

## UNIVERSITY FARM PRESS NEWS

Published Semi-Monthly by the University of Minnesota, Department of Agriculture, Extension Division.

Vol. III.

UNIVERSITY FARM, ST. PAUL, MINN., SEPTEMBER 15, 1912.

No. 18.

Entered as second class matter January 15, 1910 at the postoffice at St. Paul, Minn., under the Act of July 16, 1891.

AGRICULTURE IN  
HIGH SCHOOLS.

Three years ago by the Putnam Act ten high schools and graded schools in Minnesota received annual state aid to the amount of \$2,500 each, for the establishment of departments of manual training, agriculture, and home economics. This we believe to be a move along the line of modern progress in education. The tendency at present seems to be to make the schools vital forces along the lines of most interest to the community, and it certainly seems but logical to put in our schools some of the things that the pupils will have to deal with when they have left those schools.

In a state in which agriculture is as important as in Minnesota it would seem to us perfectly logical to teach in all of the schools of the state something of the principles of this fundamental industry. We believe that it is quite as important for the city man or woman to know something in regard to the agriculture and country life as it is for the man or woman in the country to have a general idea of the industries and life of the people throughout the country. It is a broadening, general, liberal education.

The 1911 Legislature added to the first ten schools twenty more under the Putnam Act and fifty or more additional under the Lee-Benson Act, so that during the past year there have been between 85 and 90 schools giving instruction in agriculture and other industrial subjects. One of the best things that these appropriations have accomplished is to encourage and enable these 85 schools to conduct, during 6 to 16 weeks in the winter, short courses for which no entrance requirements are made. This has enabled these schools to give instruction to the large body of boys and girls somewhat mature in age who have not had the advantage of regular grade school or high school education, and who by lack of such training are not equipped to enter the regular high schools of the community and are consequently, practically speaking, barred from securing further education. Such boys and girls have been enabled, by these acts, to get from six to sixteen weeks of good, practical instruction which has interested them in further study and better equipped them for the problems they must meet as men and women. If these acts by the Legislature should do nothing more than to provide in each community suitable Short Courses for the boys and girls who have not had suitable school advantages, and who would otherwise be barred from our public schools, they will certainly have warranted the small expenditure which they have entailed.—A. D. Wilson, University Farm.

## DOCKAGE IN WHEAT.

Unnecessary Loss to Wheat Farmers.

About 89,000 tons of dockage is contained each year in the spring wheat marketed in Minneapolis and Duluth. This dockage consists of dirt, weed seeds, and grains other than wheat. The fact that it comes to market represents a considerable loss to the farmer who sends it.

The grain grower is never credited or directly paid a cent for the dockage taken from his grain. On the contrary the shipper soon learns to anticipate dockage from a given farmer or from a given locality and to practically deduct for it in advance at the time of buying. The grower gives away feed which he might well use at home. The weed seeds and grains other than wheat remove a considerable amount of valuable plant food, particularly nitrogen, phosphorus and potash. If this feed were retained on the farm it would soon cut down feed bills, and later, in the form of manure, build up the land for future crops. The presence of the weed seed would, of course, make it desirable to grind the feed in order that the fields might not be reinfested with weeds.

The farmer who has threshed his grain would probably do well to see that it is cleaned before marketing if the available power and time permit. The screenings are then retained for his own use instead of being practically donated to some one at the terminal market or to the large mill to which it goes. The farmer who has yet to thresh can easily see that no one on the threshing crew is allowed to lay canvas on the screens and thus pollute the wheat with seeds of pigweed and other noxious weeds.

For succeeding years, clean seed, crop rotation, and cultivation for the destruction of weeds should be carefully looked after as weeds soon enough get the upper hand in continuous grain growing.—C. H. Bailey, Cereal Technologist, University Farm.

## KERNELS OF CORN.

What Kind of Kernel Did You Pick Seed Corn Week?

There is much to know about an ear of corn after one has studied it as a whole. The size and shape of the kernels, the size of germ in each kernel, the proportion of kernel to cob, are all factors of importance and have a direct relation to the feeding value of an acre of corn. As a general rule, one likes to select corn that has a large proportion of corn to cob; that is, corn with deep, well-filled kernels and small cobs. Selection on this basis, however, can easily be carried too far, as deep-kerneled varieties of corn are usually later in maturing than shallow-kerneled varieties.

The first essential that one must have in his seed corn is that it is sufficiently early to mature under his conditions. After that is secured, size of ear and depth of kernel may be considered.

The only way one can be safe in the selection of seed corn is to select it at or before the time at which he can ordinarily expect a killing frost. Corn that has matured up to that time is reasonably safe to plant. Corn that requires a week or more after that time to mature may mature in favorable years but is very likely not to mature in unfavorable years. On this account the Minnesota Agricultural College urges the early selection of seed corn, and set aside this year the week of September 16-21 and urges that farmers take at least one day during that week to go through their cornfields and carefully select seed for the following year's planting. At least fifty ears of corn should be selected for each acre to be planted. This will allow careful selection the following spring. If one has fifty ears of corn that matured sufficiently early, he can then with safety lay aside the matter of early maturity and select from the fifty ears the twenty ears that are the largest, best type and show the deepest, best kernels and the largest percentage of corn to cob and the strongest germination test.—A. D. Wilson, Superintendent Extension Division, Minnesota Agricultural College.

## FREE FARM LIBRARIES

Hints on Systematic Selection of Helpful Farm Bulletins.

Farming is a complicated profession. The farmer needs selected information from a great number of sciences, yet he can obtain a library for postage and the trouble of writing a very small consideration. The lawyer or other professional man whose working library really covers a much narrower sphere, must expend considerable money in obtaining what he should have.

Most farmers know in a general way that there is a certain amount of literature in bulletin form available for the asking. How many know that they can secure each month a list of all experiment station bulletins recently printed in the various states? This list may be secured by asking to have your name filed with the Office of Experiment Stations, U. S. Department of Agriculture, Washington, D. C. When writing for this list ask for another monthly list including all the publications of the Department itself. These lists, together with the farm papers which you should take regularly, will put you in touch with current agricultural literature.

Many inquirers write "Send me all information on agriculture," or "Send me everything you have on farming." It is impossible to answer such a request intelligently. If taken at his word the inquirer would receive a good many mail sacks full of bulletins, most of which would not help him with the crops or farm problems of his locality. He can, however, be informed each month as to the new things which have appeared and left to pick out those which are helpful and order them for himself. About 500 Farmers' Bulletins have been printed by the U. S. Department. A list of those now available for distribution can be secured from your congressman or from the Department. Other bulletins deal with more technical subjects of less immediate value to the practical farmer. Lists of these may be secured on application accompanied by a statement of the special line in which the inquirer is interested.

Every farmer should keep in touch with the publications of his own State Experiment Station and have his name placed on file to receive the monthly lists issued by the U. S. Department. There is no excuse for ignorance on any of the common farm questions when so much information is to be had for the asking. Ask for this free agricultural library and read it carefully.—J. O. Rankin, Editor, University Farm.

## FARM SCHOOL OPENS.

Letters Indicate Record Enrollment at St. Anthony Park, October 7.

The School of Agriculture, St. Anthony Park, will be open for the fall term, October 7th. There were about nine hundred in attendance at the school last year, and the advance registration indicates that there will be a still larger number this coming year.

This is a school for farm boys seventeen years of age or older who desire to learn more about farming. The course is a thoroughly practical one. It involves besides the work in general agriculture, instruction in blacksmithing, carpentry, mechanical drawing, breeds, fruit growing, vegetable, gardening, and agricultural chemistry, and work with live stock of all kinds.

The school continues in session for six months of each year. The remaining six months, it is expected, the student will spend on the farm. The entire course occupies three years. The entire expense for attendance at the school for one year need not exceed \$100.

Although the school has many graduates of high schools in attendance, its largest attendance is made up of farm boys and girls who are too old to attend the country schools, and who can get what they need here better than in their local high schools.

Full information with reference to the School of Agriculture may be obtained by addressing J. M. Drew, Registrar, University Farm, St. Paul, Minn.

## A WORD TO THE WISE.

The Seed Corn Situation Reviewed by the U. S. Department of Agriculture.

Few states are taking more active steps to remedy the seed corn situation than is Minnesota. She was not alone in her predicament last spring, however. New York, Pennsylvania, Ohio, Indiana, Michigan, Wisconsin and North Dakota have also produced more than their average farm crop, but they had little corn to plant. C. P. Hartley, in charge of corn investigations for the U. S. Department of Agriculture, says that the little reliable seed that these states did have "was gathered and treated in September," and was in almost perfect condition in the spring. Practically the same thing is said of Illinois, Iowa and Missouri where dry weather in summer, followed by fall rains and November freezes rendered all corn not gathered and dried early exceedingly unreliable for seed.

Mr. Hartley further indicates "that good preservation sometimes increases productiveness by 18 bushels per acre." In speaking of Nebraska last spring it was said "With the facts before us it becomes quite a problem to know just where the seed will come from for planting the Nebraska cornfields. For the entire State a decreased yield of 5 bushels per acre, due to a poor stand, would result in a total decreased harvest of 32,500,000 bushels of corn. At 50 cents a bushel this amounts to a loss of \$16,250,000."

A word to the wise—but a wise farmer does not need this word. He is observing Seed Corn Week.—J. O. Rankin, University Farm.

## SCHOOL HAS MISSION.

Rural Schools Should Become Social Centers.

The training of country children to grow two bushels of corn where one bushel grew before is a commendable thing. To bring this about many changes may be made in the programs of most country schools. Arithmetic problems may be worked out in terms of corn and potatoes and cows. Reading may be largely confined to subjects of interest to country boys and girls. Essays on farm topics may be written in place of the usual parsing and other grammar work. This will lay a foundation for much practical work in the later years of school life.

Older students trained in the elementary principles of agriculture could conduct germination tests of corn and grain. Herds could be tested, rations could be worked out for livestock, records could be kept of poultry, garments could be made for home, and the art of cooking could be cultivated. These and many other practical things could be worked out with the school house as a center.

Added to this is the social pleasure that could be obtained by everyone in the community when a permanent interest in the school was established. Basket socials, evening entertainments, picnics, school house fairs, lectures, and moving pictures would make the rural school a real factor in the social improvement of the school district. The country school has a mission which should not be neglected.—Ray P. Speer, Minnesota College of Agriculture.

## A FARM SURVEY.

The Department of Agriculture of the University of Minnesota has begun this year a study of the agricultural conditions of several townships in Rice and Dakota counties. Two men have been in the field during the summer taking inventories and securing statements regarding yields, expense, and equipment of every farm in each of the townships under investigation. The data thus secured will be analyzed, and from it will be determined the size of farm which is most economically equipped and operated, the type of farming which is yielding the best revenue, and the farm crops and farm practices which yield the best returns. By learning the conditions prevailing in these sections and finding the types of farms which are paying best, it is believed that it will be possible to outline methods of farming for other sections of the state which will yield greater profits than those now followed.—Andrew Boss, Agriculturnist, University Farm.

PRODUCTIVE SEED  
EARS.

Sometimes we forget the difference between good corn and good seed corn. We all know that a crib of very large ears might be a good thing to have on the market yet be very poor seed for Minnesota if it failed to mature. How many of us stop to think that a poorer looking ear that has done fairly well under adversity may be more productive than the finer looking one which had several times as much sunshine and plant food?

How many know whether the proper shape of kernel or the proper shape of ear has more to do with the productive power? Whether a rough dent or a smooth dent is more indicative of a high yield to come? Whether to choose a long ear or a short ear and how much attention, if any, to pay to shelling percentage? An attempt is made to answer some of these questions in Bulletin No. 212 of the Experiment Station at Wooster, Ohio, and in Farmers' Bulletin No. 419 of the U. S. Department of Agriculture.

After five years of work in Ohio these questions are not forever answered, but the workers believe they can make these helpful suggestions: (1) Seed ears below normal length for a given variety or locality tend to reduce the yield and shorten the length of the ear in later crops. (2) Tapering ears yielded a little better than round, cylindrical ears. (3) A continuous selection of bare tipped ears decreases the yield per acre of shelled corn. (4) Creased dented ears yielded a little better than rough dented ears. (5) Heavy seed ears produced better yields, other things being equal. An immature or otherwise undesirable ear should be discarded however heavy. (6) Seed should be selected from a slightly thicker stand and less fertile soil than that in which it is to be grown. This will give more productive ears even though they do not look quite so large and fine. (7) Although the germination test is important in avoiding poor seed, it does not indicate any inherited high yielding tendencies. (8) Introduced varieties must be adjusted to local conditions by careful and continuous selection. They cannot be expected to do well the first year, but may be grown on a small scale for a number of years until it is determined whether superior strains can be selected from them.

Although this work was not done in Minnesota or with Minnesota varieties, many of the principles will probably apply to our conditions. In benefiting from our neighbor's experience, of course, we must be sure that it really applies to our needs before acting on it.—J. O. Rankin, Editor, University Farm.

## SEND FOR YEARBOOK.

The 1911 Year Book, which chronicles the work of the United States Department of Agriculture each year, has just been issued. So many of the articles in this book are of practical interest to the farmer that it should be secured by every person interested in agriculture.

Aside from the report of Secretary Wilson which explains the work of investigation conducted by the department, there are 31 stories dealing with present-day problems of special importance. It is a book of 732 pages, bound in cloth, and contains 67 full page half tone illustrations. This book may be obtained by writing to your congressman or to either of your United States senators, who are given a number of them for distribution. If ever a book was worth a two-cent stamp it is the 1911 Year Book.—Ray P. Speer, Minnesota College of Agriculture.

LARGER YIELD  
NEEDED.

Profits in Corn Raising Determined by Increased Yield Per Acre.

The dearth of good seed corn this spring taught corn growers in this state a lesson that they are not liable to forget soon. The same conditions might prevail again. The selection of seed corn this fall, then, should not be postponed. It may seem a big profit next year, where, perhaps, a loss might otherwise be incurred.

At the present price, it can be said that every bushel raised in excess of the average yield of corn in this state represents a profit. It does not take much more time, attention, or expense to raise a 40, 50, or 60-bushel crop of corn than it does a 30-bushel one, and, after the cost of production has been paid, the profits increase in direct proportion to the increase in yield.

When you have spent time and money needed to raise an average corn crop a little extra effort will greatly increase yields and profits. There are certain fixed or overhead charges that must be paid on every acre of corn raised. They vary comparatively little whether 20 or 60 bushels be raised. The Minnesota Experiment Station found that the five-year average cost of growing an acre of corn on the series of selected Minnesota farms was \$13.75. This includes charges for seed, shelling, plowing, dragging, planting, cultivating, husking, cost of machinery, rent of land, and general expenses. Most of these items are little or no greater for a 60-bushel crop than one of only 20 bushels. The extra effort may make the difference between just breaking even and making a good profit.

How is this higher yield to be obtained? There are several factors which must be taken into consideration. Of course the germination test and cultivation should be carefully attended to. A very important factor, however, is the stand of corn obtained. To obtain a good stand it is necessary that good seed be planted. Reliable seed can be most easily and surely obtained by careful field selection in the fall. The good corn grower must pay primary attention to his seed and this attention can best be given in the fall when the corn still stands in the field. This is one of the extra efforts that pay such big dividends.—Ray P. Speer, University Farm.

AGRICULTURAL  
ADVISORS.

Several of the counties in Western Minnesota are taking the initiative in agricultural education this year by placing in the field competent trained agriculturists as agricultural advisors. At first such an act seems to be a recognition of poor farming methods in the county, and somewhat of a slur at the local farmers. This, however, is not the case. There are so many phases to the farm problems that anyone at all familiar with farming realizes that no one man can know all that is necessary to know about farming to operate a farm up to its highest efficiency. Just as the large business corporation needs the advice of an attorney in drawing up its working plans, and the assistance of competent bookkeepers and specialists in carrying out those plans, so an agricultural community needs the advice and assistance of the very best trained minds along the various lines of agricultural development.

When a railroad superintendent employs an engineer to plan out a grade, a curve or a bridge, he does not acknowledge that the engineer knows more about railroading than he does, he simply acknowledges that one who has made a study of some special problem should and does know more about that special problem than can a man who has distributed his attention and study to a large number of problems. So the progressive and wide-awake farmer will find that he needs the services of specialists just as the business man has done. We believe that, as the business of farming becomes more and more intensive, consequently more and more complicated, the use of specialists as advisors to a large number of farmers will become general.

The effort of the Agricultural College will be to direct this work along practical lines, to employ competent men, and to use the whole force of the College and of the United States Department of Agriculture to back up these field men and help them to work out and improve every farm problem that comes up for consideration, so far as present information will aid in solving the problem.—A. D. Wilson, University Farm.