

THE VISITOR

Devoted to the Interests of Agriculture, Manual Training, and Home Economics
in Minnesota High Schools

Published Monthly by the Division of Agricultural Education, Department of Agriculture, University of Minnesota

VOL. II

UNIVERSITY FARM, ST. PAUL, MINN., MARCH, 1915

NO. 7

Entered as second-class matter at the post-office at St. Paul, Minn., under the act of August 24, 1912

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THE SEED CORN PLOT FOR SCHOOL OR HOME

A project for the production of pedigree seed corn will be found practical and valuable in school plot or home project work. Such a project may occupy half an acre or more of land, and should be so located that there will be no danger of cross-fertilization by corn in other fields. Seed selected from a plot of this kind will be as good as field-selected seeds. Enough of the best seed ears obtainable to plant at least twice the area of the plot should be selected. A germination test of the individual ears should be made and any failing to show perfect germination should be rejected.

The soil of the plot should be as uniform as possible. Enough corn should be taken from each ear to plant one row, or better two rows, in the plot, but at least one-half the corn on each ear should be saved, placed in a paper sack and numbered to correspond with the row or rows in which the remainder of the ear is to be planted.

The outer two rows on each side of the field should be planted with good seed corn, but not from the ears being tested. The other rows should be planted with corn from the ears under test in the order in which they have been numbered. It is better to have the test rows duplicated in each half of the field, especially if there is any variation in soil conditions. A diagram of the plot should be made that there may be no mistake in checking up and connecting the rows with the individual ears in the fall.

To insure accuracy in the yield test, an uniform stand should be found by planting four ears in each hill and thinning the corn to three stalks. All rows should have equal opportunity for growth throughout the season.

The Home Project

Who grows seed corn as a home project should keep a note book recording from time to time the progress of the work and the purpose of all that has been done. He should also keep an account of receipts and expenditures, including man labor and horse labor.

In the fall a careful study should be made of the characteristics of the rows from the different ears. These characteristics should be tabulated by the pupils, indicating for each row, time of maturity, height characteristics, vigor, yield, uniformity of ears and any other differences which may appear. Seed corn may be selected from this plot for crop purposes or for sale.

As the result of the test, the remnants of the two ears giving the largest yield should be selected for the seeding of a breeding plot for the following season. In the second season kernels from these ears are planted in alternate rows in a square plot, and every other row is detasseled. Seed selected from this breeding plot should be used the third year in an increase plot from which the main seed crop is selected. Complete details of the plan of breeding pedigree seed corn will be found in nearly all works on farm crops or in Ohio Agricultural Experiment Station Circular, No. 66, if it can be obtained.

Owing to the complexity of the project and the time required to carry it through, success is more likely on the school plot than on a home plot. After three years, since but one plot of corn can usually be handled on a school plot, two of the plots must be carried as home projects, thus making the test, breeding, and multiplication plots all available the same year.

Plan Works With Small Grains

A similar project with small grains may be carried. Plots of small grains may be raised on the school plot or as home projects. If only pure-bred seed is given out for these plots, they serve as a source for the distribution of good seed. At harvest time pupils should be required to make selections of a specified number of the best typical heads of grain, to be used to furnish seed for a tract on the school plot. The third year the product of this tract may be used in an increase plot. While this project requires three years to give final results, once under way all three plots may be carried during the year, either on the school plot or on home areas as home projects. Once underway the school plot will become a center for the distribution of improved grain acclimated to local conditions.

There are two indispensable factors in the projects outlined. One is a carefully kept record of the work, fully intelligible to any new instructor taking up the work at any time, the other is the selection of well bred seed at the start of the enterprise.

FARMERS HELP TO GUIDE SCHOOL WORK

District No. 1, Itasca County, which includes the town of Grand Rapids, has put into operation a plan already in use in other states. The plan calls for an advisory committee of farmers to assist the school in its agricultural work. In Massachusetts the selection of such a committee of citizens is a prerequisite for obtaining state aid for agriculture in high schools. This committee is selected by the superintendent, the agricultural teachers, and the board of education, and meets from time to time to consider methods affecting the agricultural work done by the school.

There are distinct advantages in this plan. It keeps the community in direct contact with the work of the school, enables the school to obtain the counsel of practical farmers, and strengthens the work, especially the extension work through co-operative effort. One of the difficulties, however, might be the over-emphasis of the extension features to the detriment of the instructional work in the school. If care is taken, however, the selection of such a committee ought to bring good results in many Minnesota communities. Broad-minded men, willing to work in the public interest and familiar with practical agricultural needs, should be chosen. If these men can have some knowledge of schools and school work, so much the better. The *Visitor* will be glad to know what progress is made from time to time in the selection of such committees in Minnesota.

WINTHROP BOYS HAVE CALF CLUB

A dozen boys of the Winthrop high school and its vicinity under the direction of E. S. Olson, have organized a calf club. On April 1, 1914, each of the boys obtained a calf, which was carefully weighed, and began to study the problem of its feeding and care, in order to be able to show the largest gain in weight by April 1, 1915, when all the calves again be weighed by Mr. Olson. A prize fund of \$50 has been given by one of the local business men, in order to encourage the work. Mr. Olson has made a special effort to help the club by close personal touch with each member. The contest has stirred up a great deal of interest and the reports from the boys should make an interesting story.

BOOKS RECEIVED

The following text and reference books have been received at the office of the Division of Agricultural Education since the February publication of the *Visitor*. Teachers of grade and high school agriculture are invited to examine these books at any time.

ANIMAL HUSBANDRY

"Beginnings in Animal Husbandry," Plumb, C. S. Webb Pub. Co. \$1.25.
"Dairy Laboratory Guide," Martin, G. L. Webb Pub. Co. 50c.
"Feeds and Feeding," Henry, W. A. Author. \$2.25

AGRONOMY

"Field Crops," Wilson, A. D., and Warburton, C. W. Webb Pub. Co. \$1.50.

HORTICULTURE

"Popular Fruit Growing," Green, S. B. Webb Pub. Co. \$1.00.
"Vegetable Gardening," Green, S. B. Webb Pub. Co. \$1.00
SOILS

"Soils and Soil Fertility," Whitson, A. E., and Wolster, H. L. Webb Pub. Co. \$1.25.

ELEMENTARY AGRICULTURE

"Agriculture for Young Folks," Wilson, A. D., and E. W. Webb Pub. Co. 1.00.

FARM STRUCTURES

"Silos," Kind, M. L. Webb. Pub. Co. 50c.

MANUAL TRAINING

"Problems in Carpentry," Roehl, L. M. Webb Pub. Co. \$1.00.

AGRICULTURAL LAW

"Farmers Law," Koos, L. V. Webb Pub. Co. 50c.

CHEMISTRY

"Chemistry and its Relations to Daily Life," Kahlberg, L., and Hart, E. B. Macmillan Co. \$1.25.

"Chemistry for Students of Agriculture and Technology," Dodgson, J. W., and Murray, J. A. Longmans, Green and Co. \$1.10.

"Elementary Chemistry," Godfrey, Hollis. Longmans, Green and Co. \$1.10.

FARM ENGINEERING

"Agricultural Engineering," Davidson, Webb. Pub. Co. \$1.50.

Annandale, Buffalo, Cokato, Howard Lake, Maple Lake and Monticello high schools sent corn-judging teams to the University Farm Feb. 27 to engage in a judging contest under the direction of A. C. Arny. Each team was made up of five pupils. Cokato won first place in the team contest and Conrad Johnson of Cokato made the highest individual score.

AFTER FARM RECORDS

Extension Division Sending Out Blanks to Several Farmers of State.

The Extension Division of the Minnesota College of Agriculture has sent out to several farmers of the State forms for a record of their farm business.

The forms give simple directions and provide blanks for inventories at the beginning and close of the year; for receipts from sales and for expenses.

A form for a summary, showing farm income and labor income closes the set. A set of tables is provided to aid in estimating amounts of grain, hay, and silage.

These forms, aside from the service given the Extension Division in securing their use among the farmers, may be valuable in class work in farm accounting. An excellent home project may be carried on by placing sets in the hands of pupils and requiring the keeping of the accounts for a year. Sets kept by farmers and by pupils will furnish practical data of the locality for use in farm accounts work. A few of these forms are available for distribution among high school men.

NEWS

Teams from the Hallock High School won first place in the stock-judging and corn-judging contests held at Crookston in connection with the Farm Crops Show. Hallock, Thief River Falls, McIntosh, Red Lake Falls, East Grand Forks and Warren entered the contest.

R. O. Swanson Agricultural Director in the Sherburn high school has organized the first cow-testing association in Martin County. It is known as the Sherburn Cow Testing Association. Twenty-six farmers having 320 cows are enrolled. The association has been under successful operation since November 1.

C. E. Campton, Supt., and A. E. Webb, Agricultural Director of Sleepy Eyes, are planning a "Silo Day," to include a competition at the high school building. Several farmers' clubs have been organized in the surrounding country. G. E. Howard and Geo. Sprenger have addressed some of the clubs.

The high school at Arlington, altho it has not an agricultural department, is offering a two-weeks agricultural short course for boys. A special instructor was secured from the College of Agriculture. The course as planned by Superintendent K. O. Snortum includes studies in live stock, farm crops, and horticulture. Special classes for high school boys and for girls in the Normal Training course are also being carried for the two weeks.

Guy S. Ellis, of the Stewartville high school, has issued a circular letter to the business men of Stewartville asking their co-operation in inducing farmers to send in their seed corn for germination tests. The only requirement of the farmers is that they plant the corn labeled "strong" apart from the rest. Mr. Ellis has also sent a letter to farmers keeping dairy cows. In this he offers to furnish an outfit for recording milk production and for sending milk samples to the high school for testing.

O. M. Kiser reports that a conference of all those engaged in agricultural extension work in Renville County was recently held at Olivia. The purpose was to secure the co-operation of all engaged and to map out a program to insure greater unity of effort. It was decided to concentrate effort on co-operative organizations, crop improvement, increase in acreage of alfalfa and of clover, livestock improvement, including work for the control of hog cholera, boys' and girls' clubs and rural school work, and association of county school districts with schools maintaining agricultural departments. Present were a representative from the Agricultural Extension Division of the University of Minnesota, the county commissioners, the county agent, superintendent of high schools, high school agricultural instructors, county superintendent of schools, officers of the county farm bureau, officers of the Renville County Swine Breeders' Association, and federal agents in hog cholera demonstrations.

The agricultural teachers of Southern Minnesota met with the other public school teachers of that section at Mankato, Feb. 19. The following was the program of the meeting:

W. L. French, Austin, Minn., Presiding.

Content and Arrangement of the Course of Study in High School Agriculture, Prof. A. V. Storm, Agricultural College, University of Minnesota.

Our Summer Job: What Is Worth While, What Not? A. M. Field, Northfield, Minn.

Round Table—What's on Your Mind?

W. E. Hedcock, Albert Lea, Minn.

Topics submitted by teachers of agriculture in response to a questionnaire formed the basis of the round table discussion.

THE TRAVELER

In November the Traveler made a trip to Washington, D. C., to attend the annual meeting of the American Association for the Advancement of Teaching and related societies. He returned by way of New York and Michigan to visit agricultural high schools.

At Washington he read an article before the Association on "How to Improve the Quality of Teaching the Technical Subjects in Agricultural Colleges." The association took action, requesting the United States Commissioner of Education to publish this paper as a monograph for distribution. If that is done the *Visitor* will be glad to inform its readers so that copies may be procured.

The report of the standing committee on the use of land in connection with agricultural teaching was made by Mr. Merritt, one of the government specialists in agricultural education. He had visited Minnesota the preceding month and a part of his report was based upon the questionnaire cards in the files of the Division of Agricultural Education at the College of Agriculture, which were filled out by the agricultural high school teachers a year ago. If the men who filled out these cards could have heard the complimentary things contained in this report regarding the Minnesota schools, they would have felt repaid for their trouble in answering the questionnaire.

Before the American Association of Agricultural Colleges and Experiment Stations, President Vincent of the University of Minnesota, discussed the "Relation of the Agricultural College to the Instruction of Agriculture and Home Economics in Secondary and Rural Schools." He gave an excellent presentation of what is being accomplished in Minnesota.

The Smith-Lever agricultural extension act was discussed and plans for the future recommended. These plans do not differ materially from those at present in operation under the agricultural Extension Division of the University of Minnesota.

The purpose of giving federal aid to the states for secondary work in agriculture and the manual arts, was discussed quite fully and generally approved, the some of the details were objected to.

In New York staff a half-day was spent with Professor G. A. Works, formerly of the *Visitor* staff, in inspecting the State College of Agriculture at Cornell and two other half-days in visiting the high schools at Moravia and Interlaken, in which Agriculture is taught.

The Traveler also inspected, in company with L. S. Hawkins, State Inspector of High School Agriculture, the agricultural work at LeRoy and Hamburg, and the Technical Evening High School at Buffalo. He also called at the high school in Canandaigua, tho the school was not in session at the time. Mr. Hawkins visited the College of Agriculture and several agricultural high schools in Minnesota last year, while making a tour of inspection. He seemed highly pleased with what he found here, and while there are some features of the New York schools that differ from our own, there are many ways in which they are alike. There is a tendency to work more toward certain conditions that prevail here, especially in the educational requirements for their teachers, the amount of the distribution of state aid and the degree of co-operation between the State Department of Education and the State College of Agriculture. Mr. Hawkins and Professor Works will co-operate excellently and improved conditions will no doubt result. Forty-three high schools in New York receive state aid for agriculture.

The Association of Agricultural Instructors will hold its annual meeting at University Farm, Thursday, Friday and Saturday, April 1, 2 and 3. It is expected that President Vincent, and Professor G. L. Strayer, of Columbia University will be among the speakers. The teachers in Manual Training will hold their meeting in St. Paul at the same time, meeting with the agricultural instructors at University Farm on April 2 to listen to President Vincent and Professor Strayer. Prof. Farrell of the United States Department of Agriculture will discuss the subject of canning work.

RURAL LIFE CLUBS DOING GOOD WORK.

The demand for better social conditions on the farm has been recognized by the Hastings schools in the organization of a club which includes boys and girls who are taking the short course and girls taking the normal course. A short course boy has been elected president and a normal course girl secretary.

The club meets every Friday, the meetings being held alternately during the last period of morning and afternoon sessions. When held the last period in the morning a hot lunch is served in the domestic science rooms following the program. The programs include talks, discussions, recitations, and music.

Interest has been aroused by the organization and the club promises to be of distinct value both to the short course students, who will go back to their homes with ideas for old or new clubs, and to the normal girls who, as future teachers, will be expected to bear responsibility in farming and directing such clubs.

Ten such clubs have already been organized in the vicinity of Hastings and all are in a prosperous condition.

BOYS' AND GIRLS' 1915 CLUB WORK

By T. A. Erickson

The boys' acre-yield corn contest will be the leading project for boys' club work in 1915, and should be organized on the same basis as in 1914. The only change is the division of the northern zone into two zones, the north central and the northern. The club feature, which brought such excellent results in 1914, through the generous cooperation of high school agriculturists, will again be emphasized.

The pig clubs, organized at Slayton by R. F. Crim, and at Canby by B. Ostrolenk, disclosed clearly the value of such organizations. A pork-production contest will be added, therefore, as a new state project for boys and girls in 1915. The award will be based on the care and management of one pig, although the litter will be encouraged where it is possible for the contestant to have charge of one. In this case, however, a boy will be allowed to select only one pig for the final competition.

Several superintendents and agriculturists have conducted very successful potato contests. In a part of northern Minnesota the corn contest does not appeal to boys, while the potato is one of the most important crops. A potato contest, based on a one-eighth acre crop, will be made a project for the part of Minnesota included in the north central and northern zones as designated for the corn contest. The type to be grown by the contestants must be either the Carman, the Rural New Yorker, or the Green Mountain.

For girls the bread-making contest, which brought such splendid results in 1914, will be continued this year. A somewhat different plan will be followed, however. Every county should hold local contests and select one girl from the rural school class and another one from the high school class to be sent to the state fair for the final.

Poultry contests, organized under the enthusiastic direction of N. E. Chapman, will be open both to boys and girls.

Garden and canning work, which is being made a special feature of junior extension work in many states, will be a new project for 1915. Very successful work of this kind has been carried on for some time by many of the high schools in the State. One of the objections to the work has been that there is not enough of a market for the fresh products. By teaching boys and girls how to can their surplus products, and how to make excellent use of what would otherwise be wasted, however, this work can be made to mean a great deal. Wherever garden work is made a club project, the state leaders will be glad to assist the local leader in putting on a canning demonstration.

State prizes will be given in the corn, pig, bread, and potato projects. Poultry and garden and canning work should be encouraged locally. A majority of the county fairs have special departments for such projects.

Bulletins and circulars explaining the different projects may be had by addressing the Agricultural Extension Division, University Farm, St. Paul, Minn.

INSTRUCTORS TO MEET