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## College of Agriculture.

The Minnesota College of Agriculture will open the second Tuesday of next September, and will continue until the second Thursday of June, 1911. Registration, for all except new students, closes August 30 next. Applicants for admission to the freshman class must offer fifteen entrance credits given in a high school or other secondary school work, so chosen as to include those prescribed in the college catalogue, which will be mailed free to any resident of Minnesota. The college course is open to both sexes. Residents of the state are charged an incidental fee of \$10.00 a semester, and non-residents, \$20.00. College students have the same dining room and laundry privileges as school students, but are not provided with sleeping facilities. Rooms may be had in private homes in St. Anthony Park at about \$12.00 a month, or \$6.00 each where two occupy the same room.

## School of Agriculture.

The Necessary Expenses of a student at the Minnesota School of Agriculture per year do not exceed \$85.00; but this amount does not include the military suit the boys are required to have, nor traveling expenses. Write to Prof. J. M. Drew, University Farm, St. Paul, for catalogue. It is free.

Farmers' Children should not forget that the Minnesota School of Agriculture will open on October 3rd, and continue until March 22nd next. The expense of board, heat, light, laundry and room is the actual cost of maintaining the table, management and use of buildings, or about forty cents a day per student. It has never exceeded \$3.00 a week. Separate dormitories are provided for boys and girls.

Instruction is given students, at the Minnesota School of Agriculture, in the workshops, laboratories, barns, fields and class rooms. The course is co-educational, and much of the work is taken in common by both sexes; though work adapted only to young men is given them exclusively, and that suitable only for young ladies is given them alone. The school is open to all young people possessing the necessary requirements for entrance, with no limitations as to residence.

The flour and wheat testing laboratory, authorized by a late act of the legislature, is about ready to commence operations.

The state is maintaining a large and valuable herd of animals for the purpose of instructing the young people in the Agricultural School and College in the types and breeds of cattle, sheep, hogs and horses suited to Minnesota conditions. In the herd are some of the most famous individuals in the West, especially of the dairy type. They are introduced in class work, and students are instructed in practical methods of stock-judging.

Mr. Henry Dvorachek, who graduated from the Agricultural College last June, was at once employed by the state of Colorado as assistant in animal husbandry.

## THE STATE AGRICULTURAL DEPARTMENT AT THE MINNESOTA CONSERVATION CONGRESS.

The friends of this department note with gratification the prominent part borne by its force of instructors in the proceedings of the recent Conservation Congress, as shown by the official report only just published. Of the sixty addresses printed, sixteen are by workers in the School and College of Agriculture. The character of these addresses, and of all but a few of the others, makes the report a valuable contribution to the advancement of agricultural interests in Minnesota. Copies can be had on application to George Welsh, Commissioner of Immigration.

## Traction Engineering.

The term of the School of Traction Engineering for 1910 was successful in all respects, beyond any preceding term. One hundred and forty-five stu-

dents were in attendance; thirty-two of whom came from other states. There was a noticeable improvement in the quality of the men. It was, in fact, a class of gentlemen. Where one had been accustomed, too often, to expect coarseness, drunkenness, rudeness and profanity, these were noticeably absent. Education is showing, in this line of industrial effort, the same tendency to uplift and enoble character so noticeable elsewhere. It is everywhere making the engineer more than ever reliable, safe, clean and self-respecting. The steadily increasing use of power engines,—steam, gasoline, electrical and hydraulic,—in farming operations makes it certain that the graduates of this school will be in constant demand, and accentuates the wisdom of its establishment. The faculty has been increased and the curriculum enlarged, as needs have become evident; and the school is destined to a continued beneficent work as an important branch of the Department of Agriculture of the University.

## Seed Corn Week.

The Extension Division at University Farm, St. Paul, in discussing the seed corn question in connection with Seed Corn Week, commencing Sept. 12th, says that twenty ordinary ears of corn will supply seed enough for an acre, and that it will require but a few hours during Seed Corn Week to intelligently select enough seed for a large crop. With some system by which the ears may be kept separate, to admit of the circulation of air around each, like placing them on racks or in wire baskets, seed ears may be picked before thorough maturity. This is a very good plan to pursue as a protection against injury to the germ through possible freezing likely to follow if the selection of seed is left to a late date in the fall. Perfect ventilation is as essential to plant life as it is to human or animal life.

The Selection of Seed Corn for next spring's planting is one of the important subjects for farmers to consider now, and to keep in mind until the opening of Seed Corn Week, Sept. 12th. Moisture in the corn is dangerous. It is important that all of it be evaporated quickly. The experts at University Farm say this can be best achieved through a free circulation of air around each ear. Husks should be off of seed ears before Oct. 1st, to provide ample time for them to dry out before freezing weather. In long spells of wet weather a little artificial heat will facilitate evaporation.

Shelves Made of Laths, placed three or four inches apart, installed in a building where there is a draft of air circulating freely through it, and protected from rains—or shelves made of wire netting—afford suitable facilities for curing seed corn. Preparations of this character should be made now—on some rainy day—in anticipation of Seed Corn Week, beginning Sept. 12th. Corn placed on such shelves before Oct. 1st, and thus thoroughly dried, is in no danger of molding or of injury by frost.

## The Gain From Good Seed.

It is a mere platitude to say that on the farm, as in all other pursuits, the effectiveness of a man's labor depends on the intelligence with which it is applied. Not at one point only, but at all points. A farmer may bestow infinite pains upon his plowing and the preparation of his seed bed. Then he may lose half the reward which might have been his, because he has not taken the same pains in the selection of the seed. Perhaps he has grown up in the belief that "corn is corn," and that it makes little difference what seed he plants, so it comes from an ear apparently "sound." So he plants as his father planted, and harvests thirty bushels per acre, where a small fraction of the time spent in plowing and cultivating,—if given to the selection of seed ears according to the ideas which have been thoroughly tried out at the Minnesota University Farm,—would have given him forty or fifty. The "new farming," which is transforming agriculture from a merely manual to an intellectual and business pursuit, differs from the old chiefly in this: that it directs attention to a thousand before unobserved details, the study of and attention to each of which counts heavily in determining whether a crop shall be large or small; of good or of inferior quality. And of these details those which relate to the securing of

the best seed are manifestly among the most important. For further information, apply for Extension Bulletin No. 9, issued at the University Farm, St. Paul.

## Army Worms.

Representatives of the Minnesota Experiment Station have been requested to make visits to several parts of the state, to look into the injury being done to crops by a kind of worms heretofore unknown to the farmers. It has been found that these worms are army worms; or they are closely related to and work in the same manner as the true army worms. It has also been found that the losses caused by these worms could, in almost every case, have been avoided had proper methods of cultivation been practiced.

In one case seventy acres of rye were completely destroyed by this pest. It was found that the rye was drilled into the stubble without plowing. Had the field been plowed, thus disturbing the worms in their resting stage, most of them would have been destroyed.

It will be seen that long strides may be made in controlling this insect by thorough cultivation of the land. Fall plowing is especially recommended, and, if possible, early fall plowing, followed by harrowing two or three times, is desirable. Where it is impossible to plow in the fall, spring plowing is much better than sowing the crops without thorough cultivation of the soil.

## Care of the Horse.

Farm work horses are apt to be neglected at this time of the year, because of the general rush of farm work. This should, however, not be the case; but, instead, they should have more care and attention than at any other time of the year. There are still two or more months of continued hard work ahead, and our horses should be in the best of condition. Working on the field during this hot and dry weather causes the horses to perspire, and the skin will fill with dirt and dust, which is held by the perspiration as it dries. Unless this is removed, the skin will become irritated, and it makes the horse uncomfortable. In order to remove this, and to improve the general health of the animal, he should be well brushed night and morning. It greatly adds to the comfort of a horse to be brushed in the evening after a day's hard work. The curry comb should be used as little as possible, and only to loosen dirt that cannot be removed with the brush. To groom the horse well after hard work, does not only clean the skin, but it prevents various parasitic diseases of the skin. It gives the horse a glossy coat and keeps him in better condition. If the horses have been perspiring when brought into the stable, it is a good plan to let them roll in the yard and then rinse them with water that is slightly warm. This will remove the dirt and sweat. The body should then be gone over with a curved, round scrape. Following this, the skin should be rubbed with a cloth to get it dry and lay the hair flat.

W. H. TOMHAVE.

## More Bushels From Less Ground.

The possibility of producing more bushels of grain from a given area, and thereby reducing the cost of production per bushel, is shown by President Waters, of the Kansas Agricultural School, when he says that, where Kansas "college-bred" wheat has been used for seed, the acreage yield has been increased five bushels per acre in that state. Similarly gratifying results have been obtained in Minnesota from wheat bred at the Experiment Station and the seed distributed to farmers throughout the state. "Minnesota No. 169" has increased the yield over the parent variety, as shown by an eight-year test at the station, 4.2 bushels per acre; while the increase per acre, compared with the common wheat raised over the state, is 3.3 bushels in an average of trials by eighty-nine farmers. With better cultivation, better seed selection, better fertilization, and a rational rotation of crops, every farmer in the state may increase his output, and correspondingly reduce the cost of production. The state has thoroughly demonstrated this possibility; and an intelligent following of the methods employed at University Farm will enable farmer to show equally pleasing results.

## Dog Days.

Hydrophobia is said by veterinarians to be no more likely to occur in August than at any other time of the year; but, through a mistaken notion, many regard August as a month fraught with danger. Though "dog days" are here, no connection between them and the disease has ever been traced. At this season, Sirius, often called the "dog star," passes around the sun—hence the term. Don't let the season disturb the mind in relation to hydrophobia. It may occur in any season. Not all dogs "acting strangely" are infected with the disease.

Dogs, especially young ones, in the opinion of Dr. Ravenel, of the Wisconsin University, have convulsions just as children do, from over-eating, indigestion, and particularly from intestinal worms. All they need is some physic and bromide of potash. If this treatment had been followed, in many cases valuable dogs killed as mad might have been saved to live for years. Collie puppies are especially prone to the nervous indigestion so frequently mistaken by the uninitiated for rabies.

## Aid to the Injured.

During hot weather, children having the privilege of being out of doors without shoes and stockings are in danger of poisoning by rusty nails. Miss Pearce, chief nurse of the School of Agriculture, St. Anthony Park, says that, when a child has injured his foot, the first thing to do is to determine if possible what kind of an instrument caused the injury; and, if a tack or rusty nail, or any rusty metal, make a solution of common table salt—one tablespoonful in a pint of boiled water. Take four layers of clean linen or cotton cloth, a little larger than will cover the wound. Wet this compress in the salt solution, place it on the wound, and fasten securely with a bandage. Moisten the compress every three hours, for forty-eight hours; then discontinue the moist dressing and use only a dry dressing of soft linen until the wound is healed.

## Factory Methods on the Farm.

The development of manufactures in our country has reached its present vast proportions through a careful study of methods and machinery, and the sifting out and adoption of the best; through a close husbanding of material, and the use of every available shred thereof; through the conversion of much that was formerly considered valueless waste into valuable revenue-producing by-products; through such a systematic drill and specialization of labor that, aided by improved machinery, one skilled workman now accomplishes from two to a hundred times as much as formerly. The marvelous abundance and cheapness of manufactured products is the result of these methods.

What reason is there that each and all of these "factory" ideas should not be adapted to the processes of the farm? In a sense every farmer is a manufacturer; the only essential difference between him and the factory owner being that the farmer works in partnership with Nature. And Nature shows her approval of factory methods by showering her largest rewards on those who give her the opportunity to demonstrate what she can do as a business ally.

It is the application of "factory methods" simply, which has made possible such wonderful horticultural achievements as those recently witnessed at Paris and London; where, by a close attention to every detail of specially adapted soil, selected seed, a regulated temperature and just the kind of cultivation best adapted to each particular plant, it was shown to be possible, to secure from \$2,000 to \$4,000 worth of varied products from a single acre in a year; three to five crops being raised successively on the same soil.

Factory methods in their perfection, however, will demand in agriculture the same specialization of industry that is seen in the cotton mill or the machine shop. The men who can combine, with the possession of the most advanced theoretical knowledge, the manual skill and dexterity essential to the most perfect success in each department, are few indeed. The specialization seen in the factory is the outcome of an evolution which has been going on or more than a hundred years. A similar evolution is now going on in

agriculture. It will not probably take so long to reach, here, the perfection now seen in the factory; since the factory has done a great amount of pioneering of which the farm may share the benefit. But when farm management shall have been placed on the same level, in attention to detail and in business-like procedures, as the factory, then every acre of land will be made to produce many fold as much as today; and he who is capable of securing the very best results from every one of a hundred acres will rank with the "captains of industry" in our great manufacturing centers.

## Poultry Points.

The State Experiment Station always supplies its poultry with some substitute for the worms and bugs they would get were they on a larger range.

Ventilation, both night and day, is essential to the health of poultry. Many diseases among fowls are traceable to the want of pure air.

Remember to supply plenty of grit to the young poultry. They need it as much as mature birds. Grit forms part of their digestive system.

The Incubating Season is practically over with poultry, so far as profit to the owner is concerned, and the Minnesota Experiment Station advises that all old nesting material be taken out and burned, and that all nesting-boxes be disinfected and given a coat of liquid lice-killer; after which fresh straw may be placed in them for late layers. The creosote preparations sold at lumber yards for wood preserving have been used with good effect as lice killers.

## Late Potato Blight.

Farmers are advised to be on the watch for potato blight this month. August is the month when the blight does its most disastrous work. It is doubtful if spraying now will be beneficial on the early varieties, but it can do no harm to try it with Bordeaux mixture. The late varieties are in greater danger now, and spraying with Bordeaux Mixture is the only remedy. Use from sixty to seventy-five gallons per acre. This has proven effective in Minnesota the past two years. If blight appears on potatoes anywhere in the neighborhood, spray at once, and continue spraying every ten days, in good weather, whether a field is attacked or not. Spray more frequently in hot, humid weather. Details for making the Bordeaux mixture and spraying will be sent without charge on application to Prof. A. R. Kohler, University Farm, St. Paul.

## Woman's Institutes.

Illinois has quite definitely worked out and tested a plan for Women's Institutes, which the federal Department of Agriculture refers to as worthy of special consideration. These institutes were organized in connection with the Farmers' Institutes, and have been operated successfully since 1898. The objects to be promoted are a knowledge of the composition of foods, and the combinations and preparations best calculated to meet the needs of the body; the relation of bad sanitation to disease, and the means of excluding from each home and its surroundings the organisms and conditions that threaten the health and vitality of the family; the architecture of the house, as regards the comfort of the family and conveniences for performing the labor of housekeeping; the arrangement of the kitchen, and the utensils and devices for cooking that are useful in cookery; the correct principles and best practices of domestic science; and the instruction of the young, that they may be skilled in the performance of things that relate to domestic science, etc.

Illinois has also created a central state organization of women, which holds a meeting once a year in conjunction with the state organization of Farmers' Institutes.

In Minnesota, the Farmers' Institute has been working on some of the objects outlined above. Meetings have been arranged for five different localities in a circuit; one meeting a day in each locality, from Monday to Friday inclusive; and the circuit covered in the same manner for four weeks. These meetings were given up to home subjects, and were largely attended by the ladies. In Cokato and Cannon Falls, two domestic science courses, of eight lectures each, were given.