.

We started business June 1, 1919, with Mr. George Gray, a young farmer who had had some experience in shipping stock and who was known to be honest, energetic and of good judgment, as our manager.

The first seven months our paid in capital stock was only a little over \$10,000 but fortunately our directors were backers and boosters and they carried it through until our first regular meeting when our book showed 25 per cent profits after our eight per cent was paid; and this in spite of the fact that the margin on rye had been reduced from 23 cents per bushel to about 13 cents.

The results were so satisfactory that in less than a month practically all of the stock was sold. At this meeting an Agricultural Committee was

appointed to assist in any way possible, especially along the line of standardization and production. The committee felt that the first thing to standardize was our big cash crop—potatoes, and 400 bushels of certified seed was signed up for but owing to scarcity and failure of one man to hold to his bargain we failed to secure the seed. We did some soil acidity testing and five car loads of ground limestone were sold. We have recommended a ground limestone elevated bin where the farmer can drive his empty wagon under and get a load any time. The committee used our regular advertising space in our local paper to advocate liming, treating for smut, sowing high priced clover seed, better tested seed corn, etc.

We have been in business only a little over a year and have been successful. This is a short time to give advice to others but we have had good schooling in the ups and downs of cooperation in our Farmers' Inter-County Telephone Company of Kilbourn.

These are some of the factors making for success in cooperation:

A real need for the enterprise. If it is necessary to import stock salesmen at fifteen to twenty-five per cent commission for selling stock it wouldn't look as though the farmers thought it very necessary to start a company.

The directors should be the best farmers you have, irrespective of jealousy, envy or personal prejudice.

The manager should be honest, under bonds, capable, energetic.

The business should be run in a business way.

A Year's Results

The results at the end of the year are:

A business of \$205,038 done at a net profit of \$6,644. This was besides the live stock shipped at 1 per cent for the farmer.

We have a truly competitive market which means that all the farmers are getting fairer and better prices for what they have to sell.

We have a committee to be on the watch for any new way to help the farmer and to boost better practices in farming.

Our merchants say we are drawing trade from farther than they formerly got it, therefore they can keep a larger assortment of stock.

As my own part of the profits on my business with our company, I rereived \$78 besides my 8 per cent on the stock which I hold. I believe the results justify us in starting this farmers' cooperative market.

We farmers are in the front line trenches in the great battle to subdue this old earth and if the ones behind the lines fail to render the services they ought for a reward that is fair and just, we have a right, I believe, to send one of our soldiers back and run our business ourselves for ourselves.

NOTE:—There is no question but that farmers have all of the rights that other people have, no more, no less. That being true they have the right to carry their merchandise just as far towards the consumer as any other business has. It occasions a good deal of pride in those engaged in improving agriculture to know that the farm folk can do business. Here surely is a successful cooperative enterprise worthy of being an example to farmers who want to cooperate to do business.

Don't forget the Agricultural Committee of which Mr. Walker speaks. Behind any successful business is better production. The better a cooperative enterprise produces, the more successfully will it market its wares. Be sure to have a committee on production, an Agricultural Committee.—Superintendent.

THE WISCONSIN CHEESE PRODUCERS' FEDERATION Henry Krumrey, Plymouth, Wisconsin

The Wisconsin Cheese Producers' Federation is a cooperative cheese marketing association having a membership of between 3,000 and 3,500 farmers, patrons of about one hundred twenty cheese factories. It is organized under the Wisconsin cooperative law on the one man—one vote plan regardless of the amount of milk each farmer delivers at the cheese factory or the amount of stock that he owns.

It is a federation of one hundred twenty local associations, each organized around a cheese factory. In most cases the cheese factories are owned by the cheese maker who makes the cheese for the farmers at a certain sum per pound. The farmer patrons of such a factory then organize a local association with a nominal capital stock, to become a member of which each farmer buys one share of stock, costing \$1.00. Out of the money so raised they take \$10.00 to buy one share of stock in the Wisconsin Cheese Producers' Federation. Each local association elects its board of five directors, one of whom is elected president, another secretary-treasurer. The president of the local association attends the annual meeting of the federation and votes the stock of the local association at that meeting. Quite a number of the factories are owned by the farmers cooperatively and they hire a cheese maker to make the cheese for them.

The Wisconsin Cheese Producers' Federation has an authorized capital

stock of \$2,000.00, \$1,320.00 of which has been paid up.

The Federation, through its Board of Directors, employs a general manager, a sales manager, an inspector and such other help as is needed. The cheese is sold and all of the money that it brings after the expenses of operation are paid belongs to the farmer members and it is up to the stock holders at the annual neeting to say how much of it should be paid out and how much should remain in the treasury.

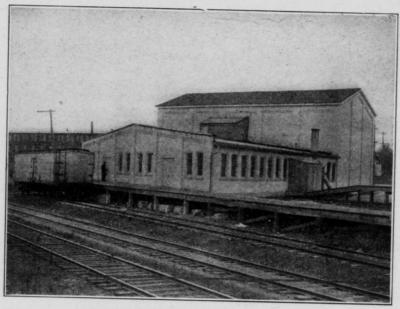
The Federation was organized in the summer of 1913 and began marketing the cheese for its members on April 1, 1914. It then had a membership of forty-three local associations. During the year 1919 the Federation made the largest growth that it made in any one of the years since it was

organized, as the following figures will show:

No lbs Choose handled	Amt. Cheese Sold for
6.125.480	\$887,501.00
7.558.796	1,132,867.00
	1,304,640.00
8.981.308	2,171,526.00
	2,322,536.01
	4.318.956.91
14,098,021	4,010,000.01
	No. lbs. Cheese handled 6,125,480 7,558,796 7,490,020 8,981,308 8,522,509 14,098,021

During this time the farmer members of the Federation have been paid the Plymouth board price, which is all that the farmers outside of the Federation get, and in addition to that they have built and paid for a warehouse and storage which with ground and equipment could not be replaced for less than \$70,000.00. Over and above that, more than \$42,000.00 has been paid out in dividends or deferred payments, and more than \$38,000.00 remains in the treasury, making in all \$150,000 Federation members are to the good, so far.

While the story of why the farmers were forced to organize for their protection has received wide publicity through magazines, farm journals,



THE WISCONSIN CHEESE FEDERATION

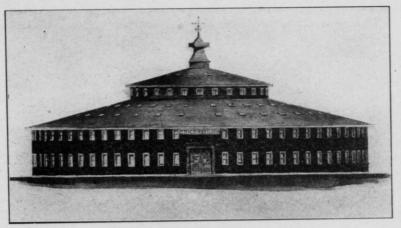
This is the picture of the substantial cheese storage house of the Wisconsin Cheese Federation at Plymouth. Sure, farmers can do business co-operatively when the spirit of co-operation is directed by a competent leadership.

etc., still there may be readers of the bulletin who are not familiar with it and I will dwell on it briefly.

For more than sixty-four years I lived on, and for more than forty years I owned and operated the farm at Plymouth, Sheboygan county, on which I was born. Like most other farmers in the county I derived my principal income from the milk which I hauled to the cheese factory to be made into cheese. For years we allowed the cheese maker, to whom we paid a certain sum per pound for making our cheese, to sell our cheese for us. He got this amount whether he sold our cheese for a high or low price. He was

not, therefore, particularly interested in whether he got us a high or a low price for it. It is true he guaranteed us the Plymouth board price for our cheese; but we allowed the makers and dealers to set the board price.

Down to the spring of 1911 there was some competition in buying on this board. About that time, however, the members of the Wisconsin Cheese Dealers' Association, composed of cheese dealers and packers' agents, apparently came to a perfect understanding in regard to fixing board prices. From that time on the cheese board became a ridiculous farce insofar as establishing legitimate prices on cheese was concerned, and beginning at that time the board price was arbitrarily fixed low during the summer, when the most and best cheese is produced, and fixed high during the



PIERCE COUNTY STOCK PAVILION

This splendid building was erected this summer on the grounds of the Pierce County Fair Association at Ellsworth for sales and exhibit purposes, at a cost of \$25,000. There's going to be a big push in Pierce county. The live stock breeders are backing the new County Agent in splendid manner and the new pavilion was swamped with fine live stock at the fair and overflow housing was necessary.

winter, when little cheese is made and when they were unloading what they had in storage.

The cold storage owners at Plymouth, where more cheese is stored than in any other place in the country, had a rule that no one but a cheese dealer could store cheese there. This was done to force us farmers to sell our cheese weekly. Even though we were satisfied that we could get much more for this cheese later on, we had no place to keep it and were obliged to sell.

Cheese Dealers' Association Kept Competitors Out

The cheese dealers were thus able to manipulate the board price as they wished because it was a closed board and absolutely under their domination. The president of the Wisconsin Cheese Dealers' Association was chairman of a committee which passed upon applications for membership. This was

done in order to limit the board membership and they went so far in July, 1911, as to adopt a rule on the Plymouth board which provided that no person could become a member unless his application was filed in April and that was done to keep members out until the following April.

I called attention to this rule in the "Plymouth Review," a paper which stood by the farmers all through this fight, and I said if this rule was not made to keep buyers away and to thus stifle competition, why was it made? I asked the organs of the cheese combination to please answer that question in the next issue. One of the organs, the "Plymouth Reporter," did not attempt to answer, but the other one, the "Plymouth Correspondent,"



A HANDY DEVICE

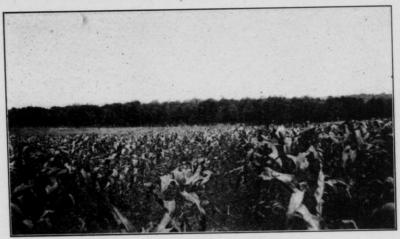
Cornfalfa Farms, Waukesha, have lots of other things besides alfalfa. You ought to see and eat their apples. Anyway this handy ladder is not patented; so copy it.

answered it and got its foot in. It was answered in this way: "This rule was made to keep buyers away who want to buy cheese in the summer when it is cheap and who do not want to buy in the winter when it is high."

For five months throughout the summer of 1911 the board price was so low that our milk made up into cheese brought us less than \$1.00 a hundred, which is less than two cents a quart. We got eleven to thirteen cents a pound for our cheese. Much of this cheese was put into cold storage by the dealers and in the winter was shipped out, some of it by the trainload, at a price as high as from eighteen to twenty-two cents. This summer cheese when it reached the consumer cost him from twenty-five to thirty cents a pound.

Local dealers, members of the Plymouth board, cleaned up on the 1911 make, from \$10,000 to \$50,000 each. The packers probably cleaned up millions. Over \$400.000 went into the pockets of dealers and packers which should have gone into the pockets of Sheboygan county farmers during that one year.

In the spring of 1912, after the dealers had disposed of what they had in storage, they gradually dropped the board price to fifteen cents, which it was on May 21, 1912. There was at that time a demand at fifteen cents a round which could not be supplied. In spite of that fact, however, on May 28, the next board day, they dropped the board price to twelve cents. Everything apparently was all arranged to go through the same old performance. I hoped that someone else would take the initiative and expose the whole business. Self-preservation compelled me to act. I saw to it that meetings of cheese factory patrons were called at the different factories to protest against these methods. I also wrote an article charging the dealers with arbitrarily fixing the board prices irrespective of supply and



HOW ABOUT COMMERCIAL FERTILIZERS

Corn fertilized and unfertilized in Clark county. Corn planters in Wisconsin are going to be equipped with fertilizer attachments.

demand. I charged them with stifling competition by rejecting applications for membership on the board, etc. I sent this article to 150 newspapers in Wisconsin with the request that it be published in order that all should know that cheese was worth more than twelve cents. Some papers, feeling, no doubt, that my charges were libelous, did not publish them.

Instead of answering my charges the local organ of the cheese combination resorted to personal abuse of myself. He intimated that I was getting crazy and said that I was a town-killing octopus. He tried to make out that if those \$400,000 had gone into the pockets of the farmers of the county instead of going into the pockets of the packers and a few dealers it would injure the towns. It was intimated that 27 law suits would be started against me for libel. I will admit that they had me scared for a time. I knew that the charges I had made were true, but I did not have direct evidence for all of them, but I got busy and got affidavits to confirm the charges which I had made and then I defied them to sue me.

I received encouragement from the farmers from the beginning. The demand for me to speak to the patrons of different factories became so great that I could not possibly comply with the requests. I, therefore, called a meeting for June 22, 1912, on the fair grounds at Plymouth and distributed handbills on which was printed the following announcement:

FARMERS WAKE UP!

Come to the Plymouth fair grounds on June 22 and be convinced that there is a cheese trust, and that if there had been no such trust you would have gotten from \$10 to \$20 more for the milk from each cow during 1911. The more of you who come to this meeting, the sooner the trust will be "busted." Cheese dealers invited to be present to defend their position. They will have a respectful hearing.

Farmers were in the midst of haying. Only two days' notice was given, yet over 1,000 farmers came to the meeting. Not a single dealer showed up.

As a result of these protests, and also perhaps because the dealers feared proceedings for violation of the anti-trust law, the board price inside of two weeks went up again to 15 cents; and this at a time of the year when they had always before dropped it! Had the farmers not become thoroughly aroused, no doubt we should have fared no better in 1912 than we did in 1911.

Then I called the attention of members of the State Board of Public Affairs to the methods of the cheese combination. This Board invited cheese dealers, cheese buyers, cold storage owners, as well as farmers, to appear before it. I was asked to state our grievances. The dealers were allowed to make their statements. They were questioned by members of the board with the result that practically every charge made was admitted to be true.

It was admitted that the dealers had a secret meeting before the Plymouth board met to agree on the price to be paid on the board, and that the cheese from the various factories was allotted among the various dealers.

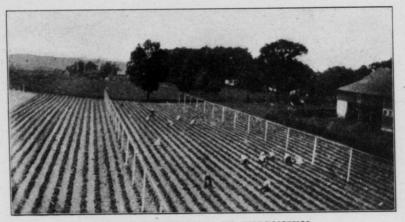
It was also admitted by a prominent dealer that it was their practice to pay the cheesemaker, who acted as the farmers' agent in selling their cheese, a bonus above board price, sometimes in cash and sometimes in the shape of an extra check.

It was also admitted that the Plymouth cold storage (where more cheese is stored than in any other cold storage in the North West) had a rule that only dealers could store cheese there, and that if others wished to store any they had to do so through a dealer.

This agitation brought good results, but agitation can not be kept up forever. To insure permanent good there must be organized, constructive and continuous effort. For the purpose of getting the farmers to organize I called a mass meeting of farmers to be held in Plymouth, February 7, 1913. Fifteen hundred farmers crowded into the opera house and side rooms and many were unable to gain admission.

Strong resolutions were adopted at this meeting, urging the farmers to organize a cooperative association to sell their own cheese. A committee was appointed to work out a plan of organization.

This committee had a number of meetings, at which it had the assistance of experts from the Economics Department of the University of Wisconsin and others. The plan agreed upon was simple. It provided that the patrons of each cheese factory form an association and incorporate under the state cooperative laws, that these various associations form a federation and that the federation employ a competent salesman and sell the cheese for the farmers.



WHY NOT IRRIGATE IN WISCONSIN?

John Williams on his light soils farm near Packwaukee has twelve acres under overhead irrigation. You ought to see the everbearing strawberries and muskmelons on this farm. Receipts per acre run up to \$1,000. It's worth following.

Violent opposition to our plan came from those who in the past had taken advantage of us. Many cheesemakers, who themselves had a county and state organization, bitterly opposed us. Some even threatened to close their factories if the farmers organized.

In spite of the opposition we perfected our organization. The patrons of 43 factories organized and joined the federation. We selected our selling agent and were ready for business August 1, 1913, but we were unable to procure a warehouse. Although the cold storage company had empty warehouses the cheese combination and its friends were powerful enough to prevent us from getting one. We were, therefore, obliged to build in order to do business.

So we built. We organized the Federated Farmers' Warehouse Company, with a capital stock of \$20,000, a share of stock costing \$10.00. Inside of a week more than half of this amount was subscribed. Soon all of the \$20,000 was subscribed and paid in.

Farmers who bought this warehouse stock were assured five per cent on their investment. This is the rent the Federation paid for the use of the warehouse and storage, but the stockholders also pledged themselves that at any time the Federation wanted to buy this warehouse they would sell this stock to it at par.

A modern warehouse and storage was built, costing \$25,500, and was completed April 1, 1914, when the cheese from 43 factories in the Federation was received to be marketed by our salesman.

It was then a Sheboygan county proposition, known as the Sheboygan County Cheese Producers' Federation, but in January, 1917, we changed our name to the Wisconsin Cheese Producers' Federation, owing to the fact that the farmers outside of the county wished to join.

The expected happened. Our enemies did everything they could to embarrass us. They put the board price higher than it had ever been before at that time of the year. They were willing to pay more for cheese than it was actually worth if they could only keep us from being able to pay as much as they were paying. But this did not last long.

In the beginning we were unknown to the trade and had some difficulty in disposing of our cheese, but we soon found a good market and were able to get as much for it as the dealers were, and when the year was up we found that we had made a profit of \$4,500, which instead of paying out to the farmers it was voted at the annual meeting to leave in the treasury as a reserve fund.

The next year things went still better and after paying the farmers the market or board price, we were more than \$10,000 ahead for that year. For 1916 we were \$13,000 ahead. The farmers voted to leave the money in the treasury instead of paying it out, so that on January 1, 1917, we had more than \$28,000 in the treasury. It was voted to use \$25,500 to buy up the warehouse stock of the Federated Farmers' Warehouse Company and pay the indebtedness on it, and since that time the Federation owns the warehouse and storage which has been rebuilt and enlarged and now could not be replaced for less than \$70,000. In 1918, after paying the farmers in the Federation the market or board price and in some instances more, we found at the end of the year when we closed our books, took stock and had an audit, that we had more then \$20,000 in the treasury, which it was voted at the annual meeting to pay out to the different local associations organized around the cheese factories according to the amount of cheese each association had delivered to us. They in turn paid it out to the farmers according to the amount of milk each had delivered to the cheese factory.

January 1, 1919, we were \$30,000 ahead, \$22,000 of which was paid out, the rest remaining in the treasury. January 1, 1920, we were \$26,000 ahead.

Our aim is to get branches of this Federation established in different parts of the state where American or Cheddar cheese is produced, get the farmers to organize a warehouse company, build a warehouse and storage which the Federation will rent, paying the farmers who hold stock in these warehouses five per cent interest on their investment as rent and then have them sell their cheese through the Federation. In this way, we hope eventually to get control of the marketing of a good proportion of the American or Cheddar cheese. It is the only way in which the producers can have anything to say as to what their cheese should bring, which they certainly should have. Farming is the only industry in which the people who produce the goods have little or nothing to say as to what these goods should bring.

The farmers in the vicinity of Spring Green, Wisconsin, have organized and built a warehouse and storage, costing \$15,500 which was completed in May, 1919, and since that time the cheese from twenty-eight factories has been sold through the Federation and it has worked very satisfactorily.

Wisconsin now produces 70 per cent of all the cheese produced in the United States. The Big Five packers control the marketing of 75 per cent of this cheese. They receive cheese at 35 different places in Wisconsin where they have warehouses, which are run in the name of a packer's agent who usually owns some of the stock.

The packers do not compete with each other in buying cheese. Each apparently has his territory allotted to him. The price which farmers get is established on the Plymouth cheese board, just as the price on butter was established on the Elgin butter board until the government had this board abolished. A cheese board exists only for establishing the price. Less than three per cent of the cheese produced in Wisconsin is sold on the board. The balance is contracted for on a basis of the board price. Practically all cheese on the Plymouth board is offered by the packers and they dominate the board. They often bid on it themselves and the board price is fixed high or low according to whether they are loading up or unloading.

That farmers can successfully market their cheese cooperatively and reduce the cost of marketing has been demonstrated by this Federation.

The following report of the findings of the Department of Agricultural Economics of the University of Wisconsin and of the Wisconsin Division of Markets, which during December and January last made a thorough investigation of how this business is run, tells the story:

The Wisconsin Cheese Producers' Federation has a membership of 120 factories. With a probable average of 25 farmer patrons for each factory there are 3,000 farmer members in the Federation. They marketed 14,098.021 pounds of cheese through their organization during 1919. During 1914, the first year of operation, only 45 cheese factories belonged to the Federation and only 6,125,480 pounds of cheese were handled. The Federation, therefore, handled in 1919 two and three-tenths times as much cheese as in 1914. For each dollars' worth of business done in 1914 almost \$5 worth was done in 1919. (Paid to factories for cheese in 1914, \$855,328; in 1919, \$4,243,938.)

The Federation markets cheese at an expense which is extremely small. In 1912, before the Federation was created, private cheese dealers took a margin which amounted to from 4.7 cents to 9.3 cents on each dollar's

worth of cheese marketed. Today the Federation has an operating cost of only 1.4 cents on each dollar of cheese sales. The difference between the 4.7 cents and 1.4 cents represents the money saving due to operating advantages which the Federation is bringing to its patrons. Frequently a further advantage is gained from the fact that the Federation sells much of its cheese at a higher price than the board price. More important than the present money gains obtained are the benefits of future advantages which will come through continued improvement in the quality of cheese handled by the Federation.

The Wisconsin Cheese Producers' Federation is one of the most successful and commendable examples of farmers' cooperation in the United States. Next to the California Fruit Growers' Exchange, which is the largest and most successful farmers' cooperative company in the United States, the Federation has the lowest operating cost.

The experience of the Federation indicates that Wisconsin farmers have a great opportunity before them in building up a strong, unified cooperative cheese producers' selling organization. The Federation has shown that it knows how to sell cheese and keep the costs down. What it should have is more cheese. If Wisconsin farmers provide the volume of business, this Federation, because of what it now does and will do for its patrons, is destined to rank in the class with the California and Canadian farmers' cooperative societies.—Theodore Macklin, Department of Agricultural Economics—Edward Nordman, Wisconsin Division of Markets.

THE WISCONSIN DIVISION OF THE FLEECE WOOL STATES GROWERS' ASSOCIATION

William F. Renk, Secretary, Sun Prairie, Wisconsin

The Wisconsin Division of the Fleece Wool States Growers' Association was organized in March, 1920, by the election of a board of seven directors, consisting of prominent sheep men from all over Wisconsin. The directors elect out of their members a president, a vice-president and a secretary-treasurer annually.

Previous to this meeting of organization several meetings were held with representatives of the Wisconsin Live Stock Breeders, the Wisconsin Sheep Breeders, the Wisconsin Society of Equity. the State Grange, the Wisconsin Farmers' Institutes and the Wisconsin Division of Markets present. One of these preliminary meetings was held in November, the others in December, of 1919.

The object of the organization is primarily to promote the sheep and wool industry of the state; first, by securing for the farmer the highest price for his clip at the minimum expense for marketing; and second, by this method of marketing the wool is graded into the different market grades, thus giving the man with the good wool a better price than the one with poor wool, which was not the case by the old method of selling wool on a flat basis.

No one at the present time would think of selling milk or cream to the market without using the Babcock test to determine the fat content. Then why not take a step forward and do the same thing in wool? By the old system of marketing wool on a flat basis there was no incentive for the farmer to breed for better wool. By the new method of marketing and grading the wools are graded into usually about eight different grades, starting with the fine half blood staple which at present brings the highest price, and running on down to three-eighths and quarter blood and finally to low quarter and braid, the latter bringing at present the lowest price.

The method of marketing and shipping wool under this association is this: one or two places in each county are usually selected to ship from



FALL FEED FOR THE FLOCK

Spring lambs fattening on sunflowers on Cornfalfa Farms. The lambs did their own breaking down of the sunflowers. The lambs look fat, don't they?

and the wool is gathered there and shipped in carlots; in a county having a County Agent, he has usually done this gathering and helped the members to ship. In some districts where wool is more widely scattered, consignments of wool are shipped from whichever station is most convenient. As the difference in freight on car load and less than car load lots is not very much, any one having a small lot need not think that it is too small to ship with profit.

When the wool arrives at the warehouse, which is at Chicago, Illinois, it is weighed, graded and stored, and when the market is in proper condition

it is sold.

The officers of the Wisconsin Association have this year contracted with the National Wool Warehouse and Storage Company of Chicago to grade and handle their wool at three cents a pound, which includes insurance and storage for five months. These people have representatives on the big eastern markets and they sell the wool whenever in their opinions the market is good. Two carloads of wool were shipped and pooled in this way from Wisconsin last year and the returns were very satisfactory. By this method of marketing the wool is fed out gradually to the manufacturers, thus giving less opportunity for buyers to break the market on heavy receipts.

In short this is another farmers' cooperative method of marketing farm products and if we all join hands and work together in harmony this should be one of the most successful marketing organizations of the state.

THE WAUKESHA COUNTY DAIRY SHOW AND THE MARKETS

J. E. Stallard, County Agent, Waukesha, Wisconsin

As a marketing organization, the Waukesha County Dairy and Agricultural Show has been a marked success. Although Waukesha county has enjoyed a splendid market for her live stock through the various breeders' organizations in the county, when they cooperated in putting on this dairy show or live stock exhibition, the total benefits to the county were multiplied several times. The printed word, together with good half-tones is an



THE WAUKESHA DAIRY SHOW

Fifteen years ago a little handful of Guernsey cattle men started the push. Reflect upon what has been done in fifteen years by co-operation. Any community can do likewise. Why not hop to it?

efficient method of advertising, but when the printed word can be supplemented by word of mouth from large numbers of persons who have actually seen the class of live stock advertised, we have an ideal foundation for a good market.

For the benefit of those who did not attend the Waukesha County Dairy Shows, a brief mention of how they were handled and the attitude of the breeders and visitors toward them may be of interest.

The show is held in the spring, the third week of March, for four days. The first one was in 1919. Forty exhibitors, with one hundred and fifty head of Guernseys, Holsteins, Jerseys, Ayrshires and Brown Swiss, com-

peted for about a thousand dollars' worth of prizes, both cash and merchandise. The entries were of such high merit that Professor H. H. Kildee, who is a dairy cattle judge of national reputation, said that many of the classes were superior to those found at most State Fairs and many National Shows. Four thousand people attended.

In 1920, a non-stock corporation, the Waukesha County Dairy and Agricultural Association, was formed and the second show held. Forty-five exhibitors with nearly two hundred head of cattle vied with each other for prizes aggregating about \$2,000. In spite of a rainy week, about eight thousand people passed through the doors. People came not only from the county and the state but from other states as well. The Chamber of



THE WAUKESHA DAIRY SHOW

No wonder the Waukesha county farmers have a market for their stock when they take the pains to run a great show like this.

Commerce, the business men of the city, the County Superintendent of Schools, the school teachers, the county Y. M. C. A., the College of Agriculture and the men, women and children of the city and the county all cooperated to make the event the complete success it was. Financially, the show has been a success also. This year a grain show and departments of milk, cream, butter and cheese, baking, canning and sewing, and swine, sheep and horses were added.

Visitors have been impressed with what they saw—farm papers have been glad to write up the event in detail, and many letters of inquiry have teen received by the breeders' associations and the County Agent. Such advertising is of the highest type and has brought results which warrant a repetition of the exhibit each year in the future.

Another result of the Dairy Show, which has an important bearing on the marketing of our live stock, is the increased interest manifested by the farmers in improving their herds. Many of the smaller breeders went home after the first show and came back again the next year with animals of better type, better fitted and better shown. And they haven't stopped there; they have been encouraged to show at the State Fair in the Waukesha County Exhibit and have won championship prizes. All of this

improves the quality of the live stock for sale, and brings the best of markets to our breeders.

Properly managed, a small community dairy cattle exhibit may accomplish wonderful results in providing a good market. This is evidenced by the recent exhibit of forty-five head of Guernseys and Holsteins owned by members of the North Lake Farm Management Club—a farmers' organization of about fifty members. The exhibit was put on in connection with the State Bankers' Convention at North Lake in June. The quality and attractiveness of the exhibit combined with remarkable cooperation between the many interests concerned made excellent advertising for the eight hundred bankers and several thousand others in attendance to carry home to their patrons and neighbors. With only a few weeks elapsing since the exhibit, several thousand dollars' worth of orders have been received.

Care must be taken to prevent the depletion of the herds caused by the high prices offered for the stock. Today the honesty of the seller is an important factor in the marketing of pure bred and high grade live stock. Exhibitions of the cattle which give prospective purchasers or their friends an opportunity to see the quality and to talk with the owners, go a long way to establish confidence and good markets.

THE MICHIGAN POTATO GROWERS' EXCHANGE

H. A. Arnold, Cadillac, Michigan

Unlike many Farmers' Cooperative Marketing Associations which have been organized by professional organizers for the profit of the promoter, this cooperative exchange was placed on the map through the efforts of the county farm agent, the farmers' hired representative.

The dissatisfaction with the system of grading wherein buyers docked the grower for the second grade and later mixed the lower quality into the first grade without loss to themselves, and the heavy charges these buyers extracted for their services during the season of 1917, crystallized the feeling of unrest among the growers and made them determined to do their own marketing. The county farm agents felt this unrest stirring and called on Hale Tennant of the Bureau of Markets for assistance. With his help a plan was formed to market all potatoes through one central exchange.

Within sixty days, twenty-eight cooperative marketing associations were ready for business. All of these locals were organized on the non-profit plan, each member contracting with his local association to deliver all his marketable potatoes to it for sale and each putting up a bond of \$100 that he would fulfill his contract. A copy of contract may be secured by addressing the writer.

Each local association elected a representative to a general meeting at which meeting the Michigan Potato Growers' Exchange was formed. The membership of the exchange consists of members of each local marketing association affiliated. Each of the affiliated organizations entered into a contract with the Michigan Potato Growers' Exchange wherein they agreed

to deliver all of the potatoes shipped by them to the Michigan Potato Growers' Exchange for sale, putting up a bond of \$500.

The expense of operating of both the local and the Central Exchange is met by a fixed charge per cwt. on the potatoes handled. The average expense of the local, including sacks, is thirty-two cents and of the central, eight cents.

The eight cent charge of the Michigan Potato Growers' Exchange is divided into a five cent selling charge, one cent for publicity and educational purposes and two cents for unavoidable losses. All surplus created by the charge of eight cents over the cost of operation is divided back to locals in proportion to the amount of business put through the exchange by each local.



A FARMER'S TRADEMARK

The Michigan Potato Growers' Exchange adopted this cartoon of Chief Petoskey for the trademark of its celebrated Petoskey potato.

At the end of the first year there were fifty-two local associations affiliated with the exchange. The fifty-two associations handled 20.06 per cent of the potato crop shipped from the state of Michigan and 109 car loads of other produce, doing a total volume of business of \$1,808,946.74.

During the second year the membership has increased to ninety-six local associations and has shipped 26 per cent of the Michigan potato crop; handled nine hundred sales of other products and made 3,000 purchases with a total value of sales in excess of \$5,000,000.

The success of this selling organization has more than realized the dreams of its founders. During the first year it was able to return to the grower on an average, according to government reports, \$.2147 more per cwt. than he would otherwise have obtained. This year the grower marketing through his cooperative organization has received \$.325 more per cwt. for his potatoes than the cash buyers have paid, or a total saving to the

producers of potatoes in Michigan, if all potatoes had been sold cooperatively, of \$1,140,230.

On beans a saving of approximately \$.50 per cwt. and a gain of \$.10 per bushel has been made.

A car load of paris green was handled at a saving to the users of \$.30 per pound; four cars of other spray material at a saving of from \$.10 to \$.20 per pound; ten cars of binder twine at a saving of \$.03 to \$.05 per pound; six cars of grass seed at from \$1 to \$5 under the regular price—an estimate of \$50,000 saved through the purchasing department, to be conservative.

As the exchange starts its third year of business, it finds itself in a much better position to be of material benefit to its members than it was two years ago, at which time it had no reputation or customers. Now it has the reputation of giving a square deal, of always delivering anything purchased from it and has better than five hundred satisfied customers.

The special grade potatoes sacked in one hundred pound sacks under the Chief Petoskey trade mark have created a demand greater than the supply and sell readily at an advance of \$.25 over the market.

An auditing department now audits the books of the locals and helps keep them on a sound basis.

The cherry and apple growers have seen the benefits of centralized selling and are lining up with the local associations so that this coming year the volume of fruit handled will nearly equal the potato business, all helping to keep down the overhead expense.

There will be between twenty and thirty more associations which will join the exchange this fall and with the organization of like exchanges in Minnesota, Dakota and Colorado, the marketing of these perishable products will be much simplified.

The first year of an organization of this kind is the most trying and the cash buyers put up a bold front, in many cases losing a considerable quantity of money in their effort to crush the new organization, but their supply of ready money is running short as evidenced by the difference in prices of the past season.

One year ago the organization had a surplus of \$18,000 from the first years' operation of which \$9,000 was divided back to the members. This year there is a surplus of \$36,000.

One of the policies of the management has been that a dissatisfied member was better out than in, so that the present membership represents sixteen thousand boosters in place of the twelve hundred doubters of two years ago.

As long as the organization operates on the same conservative lines, insisting on contracts from the growers in which the grower agrees to deliver his season's crops and keeps the exchange as a business organization, operating as such, with men in control who insist upon the same economical operation as in the past without losing their vision of further growth and benefit, the organization will unquestionably be a greater and greater success as the years go by.

THE EAU CLAIRE MILK PRODUCERS' ASSOCIATION

G. H. Shepard, Manager, Eau Claire, Wisconsin

The Eau Claire Milk Producers' Association was started about two years ago by a group of farmers who saw the possibilities in marketing their dairy products on a cooperative basis. Several speakers, experienced in the management of milk producers' associations, were asked to come to Eau Claire to relate their experiences and offer suggestions.

Following the meeting, one of the first things decided upon was that it would be necessary to hire a capable man to look after the business of the Association. The acting secretary wrote to Madison inquiring for a man, and a year ago in July the association started its real work with a manager to look after the interests of the several individual members.



SUMMER DEMONSTRATION' MEETING

Soy beans at the Spooner Sub Station, 1920. There's money in soy bean seed and there's soil fertility and feed in the crop. Get into soy beans.

Among the more distinguished accomplishments during the past year, which stand out as milestones of progress may be noted the following:

- 1. Each producer has been paid for milk or cream on the basis of accurate and correct weights and tests, this work being done by the association manager.
- 2. The association has taken a contract to supply the city milk dealer with all milk and cream used for city distribution, together with all milk used in the manufacture of ice cream. This contract is for a year and covers everything from strikes to weather. The price to be paid for milk under this contract is based on the Chicago butter and cheese markets allowing certain amounts for skim milk and whey.

The price to be paid for sweet cream is based on the Chicago market for 92 score butter. These prices have been in effect since the first of May and the method of determining prices has proven very satisfactory.

3. The surplus milk problem has been met and solved. A new Swiss cheese factory has been built at a cost of approximately \$12,000. This factory, together with an American cheese factory, has established a satisfactory market for our surplus milk. At the present time the American cheese factory is closed, due to the price of American cheese, and all of the surplus milk is being made into Swiss cheese. The new cultures of bacteria, recently isolated by Doctor Sherman of the Dairy



SUMMER DEMONSTRATION MEETING

Professor F. L. Musbach demonstrating soil practices at the Marsh-field Sub Station Farm. Soil and drainage demonstrations are popular.

Division of the United States Department of Agriculture, are being supplied by the department at Washington. Mr. C. M. Gere was here a few days and instructed the cheese maker in the use of the bacteria. Nothing but a "fancy" grade of cheese is being made.

- 4. Now that the association is on a working basis and in a position to do business, the individual member is sure of a market for his product year in and year out. He is no longer at the mercy of the dealer who may be able to use his product at the time of a shortage and then be dropped again with but brief notice. In other words—the producer looks after the production end and the management of the association looks after the marketing.
- 5. Under the present system of contracting all the so-called "fluid milk" we have established a market which is comparatively steady. Dissatisfaction over great changes in price from one month to another has been eliminated to a great extent.

The association is incorporated under the laws of Wisconsin, is a noncapital stock organization, and its officers are farmers, who are members of the association and also producers.

Due to the fact that the association is handling its own surplus milk it has been necessary to establish a checking system. The entire amount for any period is paid to the association, and then the individual members are paid by the association, from the total receipts, according to the quantity and quality of product supplied.

A membership tee of ten dollars is required of each member. This money is used for office equipment and other incidental expenses. The monthly expenses of the association are subtracted from the total receipts and in this manner the cost to each member is proportioned to the amount of product marketed.

It would require too much space to give all the minute details connected with the numerous problems and difficulties which we have had to meet during the past year. At the present time, however, everything seems to be progressing nicely, and we are looking forward to a profitable future.

THE COUNTY AGENT IN COOPERATION

H. M. Jones, County Agent, Ladysmith, Wisconsin

In order to be a success in the eyes of many farmers with whom he works, the County Agent must be a true cooperator who is willing to cooperate and he must realize that cooperation is necessary to big achievements. A man working alone can do only one-tenth as much work as ten men hammering with the same end in view. In my own limited experience I have learned one thing which will always be of value to me: Don't tackle anything big alone, and that outside help means cooperation.

The word cooperation has been feared by many in the past as one which emanated from the devil's mouth or from some extremely radical political party. It was thought to lead to the disruption of community friendship and to breed contempt, distrust and hard feelings. But farmers have learned that they can cooperate, although today you will sometimes hear some farmer say that "Farmers will not stick together; they will not cooperate." An investigation will often show that this fellow has been stung at some time or other, probably on a Cooperative Stud Association or a creamery before the county was ready for it.

It is true that before giving his assistance to a cooperative project the County Agent must ascertain two things for himself:

That the proposition is on the level. That there is a real need for it.

If his conclusions are both favorable, then it is worth going after. Today there are many socalled cooperative propositions that are not on the level or are in a class with some speculative oil stock. Usually these are not cooperative except in name and methods of organization and are promoted only to enrich private pocket books. That there is a real need for a cooperative organization is one of the most important things to consider. Often the agitation is started for some cooperative enterprise before the community is sufficiently developed to finance and support it. Such an organization should be discouraged from the beginning. In upper Wisconsin a few years ago were many illustrations of this very thing. I have seen many cheese factories and creameries closed and not running because there were not sufficient cows in the community to support them. Of course today the country is developing fast and these are again being put in use.

There are two kinds of cooperative business organizations which must be considered. Very often both of these are much tied up together and do



THE IRON RIVER POTATO GROWERS' ASSOCIATION

The Iron River potato growers looking at the oats on the Abrahamson farm, in Bayfield county, Northern Wisconsin.

business under the same management. However, to my mind they represent two different phases of cooperation.

Cooperative Marketing

Cooperative Buying

Cooperative marketing we hear much about today as a method of cutting out the dealers in between, all of whom of course must have their profit. There is no doubt that it is this side of cooperation which it is most important to develop. The farmer is a buyer and a seller and he must sell more than he buys or he is not going to last very long and for that reason the marketing side should be more strongly brought to his attention. Here is where some real constructive work can be done in assisting in building an organization equipped to handle farm produce and the results will show themselves in hard cash. In Rusk county, farmers living around Bruce figure they have at least \$7,500 in their pockets which is their profit for shipping potatoes together. In the fall of 1919, on forty car loads of

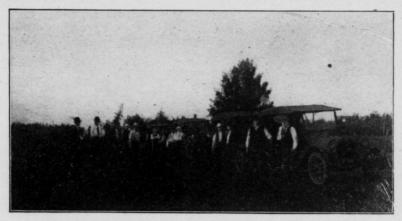
potatoes, they received an average of thirty-five cents per cwt. above the average price paid in by buyers in the county. Besides their potatoes they shipped:

24 car loads of live stock

2 car loads of mixed grain

2 car loads of rutabagas

on which they feel they received at least \$5 000 more than they would have received from buyers. On the mixed grain, which was mostly rye, and on the rutabagas, they sold a crop which local buyers would not handle. In any new county this usually is one of the strongest arguments for cooperative marketing. It provides a means of marketing produce which is



THE IRON RIVER POTATO GROWERS' ASSOCIATION

At the Farmers' Institute at Iron River last spring interest in potato development was aroused. At a later institute the Iron River Potato Growers' Association was organized. In August this association held a field demonstration day and visited the fields of all of its members. It was a great trip.

not always salable to local buyers. Live stock and grain which is shipped out in car lots is usually mixed and buyers are often loath to handle such shipments.

The sums mentioned above, totaling \$12,500, are not much perhaps in this day, but nevertheless they mean much to the community because they are distributed among many.

This one organization has succeeded and the seed has spread to other communities with the result that next fall at least six communities in Rusk county will have marketing organizations functioning.

The other kind of cooperative business organization referred to is the cooperative store. We have often heard the farmer referred to as a manufacturer and often he is a large one in comparison with many of our small town manufacturing plants from the standpoint of capital invested. Every manufacturer, whether large or small, wishes to produce his manufactured

articles at the lowest cost possible. The city manufacturer buys his raw material, whether it is steel, coal, logs or chemicals, directly from the producer wherever possible, and in large quantities. Consider the farmer a manufacturer and his feed, fertilizer, lumber, seed, wire, machinery, dynamite, etc., as his raw materials which he must have for the manufacturing of his products. These materials he uses in large amounts and any increase in their cost, increases his production cost. These materials he should be encouraged to buy collectively so that he will be able to buy right. However, many cooperative organizations lose sight of this very fact and handle such things as lemon extract, cotton gloves, thread, cinnamon, ginger and such things, which may all be well and good, but it is doubtful. The large profits that will be derived will not come from such things but from the marketing of their own produce and the handling of such raw materials as the farmer manufacturer uses in large amounts.

Necessary to the success of any cooperative organization as well as of any business is proper financing. Often we find a cooperative concern in a bad condition financially, because it was put in motion before enough capital stock was subscribed with which to do business. The result is that the organization is a lame duck from the start with no financial backing and consequently no credit. This is an evil to beware of. The amount of money necessary for success should be raised and not have the organization running on the financial backing given by three or four community-spirited men who will often gladly put their credit back of the organization. The greatest success in any cooperative organization comes when every farmer in the community is more than a sympathizer; when he is a backer of it financially as greatly as he can afford to be.

A cooperative institution is built up for the community and builds up community spirit, friendship and usually good feeling. It is a community asset in which all participate in part at least. The money saved the farmers through cooperation is spread over the community and increases the average wealth of the farmers. It goes to build more rural factories and better homes.

Farmers can cooperate and want to cooperate and they appreciate the valuable assistance the County Agent can give them.

ESSENTIALS IN MARKETING

E. L. Luther, Superintendent Farmers' Institutes

- 1. A suitable product suitably put up. Farmers should present for sale only such a product as they would themselves buy and the product should be presented in an attractive form. Community production must also succeed individual farm production in establishing a quality product in quantity.
- 2. A knowledge of the cost of the product. No other business in the world than farming could have survived the lack of cost accounting. Farmers should know something of what their products cost them. Farmers must begin to keep accounts.
- 3. Control of the product as far as possible towards the ultimate consumer. This can be brought about through cooperative marketing. Local warehouses cooperatively owned and terminal facilities in central markets must be cooperatively owned and operated.

STANDARDIZING FARM PRODUCE

B. B. Jones, In Charge Standardization, Wisconsin Division of Markets, Madison, Wis.

When a farmer takes his eggs to the local merchant, he receives a price, let us say 35c a dozen, straight through for all the eggs he has brought in. When the housewife goes into the store in the large city and asks the price of eggs she may receive a price on these same eggs but is not quoted a straight price on all the eggs in the lot but is told that the "selects" sell for 60c a dozen, the "firsts" for 52c, the "seconds" for 45c and possibly the dirty or checked eggs may be quoted to her at 40c. What does such an occurrence mean? It means that at the producer's end there is no great association between quality and price while at the consumer's end, quality and price have a direct relation. It also means that somewhere along the line of distribution the eggs brought in by the farmer have been standardized or graded and that quality and price have been placed in direct association.

There is no other general line of business in the country that is in greater need of a general system of standardization of its products than the agricultural business. Quality and price should be directly related at the producing end if the producer is to reap the full benefit from his labors. Products such as oil, coal, steel, leather, lumber, etc., are commonly sold on a graded or standardized basis and contracts are made and money paid for such standardized products without the purchaser ever seeing them. In many of our agricultural products such a transaction rarely takes place because the purchaser buys not on established grades or standards but on personal inspection because it is the only safe way the business of a receiver can be successfully carried on.

The business of establishing standards and grades for farm products has met with strong opposition from various sources, chief among which is the opposition of those whom grades benefit both directly and indirectly, namely, the producer. It is positively certain that until recognized grades and standards for farm products are established the marketing of these products will never reach such a high state of perfection as has been reached in the marketing of most other classes of commodities.

Great strides in the establishing of grades for farm products have been made in the past ten years. There is still much to be done in this line although the work from now on should be somewhat easier because of the good results now being experienced where grades have been in effect for any length of time.

Grain is one of the great agricultural products which have been successfully standardized and graded. Grain is universally bought and sold on the basis of grade. Likewise hogs and other live stock are being sold on the large live stock markets of the country on a more or less universally adopted standardized basis. Cotton standards have been in use and the federal government has proposed certain standards for wool. Thus the

work of standardizing has a good start and it is hoped that in a few years nence practically all farm products will be bought and sold on the basis of grade.

While in Wisconsin the grading of grain and live stock is commonly practiced, there is a great need of work along the line of standardizing and grading dairy products and fruits and vegetables. Very little as yet has been done by the Division of Markets to establish grades on dairy products but the work of standardizing and grading fruits and vegetables has been given considerable attention and to date grades have been established on potatoes and cabbage and hearings have been held with the view of establishing grades on apples. In addition, grades have been established on



FARMERS AT THE STATE FAIR

The above sweepstakes banners were won by farmers on their exhibits in the Department of Farm Crops at the Wisconsin State Fair, 1920. Along with the banners went sweepstakes and first prizes in considerable money sums. The large Grand County Sweepstakes banner went to the county whose farmers won the most money in this Department. La Crosse county farmers captured this banner for their county. Prizes like this will be awarded at the 1921 fair.

comb and extracted honey. The law requires that public hearings be held before grades are established and at various hearings already held many questions relating to standardizing and grading have been explained and the opposition to grades is fast declining because all those interested are learning of the benefits of grading farm products.

The establishing of grades requires that more than just the interests of the farmer be looked after. It requires that the interests of the shipper, the receiver and the consumer be looked after in addition to those of the farmer. One of the chief difficulties encountered so far in establishing grades has been that those at the producing end are too prone to look after their own interests solely and ignore interests of those at the consuming end. The establishing of grades on farm products should be of benefit to the producer, to the consumer and to all those operating between producer and consumer.

No better example of the benefit of grades to the producer can be cited than the example of the experiences of the fruit and vegetable growers of the Pacific coast. Wisconsin can well look to the West for guidance in this matter of standardizing and grading farm products, for in that section of the country standardizing and grading has reached its greatest perfec-



AGRICULTURAL EXTENSION DEMONSTRATION

Extension specialists and County Agents studying demonstration methods with alfalfa. Every farm in Wisconsin should be sure to grow some leguminous crop every year.

tion and experience has so well proven to the producers that standardizing and grading pays, and pays big, that nothing would induce them to return to the old way of selling farm produce in a haphazard way. Grading has meant dollars and cents to western fruit and vegetable growers and that is what proves its value. The grading movement is spreading rapidly over the country because of the great benefits derived from grading farm produce at the producing end.

Standard grades tend to induce farmers to grow a higher grade of produce. Under the present system of selling, some well grown products receive no premium over the poorly grown. It is certain that the commercial value of produce is increased by grading, and this increase goes to the grower of good produce especially during seasons when supplies are heavy and the market is dull. The produce that does move under such conditions is always the best graded and the poorly graded or ungraded stock is

passed up by the buyers. Grades provide a standard basis upon which business can be carried on and make it possible for the buyer to secure the size and quality of stock he desires. Shippers and receivers as a rule are highly in favor of grading as it makes it much easier for them to carry on their business. Dishonest dealers will often object to grades being established because grading aids in eliminating fraud and deception and tends to promote confidence between all parties in the chain of distribution from the producer to the consumer.

The consumer of course is the final link in the marketing chain and until the last few years he has been the least considered. The pendulum is now swinging the other way and the consumer is being taken into consideration by both producers and dealers. The establishing of grades on farm products will greatly benefit consumers and this Division when establishing grades gives due consideration to the claims of the consumer; in fact, the claims of the producers, the dealers and the consumers are given equal weight in all considerations. There is no doubt but what standard grades for farm produce are needed and that within a few years agricultural products will be bought and sold on the same basis with other products, namely, on the basis of grade.

GROWTH AND DEVELOPMENT OF THE MILK PRODUCERS' ASSOCIATION—CHICAGO DAIRY DISTRICT

Frank T. Holt, President Milk Producers' Association, Chicago Dairy District, Pleasant Prairie, Wisconsin

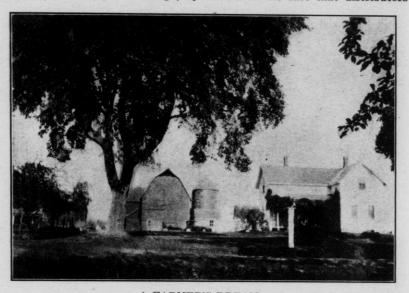
During the fall of 1908 the conditions under which milk was being sold in the territory tributary to the Chicago district became so unsatisfactory that farmers began to consider some means of relief for the industry. The matter was discussed to such an extent in Lake county, Illinois, that meetings were held in Antioch, Russell and other places in the county, which resulted in a mass meeting being called for February 9, 1909. Several hundred dairymen of the district met at the Old Sherman House in Chicago. and perfected the organization of the present Milk Producers' Association. This association is composed of local organizations around each plant or shipping point in the Chicago district and covers approximately 20,000 square miles of territory. These lesser organizations are known as locals of the general association with its headquarters at 29 So. La Salle Street, Chicago. The organization is operated under a charter obtained from the State of Illinois and is subject to the laws governing associations in that state, although its membership covers considerable territory in the states of Indiana and Wisconsin.

The purpose of the association is to promote the interests of the producers and consumers of milk by: a—improving the conditions under which milk is produced; b—improving methods of marketing and cooperating therein; c—standardizing the product; d—generally, by doing such

other things as may be necessary to improve the quality, reduce the cost of production, increase the return to the producers, and to do all things necessary therefor.

The membership for several years was confined to the can shipping districts tributary to Chicago, and with only about 3,000 members who contributed the nominal fee of \$2.50 per capita each year; but for the past three years a fee of \$3 has been charged, \$1 of which remains with the locals for the local expenses.

As time went on the conditions in certain respects grew worse instead of better, particularly for those dairymen producing milk for fluid consumption in the city of Chicago, by reason of the fact that distributors



A FARMER'S DREAM

By the side of the road over among the mighty hills of Sauk lies this splendid Sedgwick farm, well kept, well cropped, well stocked. What has the city to offer better than this?

began pushing out further into unorganized territory, to purchase their supplies at what would be considered less than cost of production to those farmers in the nearby districts where land and labor were higher priced. The determination on the part of the organized farmers became all the more pronounced and they began to look about for means to justify the end.

In the spring of 1916, the great Borden Company, as had been its custom in previous years, was the first to announce the price it intended to pay for the six summer months beginning with April 1. The price named, \$1.33\forall_3 per hundred weight, while being partially accepted by some of its patrons in the Elgin district, did not meet with the approval of the major-

ity of the farmers and with one accord they refused to deliver their milk. It did not take many days of withholding the milk from the market to make the buyers willing to pay the price of \$1.55 demanded by the farmers. This was the first time in the history of the industry that the dairymen had won out in their demands.

For a number of years it had been the custom to make contracts with buyers for six months at a time and before the expiration of the 1917 summer contract, war conditions had advanced prices to such an extent that not a dairyman in the whole country but realized he had been delivering milk at a decided loss. Accordingly, a delegate meeting was called and several hundred farmers met at the First Methodist Church in Chi-



PAGEANT AT HOLCOMBE, WISCONSIN

The celebrated Holcombe Farmers' Club staged a pageant descriptive of the history of the place. Mr. and Mrs. Edminster are showing how they came to the place when it was all woods.

cago on September 21, 1917, to consider conditions and prices for that winter. This meeting afterwards became famous because of the fact that milk was advanced \$1.12 for the next month, making a price of \$3.42, which was considered by the Federal authorities as unreasonable and the farmers branded as profiteers.

One week later officers from the District Attorney's office of Cook county raided the office of the Milk Producers' Association and took with them nearly all the records and correspondence of the producers. This was but the beginning of the court action which culminated in the famous trial of seven of the officials of the association and which occupied the attention of the court for seven weeks in the fall of 1919, finally resulting in the acquittal of every one of them.

In November, 1917, the Food Administration, having the dairy products of the United States under its control, asked the Milk Producers' Association to reduce its price to \$3.22 per hundred weight, promising to have an investigation made as to the cost of production and further agreeing that should \$3.22 be found to be less than cost of production the deficiency should be made up to them by a spread to be allowed on the price for the succeeding six months. The Commission appointed to have charge of this investigation took two months to gather evidence and finally on February 1 rendered a majority decision which met the disapproval of the producers and accordingly a large meeting was called in Elgin the first week in March and has since been known as the "indignation meeting," where a set of resolutions was adopted and copies telegraphed to Herbert Hoover, Food Administrator, at Washington.



THE SEYFORTH FARM, MONDOVI

Yes, alfalfa will maintain such a farm plant in Wisconsin if it is given a chance.

Immediately thereafter and about the middle of each succeeding month until January, 1919, a representative of the Food Administration met in conference with a committee of buyers and another committee from the producers, to arrange prices for the following month on the basis of cost of production. This method gave more universal satisfaction to the producers than any that had ever been tried. Even before the United States became involved in the World War, the organized farmers in this and other districts began to work out solutions for the problems of handling the surplus milk and other products which at certain seasons of the year were being sold at a considerable loss, not only to the producers, but to the buyers as well.

This movement not only increased the membership in the various associations but resulted in the formation of stock companies within their own ranks for marketing purposes. The Milk Producers' Association was

among the pioneers in this movement and in the fall of 1918 perfected the organization of the Milk Producers' Cooperative Marketing Company with an authorized capital stock of \$500,000, for the purpose of doing collective bargaining. While this organization of the Marketing Company was perfected in November, 1918, it did not begin to handle the milk of the producers until February 1, 1919, at which time the Food Administration had ceased to function. When the time came to arrange prices for February, 1919, the buyers, claiming that the Food Administrator having no more authority, the law of supply and demand should rule, ignored the cost formula and endeavored to again dictate prices. But the Marketing Company which the Producers' Association had so recently perfected, acting under the Power of Attorney given it by each individual member under the terms



ALFALFA IN UPPER WISCONSIN

Dr. C. D. Packard of Rhinelander turned farmer and takes pride in his alfalfa fields on his farm in Oneida county. Alfalfa will come through if conditions are made right.

of their contracts, sold the milk and has since continued to do so, for a monthly advance over the price offered by the buyers of from 25 cents to 75 cents per hundred weight. The possibilities and the field of usefulness which lie before this gigantic corporation are almost unlimited. The Marketing Company is now, at less than two years of age, handling nearly all the milk produced in the great Chicago district, and is recognized as a power for good, not only by the producers, but by the buyers as well.

In March of the present year the Nestles Food Company, operating four large condenseries in the Chicago district, notified the Marketing Company that it would not buy milk through farmers' organizations doing collective

bargaining, but proposed to buy its milk from the individual farmers, and asked the Marketing Company to take care of all milk over which it had control. This stand taken by one of the largest buyers of milk, again roused the producers and in a very short time the Nestles Company found itself without milk at the four plants above referred to. Thus it will be seen that the Marketing Company on a very short notice had on its hands for manufacture or disposal otherwise, a daily output of nearly a half million pounds. This prompt action on the part of the company at that time and the creditable manner in which this vast amount of milk was handled inspired the confidence of the farmers and at the same time it may be said, surprised the buyers.

The par value of a share of stock in this company is \$50 and is sold only to bona fide farmers or farm owners; no one is allowed to own more than five shares of the capital stock, thus preventing any one person from getting a controlling interest. In other words, it is purely a farmers' cooperative company. The business of the concern is in the hands of a board of 27 directors selected with a view to distributing the representation throughout the district in which it operates. The head officers are selected by and from the board of directors, and hold their offices for one year, although the directors are elected by the shareholders for a period of three years. The board of directors also selects a general superintendent and an executive committee of five from among its number.

Farmers desiring to have their milk handled by this company are recuired to sign a contract which is binding to both parties, for the remainder of the year in which it is written and self renewing for periods of one year each thereafter, unless either party serves notice on the other at least thirty days before the end of the calendar year. Milk is sold at a uniform price for a given quality and each contract holder is liable for a uniform spread or commission charge to cover the needs of the company. Surplus milk is handled by the company at various plants owned or controlled by it and the proceeds from sale of manufactured products pooled. as is also the price obtained for fluid milk. At the present writing several new plants are in the process of construction. These plants are intended to properly process milk and prepare it for shipment to the city to supply the fluid milk trade and at the same time manufacture the surplus whenever the trade does not require it all. In this way the distributors are assured of a more even flow and the producers a better price for what is needed for immediate consumption. In this manner too, the supply and demand may be regulated to a certain extent and somewhere near cost of production obtained for all milk needed, and the loss, if any, sustained only on surplus.

Primarily, the object of the Producers' Association and of the Marketing Company might be considered the same and yet each has functions to perform which are and must necessarily be peculiar to itself. The Marketing Company is an incorporated stock company, acting as selling agent for the members of the Producers' Association, with power to buy, sell and manufacture milk and other products for its shareholders and other persons.

As previously stated in this article, the producers' association is composed of locals, and it is through these local organizations that the work is carried on. Were it not for these locals and through meetings held occasionally under the auspices of the locals, the rank and file could hardly

be kept posted on what is really being done for them.

The necessity of maintaining the parent association is evident when it is understood that the laws governing stock corporations do not provide for local organizations such as compose the Producers' Association, and only through the locals can local propositions be handled. It is the policy of the present officers of the Milk Producers' Association to hold monthly meetings in each county, where committees from the various locals may meet representatives from the head office and there discuss problems confronting the various communities.

Matters pertaining to the Marketing Company may also be freely discussed at these meetings and information disseminated to the members in this manner, which seems to be much more satisfactory than by corre-

spondence.

The representatives attending these county meetings are prepared to take up every phase of the industry from the standpoint of the producer, and to lend assistance to their brother dairymen through the association.

"The Milk News," edited by the secretary of the association, is the official organ and is sent to each member monthly.

It will be readily seen that it would be impossible for the Marketing Company to conduct the work now being carried on by the Milk Producers' Association.

A SUCCESSFUL AUTOMOBILE INSPECTION TOUR OF WISCONSIN POTATO GROWING COUNTIES

J. G. Milward, College of Agriculture, Madison, Wisconsin

Wisconsin potato growing interests recognize that the best time to study the potato crop is during the active summer growing season. The best time to determine the location of strong, vigorous, disease resistant strains and to study varieties is on the field during the growing season.

Unusual interest has been aroused in good seed potato stock in Wisconsin. The records to date show that certain growers in Wisconsin have very high producing strains. These fields have been located largely through the field inspection service in Wisconsin.



POTATO DEVELOPMENT IN WISCONSIN

Dr. Stewart of the U. S. D. A. discussing the mosaic disease before specialists and growers in a grower's field in northern Wisconsin. Wisconsin growers need to study this disease and look out for it before it gets in its work.

It naturally follows that a very large number of growers are using inferior seed. A large number of these growers can profit by discarding inferior seed and substituting good stock now under inspection in the state.

Therefore in arranging the automobile tour referred to in this article Wisconsin potato interests had this type of community seed potato improvement work in mind. A four day trip from Spooner to Rhinelander will permit an inspection of some of the best potato fields in upper Wisconsin, including the Rural New Yorker, Green Mountain, Triumph, Early Ohio and Irish Cobbler varieties. These varieties are practically the only ones under state inspection in Wisconsin for certification.

Before starting on the trip a day was spent on the Spooner Branch Station. The United States Department of Agriculture is cooperating with the Wisconsin Experiment Station in a trial of leading strains of seed stock. About fifty growers in Wisconsin have furnished state inspected seed in one hundred pound lots. This stock has been planted under uniform conditions to determine its relative value.

The Triumph variety will furnish a good example. This variety is especially subject to a diseased condition known as Mosaic. In extreme cases the foliage becomes mottled and when the leaves are held to the light this peculiar yellow mottled condition is visible in the leaf tissues. Under extreme conditions the plant may become dwarfed. Unfavorable soil and weather conditions will influence the development or expression of the disease.



POTATO DEVELOPMENT IN WISCONSIN

Dr. Stewart of the U. S. D. A. discussing with Professor J. G. Milward of Wisconsin some peculiar vine developments. Do the Wisconsin growers appreciate the special attention which the potato crop is receiving in Wisconsin?

On the Spooner Branch Station strains of the Triumph variety from twenty different sources are grown side by side. It has been shown that one strain of seed grown by J. W. Smith of Kent is superior to any other strain known in Wisconsin. This has been confirmed by a thorough trial of this seed stock in the South.

Although not so pronounced as in the case of the Triumph, similar conditions are in evidence with each of the other standard varieties.

Those in attendance at Spooner from other states were particularly impressed with this practical seed plot improvement work. Emphasis was placed upon the importance of distribution of the superior strains among the growers of the state.

The season had been unusually dry at Spooner. This condition undoubtedly made even more conspicuous the difference which might be expected with different strains of seed.

Our tourists started south from Spooner on August 18, going direct into Barron county. A field excursion arranged covered some of the best fields of Rural New Yorker, Green Mountain and Triumph in the county. It was here possible to see the same conditions on a field scale that were shown on the smaller plots at Spooner. Following the recommendation of the Experiment Station, one large grower had purchased the J. W. Smith strain of Triumph and a superior strain of Green Mountain for trial in comparison with his own seed of the same varieties. It was one of the best object lessons of the trip. As a result of this trial this grower has secured enough high class seed to meet his 1921 requirements.



POTATO DEVELOPMENT IN WISCONSIN

Dr. Stewart of the U. S. D. A. photographing a problem which interested him on a grower's field in northern Wisconsin.

As the trip advanced from Barron county eastward through Rusk, Price and Oneida counties these same conditions were encountered. The outstanding feature discussed by the visitors present was the progressive attitude of the comparatively younger class of farmers and settlers. It was manifest not only in the attention given to good seed stock, but also in the type and quality of live stock, in the building of new barns and equipment and in the general success of farming operations of which potato growing is only a part of the system.

It was borne out again what has been repeated before, that as a rule the successful potato grower in Wisconsin is also a successful live stock man, that the quality of potatoes raised is determined largely by the quality of the soil. Quality potatoes are raised on land where a good crop of clover has been turned under and where stable manure and fertilizers are available.

The writer has purposely omitted all mention of the splendid receptions and local programs which were arranged by growers and commercial clubs at Spooner, Mikana, Rice Lake, Bruce, Ladysmith, Phillips and Rhinelander. Probably a total of fifteen hundred growers joined in the field excursions arranged in the five counties covered by the excursion.

The following states sent representatives: Pennsylvania, Louisiana, Arkansas, Ohio, Illinois, Iowa and Nebraska. These men were leaders in their respective states and were especially interested in the conferences arranged on seed potato inspection standards.

Wisconsin has important interstate relations to maintain. We furnish a large amount of seed to Southern and Eastern truck centers.



POTATO DEVELOPMENT IN WISCONSIN

Potato specialists studying the plots at the Spooner Sub Station.

The state, through inspection, can offer a valuable service to the grower and to the potato buying interests.

The potato inspection service has been placed upon a very practical basis. Those in charge of the work in Wisconsin maintain that the final test of the work is this—Is the quality and grade of state inspected seed superior to the average commercial seed shipment in the state?

The result of the inspection tour has shown that through a period of ten years' work, involving many interests, Wisconsin has made progress, especially in locating some of the most valuable strains of seed of the standard varieties in the country.

This stock will be used to build up still further our interstate seed trade. It will be used for dissemination in counties and communities until the growers of the state are supplied with the very best seed stock that can be grown.

In our emphasis upon Good Seed we will not overlook the equally important requirement of Good Soil and Intensive Cultivation.

NOTE:—The Superintendent was privileged to make the trip with the party which went across the northern potato area of Wisconsin in August. It was, indeed, an eye opener. Do potato growers appreciate the ravages and losses which potato diseases and weak strains of potato seed are bringing them? Do potato growers appreciate the work which is being done by the Horticultural Department of the College of Agriculture to bring out the more disease resistant and productive strains of potato seed and to keep down disease? Do the growers appreciate what it means to their business to have the best equipped specialist of the United States



POTATO DEVELOPMENT IN WISCONSIN

Five potato specialists getting right down to business on a problem.

Department of Agriculture assisting the Horticultural Department of the College of Agriculture with this problem? Do the growers understand the financial benefits which the Horticultural Department of the College of Agriculture is bringing them when it gets the specialists of a half dozen other states to tour Wisconsin to see our growers and become acquainted with our seed? If they do, they will see that this work is maintained and amply financed. Be sure to study the pictures which are presented in this Bulletin and which show the specialists at work.

Here is something which should be significant to the potato growers. After the specialist from Louisiana had visited fields clear across northern Wisconsin and had become convinced that the work which was being done was producing the very highest class of potato seed stock, he said to a group of farmers:

"Louisiana wants your seed potatoes; but Louisiana can not deal with your individual farmers. What sort of business organization have you to

handle your potatoes in quantities such as we will need and what preparations have you made to handle the finance?"

The farmers had to admit that they had made no adequate preparation to market the great seed crop economically. There you are. In the new day farmers have got to get over their proverbial go-it-alone, individual, do-as-you-please practices and cooperate. They must do this or a separate bunch of business men must do it if the work is done and potatoes are moved.—Superintendent.



POTATO DEVELOPMENT IN WISCONSIN

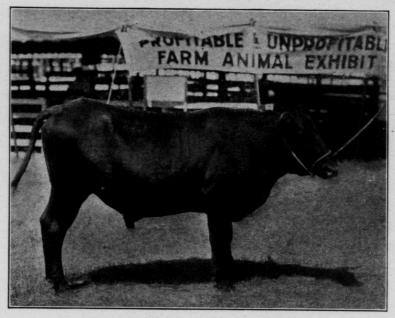
Professor J. G. Milward speaking before the Oneida County Potato Growers' Association at its summer meeting at Roosevelt, Oneida county.

MARKETING CROPS ON THE FARM

E. L. Luther, Superintendent of Farmers' Institutes, Madison, Wisconsin

There is the greatest interest these days among farmers in the subject of marketing farm crops. The farmer feels that he does not get the "rake off." Who does? That is what he wants to find out. And it is quite a job. It is about as hard as it is to find the profiteer.

In a certain county in Wisconsin there were splendid fields of clover and corn. In that same land the main industry was dairying and it was a sure

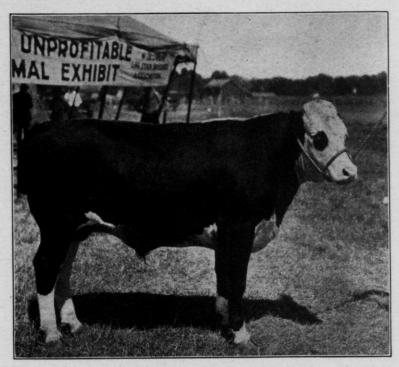


MARKETING CROPS ON THE FARM

A 36-month old "rough steer" weighing 920 pounds for which \$59.80 was paid on the open market at the Chicago Stock Yards, at \$9.50 per hundredweight. He dressed out 49 per cent of tough beef. If you are selling your hard earned corn and clover to this sort of scrub stock, you are patronizing a gouger of a middleman.

thing that the clover and corn were marketed by feeding them as forage to dairy cows. In that community lived Farmer A who fed his crops to dairy cattle and whose main source of revenue was butter fat. Year in and year cut his cows marketed his crops. He grew crops and fed them to cows and he milked. He paid no more attention to which of his cows did the best by him in marketing his clover hay and corn silage than he did to the men who handled his butter fat.

But finally one day Farmer A woke up and began to wonder if he was getting all he should out of his butter fat. He not only gave this matter attention but he started things among his neighbors and they got busy. They formed a cooperative creamery company to handle their butter fat but all the while they kept on growing and harvesting clover and corn, kept on feeding and milking cows entirely contented with their lot now that they had settled the case of that fellow who had been making money



MARKETING CROPS ON THE FARM

A 16-months old "baby beef" weighing 1,040 pounds for which \$109.20 was paid on the open market at the Chicago Stock Yards, \$10.50 per hundredweight. He dressed out 63 per cent of high priced meat. If you are selling your hard earned corn and clover to this kind of steers, you are patronizing good middlemen.

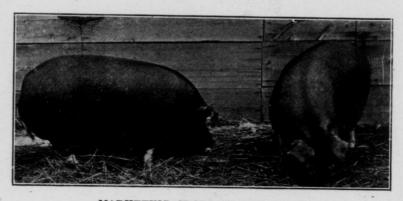
off of them from their butter fat. They supposed of course that they had done away with the main and only one who took up the profits which should be theirs.

The county took on a County Agent and in due season the County Agent fared that way. He was looking up farmers for a cow testing association. Farmer A was really a progressive sort of fellow and joined the association. Here stood three cows one after the other in his barn in about the



MARKETING CROPS ON THE FARM

If you use a scrub boar and sell your hard earned corn and clover to this kind of swine, you will be patronizing the wrong kind of middlemen.



MARKETING CROPS ON THE FARM

If you sell your hard earned corn and clover to this kind of swine, you will be patronizing the right kind of middlemen.

same milking period. In one month two of these cows returned the owner \$3 over the cost of their feed. These three dollars were to pay the farmer and his wife and children for care, barn room, taxes, interest and other incidental expenses. Remember both cows together returned \$3 worth of butter fat over the cost of their feed for that month. What about the other cow? She alone returned \$27.65 over the cost of her feed! Farmer A found that through the years he had been selling his hard earned clover and corn to cows two of which only returned him a profit on this feed of \$3 while other of his cows were good marketers of his clover and corn and paid him \$27.65 apiece as profit on this feed. This got Farmer A's goat and he exclaimed to the County Agent: "I surely thought that those fellows who handled my butter fat were getting to me and I guess they were some, but what do you know about those cows which were marketing my hard earned clover and corn?"

And so it was. Here was a farmer who was stopping but half of the leak. And so it is with a lot of farmers. The cows on their own farms over which they have absolute control and some of which are really very grasping middlemen, they pay no attention to but let go on handling their clover and corn to no profit and much of the time to an absolute loss.

On this date (June 23, 1920) we have 106 cow testing associations in Wisconsin. The largest county in southern Wisconsin has about 80,000 milk cows and only has four cow testing associations with a total of 1,600 cows. Every one of the state's 106 associations should be in that county. The farmers of that county complain much about their outside markets and the markets for their butter fat. They need to do so; but they need equally much to look after the home market which their cows furnish them for their hard earned clover and corn. Only one-fiftieth of the marketers of their clover and corn over which they have absolute control are looked after at all. And these leaks of profits are within their own control.

Lots of farmers in Wisconsin do not market their hard earned clover and corn through dairy cattle but by feeding the to beef cattle. We received here two cuts, one of a 16-months old grade Hereford for which \$109.20 was received, and one of a 3-years old scrub steer for which \$59.80 was received. Thus we see that in the case of farms where the pure bred beef bull was kept the farmer received an average monthly return of \$6.82 for his corn, clover and time, while the farmer who kept the scrub bull and marketed his corn and clover through scrub steers realized a monthly return of \$1.66. It would seem that while keeping both eyes on the big packers who market their beef farmers might also keep half an eye on the steers that are marketing their clover and corn.

Maybe it is hogs which are marketing the crops on the farm. We present here the cases of two different sets of hogs that marketed hard earned farm crops in Wisconsin. Just look over the pictures and then go look over your hogs. Which kind of middlemen are marketing the hog crops on your farm? And, you Poland China, Duroc Jersey, Chester White breeders, is it not a duty which you owe Wisconsin to go at this proposition with religious zeal and get farmers who are using scrub boars into your associa-

tions as dairy farmers are organizing cooperative creameries and cheese factories and cow testing and breed associations?

Repeat it. Farmers need to look after their markets. But there are two kinds of markets for the farmer: there is a market for butter fat, beef and pork; and there is a market for clover and corn. The markets for butter fat, beef and pork are essential and the farmer should be able to exercise some control over these markets. But the markets for clover and corn are also essential. They are entirely within the control of the farmers. There are 106 cow testing associations. That means that of the 150,000 dairy farmers of Wisconsin not over 4,000 farmers are looking carefully after their markets for clover and corn. Are we not in danger of saving a little at the spigot in marketing our butter fat, beef and pork and losing many times as much at the bung in marketing our clover and corn?

Let us look after marketing crops on the farms of Wisconsin. Wherever clover and corn are fed to live stock we need better live stock.

FEEDING FOR PROFIT WITH HIGH PRICED FEEDS

George D. Springer, Formerly Emergency Demonstration Agent,
Dodgeville, Wisconsin

Feeding for profit with high priced feeds is essentially the same problem as feeding for profit at any time. The big reason for a discussion of this subject now is because farmers are likely to make the mistake of underfeeding since all feeds are so high in price and to emphasize the fact that it is not economy to feed the poor cow at all.

Four factors enter into profitable dairying:

- 1. A good working machine-a cow that can turn feed into milk
- 2. Plenty of the right kind of feed, either raised on the farm or purchased at the proper season
- 3. Feeding the cow according to her production
- 4. Obtaining a fair price for the dairy products

The dairyman must hold himself responsible for the acquiring of the first three factors; the fourth will be taken care of by the law of supply and demand and the cooperative marketing of dairy products.

It may be well to give the composition of feeding stuffs and the function of each class of nutrients:

		Use
Feeds contain	Protein Carbohydrates	Repair of protein tissue Growth Milk Wool
	Fat	Fat Heat Energy

Successful feeding will depend largely upon supplying sufficient protein for the repair of the working tissue of the cow, for the growth of the foetus and for the production of the protein content of the milk, along with a sufficient amount of carbohydrates and fat to produce the butter fat and to give the cow heat and energy with which to perform her work.

It is a recognized fact that the best feed for a dairy cow is the fresh blue grass pasture. But this feed is available for only a few of the summer months. If we can reproduce this feed at the other seasons of the year our feeding problem is solved.

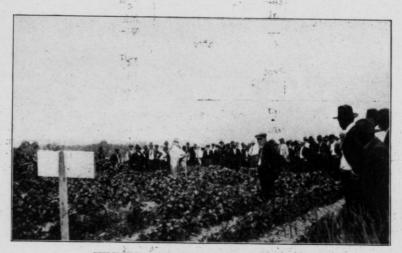
The outstanding advantages of early pasture are:

- 1. An abundance of feed is available
- 2. A palatable feed is secured
- 3. The feed is succulent
- 4. The ration is balanced



SUMMER DEMONSTRATION MEETING

Professor E. J. Delwiche demonstrating M1611 spring wheat developed at the Marshfield Sub Station Farm. This is a great wheat and farmers ought to watch for its dissemination.



SUMMER DEMONSTRATION MEETING

Professor F. L. Musbach demonstrating soy beans at Marshfield Sub Station. Yes, soy beans will grow on heavy soils and in the corn.

The dairy cow is like any other machine—she needs a good portion of her ration to keep the machine running. It is the feed given over this requirement that is returned in the form of milk. The economy of a full ration is illustrated as follows:

In the Dodgeville Cow Testing Association, this economy was shown when dry pastures came. Three herds that were little more than maintained on short pasture showed an average decrease of \$150 a month in the milk check. This was an average decrease of \$5 per cow. Two farmers were so fixed that they could cut alfalfa and feed it green. Here, production was increased. When the alfalfa was gone, one of the herds fell off to a level with the other three. In no case has it paid to overstock a pasture, and those who have supplemented their pastures have been amply repaid for their feed and work.

In making up the winter ration we must start with the roughage portion, as this is the base. To obtain the succulence needed, corn silage is used because of its cheapness and ease of obtaining. Timothy hay has no place in the ration because of its low protein content. Timothy hay is a good horse feed. Mixed hay is a better dairy feed, but by far the best hay is alfalfa. The following tables illustrate the advantage of alfalfa hay:

	Protein	Total Digestible Nutrients		
35 lbs. corn silage 15 lbs. timothy hay	.385 .45		6.195 7.27	
Total	.835		13.465	
35 lbs. corn silage 15 lbs. alfalfa hay	.385 1.53		6.195 7.74	
Total	1.915		13.935	
35 lbs. corn silage 15 lbs. mixed hay	.385		6.195 6.93	
Total	.985		13.125	

The advantage of alfalfa as a dairy feed does not lie in a larger digestible content but rather in a larger protein content. In all rations the main thing for farmers to watch is the protein content. As a rule the carbohydrate content will be over-supplied.

The question is often raised, Does it pay to feed a dairy cow grain? The answer is always in the affirmative if the cow has the dairy tendency and the better the cow, the more profitable it is to feed grain, even at high prices.

The cost of production for a 1,000 pound cow giving one pound of butter fat daily is as follows:

32 lbs. corn silage 15 lbs. alfalfa hay 3 lbs. ground oats	Protein .353 1.53 .291	Total Digestible Nutrients 5.664 7.74 2.112	Cost \$.096 .15 .075
Total	2.174	15.516	\$.321
Requirement	2.02	15.4	

Butter fat is now selling at 54 cents a pound at the creamery. This will leave 22 cents plus the skim milk as the return over cost of feed.

If the cow is capable of producing one and one-half pounds of butter fat daily, the following is a good ration:

32 lbs. corn silage 12 lbs. alfalfa hay 11 lbs. grain mixture	Protein .353 1.272 1.353	Total Digestible Nutrients- 5,664 6.192 7.469	Cost \$.096 .12 .253
Total Requirement	2.978 2.86	19.325	\$.469

The grain mixture for the above ration is made up as follows:

Oats _____200 pounds
Bran ____100 pounds
Oil meal ____ 50 pounds

The butter fat is worth 81 cents; this, minus 47 cents, the feed cost, will leave 34 cents plus the skim milk, return above the cost of feed.

Should the cow produce two pounds of butter fat daily, the following would be an economical ration:

30 lbs. corn silage 10 lbs. alfalfa hay 18 lbs. grain mixture	Protein .33 1.06 2.088	Total Digestible Nutrients 5.31 5.16 12.744	Cost \$.09 .10 .42
Total	3.478	23.214	\$.61
Requirement	3.42	23	

The grain mixture for the above ration is made up as follows:

Oats ______100 pounds
Bran _____100 pounds
Barley _____100 pounds
Oil meal _____20 pounds

The butter fat is worth \$1.08; this, minus 61 cents, the feed cost, will leave 47 cents plus the skim milk, return above the cost of feed.

The prices of the above feeds are as follows:

Silage\$ 6	a	ton
Hay\$20		
Oats\$50		
Bran\$34		
Oil meal\$60		
Rarley 959		

Any of the above feeds could have been purchased at the listed prices during the past summer (1917). Feeding for profit includes buying feeds at the proper season and price.

It is clear, then, that it is more profitable to feed a high producing cow to the limit than it is to feed a low producing animal to the limit of her production. But one man states that his cow can produce 2 pounds of butter fat daily without any grain. His cow did produce 2 pounds of butter fat daily as long as she had the condition to do it with, when that was depleted she produced less than 1 pound of butter fat daily.

Given a good cow and plenty of the right kind of feed, it does pay to feed a cow according to her production; i. e., all the roughage she can handle and 1 pound of grain to 3 or 4 pounds of milk.

DRINKING CUPS FOR LIVE STOCK

N. A. Rasmussen, Farmers' Institute Lecturer, Oshkosh, Wisconsin

Of all the tools, machinery and labor saving devices we have tried on our farm none has proven more satisfactory nor come as near to being onehundred per cent efficient and as near to doing all the manufacturers claim for them as the automatic drinking cups.

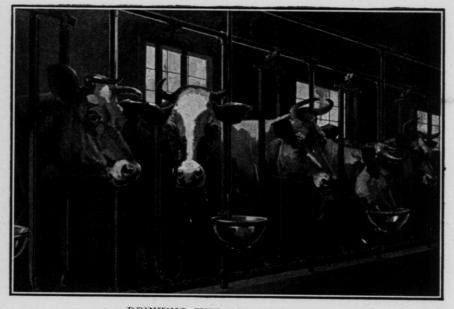
There is no question but what they pay for themselves in time and labor saving alone in a short time and that is what we expect of most machinery, but after having used them for about seven years, I am well convinced the cows will produce from five to ten per cent more milk when water of an even temperature is accessible at all times. The young stock, pigs and chickens, will do as well accordingly but the horse, that is where the greatest difference will be evidenced. If one has kept careful check on feed and the condition of the horse in general before installing cups and again after installing them, one will find the grain ration cut twenty-five per cent and the horse in better condition than when watered as ordinarily.

It will seem at first thought that drinking cups for horses will prove to be impracticable in the summer time when they come in from the work fields in hot weather. Under such conditions horses are usually not allowed free access to all they will drink at the tank. But it does not work out that way with drinking cups in the horse stalls. Horses come to know that they can drink a little right along when drinking cups are in and so upon entering the stalls warm and perspiring and thirsty, my horses drink a few swallows, wash their mouths out and turn to their hay. Off and on during the noon hour they drink a little water when they desire and at no time overdrink as they must do at the tank. Consequently my horses have suffered no evil consequences from having water before them at all times in drinking cups.

There are many kinds of cups on the market, all of which are good. Personally I prefer a cup with a cover and individual valve so cup is empty except when the animal is drinking. I prefer all piping overhead for several reasons: first, the pipes will not freeze so easily as when on the floor, especially when doors are opened for cleaning stables, etc.; second, they are

apt to be in the way on the floor unless laid in the cement and that is not desirable if repairs and changes are necessary. The main pipe running along the floor just back of the manger curb is not convenient to get at with a pipe wrench. One must always keep close to walls and partitions while with overhead piping one can cross anywhere, thereby saving pipe, couplings and labor; third, when pipes are laid along the ceiling the system may be shut off in the evening and the animals will drink enough as a usual thing, to drain the pipes and thus avoid any liability of freezing in extremely cold weather. If the pipes are laid on the floor they must be drained by some arrangement which requires the time and attention of labor. One inch pipe is large enough for a good sized stable.

Do it now. Notify your dealer to come and install a water system. If you haven't the money, borrow it; you cannot afford to wait.



DRINKING CUPS FOR LIVE STOCK

Notice the ease with which overhead supply pipes may be reached with the wrench. One cow is drinking while having her picture taken.

THE LAND CLEARING INSTITUTE SCHOOL

In Upper Wisconsin in the areas having plenty of land clearing to be done, there is need of discussion of this most practical work at Farmers' Institutes. But thus far there has been a lack of persons with the required information to make land clearing discussions at Institutes very practical for farmers.

With the view of having people ready to answer requests for this kind of work at the Institutes the Department of Farmers' Institutes cooperated with the Division of Land Clearing of the Engineering Department of the College of Agriculture, and carried on the first Land Clearing Schools ever held, we believe, in the world. These were held in Marinette, Rusk and Chippewa counties. The school in Marinette county covered a large part of May, 1920, and covered every phase of land clearing, including the use of explosives, pullers, skidding stumps, piling and ditching with explosives.

The pupils were mature men and the work took on the form of real laboratory work in which each pupil did the thing with his own hands and in which practical discussions were led by the experts in charge.

As the result of these schools there is not only a good bunch of men to employ in the most economical land clearing enterprises but also a considerable number of people who will be able to meet farmers at Institutes and present the most practical and economical means of clearing land.

You will be interested in the pictures of land clearing presented in this Bulletin. Don't miss them.—Superintendent.



THE LAND CLEARING INSTITUTE SCHOOL

The students in the school were shown how to get around a lot of backaches and disagreeable work by practicing the ditch blast.



THE LAND CLEARING INSTITUTE SCHOOL

Some land needs drainage before clearing operations can be begun.

Here is a case. A tough looking job, isn't it?



THE LAND CLEARING INSTITUTE SCHOOL

Skidding stumps with a tractor. This not only collects the stumps for piling but effectively removes most of the soil from the roots.

THE UNIVERSITY OF WISCONSIN

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The University embraces-

The College of Letters and Science The College of Engineering

The Law School

The College of Agriculture The Medical School

The Graduate School The Extension Division The Summer Session

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General Courses in Liberal Arts Special Courses which include:

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Library Training Course Music

Pharmacy Physical Education

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The College of Engineering em-

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The Long Agricultural Course The Middle Agricultural Course The Short Agricultural Course

The Dairy Course

The Farmers' Institutes Home Economics Course The Law School embraces-

A Three Years' Course

Branches of Study

The University presents a wide range of study embracing more than three hundred subjects. Something of the extent and variety of these may be indicated by the following synopsis: Twelve languages are taught, viz.: Greek, Latin, Sanscrit, Hebrew, German, Norse, French, Italian, Portuguese, Spanish, Anglo-Saxon and English. In Mathematics there are forty special courses. Under the Sciences there are a large number of courses in each of the following: Astronomy, Physics, Chemistry, Geology, Mineralogy, Zoology, Botany, Anatomy, Bacteriology, Pharmacy. In History there are fifty courses; in Political Economy, seventy-seven; in Political Science, forty-four; in Mental Sciences there are sixty-one, embracing Philosophy, Psychology, Ethics, Aesthetics, Logic and Education. There are twenty-seven courses in Music, and forty-three courses in Physical Education.



THE LAND CLEARING INSTITUTE SCHOOL
Two classes actually at work upon scientific land clearing problems.

Physical Culture:—The Armory and Gymnasium is one of the largest buildings for its purposes connected with any institution of learning in the country. It is provided with rooms for lectures on Physiology and Hygiene, and for class and individual exercise in all the forms of gymnastic practice. There are also the most abundant and approved facilities for shower, sponge and swimming baths.

Adequate accommodations are provided for the women's gymnastics in Lathrop Hall, which is fully equipped. This furnishes ample facilities for systematic courses for young women, and is under the immediate direction of a trained instructor. This provides a gymnasium

for the exclusive use of women.

- In Mechanics and Engineering:—Elementary Mechanics, Mechanics of Material, Dynamics, Mechanics of Machinery, Theory of Construction, Thermodynamics, Elementary Surveying, Railroad and Topographic Surveying, Geodesy, Sanitary, Hydraulic, Railroad, Electrical, Steam Engineering, Hydraulic Motors, Hoisting Machinery, Theory and Construction of Locomotives, Railway Location, Railway Equipment, Construction and Maintenance of Way, Railroad Field Work.
- In Electricity:—Electrical Testing, Electrical Plants, Electrical Construction, Electrochemistry, and various forms of drawing are given; also shop work in wood, iron, brass, both hand work and machine work, machine designing, construction and testing machines.
- In Agriculture:—Various courses are given in Agriculture, Animal Husbandry, Farm Management, Dairying, Agricultural Chemistry, Soils, Veterinary Science, Agricultural Physics, Agronomy, Horticulture and Economic Entomology, Bacteriology, etc.

- In Law:—Courses in Equity, Jurisprudence, Real Property, Constitutional Law, Wills, Contracts, Torts, Practice and Pleading, Law of Evidence, Corporations, Domestic Relations, Admiralty, Insurance, Estoppel, Partnership, Taxation, Criminal Laws, Common Carriers, Medical Jurisprudence, Probate Law, Code Practice, Agency, etc.
- In Pharmacy:—Courses in Practical Pharmacy, Pharmaceutical Chemistry, Materia Medica, Pharmaceutical Botany and Practical Laboratory Work.
- General Facilities:—The faculty embraces six hundred and eighty-five instructors of whom 160 average half time. The laboratories are new, extensive and well equipped; embracing the Chemical, Physical, Metallurgical, Mineralogical, Geological, Zoological, Botanical, Bacteriological, Civil, Electrical and Mechanical Engineering, Agricultural and Pharmaceutical Laboratories. Seminaries are held for advanced study in History, Language, Literature, Mathematics and other branches.

The libraries accessible to students embrace that of the University, 330,000 volumes; of the State Historical Society, 445,000 volumes; of the State Law Department, 65,000 volumes; of the city 43,000 volumes; of the Legislative Reference Library, 40,000 volumes and pamphlets; besides special professional and technical libraries, making in all more than 930,000 volumes, including pamphlets, thus affording very exceptional opportunities for reading and special research.

Any person who desires information in regard to any of the colleges or

schools should apply to

W. D. HIESTAND. Registrar.

COURSES IN THE COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF WISCONSIN, MADISON

- Long Course. Covering four full college years, offers scientific training in agriculture, as well as training in the underlying sciences. Students may specialize in any line after the second year.
- Middle Course. Consists of two full college years, modified to include as much practical work as possible in connection with the regular scientific training.
- Home Economics. A four-year course, leading to the degree of Bachelor of Science, for those who wish to prepare themselves as teachers in Home Economics, as home makers or for other related vocations.
- Home Economics.—A two-year course for training vocational teachers under the Federal grant Smith-Hughes Law.
- Summer Session. Last week in June to first week in August. This session includes 39 courses in agriculture.
- Short Course. A term of 15 weeks in each of two years. Registration Monday and Tuesday, November 8 and 9. The course includes lectures, demonstrations and practice work.
- Young People's Course. This is a one week course of lectures and demonstrations in agriculture for boys and girls who have taken part in the Young People's Grain Growing Contests. It is held in June.
- Farmers' Course. This is a course of popular lectures, demonstrations and exercises in practical agricultural science, beginning early in February. It is open to farmers over 25 years old.

- Winter Dairy Course. A twelve weeks' session, beginning early in November, including lectures, laboratory and practice work in the manufacture of dairy products. It is designed especially for buttermakers and cheesemakers.
- Summer Dairy Course. This is a ten-weeks' training in dairy factory operation for beginners. Students are admitted any time during the spring or summer after March 1.
- Special Dairy Course. This is for creamery and cheese factory operators and managers and covers ten days, including addresses and laboratory demonstrations. It is given at the time of the Farmers' Course.
- Women's Course. This is a one-week course of lectures and demonstrations on various phases of home economics, cooking, nursing, etc., and is given during the first week of the Farmers' Course.
- Women's One Week School. This is a laboratory course in cooking, given during the second week of the Farmers' Course.

FARMERS' INSTITUTES

E. L. Luther, Superintendent.

Alice E. Hibbard, Clerk.

THE FARMERS' INSTITUTES DEPARTMENT conducts meetings in various sections of the state where practical lectures and conferences on subjects pertaining to farm life and farm operations are presented. Women's Institutes are also conducted for the women. The Farmers' Institute Bulletin is issued annually in an edition of 30,000 copies, and distributed at Institutes and by mail; also 10,000 copies of the Farmers' Institute Women's Bulletin. Any community can secure an Institute upon proper application to the Superintendent. For further information address E. L. Luther, Madison, Wis.