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DAIRY COWS EXHIBIT DEPRAVED APPETITES

Legislature Asked to Appropriate Funds for an Investigation by University Farm Scientists

By the terms of a bill presented in the legislature at the request of the Minnesota State Dairymen's association the sum of \$6,000 a year for the next two fiscal years is appropriated to the university department of agriculture for an investigation to determine in what parts of Minnesota, and to what extent, feed and water used for livestock production are deficient or abnormal in mineral content, also to determine the minerals in which cattle rations are lacking and the means that should be taken to remedy such conditions.

The bill has the active support of legislators from certain western counties where the abnormal appetite of cows in milk has been particularly noticeable, especially in the winter when dry feeds are used. Manifestations of this depraved appetite appear in the eating of dirt and wood partitions in barns and the chewing of bones, old shoes and rubbers. Dairy cows under these conditions soon dry up and young animals are stunted in growth.

Different as to Water

While hay and other feeds grown in certain districts are deficient in minerals, complaints have been received by the biochemistry division at University Farm that in instances the water supply was not fit to use on account of its high mineral content. One sample of water analyzed by the university men contained 2.5 per cent of Epsom salts. Cows drinking this water went dry, according to the owner, in spite of anything he could do. Of another sample subjected to analysis Dr. R. A. Gortner, chief of the division, says it contained large amounts of either Epsom salts or Glaubers salts, "far too much," as he expressed it, "for continual use either for humans or for animals, particularly milking cows."

Dr. Eckles Describes Situation

Dr. C. H. Eckles, chief of the dairy husbandry division of the university, says:

"There are certain sections in Minnesota where the difficulties in animal feeding are especially acute. The worst condition seems to prevail along the edge of the Red river valley in Becker and Mahanomen counties. A second area is the sandy soil district north of the twin cities. It is probable that similar troubles will arise on peat soils after they have been cropped for a few years. The complaints have been more wide spread this winter, indicating that the long dry season of 1922 cut down the mineral supply of pasture and range feeds and that the cattle went into winter quarters less fortified than usual against the drafts

made upon them for the necessary mineral in milk. When feeds do not supply this mineral it is taken from the bones and system of the animal and they decline in vigor and productive powers.

What May Be Done

"It is possible that both the high content of mineral matter, especially magnesium in the water, and the supposedly low calcium and phosphorous content of the feeds grown, are concerned with the trouble. In case funds are furnished we will undertake to make first a survey of the section where the most trouble is experienced, gathering all the information possible and taking samples of the feed grown and the water used. These samples would be analyzed. Meanwhile practical experiments would be started in the use of mineral supplements in the feed of animals and the effect of water containing an excess of minerals. Aside from these, preliminary investigations of a fundamental character would be started at the experiment station here and advanced as far as possible for the purpose of ascertaining the facts in accurate scientific manner. The project would be a joint one between the divisions of agricultural biochemistry, dairy husbandry and agricultural extension."

BLUE EARTH PUREBRED SIRE DRIVE A WINNER

The purebred sire campaign in Blue Earth county is a success. One hundred six sires placed was the result of work up to Saturday evening, February 24, in spite of a handicap of bad roads and stormy weather. The goal had been reached when 100 were placed.

The campaign started January 25 with an enthusiastic meeting in Mankato which was addressed by Dean W. C. Coffey, F. W. Peck, N. J. Holmberg, W. F. Foley of The Farmer; F. E. Murphy, Minneapolis Tribune; I. A. Drake of Farm, Stock, and Home; J. B. Irwin, and others from the outside. J. E. Reynolds of Mankato and County Agent L. E. McMillan spoke from the viewpoint of Blue Earth county.

Previous to the meeting the county agent secured by questionnaires a list of 150 purebred Guernsey, Holstein, Short-horn and Hereford sires which were for sale in the county. The plan of the campaign was explained and unanimously adopted January 20 at a meeting of purebred breeders. This plan specified that no preference should be given any breed.

County Agent McMillan says: "One of the fine things is the unusual interest manifested by the farmers and business men in improved livestock. This is the most important feature of the campaign in my judgment. The interest aroused in better livestock will continue to grow and result in many good herds being developed through better breeding and better care and feeding."

THREE SHORT COURSES ARRANGED FOR JUNIORS

University Farm and Morris Dates March 26 to 30—Crookston April 2 to 8—Conference for Leaders at "U"

The dates for the thirteenth annual club boys' and girls' short course at University Farm have been advanced to March 26 to 30 inclusive, which is vacation week for most of the schools in Minnesota. A conference and training school for club leaders will be held the afternoons of March 27 and 28, the mornings being left open for the leaders to take the class work given to the boys and girls.

Boys and girls between the ages of 10 and 20 and from any part of the state can enroll in this short course. Two outstanding features will be judging contests of dairy and general livestock and a contest in advanced bread club work. Members of winning teams will be awarded free trips to the Minnesota State Fair and to other similar enterprises. Minnesota juniors can attend this great course at the cost only of railroad fare and subsistence while at University Farm. Reduced railway rates of one and one-half fare on the certificate plan have been secured for those whose one-way fare amounts to more than 67 cents. T. A. Erickson, the state leader, says:

"The district contest in advanced bread club work will be held in connection with this short course, with two of the best teams demonstrating at one of the general sessions. In order to encourage an early start in livestock judging work, those enrolled for such work will compete in special contests at the short course. The plan is to make this week full of good things for both club members and leaders."

The junior short course at the West Central School at Morris will be held the same week as the one at University Farm. The course at the Northwest School of Agriculture at Crookston will be held April 2 to 8. Plans for these courses are similar to the one at University Farm.

LINCOLN TO MARKET EGGS CO-OPERATIVELY

N. E. Chapman, poultry specialist, has been stirring up interest in egg marketing in Lincoln county. County Agent Kosmoski says that 12 to 15 cases of fresh eggs are being shipped each week from Hendricks creamery to a special market in St. Paul. Prices ranging from one to 15 cents a dozen more than the local market is paying are being realized. The Lake Benton creamery is also planning to ship eggs co-operatively. When these two markets are well established, county-wide co-operative marketing will be started, the agent says.

HIGH MARK IS SET BY ADAMS CLOTHING CLUB

Attendance Upon Five Months Course in a Mower County Community Practically 100 Per Cent

The Adams clothing club in Mower county stands out conspicuously among community groups in the state. Four days before the reports were due in the central office, Mrs. Elmer Wilson, the leader of the club, collected and sent in a complete record of the work done by each member during the five months' clothing project carried on under the direction of the state specialist. Except for the first meeting, to which one of the members who was unable to attend sent a substitute, the attendance for the entire five months was 100 per cent.

Sixteen to Start With

Last May sixteen women from Adams attended the county meeting at Dexter at which Miss Julia O. Newton presented the state plan for organized project work. They went home so enthusiastic that seventy women in the community signed up for the work. During the summer, with the assistance of Miss Jessie Partridge, county club agent, the club held meetings each month to make dress forms. But it was not until September when the clothing specialist could be sent into the county that they began their regular project series. As all of the seventy women could not attend the specialist's meeting, twelve representatives were chosen. Between meetings with the specialist these women held other meetings which all the members of the club attended. There they presented the work given by the specialist, each woman being responsible for a certain part of it in which she had become most proficient.

Close to 200 Reached

It is interesting to note how much has been accomplished by the club. The women have passed on the things they have learned as a whole or in part to more than one hundred other women. They have helped make ninety dress forms in the community. They have used that mysterious box of machine attachments 146 times, thereby saving many hours of needless labor. They have made various types of garments from their altered patterns, and have been able to choose more successfully the colors and lines most becoming to them. At this time, however, the results of the clothing project at Adams cannot be adequately measured. As Mrs. Wilson says: "The reports do not show as fully as we wish the good we have got out of the lessons. Most of the fall sewing was finished before we commenced the lessons and our spring sewing is just beginning."

Standard Bred Stock in Demand

N. E. Chapman says that probably 75 poultry shows will be held in the state the present season with an average approaching 500 birds to the show. He relates that at one show which he attended 75 cockerels were either sold or contracted for and that many orders were given for hatching eggs. "This illustrates the value of standard bred poultry," he says, "and is in harmony with the present pure-bred sire campaign throughout the state."

LONG LAKE GROWERS ORGANIZE SPRAY RING

On February 26 fruit growers in the district around Long Lake, Hennepin county, started a drive on orchard pests by organizing a spray ring. The organization is the result of a series of local meetings in which spraying for disease and insects was discussed by the county agent and representatives of the agricultural college. The ring is composed of twelve fruit growers having a total of 1,800 apple trees. A large power sprayer will be purchased and an operator hired to do the spraying in the different orchards. The members of the ring will hold equal shares in the machine and the cost of operation will be pro-rated on time and material required in each orchard. F. W. Holbrook is president of the ring. There are other fruit districts in the state where excellent results could be obtained from a similar co-operative effort.

SUGAR BEET CULTURE EXTENDING IN VALLEY

Pennington county seems likely to grow more sugar beets this year than ever before. A beet growers' association has been organized and the planting of 1,500 acres is proposed. Rates on beets from Thief River Falls to the Minnesota Sugar company's plant at Mason City, Iowa, have been reduced by the Soo Line from \$7.50 to \$2.25 per ton.

The commercial club of Thief River Falls, the Minnesota Sugar company, and the farm bureau will send County Agent J. J. McCann of Pennington to San Antonio, Texas, to hire Mexican laborers for the season of 1923. About 400 Mexicans will be brought in to work in the beet fields of Red river valley counties.

Mahnomen county farmers are planning to grow 300 acres of sugar beets this year. Applications for allotments have been coming in briskly, says the county agent.

More Dairy Stock for Lincoln

Twenty-seven Holstein cows and heifers from improved herds in Wisconsin were recently shipped into Lincoln county. A bank at Ivanhoe helped to finance the deal for the farmers. An average price of \$77 a head was paid for the stock.

Co-operative Buying Also Helps

Co-operative buying through the farm bureau saved members \$4,800 in January, says Blackburn of Cottonwood county. Pools were organized for buying fence posts, stock salt, and apples.

Iowa Buys Minnesota Seed Stock

Kittson county potato growers are again supplying potatoes to Iowa State College men for experimental work in Iowa.

More Club Work Predicted

Prospects for boys' and girls' club work in Martin county are better than ever before, says County Agent Paul A. Johnson. The farmers' clubs, a real power in Martin county, are encouraging the boys and girls to get into club work.

CLUB WORK TO REACH OLDER BOYS AND GIRLS

Special Competition Provided for Advanced Work in Breadingmaking—Maximum Age Raised to 20 Years

One of the special purposes of boys' and girls' club work is to interest rural young people who are out of school in farm and home enterprises. Statistics show that 43 per cent of farm boys and girls leave school between the ages of 15 and 17 years. Only 25 per cent become farm operators between the ages of 20 and 24 years.

In order to reach more of these young people for better methods of agriculture and home economics the maximum club age for all projects has been raised to 20 years. Several features have been added especially for the older boys and girls. The farm management project was announced in the last issue.

Advanced Bread Club Work

The advanced bread club work is open to girls and boys between 15 and 20 years inclusive. The project for each member enrolling requires the baking of at least 75 pound loaves of bread or its equivalent, twelve bakings of quick bread, twelve cakes and six bakings of other flour products, such as doughnuts, pies, etc. A record and story are required as in other bread club projects.

The special competition for the advanced bread club work is the team demonstration contests. A series of eight or nine district contests will be held during April and May, beginning with the one in connection with the boys' and girls' short course at University Farm, March 26 to 30, and the one at Morris the same week. A third one will be held at Crookston the week of April 2 to 8. Other district contests will be arranged later.

Milling Company Opens Purse

Each county near these points will be entitled to send a competing team, whose railroad fare will be paid both ways. The winning teams from the district contests will demonstrate at the State Fair. The Russell Miller Milling company of Minneapolis will pay the traveling expenses of these advanced bread teams to the district contests and to the State Fair demonstrations. The company has also provided funds for free trips to the National Club Exposition at Chicago during the International Livestock Show for the following bread making winners: Advanced bread team of three members; Class A bread team of three members; Class B bread team of three members; best breadmaker in state—Class A; best breadmaker in state—Class B.

New Creamery Dedicated

Six hundred persons crowded into the new creamery at Ruthton, Pipestone county, to attend dedicatory exercises. The new building cost \$18,000.

Creamery Returns Augmented

Patrons of the Triumph Co-operative Creamery appreciate the help given by the Minnesota Creameries association of which the creamery is a member. And no wonder. The secretary in his report says a gain of \$5,580 is to be attributed directly to the association organized by A. J. McGuire and his colleagues.

Scrub Sire Doomed in Beltrami County

The idea of a long time program with a definite goal is not a new one, but Beltrami county offers an example of a five-year program for a particular project which, if put through, will be a tremendous achievement. The farm bureau of that county estimates that at the rate things are going there will be a bull association in two more years within reach of every farmer in the county, also that in four more years the scrub bull will be extinct in the county. It was a year ago that the county extension forces started this campaign and they allowed themselves three years and five years to do it—three years to bring a purebred bull within range of every farmer, five years to clean up the last of the scrubs.

Can Clean Up in Two Years

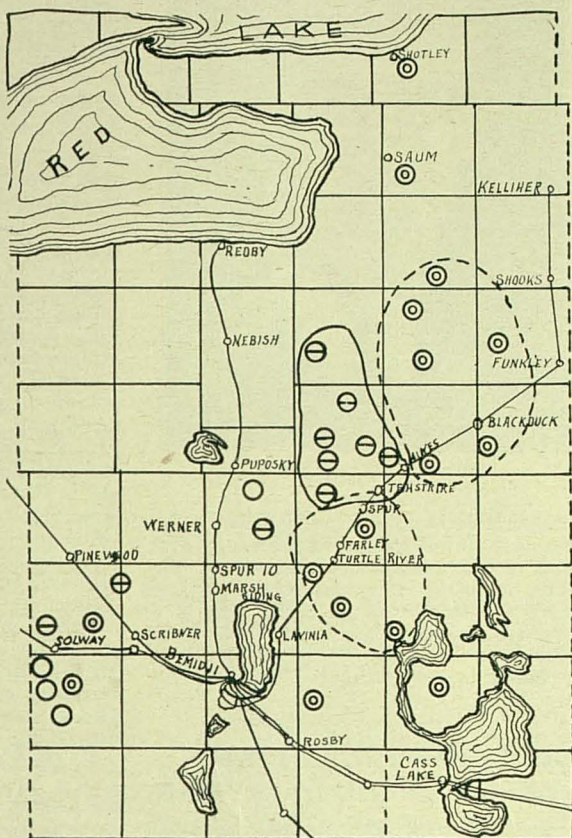
The accompanying cut shows the situation January 1, 1923. Since then another Guernsey association in the vicinity of Redby with four blocks. Other communities will soon form associations. County Agent Dvoracek feels it is a conservative estimate to count on but two years more to spread the bull association plan over the entire county.

In 1921 Beltrami county was designated as a demonstration county in bull association work by the United States Department of Agriculture. Joel G. Winkjer spent several weeks in the county in August, 1921, and has returned two or three times since to give assistance. During the first visit fourteen blocks were organized, four of them by grouping into one association immediately, the others being left for organization later.

Thirty-six Blocks in Sight

Subsequent work has created new blocks and has formed the associations which exist at present. There are eighteen blocks in the four organized associations and about as many more not yet

gone into associations. While it would be better to complete the organization without having these scattered blocks, it



○ GUERNEYS ⊖ HOLSTEINS ⊕ SHORTHORNS
(By Courtesy of Northwest Farmstead)

PUREBRED BULL BLOCKS IN BELTRAMI COUNTY
JANUARY 1

⊖ Circles represent bull blocks; those enclosed in lines belong to associations, the lines showing roughly the territory of the associations.

is not always practical to do so as the individual blocks often develop before the other blocks are ready to start.

When organized the associations incorporate and take over the ownership of the bulls of one member blocks. In this way the expense and risk are distributed over the entire association and the shifting of the bulls from one block to another is easily handled. Uniformly good animals are insisted upon in every case, so that there can be no criticism of either the breeding or the individuality of any of the bulls when transfers are arranged.

Boy Sheep Team Honored

Kittson county's sheep demonstration team of three boys gave demonstrations, on invitation, before a convention of agricultural societies at Winnipeg.

Land Clearing Prizes Increase Interest

Awards of land clearing prizes under the auspices of the land clearing section of the university have greatly stimulated interest in farm bureau and county agent work in parts of Aitkin county, says A. W. Jacob, the county agent.

Paynesville Cows Will Be Tested

Stearns county dairymen, who organized their first testing association at Sauk Center recently, are planning to form a second association in the Paynesville community early in the spring.

Poultry Series Popular

The fourth series of poultry meetings, under the direction of Miss Cora Cooke, is now in progress in Brown county. The agent reports that the attendance increases at every meeting.

POULTRY SHOWS OVER STATE WELL ATTENDED

Nobles County Exhibit Placed Among Leaders by University Man—Faribault a Close Second

"The largest and best poultry show in the state outside of Minneapolis."

This compliment for the Nobles county poultry show held at Worthington comes from Prof. A. C. Smith, of University Farm, who worked from early morning until midnight to judge the 640 birds which had been entered.

A new feature of the show this year, says A. R. Miesen, the county agent, was the utility class. A crop show was also held in connection with the poultry exhibit. C. L. Alexander of University Farm judged the crop exhibits, and Ralph F. Crim got in another good talk on alfalfa, soybeans, and sweet clover.

Just One Show After Another

Local poultry shows held at Ellsworth, Adrian, Rushmore, Brewster, and Wilmont contributed a large amount of advertising to the county-wide show and assured its success. Just how these local shows were handled is thus described by Agent Miesen:

"The county agent obtained a truck, loaded on this the necessary coops and material to take care of 300 birds, also the dressed poultry exhibit which was frozen and packed in boxes. By means of the truck all the material was moved from town to town each day and set up the first thing in the morning, all in readiness for the birds when the farmers brought them in. As the show was over in the afternoon, everything was again loaded and moved to the next town. This system worked out very satisfactorily. Every community was satisfied and from all expressions the shows will be larger than ever next year. The largest show had more than 200 birds."

What Agent F. E. Krause of Faribault county pronounces the best poultry show in southern Minnesota was held at Winnebago. Nearly 500 birds were exhibited. A fine spirit of co-operation was shown by members of the association, and to this Mr. Krause attributed the success of the exhibit. Dr. W. A. Billings' meetings in Faribault county have been of great value to poultry keepers, the agent declares.

Swift County Gets in the Game

Swift county's first poultry show brought out more than 300 birds representing 30 or more varieties. The attendance the three days and evenings of the show was 1,800. "The show was not only a fine exhibition," says W. E. Hargrave, the county agent, "but it was the means of exchanging many breeding birds and hatching eggs. Chapman of University Farm and Edson of Morris addressed large sized audiences."

K. A. Kirkpatrick, the Hennepin county agent, says: "Two hundred sixteen birds were shown at the second annual poultry show and institute of the Long Lake Poultry club. Quality was wonderfully improved over the showing of last year. This fact was remarked upon by many persons who visited the two shows. New poultry clubs have been formed by local workers at Mound and Edina."

CITY MAN LEARNS TO CAN; HERE'S HIS RECORD

Six Hundred Twenty Quart Jars of Fruits and Vegetables Canned at Average Cost of Eleven Cents a Jar

A Minneapolis man, whose family consists of an invalid wife and four children has given a most interesting report of home canning, the method for which he learned from the Minneapolis home demonstration agent. Following are extracts from his report:

No. qt. jars	Kind	Total
77	Yellow wax beans.....	\$ 3.70
155	Tomatoes	4.45
51½	Carrots	1.19
17	Cauliflower	1.25
50	Sweet corn	2.75
30	Peas	4.80
9	Beet greens65
1	Small beets12
48	Vegetable soup	4.80
12	Pineapple preserves	2.84
18	Bing cherries	6.19
2	Blue plums64
9½	Blueberries	2.28
28	Bartlett pears	4.38
69	Grape juice	4.54
14	Grape marmalade	3.44
9½	Grape conserve	3.44
15½	Chokecherry jelly	2.28
8½	Apple jelly	1.80
6½	Groundcherry, tomato jam....	2.85
7	Apple sauce77
7	Cranberry sauce	3.08

620

\$67.95

"This makes an average cost per quart jar of a little less than 11 cents.

"Accurate figures were kept on the entire cost of these articles such as sugar, fuel, salt, rubbers, etc., allowing nothing for time spent, as this work was done Saturday afternoons.

"We also put in the basement for winter use the following vegetables. The figures, showing the market cost when I had time to market, rather than the lowest price, might be of interest:

Carrots, 1 bushel	\$.75
Turnips, 1 bushel50
Squash (winter) 1 bushel75
Onions, 1 bushel75
Apples (large) 1 bushel	2.25
Squash, 10 large for immediate use.....	.50
Potatoes, 10 bushels	6.00
Potatoes (sweet) 1 bushel	1.50
Celery, 79 stalks	1.25
Cabbage, 2 dozen large head.....	.70

"We made five dozen large heads of cabbage into sauerkraut, filling 60 quart cans which can be used for two years to come, depending on our appetite for kraut.

"Our grocery bill has been materially decreased, and we find that with the above on hand meals are quickly prepared and more of the vegetables used than if cleaning and preparing were necessary each time."

Farm Business Schools

Farm business schools in charge of W. L. Cavert and C. E. Wise, Jr., have been held this season in about 30 communities with an average attendance of about 35 persons. Keen interest is being taken in the proceedings. Cost of production studies centering about hogs and dairy products have proved to be the most popular in the schools, says Mr. Cavert. The general discussion usually concerns such subjects as improving markets, cutting costs, and how much of a given crop it is best to raise. Mr. Wise has been spending much of his time co-operating with the dairy people.



B. A. HOLT

Mr. Holt is doing part time work for the agricultural extension service by giving instruction at meetings over the state in cooperative marketing, particularly the marketing of eggs. He is a graduate of the Minnesota College of Agriculture and is a research assistant attached to the division of agricultural economics.

CLUB BOY TALKS LIKE EXPERIENCED DAIRYMAN

That Harold Kleinschmidt, a Blue Earth county club boy, has caught the true spirit of club work and will in all probability become a successful dairy farmer, provided his interest continues to lie in that direction, is seen in a letter which he has written to L. E. McMillan of Mankato, his county agent. The letter is a fine testimonial to the forward character of junior club activities in Minnesota. The boy says:

"You would probably be interested in knowing that my heifer came fresh on Christmas eve, December 24. At present the cow has slightly fallen short of my expectations, as I do not believe she is giving full capacity. She averages approximately 24 pounds of milk a day. In January she gave 752.25 pounds of milk which tested at 3.4. This would make the total amount of butterfat produced 25.57 pounds. If all butterfat had been sold at 58 cents per pound the proceeds would have amounted to \$14.79. By these figures one can easily see that there is little chance for financial loss as far as production goes.

"I am the proud owner of a month's old bull calf which is doing exceptionally well. I am still feeding him whole milk with hay and a small amount of oats. I have already refused an offer to sell. I will try to push this year's project to the limit."

Martin Adds Two New Clubs

Martin county, justly celebrated for its thriving farmers' clubs, has, with the organization of two new clubs in Fox Lake township, a grand total of 35 in the county.

ALFALFA GROWERS CAN CONTROL GOPHER PEST

Poison Formula Recommended by Extension Entomologist—Crow Wing to Fight the Rodents in April

With the increase assured in the acreage of alfalfa, it is anticipated there will be an increased demand for assistance in the control of pocket gophers. Alfalfa fields are favorite homes for these gophers and they often become a serious pest through the amount of alfalfa destroyed and the hindrance in mowing.

County Agent Roth of Crow Wing county says the gopher menace is looked upon as a serious handicap to alfalfa growing in that county and that a gopher killing campaign will be put on in April. Such a campaign was conducted in several counties last year, County Agent Dvoracek of Beltrami reporting that poison enough for 40,000 baits was used there with good results.

C. E. Mickel, of the division of entomology, University Farm, says the following is the most satisfactory formula for poisoning: One eighth ounce powdered strychnin alkaloid, one-eighth ounce sodium bicarbonate (baking soda), one-eighth ounce saccharin. Mix and sift upon four quarts of diced vegetables—potatoes, carrots, parsnips, beets, turnips, etc. Stir with an old spoon while sifting, so each piece of vegetable will be sprinkled with some of the poison. The pieces should be about half an inch square and an inch to two inches long.

Runways can be located by punching with a No. 9 wire on the "plug" side of the mound, a foot or so from the mound. Enlarge the hole with a pointed broomstick, slide in a couple of pieces of bait, and cover the hole. After poisoning the field, drag to level the mounds, and after a week to ten days re-poison all new mounds.

It is well to remember that strychnin is a deadly poison and that great care should be used in handling.

In Mahanomen county, where 44 demonstrations attended by 440 persons were held, it was estimated that from 75 to 90 per cent of the gophers on infested farms were killed.

CO-OPERATIVE SHIPPING ADDS TO RETURNS OF MEEKER'S CREAMERIES

The co-operative creamery association, Unit No. 1, which was formed by the Meeker county farm bureau two years ago and is now composed of 23 co-operative creameries, shipped 3,902,000 pounds of butter last year. Savings made in freight charges, over previous methods of shipping by local freight, amounted to about \$20,000, according to T. G. Stitts, the county agent. "Of course the saving in freight is not the only benefit this association has brought to our farmers," says Mr. Stitts. "Probably there were other things which netted them more money. However, the freight figures are the easiest to get at. The quality of our production has been greatly improved, and this, as well as the saving made on freight, shows why our dairymen are netting more money for their butter."

CLUB BOYS SELECTED FOR STATE FAIR CAMP

Every County of the State's 87 Will Be Represented—Free Trip and a Week of Sightseeing.

Practically every club project in which Minnesota boys are engaged will be represented by the lads who have won membership in the farm boy camp of the 1923 Minnesota State Fair. All the counties of the state, including Lake of the Woods, which is No. 87, will have its boy representative in the camp.

A few of the larger counties can send three boys to the camp; all others are entitled to two representatives each. In addition, several other boys have also won free trips to the fair, so that the camp membership will be 180 to 185. Each boy must be at least 15 years old by June 1 next and must have made an outstanding record in club work in his county to win the state fair outing and camp membership.

Roscoe C. Coffin of Minneapolis, assistant state secretary of the Young Men's Christian association, will again be superintendent of the camp. The list given below is of members and their projects from 81 of the 87 counties in the state. Members from Cass, McLeod, Marshall, Norman, Lake of the Woods, and Sibley counties will be announced later:

Aitkin—Albert Safford, Aitkin; Orie Boyer, Aitkin
Anoka—Chas. Sumter, Anoka, dairy calf; Clarence Sharer, Anoka, dairy calf
Becker—Allen Gandrud, Detroit, dairy calf; Ambrose Tourn, Callaway, dairy calf
Beltrami—Charles Blakely, Turtle River, potato; William Evans, Bemidji, pig
Benton—John Jones, Oak Park, potato; Henry Hromatka, Foley, potatoes
Bigstone—Swenson, Clinton, dairy calf
Blue Earth—Donald Laurisch, Mapleton, baby beef; Oscar Goranson, Lake Crystal, dairy calf
Brown—Herbert Blick, Comfrey, baby beef; Elmer Anderson, Springfield, baby beef
Carlton—George Beck, Barnum, dairy calf; John Depoe, Cloquet, garden
Carver—Raymond Perbix, Hamburg; Ralph Kowalke, Waconia
Cottonwood—Roy Christenson, Westbrook, calf; Clarence Valen, Storden, pig
Chippewa—Harold Gerber, Montevideo, baby beef and pig; Lyle Able, Montevideo, dairy calf
Chisago—Ralph Johnson, North Branch; Edwin A. Joanson, Center City
Clay—Morris Stadium, Glyndon, garden; Frank Brown, Glyndon, garden
Clearwater—Carl Widseth, Gonvick, potato; Martin Negaard, Gonvick, potato
Cook—Hilmer Isaacson, Grand Marais, potato; Richard Jones, Grand Marais, potato
Crow Wing—Ernest Enes, Pequot; Harry Armstrong, Crosby
Dakota—Bernard Tersteeg, Farmington, corn; Stanley Wales, Northfield, sow and litter
Dodge—Robert McMartin, pig; Lester Gripp, purebred steer
Douglas—Albert Jensen, Nelson, potato; Theodore Ording, Nelson, sow and litter
Grant—Densmore Brewster, Hereford
Faribault—Edgar Bachtle, garden; Clarence Rorman, pig
Fillmore—Julius Affeldt, Wykoff; Alfred Johnson, Peterson
Freeborn—Merton Head, Albert Lea, dairy calf; Jewel Flugum, Albert Lea, dairy calf
Goodhue—Manley Langeness, Kenyon, pig; Stanley Langeness, Kenyon, pig
Hennepin—Hiram Scovel, Minneapolis, pig; Millard F. Warde, Camden station, pig
Houston—Paul Plitzuweit, Caledonia, pig; Harold Johnsrud, Spring Grove, corn
Hubbard—Thomas Jondahl, Laporte, potato; Orville Lindstrom, Laporte, potato
Isanti—Leo Boynholdt, Princeton, sow and litter
Itasca—Milton Johnson, Grand Rapids, potato; Kenneth Nesseth, Dunbar, potato
Jackson—Charles Wahl, Lakefield, poultry; Theodore Kuhnau, Heron Lake, dairy calf

Kanabec—Arnold Archer, Mora, dairy calf; Louis Gorenson, Ogilvie, dairy calf
Kandiyohi—Raymond Maier, Atwater, sow and litter; Astor Lindstrand, Atwater, sow and litter
Kittson—Earl Olson, Bronson, potato; Willard E. Berg, Hallock, poultry
Koochiching—Oluf Wold, Ray, potato; Henry Eggenbroten, Little Fork, potato
Lac qui Parle—Durven Hermanson, Boyd, potato; Alfred Schnaser, Bigstone City, S. D., pig and corn
Lake—Clarence Holm, Two Harbors, potato; John Floathe, Two Harbors, potato
Le Sueur—Clarion Moses, Kasota, sheep; Bernard Barnager, Le Sueur, pig
Lincoln—Joseph Urbanski, Ivanhoe, corn
Lyon—Leo Zimke, Tracy; Arthur Thomas, Tracy
Mahnomon—Godward Hillesland, Mahnomon, potato; Roy Schmidt, Waubun, potato
Martin—Stewart Mills, Granada, baby beef; Peter Johnson, Fairmont, corn
Meeker—Austin Casey, Litchfield, baby beef; Kenneth Evenson, Litchfield, dairy calf
Mille Lacs—George Peterson, Milaca, potatoes; Arnold Pintz, Wahkon, dairy calf
Morrison—Neil Hirth, Browerville, corn and dairy calf
Mower—Leonard Anderson, Rose Creek, sow and litter; Herbert Hanson, Elkton, corn
Murray—Olaf Olson, Dovray, pig; Bert Samuelson, Hadley, pig
Nicollet—Herbert Gran, St. Peter; Carl Malmberg, Lafayette
Nobles—Donald Slaiken, Worthington, pig; Arthur Lawrence, Rushmore, pig
Olmsted—Ray Pearson, Rochester, lamb; Jacob Richman, Rochester, sow and litter
Ottertail—Chester Torgerson, Fergus Falls, pig; Ross W. Jacobson, Vining, potato
Pennington—Virgil Denhart, Hazel, sheep; Lawrence Letnes, Thief River Falls, dairy calf
Pine—Paul Winslow, Hinckley, potato; Henry Johansen, Askov, garden
Pipestone—Raymond Horigan, Pipestone; Elvin Alexander, Pipestone
Polk—Alex Brustad, Fosston, potato; Clifford Thor, Gully, poultry
Pope—Walter Gaffney, Villard, dairy calf; Chester Johnson, Cyrus, garden
Ramsey—Donald Yocum, North St. Paul, poultry; Alfred Belland, North St. Paul, potato
Red Lake—Earl Burke, Brooks, potato
Redwood—Floyd Lewis, Redwood Falls; Albert Meyer, Springfield
Renville—Floyd Johnson, Sacred Heart, corn; Francis Henneberry, Olivia, baby beef
Rice—Henry Schultz, Faribault; Verne Coon, Faribault, corn; Lincoln Paulson, Faribault
Rock—Oscar Rortvedt, Hills, pig; Lloyd Qualey, Hills, pig
Roseau—Roy Hagen, Greenbush, potato; Paul Schulte, Roosevelt, pig
St. Louis—Mike Jerina, Aurora, potato; Allie Luoma, Makinen
Scott—Edward Berger, Jordan, dairy calf; Henry Morlock, Jr., Jordan, baby beef
Sherburne—James Johnson, St. Cloud, pig; Lawrence Spencer, Zimmerman, baby beef
Stearns—Everett Borgmann, Sauk Center, dairy calf; Harvey Kruger, Paynesville, dairy calf
Steele—Dwight Morford, Owatonna, sow and litter; Geln Jones, Owatonna, sow and litter
Stevens—Floyd Raisin, Morris, dairy calf; Merrill Stevenson, Morris, dairy calf
Swift—Maurice Baker, Kerkhoven, market pig; Leon Gregerson, Murdock, dairy calf
Todd—Eldon Roddis, Osakis, dairy calf; Clarence Lageson, Clarissa, potato
Traverse—Marlowe Hanson, Graceville, pig; Paul Jacobs, Wheaton, baby beef
Wabasha—Neil Huddlerton, Wabasha; Ronald Ames, Weaver
Wadena—Herold Larsen, Wadena, dairy calf; Ivan Powell, Wadena, pig
Waseca—Lloyd Volling, New Richland, dairy calf; Adney Fletcher, Waseca, corn
Washington—Ralph Wright, Hastings, baby beef; Clemens Hageman, Hastings, dairy calf
Watsonwan—Floyd Coleman, St. James, poultry; Lyle Miller, Ormsby, dairy calf
Wilkin—Oscar Torkelson, Breckenridge, pig; Donald Fuder, Rothsay, pig
Winona—Raymond Faber, Rollingstone, dairy calf; Leighton Ebersole, Lewiston, dairy calf
Wright—Lyman Ransom, Annandale, corn; Harry Stokes, Monticello
Yellow Medicine—Russell Morgan, Granite Falls, baby beef; Raymond Barber, Granite Falls, baby beef

Unit Meetings Well Attended

Kelehan of Lyon says that 12 community or local unit meetings were held in his county in January, the total attendance being nearly 1,000.

WOMEN'S MEETINGS AT CROOKSTON BENEFICIAL

An important feature of the Farm Crops show at Crookston was the varied program offered to the women visitors. That the program was appreciated was evidenced by the large attendance. Subjects of especial interest to homemakers were discussed and opportunities were given for questions and comments.

The demonstrations by members of the girls' clubs were splendidly given, and made it possible for mothers to see and to hear the type of instruction given in club work and its effect in promoting efficiency.

Home topics were introduced on Tuesday by Mrs. H. E. Simpson, who discussed "The Mother's Opportunity in the Home." This was followed on Wednesday by a discussion of "The Factors of an Efficient Family Diet," led by Miss Cordiner, who also spoke on Thursday on "The School Child and His Diet," and on Friday, "Food and the Baby." Miss Cordiner also addressed the men on Friday morning on the subject, "The Father as a Factor in the Child's Selection of Foods."

On Wednesday Mrs. Maybohm gave an illustrated talk on "Appropriate Dress," and on Thursday she spoke on "Club Work for Girls, and Its Effect in Home Making."

A splendid address was given by Miss M. Beatrice Johnstone of Grand Forks on the subject, "The School and the Community," in which she emphasized the value of a closer connection between the school and the home, and the value of using the schoolhouse as a community center.

Splendid music was furnished daily. All in attendance announced their intention of returning next winter because of the enriched outlook received at this one.

900 ATTEND INSTITUTE HELD AT HERON LAKE

Business men of Herron Lake did themselves proud as hosts for the farm people attending the institute recently held in that place. Dinners were served free to 464 persons who attended the forenoon session. The Heron Lake band and a quartet of ladies from Weimer township presented half hour program at the opening of the forenoon and afternoon sessions. Counting those who came in for the afternoon session only, the attendance at the institute was about 900.

Interest in Poultry Increasing

Interest in poultry work increases each month, says County Agent Grant of St. Louis. Poultry house plans and feed charts are in steady demand. Meadowlands is going to have an association.

"Partners" Going Good

So many calls are received for the use of the boys' and girls' club film, "Partners," that it is being found increasingly difficult to grant them all. Three copies of the film are kept "working" most of the time. File your requests for "Partners" well in advance of the time planned for its use. This will help some. No charge is made for the use of the film.

MINNESOTA EXTENSION SERVICE NEWS

Published monthly at University Farm, St. Paul, Minn., by the Agricultural Extension Service of the University of Minnesota and the United States Department of Agriculture, co-operating in the interest of extension work in agriculture and home economics.

WALTER C. COFFEY
Dean of the Department of Agriculture and
Director of Experiment Station

FRANK W. PECK
Director of Agricultural Extension
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Editors

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MARCH, 1923

SOME LESSONS IN CO-OPERATION

As time affords opportunity for measuring some of the practical results of co-operative marketing, it is becoming more and more apparent that economic distribution that will be permanently satisfactory as the result of group selling of any farm product is distinctly a business operation, calling for business methods and experience, and moreover calling for careful study of the various forces that operate in any market.

One of the fine characteristics of the Minnesota experience is that of the gradual development during the last ten years of strong local co-operative units that have gradually formed their central organization with the locals as a secure foundation. Even with this advantage, there is made apparent the need of good management, sound business practice, minimizing of personal differences of opinion, a constant watchfulness of details, and increasing emphasis on standards of a high quality product and the need of absolute loyalty on the part of individuals making up the groups in the marketing plan.

Much interest will be taken in the information given to the state of Minnesota by those familiar with co-operative marketing practices in other states with other commodities, and all of us should welcome such information and select all that is usable, all that will help to improve methods in this state. It should not be looked upon as an emergency savior of the economic situation, nor as a cure-all being offered for the salvation of the farmer, but as a straight business opportunity to be carefully worked out and applied in a safe, sane manner from which should come some fine advantages as time goes on.

THE TURN TOWARD LEGUMES

It is gratifying to note the interest now being shown in alfalfa growing, not only for the value of the crop itself, but also because of the interest it represents in more efficient feeding of livestock. Alfalfa admittedly produces the greatest amount of protein roughage per acre of any crop grown in Minnesota, and produces it more certainly. Protein feeds have been most often lacking in the farm

rations of Minnesota and purchased feeds have largely been those high in protein. The production of alfalfa, therefore, is striking directly at one of the chief leaks in the feeding program of to-day.

More efficient production is one of the answers that the farmer is giving to the disparity between the cost of production and the selling price of any product. Not only is he working for better prices, but he is also quietly engaged in reducing the cost of production. The feeding of more protein and the producing of that protein at home in the form of alfalfa, soybeans and other legumes is one of the steps in efficient production of livestock and livestock products. It is a splendid commentary on the good sense of the Minnesota farmer that he should turn so rapidly and so quietly to more efficient feeding in the economic crisis in which he finds himself.

With so much good Grimm alfalfa seed on the market and at such a reasonable price, and with the services of the state seed laboratory at our call, there is no reason why any poor alfalfa seed should be sold henceforth in Minnesota. Steps should be taken in each county where any considerable amount of alfalfa is to be sowed to see to it that nothing but the best possible seed is offered for sale in the county. Efforts should be made to get every dealer in the county thoroly familiar with the value of Grimm seed and to make sure that he will offer nothing but the best for sale. It is extremely important that the farmer have good seed if he is to get a successful and permanent stand, and if nothing but the best is offered for sale it will do much toward insuring success.

CO-OPERATION THAT CO-OPERATES

Some of the advantages claimed for co-operative marketing as a factor in helping the farmer to get on a better financial footing are substantiated by the achievements of the Central Co-operative Commission association of Minnesota, the leading livestock co-operative marketing agency in the United States.

At their recent annual meeting, representatives of 300 co-operative shipping associations affiliated with the Central were told by J. S. Montgomery, general manager of the Central, that dividends amounting to more than \$100,000 on a business of \$21,700,000 had been earned in the first full calendar year of operation by the association. Mr. Montgomery announced that \$78,000 in patronage dividends would be paid to farmers on the 1922 business, that 8 per cent would be paid on the \$25,000 capital stock of the Central, and that a surplus of \$20,000 had accumulated in the treasury after paying all dividends.

While the commission charges of the Central have always ranged below those of private commission firms, Mr. Montgomery announced that a new rate, averaging about \$2 less on all cars, would be put into effect immediately. The co-operative company handled 15,344 cars of livestock in the 12 months of 1922 at an average selling cost of \$8.27 a car, the average net saving over the old commission rate being \$6.53 a car. This was the year's record business for one firm on the South St. Paul market.

A GOOD ORGANIZER

A good organizer is one who has the ability to do three things. In order of importance they are:

1. Secure good will.
2. Get spontaneous co-operation from associates.
3. Harmonize and direct the people concerned.

The first is dependent upon a personality that radiates friendliness and sincerity and at the same time begets confidence and respect.

The second is dependent upon a judicious directing force embodying a clear understanding of what is being attempted and preparedness by arranging all details ahead of time. (Pushing the job instead of letting the job push you.)

The third is dependent upon tact—a fine sense of what circumstances require to be met in a fair, square way, treating all alike.

WILSON'S NEW FOLDER

"Team Work by Merchant, Farmer and Homemaker in Community Service for the Home Town" is the title of a 30-page folder prepared by Judge Frank T. Wilson, community adviser, and issued by the general extension service of the university. Judge Wilson says the farm bureau, store bureau and home bureau, the last meaning the women of the land, can by united effort work out any community project and help solve some of the problems of home trade, better markets and better government. Community institutes under the auspices of the university are being held on lines proposed by Judge Wilson in various parts of the state.

SHORT COURSES AND CLUB RALLIES ATTRACT

Junior short courses and club rally days have been the most popular and successful factors of the extension program for boys and girls the last thirty days.

Earl Springer conducted a two days course at Lafayette and Nicollet for Nicollet county, with splendid attendance. The clubs were reorganized for the year and instructions given in the projects. C. D. Patterson held two days of short course work for Lac qui Parle county, giving special instruction in the projects selected for his county. Le Sueur county followed the same plan for two days at Cleveland and Montgomery, with M. B. Taylor in charge. Kanabec county gave three days for its club short course under the direction of Mr. Elson. Charles Kelehan gave a two days course of instruction for the boys and girls of Ottertail county to meet the unusual demand in club work.

Typical club rally days were held by W. E. Watson at Farmington on February 3 and by K. A. Kirkpatrick at Minneapolis on February 17.

Glenwood Farmers Want Creamery

Farmers of Glenwood in Pope county have taken the first step for a co-operative creamery.

Inoculated Sulphur for Potato Scab--Results of Experiments Made in Minnesota in 1922



LOOK ON THIS PICTURE AND THEN ON THE ONE BELOW.—YIELD FROM 45 HILLS OF POTATOES, TAKEN FROM PART OF FIELD NOT TREATED WITH INOCULATED SULPHUR, ON FARM OF A. F. LANDEEN, EAGLE BEND, MINNESOTA.

(By R. C. Rose)

The use of inoculated sulphur on some of the scab infested soils in New Jersey has given good results in the control of the common scab of potato. In certain other states the control of scab by this method has not been as successful, possibly on account of differences in soils. Inoculated sulphur is nothing more or less than ordinary sulphur inoculated with bacteria which reduce it to an acid form when applied to the soil. This mild acidity which is developed in the soil is unfavorable for the growth of the scab organism and has a tendency to reduce the amount of infection and rate of growth of the organism on the new tubers that are developing.

Most Minnesota potato growers can handle the scab question effectively by seed treatment, crop rotation, and the use of green manures. An investment in a chemical treatment of the soil would hardly be justifiable unless the disease was so severe as to make the greater portion of the crop unsalable or, perhaps, in the growing of seed stock, where the amount of disease is an important item and the selling price is more apt to permit an extra expenditure along this line.

Experiments in Minnesota

During the summer of 1922 inoculat-

ed sulphur was tried out on various types of potato land in different parts of the state, with results varying from no control to 85 per cent control. In Wadena county the results varied from no control to partial control. On one farm in Pine county the amount of scab was considerably reduced, but the exact figures were not obtained. In Carlton county the inoculated sulphur reduced the scab on one farm, but had no effect on another. In St. Louis county a slight reduction in scab resulted from the treatment, but exact figures were not obtained. At the Northwest Experiment Station the inoculated sulphur did not control scab. On the farm of A. F. Landeen, Eagle Bend, Minn., an application of 400 pounds of inoculated sulphur per acre reduced the amount of unsalable scabby potatoes from 54.9 per cent to 7.8 per cent, and the total scab from 90.1 per cent to 53.5 per cent. All the seed used on this test had been treated with corrosive sublimate before planting, so that the scab on the resulting crop originated from the soil and not from the seed. The accompanying plates show the yield and amount of scab found in forty-five hills selected at intervals over the treated field and in the same number from the untreated field.

Many Inquiries from Growers

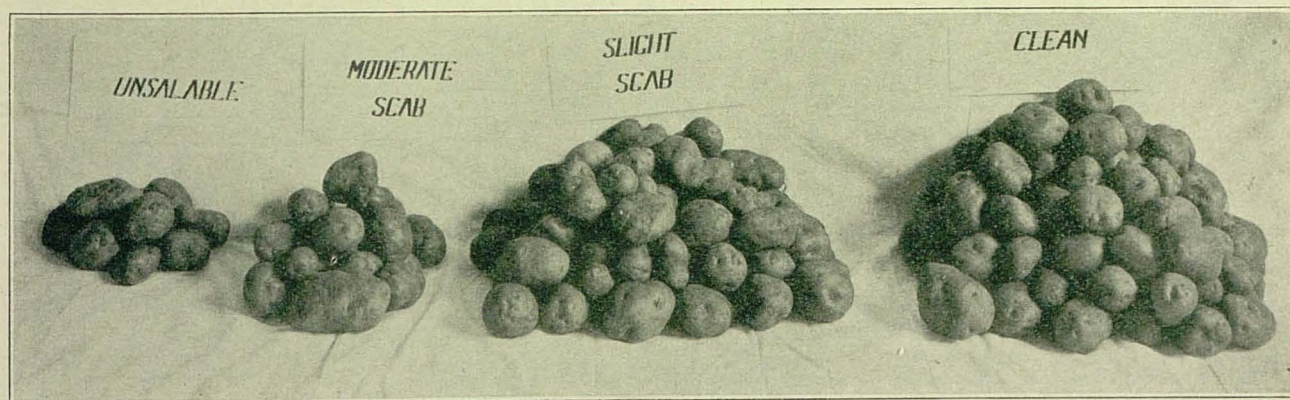
The purpose of this article is to give the potato grower who may be interested in soil treatment some idea of how the results may vary on different soils. The Minnesota Experiment Station has received many inquiries from farmers who have heard of inoculated sulphur and who requested a statement concerning its use. Recommendations on this treatment under Minnesota conditions are withheld until more tests have been made in the field. Farmers who wish to try this material on their own farms are advised to make their tests on a small scale.

Dickinson Succeeds Lyness

W. A. Dickinson, a native Minnesotan and graduate of the Minnesota School of Agriculture, is the new county agent in Waseca county, succeeding C. E. Lyness who resigned to accept a similar position with headquarters at Olathe, Johnson county, Kansas. Mr. Dickinson was for seven years county agent of Floyd county, Iowa, and otherwise has had much experience in agricultural extension work.

400 at Unit Rally

More than 400 farm folks attended a meeting of the Prairievale farm bureau unit at Evan, Brown county.



YIELD FROM 45 HILLS OF POTATOES, TAKEN FROM PART OF FIELD TREATED WITH INOCULATED SULPHUR, 400 POUNDS TO THE ACRE, ON FARM OF A. F. LANDEEN, EAGLE BEND, MINNESOTA.

The Country Book Shelf

Read not to contradict and confute; nor to believe and take for granted; nor to find talk and discourse; but to weigh and consider.—Bacon.

By F. E. Balmer

What shall country people read? Special interest was aroused in this subject at the annual extension conference held at University Farm. The conference requested the extension division to secure from the various departments lists of readings on specified topics in which extension agents will be especially interested. It was desired that the list be issued through the Minnesota Extension Service News for the benefit of all on the mailing list of the publication, and that the list be supplemented from time to time.

Accordingly each of the several departments has been requested to prepare a list of readings in its especial field, including standard works as well as recent or current contributions. Each was requested also to add any general readings deemed advisable for personal improvement.

Dean W. C. Coffey says: "I think it is advisable to suggest general reading. I think attention should be given to works on economics and that special effort should be made to find literature in this field which is sound but which is couched in terms that farmers can understand. This is a matter which, of course, should be handled by our division of agricultural economics. I also think a list of general reading is well worth while. Just now I am struggling with Well's Outline of History and it seems to me that much of it would be good reading for farmers on long, cold winter evenings. Works of this kind give a man a perspective which help him to distinguish temporary conditions from those which help to shape the permanent course of society."

Economics

The following complete list of suggestive readings in the field of agricultural economics is furnished through the courtesy of Dr. J. D. Black, chief of the division of agricultural economics at University Farm:

References on Marketing

- Books—
- Hibbard, B. H., *Marketing Agricultural Products*. Appleton.
- Macklin, T., *Efficient Marketing for Agriculture*. Macmillan.
- Cumberland, W. W., *Co-operative Marketing*. Princeton University Press.
- Nourse, E. G., *Chicago Produce Market*. Houghton Mifflin Co.
- Weld, L. D. H., *Marketing Agricultural Products*. Macmillan.
- Powell, G. Harold, *Co-operation in Agriculture*. Macmillan.
- Smith-Gordon, Staples, *Agricultural Reconstruction in Ireland*. Yale University Press.
- Buck, S. J., *The Granger Movement*. Harvard University Press.
- Gaston, H. E., *Non-Partisan League*. Harcourt, Brace & Howe.
- Clark, Fred, *Principles of Marketing*. Macmillan Co.
- Articles—
- Nourse, E. G., *Economic Philosophy of Co-operation*, *American Economic Review* December, 1922.
- Haney, L. H., *Integration in Marketing*, *American Economic Review*, September, 1920.
- Weld, L. D. H., *Integration in Marketing*, *American Economic Review*, March, 1921.
- Bulletins—
- Farmers' Elevators in Minnesota: 1914-1915.

- Minnesota No. 164. E. Dana Durand and J. P. Jensen.
- Farmers' Co-operation in Minnesota, 1913-1917. Minnesota No. 184. J. D. Black and Frank Robotka.
- Local Co-operative Potato Marketing, 1921. Minnesota No. 195. J. D. Black, Frank Robotka and P. L. Miller.
- Organization and Management of Livestock Shipping Associations, 1923. Minnesota No. 201. J. D. Black and E. W. Gaumnitz.
- Farmers' Co-operation in Minnesota, 1917-1922. Minnesota No. 202. H. Bruce Price.
- Co-operative Livestock Shippings in Iowa, 1920 Iowa 200. E. G. Nourse.
- Legal Phases of Co-operative Associations, 1922. U. S. D. A. 1006. L. S. Hulbert.
- Fundamental Principles of Co-operation in Agriculture, 1920. California Station Circular 222. Harold C. Powell.
- Co-operative Grain Marketing: A Comparative Study of Methods in the United States and Canada, 1921. U. S. D. A. 937. J. M. Mehl.
- Producers Co-operative Milk Distributing Plants, 1922. U. S. D. A. 1905. Jesness, Barber, Swarthout and Clements.
- Marketing Creamery Butter, 1917. U. S. D. A. 456. Potts and Meyer.
- Marketing Wisconsin Butter, 1916. Wisconsin 270. Hibbard and Hobson.
- Sales Methods and Policies of a Growers' National Marketing Agency, 1923. U. S. D. A. 1109. Asher Hobson and J. B. Chaney.

Suggested Readings on Prices of Farm Products

- Books—
- Fisher, Irving, *Stabilizing the Dollar*, Macmillan Co., N. Y., 1920. \$3.50.
- King, Clyde L., *The Price of Milk*.
- Henderson, H. D., *Supply and Demand*, Harcourt, Brace and Co., Chicago, \$1.25. (Exceptionally clear and interesting discussion of the general economic principles governing prices.)

Bulletins—

- Minn. Exp. Sta. Technical Bulletin 10, Holbrook Working, *Factors Determining the Price of Potatoes in St. Paul and Minneapolis*.
- Mont. Exp. Sta. Circular 99, H. E. Selby, *Graphic Presentation of Statistics of Farm Products*.
- U. S. D. A., Department Bulletin 999, G. F. Warren, *Prices of Farm Products*.

Pamphlet—

- Roberts, George E., *Fall of Agricultural Prices*. Address before Academy of Political Science, N. Y., Nov. 24, 1922. Reprinted by National City Bank of N. Y.

Suggested Readings on Statistical Methods

- Davies, George R., *Economic Statistics*, Century Co., N. Y.
- King, W. L., *Elements of Statistical Method*, Macmillan, N. Y. \$2.00.
- Secrist, Horace, *An Introduction to Statistical Methods*, Macmillan, New York \$2.50.
- Brinton, Willard C., *Graphic Methods for Presenting Facts*. Engineering Magazine Co., N. Y., \$5.00.

Economics of Production

- Taylor, F. M., "Principles of Economics," Chapters IV to XI, Ronald Press Co., New York.
- Taylor, H. C., "Agricultural Economics," Chapters V to XIV, Macmillan Co., New York.
- Holmes, C. L., *Minnesota Technical Bulletin* No. 4, "Wages of Farm Labor."
- Taylor, H. C., and Black, J. D., *Wisconsin Bulletin* No. 316, "Farm Labor in Wisconsin."
- National Bureau of Economic Research, N. Y., "Income in the United States" Volume I; Vol. II, Chap. III; also Vol. III.

Land Economics

- Hibbard, B. H., and Black, J. D., *Wisconsin Research Bulletin* No. 47, "Farm Leasing Systems in Wisconsin."
- Taylor, H. C., "Agricultural Economics," Chapters XIX to XV, Macmillan Co.
- Haas, G. C., *Minnesota Technical Bulletin* No. 9, "Sales Prices as a Basis for Farm Land Appraisal."
- American Association for Agricultural Legislation, *Wisconsin Bulletin* No. 2, "Papers on Tenancy." (25 cents.) *Bulletin* No. 6, pp. 1 to 35 (\$1 for whole bulletin).
- Carver, T. N., "Readings in Rural Economics," pp. 352-547, Ginn & Co., New York.

Credit

- Moulton, H. G., "Financial Organization," University of Chicago Press.
- Wright, Ivan, "Bank Credit for Agriculture," McGraw-Hill Co.
- Morman, J. B., "Principles of Rural Credit," Macmillan Co.

Station Literature Available

Pursuant to the recommendation of Dean Coffey it is appropriate to say that the Minnesota Agricultural College has taken a position of leadership among agricultural colleges in the country in promoting study in the field of agricultural economics. An extended list of publications has been issued by the Minnesota Station dealing with economic problems of the farmer, the principal bulletins being:

- Minnesota Experiment Station Bulletins
146. Statistics of Cooperation Among Farmers in Minnesota
- 152.
156. Co-operative Livestock Shipping Associations
163. Investigations in Cost and Methods of Land Clearing
164. Farmers' Elevators in Minnesota
166. Co-operative Creameries and Cheese Factories in Minnesota
167. Co-operative Buying by Farmers' Clubs in Minnesota
171. Co-operative Stores in Minnesota
172. A Farm Management Study of South-eastern Minnesota
179. Cost of Producing Minnesota Field Crops
184. Farmers' Co-operation in Minnesota
189. Forced vs. Delayed Systems of Clearing Stump Land
195. Local Co-operative Potato Marketing in Minnesota
196. Farm Development Studies in Northern Minnesota

Special Bulletins

13. Storage of Root Crops
14. Preparation of Perishables for Market
19. Cost of Milk Production
30. Factors of Cost in Pork Production
31. Shall I Buy a Tractor?
42. How to Make and Analyze an Annual Report for Country Grain Elevators
51. Farm Lease Contracts
59. Planning the Farm Business
61. Farm Bureau Units, the Rural Community and the Extension Service
62. Lessons in Economical Pork Production
65. Making a Living on a Timber Farm
- Minnesota Farmers Library
15. Cost of Horse Labor
36. Egg Marketing
42. Co-operative Creameries and Cheese Factories
46. Farmers' Clubs
59. Cost of Producing Field Crops, 1908 to 1912
- Studies in Social Service by "U."
1. Social and Economic Survey of a Township in Southwestern Minnesota
3. Early Economic Conditions in the Development of Agriculture in Minnesota
4. Studies in Marketing of Farm Products

The above list might also be supplemented by Farmers' Institute Annual for Minnesota, 1913, No. 26, which was devoted to the special topic of "Co-operation Among Farmers." Those who are employed in extension work should be interested in having their names placed on the mailing list of the Bureau of Agricultural Economics, U. S. Department of Agriculture, to receive the publication issued monthly under the title, "The Agricultural Situation."

The Monthly News Letter of the National City Bank of New York, entitled "Economic Conditions, Governmental Finances, United States Securities," will be sent regularly to those requesting it. Attention was called in the issue of the Extension Service News for April, 1922, to several recent books in the field of agricultural economics.

Publications in Farm Management and Farm Crops

Prof. Andrew Boss, chief of the division of agronomy and farm management, suggests the following brief list of farm management and field crops books

suitable for county agents and farmers:

- On Farm Management*—
 "Farm Management," Boss—Lyons & Carnahan, Chicago. 90c
 "Farm Management," Warren—Macmillan, New York. \$2.40
 "Field Management and Crop Rotations," Parker—Webb Publishing, St. Paul. 2.00
 "Dairy Farming," Eckles and Warren—Macmillan, New York. 2.40
On Field Crops—
 "Field Crops," Wilson and Warburton—Webb Publishing, St. Paul. 1.80
 "The Small Grains," Carleton—Macmillan, New York. 2.90
 "Forage Plants," Piper—Macmillan, New York. 2.90
Bulletins on Farm Management—
 Minnesota Experiment Station, No. 64, W. L. Cavert and G. A. Pond, "The Dairy Cow as a Market for Labor"
 W. L. Cavert, No. 59, "Planning the Farm Business," No. 65, "Making a Living on a Timber Farm"
 W. L. Cavert and G. A. Pond, No. 62, "Lessons in Economical Pork Production"

Land Clearing

M. J. Thompson, superintendent of the Northeast Experiment Station at Duluth, calls attention to the following publications issued relative to the work of that station:

- Special Bulletin No. 163 "Investigations in Methods of Land Clearing"
 Special Bulletin No. 189, "Forced vs. Delayed Systems of Clearing Land"
 Annual reports of the Northeast Experiment Station—1915-1921, inclusive.

Superintendent Thompson says their main work is with reference to land clearing and farm development, and a synopsis of available material may be found on the last page of special bulletin No. 163.

Publications available at the North Central Experiment Station are, according to Otto I. Bergh, the superintendent, "Land Clearing," and "Dairying and General Farming for the Timbered Section," both by A. J. McGuire. Various station reports can also be had.

Books in the Field of Entomology

Dr. W. A. Riley, chief of the division of entomology and economic zoology, says: "Fortunately in the field of entomology there are now available some very excellent and down-to-date books dealing with special phases of insect control." The following, he believes, will prove of special value to state and county extension employees:

- Crosby & Leonard—"Manual of Vegetable Garden Insects," Macmillan, New York \$2.75
 Herrick—"Insects Injurious to the Household and Annoying to Man," Macmillan 2.00
 Sanderson & Peairs—"Insect Pests of Farm, Garden and Orchard," John Wiley & Sons, New York. 4.50
 Slingerland and Crosby—"Manual of Fruit Insects," Macmillan. 3.50
 Washburn—"Injurious Insects and Useful Birds," Lippincott Co., Philadelphia. 2.00

Forestry Publications

Prof. J. H. Allison in submitting a list of publications on forestry topics says: "I have not prepared a special list of readings according to various subjects in forestry, but rather a general list. The list deals principally with forestry as it affects the farm, also general material." His recommendations are:

- "The Book of Forestry," Fred F. Moon. \$2.00
 "The Farm Woodlot," Cheyney and Wentling. 1.75
 "Farm Forestry," J. A. Ferguson. 2.00
 "Impressions of European Forestry," R. S. Hosmer. 1.00
 "Our National Forests," R. H. D. Boerker. 2.50
 "Practical Tree Repair," Elbert Peets. 2.35
 "Tree Pruning," A. Des Cars.75
 "Trees and Tree Planting," J. S. Brisbin 1.50
 Any of the above books may be obtained from the American Forestry As-

sociation, 914 Fourteenth street N.W., Washington, D. C. The books marked with an asterisk are, I believe, the ones which county agents would find of most interest and value.

The following publications issued by the U. S. Department of Agriculture should also be of value:

- No.
 13. White Pine under Forest Management. 15c
 24. Cottonwood in the Mississippi Valley. 10c
 55. Balsam Fir. 10c
 *139. Norway Pine in the Lake States. 10c
 153. Forest Planting in the Eastern United States. 10c
 316. Willows: Their Growth, Use and Management. 15c
 479. Nursery Practice on the National Forests. 25c
 481. Status and Value of Farm Woodlots in the Eastern United States. 15c
 519. Poles Purchases, 1915. 5c
 *552. The Seasoning of Wood. 10c
 556. Mechanical Properties of Wood. 10c
 *638. Forestry and Community Development. 10c
 *718. Small Sawmills: Their Equipment, Construction and Operation. 10c
 753. Use of Wood for Fuel, 1919. 10c
 758. Pulpwood Consumption and Pulpwood Production in 1917. 5c
 *933. Black Walnut: Its Growth and Management. 20c
 *1007. Utilization of Basswood. 20c
 Office of Secretary of Agriculture (U.S.)—
 Report No.
 115. Part 8—The Distribution of Softwood Lumber in the Middle West—Wholesale. 20c
 116. Part 9—The Distribution of Softwood Lumber in the Middle West—Retail. 15c
 U. S. Office of Secretary—
 Circular No.
 79. Emergency Fuel from the Farm Woodlot. 5c
 *120. Private Forestry. 5c
 148. A Forestry Policy for the Nation. 5c
 U. S. Department of Agriculture—
 Circular No.
 112. Timber Depletion and the Answer (Senate Resolution 311). 5c
 *155. Beautifying the Farmstead: How Teachers May Use Farmers' Bulletin 1087
 *177. Treatment of Ornamental White Pines Infected With Blister Rust 5c

Bee Culture

Prof. Francis Jager, chief of the division of bee culture, has the following recommendations to make:

"ABC and XYZ of Bee Culture," A. I. Root Co., Medina, Ohio. Price \$3.00. Revised every two years. The best book for the common beekeeper.

"Phillips' Beekeeping," by Dr. E. F. Phillips. Macmillan Company, New York. Price \$2.50. The best book for students and beekeepers who have had some school and college experience.

"Langstroth's Hive and Honey Bee," revised by C. P. Dadant. American Bee Journal, Hamilton, Ill. Price \$1.50. Combines the advantages of the first two books.

"Starting Right with Bees," A. I. Root Co., Medina, Ohio. Price 75 cents. Just the thing for the novice.

"Among the bee periodicals," says Professor Jager, "two of the oldest are the American Bee Journal, Hamilton, Ill., monthly, illustrated, \$1.50 a year; and Gleanings in Bee Culture, Medina, Ohio, monthly, illustrated, \$1.00 a year. Both cover the whole of American beekeeping. Government bulletins Nos. 1084 and 975, treating on 'American and European Foul Brood Diseases,' should be in the hands of every county agent."

Farmers' Bulletins—(May be obtained free from the U. S. Department of Agriculture, or from your representative or senator.)—

447. Bees
 653. Honey and Its Uses in the Home
 695. Outdoor Wintering of Bees
 820. Sweet Clover, Utilization
 961. Transferring Bees to Modern Hives
 975. Control of European Foul Brood
 1012. Preparation of Bees for Outdoor Wintering
 1014. Wintering Bees in Cellars
 1039. Commercial Comb Honey Production
 1084. Control of American Foul Brood

1198. Swarm Control
 1215. Beekeeping in the Clover Region
 1216. Beekeeping in the Buckwheat Region

More Lists in Store

As further lists are received from other departments they will appear in later issues. One of the very busy substitution men writes: "Our eight-hour law both before and after dinner takes up all of the time I have. I find it hard to even get time to read the Breeders' Gazette." This is a good hint as to his estimate of its value.

Some late books have recently appeared under the caption of "The Farmers' Book Shelf," published by Harcourt, Brace & Co., 1 West Forty-seventh street, New York, edited by a recognized rural leader, Kenyon L. Butterfield, president of the Massachusetts Agricultural College. Each book in the series sells at \$1.35 by mail. The list that has been announced to date is as follows:

- "The Agricultural Bloc"—Capper
 "The County Agent and the County Farm Bureau"—Burritt
 "The Farmer and His Community"—Sanderson
 "The Grange Master and the Grange Lecturer"—Buell
 "The Labor Movement and the Farmer"—Robbins
 "Country Planning"—Waugh
 "Our Soil Wealth"—Lipman
 "The Farmer and the World's Food"—Cance
 "The Farm Movement in Canada"—Lambert

Books on County Extension

Those affiliated with the extension service and the farm bureau movement will be interested in the new book, "The County Agent and the Farm Bureau," by M. C. Burritt, vice-director of extension, New York. Many will recall the announcement in the April, 1922, issue of the Minnesota Extension Service News of two books treating of this movement—"The Demonstration Work" by O. B. Martin, and "The Farm Bureau Movement" by O. M. Kile. It is worth while to compare and contrast the contents of these three books. The first part of Mr. Burritt's book describes in detail the work of the county agent service, treating of the program of work, teaching and information giving, organization and leadership, the relation of the county agent and the farm bureau to commercial enterprises, and the county agent's job and opportunity. The second section of the book gives a historical sketch of these potent agencies for agricultural improvement.

Mr. Burritt's book places emphasis on the county and local phases of the movement in comparison to the book of O. M. Kile, which apparently treats of the whole movement largely from the standpoint of a farmers' nation-wide class organization instead of a co-operative undertaking or "partnership between farmers and the public agricultural agencies." Mr. Martin's book is descriptive of the early development of demonstration work in the south out of which the county agent work grew. It explains the spirit and philosophy of Dr. Seaman A. Knapp, who conceived and developed the demonstration plan of agricultural education out of which virtually crystallized the federal Smith-Lever act which provides the national plan of organization, administration, and financing of the agricultural extension service.

A Bit of Fiction

It is no doubt well for extension employees to read a bit of fiction. Attention is again called to Knute Hamsun's

"Growth of the Soil," a striking piece of fiction with a rural background. It is worthy to be recommended for reading and re-reading by country people and others. It is published by Alfred A. Knopf, New York.

Country people will enjoy "Vandemark's Folly" by Herbert Quick. Reviewing this book, Townsend of the Outlook says: "This story does for the open Iowa prairie country in the early settlement days, say from 1855 on, exactly what 'Main Street' didn't do for the small town. It gives a fair picture of men, women, and things. It doesn't rave about God's country, God's open air, or God's wilderness. It doesn't indulge in high-flown apostrophes to nature. It just shows us the people, the rough times they pulled through, the trouble with bad men and foolish women, the settler's summary way of dealing with land jumpers, the sturdy push to build up the splendid farm country."

General Reading, Current Information

Dr. R. R. Price, director of the general extension division, University of Minnesota, to whom a request for a list of publications was addressed, replied that he had not prepared a list which would be of special interest to the extension employees, yet, speaking generally, he advised any one so employed to keep up, as far as his time and opportunities permit, his knowledge of the standard work of English literature, both in prose and poetry. As to magazines, Dr. Price recommended such magazines as the New York Outlook, the Independent, Atlantic Monthly, System, and the Country Gentleman.

There are many magazines of high order available at reasonable prices that afford excellent sources of information on current affairs. For example, such articles as the following that have appeared recently: "The ABC of the Ship Subsidy Bill," and "The Brawn of the St. Lawrence River" in the Outlook of January 31, 1923; "The Farmer and the Factory Hand" in the February, 1923, Atlantic Monthly; "An Agricultural Program for an Industrial State" by David Friday, and a recent series of Alonzo E. Taylor on "European Food Needs," in late issues of the Saturday Evening Post.

Extension employees and others interested will find it profitable to acquaint themselves better with the local library service. Most libraries receive regularly the following publications descriptive of new books:

"Book Review Digest" and the "Standard Catalog Bi-Monthly," H. W. Wilson, 958 University avenue, New York.

"The Book List," American Library Association, 78 East Washington street, Chicago.

"The Publisher's Weekly," R. R. Bowker, 62 West Forty-fifth street, New York.

Local libraries should be given any assistance possible in selecting books on agricultural topics. A visit to almost any local library in a rural section will reveal a great lack of up-to-date books pertaining to agriculture and rural life. Local extension employees can help correct this condition by suggesting desirable books to purchase. Certainly, too, the local library should be encouraged to be regular subscribers for such important publications as the farm journals of this region such as The Farmer, St. Paul; Farm, Stock and Home and the Northwest Farmstead, Minneapolis.

AITKIN IS ORGANIZING TO MARKET ITS EGGS

Poultry enthusiasts of Aitkin county met at Aitkin and worked out plans for an association which will make a specialty of handling proper feeds for egg production and will push plans for co-operative marketing. County Agent Jacob says: "Co-operative marketing enterprises have been developed in Aitkin county for the marketing of livestock, cream, wool, and berries. The association now being developed to handle eggs will be the last connecting link in the co-operative marketing of all farm products raised in the county."

46 Below Couldn't Stop 'Em

That Koochiching county women appreciate having a home demonstration agent is evidenced by a report from the Forsythe clothing group. The day Miss Sabin was to give the second lesson of the project the thermometer registered 46 degrees below zero. Despite the extreme cold there were present the ten regular members of the group and two visitors, all of whom had several miles to go to reach the schoolhouse where the meeting was held.

Fathers' Help Appreciated

That the men are interested in the home phase of farm bureau work was demonstrated at one of the clothing meetings recently held in Murray county. There are several small children who must go with their mothers to the meetings. In order that the women could work without interruption, three of the husbands stayed all day and cared for the children in another room.

Reading for a Broadened View Point

As pointed out by Dean Coffey, reading should impart perspective. We need to take a longer point of view of affairs than what is involved and evident in the immediate present. It may profit us much to understand "Farmers of Forty Centuries" by King, descriptive of the intensive agriculture of China and Japan, to know the "Roman Farm Management" of Cato and Varro, and to learn from our own Solon J. Buck of the Minnesota Historical Society of the rise and experience of a national farmers' organization in "The Granger Movement." It will profit much in gaining a broadened understanding and in attaining a better state of citizenship to become familiar with such a noteworthy work as "Modern Democracies" of James Bryce.

Books as Good Friends

Henry Van Dyke has recently written of "Companionable Books." "By companionable books I mean," he says, "those that are worth taking with you on a journey, where the weight of luggage counts, or keeping beside your bed, near the night lamp; books that will bear reading often, and the more slowly you read them the better you enjoy them; books that not only tell you how things look and how people behave, but also interpret nature and life to you, in language of beauty and power touched with the personality of the author, so that they have a real voice audible to your spirit in the silence."

MINNEAPOLIS JOURNAL GIVES FOR CLUB WORK

Free Educational Trips and Scholarships Offered Juniors Who Excel in Dairy Calf Club Work.

Just at the time when boys' and girls' club work is being reorganized for a new season's campaign, the Minneapolis Journal has heartened and stimulated all the workers by an offer of two groups of awards for boys and girls who are members of dairy calf clubs throughout the state. Regents of the university promptly accepted the offer which provides for—

A free trip at the expense of The Journal to the second National Boys' and Girls' Club Exposition in Chicago for the winner in the boys' and girls' dairy calf club work in every Minnesota county having a dairy calf club enrollment of 25 or more.

Four scholarships of \$100 each, to be known as The Minneapolis Journal Dairy Calf Club Scholarships, to be applied in any one of the schools of agriculture in Minnesota or in the Minnesota College of Agriculture, one scholarship each to be awarded to the boy or girl adjudged the state winner in Minnesota boys' and girls' dairy calf club work in each of the Holstein, Guernsey, Jersey, and Ayrshire breed classes. These scholarships may be used any time within a period of two years from the date they are awarded.

The Journal's enterprise and liberality have been complimented by President L. D. Coffman of the university, Dean W. C. Coffey, Governor Preus, and T. A. Erickson, the state club leader. "The Journal's prize offer is especially good," says Mr. Erickson, "because it reaches the individual county promoting dairy calf club work with a wonderful educational trip. The four scholarships give each breed a fine chance to make a showing. The required enrollment of 25 members will induce many counties to put forth a little extra effort to reach that standard, and will thus serve as a real incentive for getting each county back of its program in a stronger way."

500 at Community Get-Together

The Grand Rapids folks in Itasca county staged a community get-together which attracted 500 persons, more than half of whom came from the country, some of them from as far as 20 miles. The town commercial club, the women's club, and the farm bureau, a combination which cannot be beaten, were sponsors for the affair.

First Principles of Dairying Taught

Simple principles of dairying are being taught by university specialists and the county agent in dairy schools at Pitt, Williams, and Graceton in the new county of Lake of the Woods.

1,600 Acres Will Be Reclaimed

A drainage project which is being developed by interests in Mille Lacs county, working in co-operation with Prof. G. R. B. Elliott of the agricultural engineering division at University Farm, will reclaim 1,600 acres of fertile land. "In dollars and cents this drainage means that \$20,000 worth of land will be made tillable," says Agent W. F. Hammargren.

GRIMM SEED GROWERS ADVISED TO ORGANIZE

New Industry Can Be Developed, Says Army—Agents Report Increasing Interest in Legume Campaign.

A state association of Grimm alfalfa growers should be organized this year, in the opinion of Prof. A. C. Army and others of University Farm. This is regarded as an important step in the movement to increase the production of legumes in Minnesota.

"Grimm alfalfa was developed by and named for a Minnesota farmer and it is distinctly a Minnesota product," says Professor Army. "Minnesota has large areas adapted to the production of Grimm alfalfa seed. While the hay crop is the biggest factor, a new industry, that of growing and marketing pure Grimm alfalfa seed, can be built up. As one of the first steps in this direction the growers should organize a state association. We know we have the conditions for alfalfa seed production. Why should we not now begin to capitalize our advantages by organizing and pushing production in every section where the soil and climate are friendly to the crop?"

County Campaign Reports

Campaigns for the growing of more alfalfa are being carried on in many counties. Extracts from reports of county agents are given herewith:

Nobles—As a result of Mr. Crim's talk on alfalfa at local and county crop shows, orders for 1,500 pounds of seed have been pooled. Genuine certified Grimm seed will be purchased. The county agent is now getting the best quotations from seed houses and individuals having seed for sale.

Lyon—Eighteen farmers have agreed to try out soybeans the coming year, especially for cattle feed, and to plant with ensilage corn. Farmers are pooling their orders for Grimm alfalfa and sweet clover seeds. We are trying to get townships low in alfalfa production to increase their acreage the coming year.

Greater Soybean Acreage Foreseen

Jackson—A great many soybeans will be sown this year, as they have passed the experimental stage in this county, especially where they are used for "hogging off" purposes or for putting in the silo. Many inquiries regarding the sowing of legumes are being received at this office.

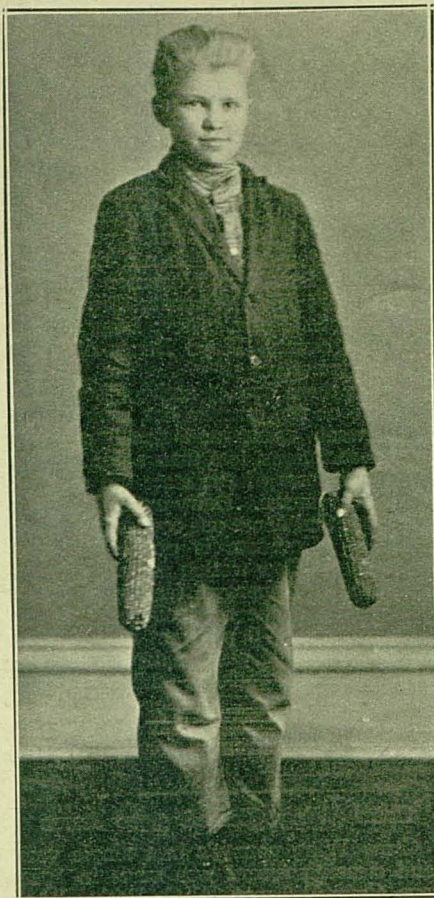
Faribault—Several orders have been placed for soybeans. Special effort will be made to obtain a variety known as the Manchu, which was very promising in a plot where eleven other varieties were tried out in this county last year.

East Ottertail—Two tons of certified Grimm alfalfa seed have been sold to 140 co-operators. Some 402 acres of alfalfa have been pledged. Orders are being pooled for more seed of red clover, sweet clover, alfalfa, and soybeans.

Houston—Orders are coming in for certified Grimm alfalfa seed. It will probably be around 40 cents a pound. Many new fields will be started this spring.

Dairy Schools Help Cause

Waseca—Orders for 600 pounds of genuine Grimm alfalfa seed have come in as a result of the dairy feeding schools held during the month. It is planned to secure the seed through the



VERNE G. COON

This 15-year-old boy of Faribault, Rice county, was the champion five-acre corn grower among Minnesota corn club boys and girls in 1922.

New Stunts for Kirkpatrick

County Agent K. A. Kirkpatrick of Hennepin county has encountered something new in his long and varied experience in county extension work. The farm bureau directors have directed him to prepare plans for the improvement of the central produce market and for the enlargement of the store room exchange service.

Hennepin County Farm Bureau exchange service.

Dodge—Great interest is being shown in soybeans as a legume crop. Soybeans have proven of great adaptability to the varying soils and weather conditions. They furnish a legume crop which the Dodge county farmer cannot overlook, especially when he is having difficulty in securing stands of clover. Growers seem to think they should have about \$4 a bushel for soybean seed.

Definite campaigns for more legumes are in progress in Crow Wing, Mille Lacs, Carlton, Aitkin, and Kanabec counties in the northeast district. Growing alfalfa seed has developed into an industry in Pennington county in the northwest district. Growers having seed for sale are sending samples to prospective buyers in neighboring counties. Much of the new seed, however, will be planted in Pennington county.

BECKER HOLDS DAIRY CALF CLASS TROPHY

Has the Grand Champion at Crookston Show for Third Successive Year—Other Awards to Juniors.

Club boys and girls of the Red river valley did their part in making the recent Farm Crops Show at Crookston a success. Dairy calves, poultry, potatoes, and corn made up their exhibits. Competition in the dairy calf class was especially keen on account of the silver trophy which the Red River Valley Dairymen's association offered to the boy or girl having the grand champion dairy calf in the show. Monica Zurn of Becker county has held the cup for two years and sought to win it again this year. The judge, however, decided that Allen Gandrud's Holstein heifer was the grand champion of the show, and the cup was therefore awarded to him. Allen, who also hails from Becker county, has been a close competitor for the cup the last two years, and Miss Zurn said, after the judging was done, that she was satisfied as long as the cup was retained in Becker county.

Corn and Potato Awards

In the potato division Roy Nehring of Kittson county won sweepstakes on his sample of Early Ohios. Dale Smith of Becker county won first prize in reserve sweepstakes on his sample of Rural New Yorkers.

In the corn exhibit, Charles Eissner of Polk county won sweepstakes on his sample of smut nose flint corn, and Olof Olson, also of Polk county, won reserve sweepstakes on his sample of yellow dent. Prizes in these classes include free trips to the junior short course at the Northwest School of Agriculture, Crookston, and the sweepstakes prizes include free trips to the 1923 State Fair as members of the Farm Boys' Camp.

Two Fine Demonstrations

Two very interesting and instructive demonstrations were given by teams from Kittson county. The Glue Club garment demonstration team of Hallock put on a demonstration before the women's meeting on Tuesday which was well received by a large and appreciative audience. The A. E. F. sheep demonstration team of Humboldt, the champion at the 1922 State Fair, gave a splendid demonstration before a large audience in the livestock pavilion. The members of both teams have done effective work and deserve the recognition that was given them at the Farm Crops Show.

At a conference of county agents and club leaders report were given on plans for boys' and girls' club work the coming year. Judging by the reports the work will be pushed more than ever in the northwestern section of the state.

Creamery Output Shows Trend

A good sized "straw" showing the trend towards dairying and the progress made in cutover districts in the north is furnished by the Beltrami county agent in his statement of the 1922 operations of the Black Duck creamery. This creamery made 111,000 pounds of butter in 1922 as against 71,000 pounds made in 1921, or an increase of 60 per cent. Patrons of this creamery are going to sow alfalfa and increase production to a still higher notch.

"U" GARDENERS INDORSE NEW EARLY SWEETCORN

Picaninny, an early sweetcorn—earlier even than Golden Bantam and other well-known varieties—is recommended by horticulturists of the University of Minnesota for more general planting and use. This corn was originated at the government station in Ontario, Canada, and is especially useful in northern latitudes where the frost menace must be taken into consideration. The stalk of the Picaninny is short and the ears appear well down the stalks towards the ground. W. T. Tapley, who is in charge of the vegetable section of the horticulture division at University Farm, believes this variety of the good old corn on the cob should be grown extensively in northern Minnesota. It is desirable, he says, for all parts of the state.

New Zealand spinach is also recommended by Mr. Tapley for planting in the open ground as late as June. "This plant often grows to a height of three feet and is simply great for salads," he says. "Its leaves are highly succulent. New branches will develop as the foliage is picked and used. The kitchenette squash and the Des Moines squash are well worth growing where there is space for them. The first was originated at the Minnesota station and the latter in Iowa and both are adapted to our conditions. They are well flavored and are easy to serve."

Gardens on many farms do not supply as large a variety of vegetables as they should. Mr. Tapley believes there is a fine opportunity for more diversification here.

STATE FARM SCHOOL SOON TO GRADUATE 100

Preparations are being made for the 34th annual commencement exercises of the Minnesota School of Agriculture which will be held at University Farm on Wednesday, March 28. Nearly 100 farm boys and girls will be graduated from a three-year course of six months' school work and six months' project work on farms each year. Six members of the class have been chosen to demonstrate definite phases of Minnesota farming and homemaking at the closing exercises. The Minnesota School of Agriculture was the first of its kind in the United States, and when members of the present senior class have received their "sheepskins" it will have graduated nearly 3,000 boys and girls, all but a small per cent of whom have returned to the farms to practice improved farming methods and to lead community activities. The plan of the Minnesota school, founded in 1888, has been repeatedly copied by other states, even its course of study having been adopted in several instances.

Orchardists Will Form Spray Rings

McNulty of Winona says much interest is being shown in the spraying of orchards and that, so far as possible, the work will be carried on in groups. One spray ring has been organized, its work to be supervised by R. C. Rose, specialist in plant diseases. This will be a demonstration community. Organization of several spray rings, in order to reduce the cost and reach larger numbers, is forecast by the Winona county agent.

COW TESTING WORK IN STATE STEADILY GAINS

Greater interest is being taken in cow testing work over the state than ever before, says E. A. Hanson, dairy livestock specialist. The Martin County Testing association, with H. A. Anderson, tester, was recently organized among dairymen of Sherburne, Welcome, and Fairmont. Old associations reorganized and put on a new basis are the South Hennepin, Lawrence Wogensen of Hopkins, tester; Nicollet county, Milton Petersen of St. Peter, tester; Long Prairie in Todd county, Floyd Bemis of Long Prairie, tester.

While there are 45 active associations and two on the inactive list, with a total of between 13,000 and 14,000 cows in such associations, less than 1 per cent of the dairy cows of the state are on test, says Mr. Hanson. Dairy authorities have estimated that about one cow out of every three in Minnesota is unprofitable for her owner. Cow testing associations are organized to improve feeding methods and weed out the nonproducers. If no more than 5 or 6 per cent of all dairy cows in the state were under test, a tremendous saving could be made for dairymen.

Mr. Hanson reports that organization plans are well advanced for several new associations.

Crow Wing Cleared 5,500 Acres

Crow Wing county's best single year land clearing record was made in 1922, says County Agent E. G. Roth. "According to our best records," he says, "Crow Wing county farmers brushed, stumped, and broke approximately an average of four acres for the year, or a total of 5,500 acres."

Dietrich Goes to Iowa

William Dietrich, who had been county agent of Fillmore county since the organization of the county farm bureau in 1918, resigned recently to accept a similar appointment in Floyd county, Iowa.

Baby Daughter in Roth's Home

Born, February 13, to Mr. and Mrs. E. G. Roth of Brainerd, a daughter. Mr. Roth is county agent of Crow Wing county.

Wise a Benedict

Charles E. Wise, Jr., assistant farm management demonstrator with the extension service, and Miss Evelyn Voss, instructor in athletics at University Farm, were married recently and are making their home in Minneapolis.

Fat Poultry Project Favored

Club boys and girls in Itasca county are planning to be contenders in the fat poultry project, which will be introduced in the Junior Livestock Show next November.

Itasca Boosting for Legumes

County extension workers in Itasca are carrying on better dairy feeding work and are laying special emphasis on the greater use of silage or roots and more legumes.

SAYS POULTRY BUSINESS IS BOUND TO BE GOOD

N. E. Chapman, poultryman with the agricultural extension division of the university, replies in the negative when asked if there is any danger of the poultry business being overdone in this country.

Mr. Chapman cites such examples as New York City to show the popularity of poultry products over other classes of meat in the diet. Poultry and eggs have a commanding lead in New York City where, according to E. V. Wilcox, a nationally known poultry authority, the per capita consumption of poultry flesh amounted to 33 pounds and of eggs to 30 pounds last year. During the same time the per capita consumption of beef was 56 pounds, of fish 31 pounds, of pork 30 pounds, and of mutton 17 pounds.

Furthermore, the university poultryman predicts that the demand for eggs and fowls will continue to increase and to justify any effort put forth to increase production.

Growing More Stock Feed

The advantages of new clearing in the north are already beginning to be felt. The Aitkin county agent says that feed purchases this year are lighter than usual because of the larger amount of feed raised on increased clearings.

100 New Alfalfa Fields the Goal

One hundred new fields of alfalfa as the minimum is the goal set in Beltrami county, says County Agent D. C. Dvoracek.

Livestock Buyers Competing

Buyers for packing houses are practically paying South St. Paul prices at Waseca and Otisco, says the Waseca county agent. Up to this time the co-operative shipping companies have practically transacted all the business.

Creamery Planned at Truman

Truman in Martin county is planning to build a co-operative creamery. County Agent Johnson in his report for January says that 102 farmers have already signed the organization rolls.

Hail Insurance Organization Talked

A county-wide hail insurance organization is proposed in Martin county.

Splendid Interest Shown

Mrs. J. H. McCaffrey, one of the local leaders for the clothing project of Wabasha, who has attended three local leader training schools, says: "I can't begin to tell you how interested people are. Ever since this work was first organized here I've had at least two telephone calls every day about this clothing project."

Dr. Alway Will Test Soils

Complete tests of the peat soils of Aitkin county are to be made under the auspices of Dr. F. J. Alway, chief of the soils division, University Farm. A carload of lime has been allotted to the McGregor community for the purpose of correcting the extreme acidity of the peat soils.