

UNIVERSITY FARM PRESS NEWS

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

VOL. VI

UNIVERSITY FARM, ST. PAUL, MINN., NOVEMBER 1, 1915

NO. 21

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

ORCHARD AND GARDEN NOTES

November 1-8

Lay down and cover grapes and raspberries.

Cabbages make good winter feed for poultry. Secure some now.

Leave the hyacinths and other bulbs in a cool dark storage place until the roots are well formed.

Do not put a heavy mulch on perennials. It is likely to smother the plants. Straw makes the best mulch.

A final clearing of trash from the garden is due now. Trash and weeds make fine harbors for insects to winter in.

Parsnips may be left in the ground over winter. If wanted for winter use dig late in the fall and store in a box of soil in a cool place.

Do not coddle your plants. Give them plenty of light and fresh air. Keep them clean and give them what water they need—neither too much nor too little.

You'd better put a little good rich garden soil in the cellar or where it will not freeze. It will come handy to start those early vegetable and flower seeds in next spring.

Greenhouse sanitation is becoming more and more important. We cannot be too careful about preventing the numerous insects and fungus diseases from gaining a foothold.

The newest book on floriculture is "Principles of Floriculture" by E. A. White, Cornell University, published by Macmillan Company. It is a splendid book and any one interested in flowers can spend much time in studying it.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

ORCHARD AND GARDEN NOTES

November 8-15

Cover root crops with a little sand to prevent wilting.

Protect roses and perennials from moisture during the winter.

Mulch the tulip bed with straw or straw manure as soon as the ground freezes.

Clean straw, put on about four or five inches deep, makes the best mulch for strawberries.

Hubbard squashes make a fine addition to a vegetable menu and usually are easily grown.

Don't store dahlias or cannas in piles. They should be in boxes or on shelves only one layer deep.

We picked autumn-bearing strawberries as late as the second week of October. These were from spring-set plants.

Feed the birds. You owe them a living. They earned their winter food and protection by destroying thousands of worms and weed seeds.

Is your road to town rough and hard to travel over? A split-log or iron drag drawn over the road after each rain helps to give a good surface and does not cost much.

Remember the winter meeting of the Horticultural Society early in December. If you are interested in trees, fruits, flowers, or vegetables it will pay you to attend at least some of the sessions.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

HEALTH CHARTS IN RURAL SCHOOLS

The Minnesota Public Health Association is beginning a campaign for the protection of the health of the children of the one-room rural schools.

According to an announcement sent out by Dr. I. J. Murphy, secretary, the association is offering rural schools only an illustrated chart entitled "Daily Program for Boys and Girls." The chart suggests something better than pancakes for breakfast, and bears this inscription:

"The boy who doesn't play is father to the man without a job."

The charts will be given as prizes to rural schools which enter the Red Cross Christmas seal campaign. An invitation will be sent to every rural teacher requesting the cooperation of her school in the campaign which will begin with the first day of Health Week, December 6. Schools that do not take part in the campaign will be able to purchase the charts at \$2 apiece if any are left after the prizes have been awarded.

CHANCE TO GET A VISITING NURSE

Five communities of 3,000 or more have a chance to secure a visiting nurse free of charge. Dr. I. J. Murphy, secretary, says that the Minnesota Public Health Association will pay the salaries of such nurses for the five communities, of the size indicated, which sell the largest number of Red Cross Christmas seals per capita. Two or more adjacent villages or townships may unite to enter the contest provided the population equals 3,000.

Dr. Murphy says that nearly all of Minnesota's cities of 5,000 or more now employ such nurses and that the remainder are making plans to do so, and he looks forward to the time when all rural communities will also employ visiting nurses.

B. M. Cosgrove, superintendent of city schools, St. Peter, (population 4,000) believes the visiting nurse is as essential as any member of the school staff; is an absolute necessity, if communicable diseases are to be controlled among school children. He has his visiting nurse check up all absentees from both public and parochial schools. In this way many mild cases of infectious diseases which should otherwise spread their infection broadcast are discovered and controlled.

LAKE CITY PLANS BIG DAIRY MEET

Lake City will hold its first annual Tri-County Dairymen's Convention for the farmers of Goodhue, Wabasha and Olmstead Counties, November 18 and 19, of this year. Earl J. Trospier is in charge of arrangements for this convention, and has secured a lot of splendid speakers. Among these are T. L. Haecker, chief of the Division of dairy and animal husbandry of the College of Agriculture, University of Minnesota, known as "the father of the dairy industry in Minnesota"; W. A. McKerron, of the agricultural extension division of the University of Minnesota; W. F. Schilling, of Northfield, a prominent Holstein breeder and editor of the Northwest Dairyman; A. J. Glover, of Fort Atkinson, Wis., editor of Hoard's Dairyman; H. G. Van Pelt, of Waterloo, Iowa, editor of Kimball's Dairy Farmer; M. D. Munn, of St. Paul, president of the American Jersey Cattle Club and a prominent Jersey breeder; J. J. Farrell, dairy and food commissioner for Minnesota and a director of the National Dairy Council, and F. W. Merrill, of Minneapolis, an expert on creamery outfitting and management. Friday evening, November 19, will be given a great alfalfa banquet.

BARLEY-FED HOGS MAKE GOOD GAINS

"Can I fatten my hogs on barley instead of corn?" This question is asked frequently this fall, says R. C. Ashby of the Minnesota Experiment Station. The two grains are similar, as shown by the following:

	Total digestible nutrients.	Digestible Protein.
100 lbs. corn	84.1 lbs.	7.8 lbs.
100 " barley	77.9 "	8.7 "

Corn therefore, contains about 8 per cent more of total digestible nutrients, but less digestible protein, and for general feeding corn is considered about 8 per cent more valuable than barley, pound for pound.

At the Washington Experiment Station Mr. Ashby directed a feeding test, in which five lots of shoats, which at the beginning averaged 125 pounds, were fed rations as follows:

Lot 1—90 per cent rolled barley and 10 per cent tankage.

Lot 2—90 per cent rolled barley and 10 per cent tankage (different brand).

Lot 3—95 per cent rolled barley and 5 per cent tankage.

Lot 4—Ground oats and field peas.

Lot 5—Rolled barley.

The pigs were fed for seven weeks and then sold. At the time of the sale, the first four lots weighed from 190 to 225 lbs. per pig. Lot 4 made the largest daily gains, lot 3, the next largest and lot 2 next.

Lot	Grain Eaten for 100 pounds gain.
1.....	422 lbs.
2.....	419 lbs.
3.....	393 lbs.
4.....	393 lbs.
5.....	584 lbs.

These results compare very favorably with experiments where corn and tankage rations were used. Comparing lots 1 and 5 it appears that 42.2 lbs. of tankage replaced 204.2 lbs. of barley.

Barley alone is not sufficiently relished and does not contain enough protein. Milk or tankage may be fed with it to advantage. Good combinations are 90 per cent barley plus 10 per cent tankage, or 90 per cent barley plus 5 per cent tankage for older hogs; 1 pound of barley to 2 pounds of skim milk.

The barley may be soaked or ground with advantage, but tankage must not be soaked before feeding.

Corn and barley mixed are better than barley alone.

STATE PIG CONTEST A GREAT SUCCESS

(Editors: Possibly some boy in your community participated in the Minnesota pig-growing contest last summer, or possibly your community had a pig-contest club. In any event, practically every country boy in your vicinity will be interested in the results of the contest. Here they are, and they may start some boy on the road to prosperity.)

Minnesota's first state pig-growing contest was a wonderful success. Of 400 boys and girls who entered the contest in the spring, 150 completed the work. The interest spread to all parts of the state and the contest of next year promises to be even more spirited than that of this year.

Harold Bemis, aged 16, of Long Prairie, in the north central part of the state, won highest honors, receiving four prizes—the national all-star club emblem awarded to this state, the first prize of \$20 awarded to the boy securing the best results in the north central part of the state, a prize of \$8 offered by the Duroc-Jersey Association for the boy getting the best results with a Duroc-Jersey pig, and a pure-bred Duroc-Jersey pig from one of the leading breeders of the state. Harold's pig made a gain of 1.96 pounds per day at a cost of 3.9 cents per pound.

Oscar Pearson, aged 13, of Loman, in the northern section of the state, scored second-best results with a Berkshire pig which gained 1.6 pounds per day at a cost of 1.9 cents per pound.

Melvin Sansness, of Farwell, in the north central section of the state, with a Yorkshire pig which made a gain of 1.2 pounds per day at a cost of 3.2 cents per pound, won second prize in his section of the state and a special prize of a pure-bred Yorkshire pig given by Thomas Canfield of Lake Park.

The prize winners in each of the four sections of the state are as follows:

Northern Section

Oscar Pearson, Loman; Andy Morkassel, Warren; Raymond LaVoi, Fosston; and Oscar Peggler, Loman.

North Central

Harold Bemis, Long Prairie; Melvin Sansness, Farwell; Joseph Rutten, Osakis; and Fred Maurer, Mora.

South Central

Floyd Rieke, Fairfax; Amos Leger, Anoka; George Goodrich, Anoka; Cecil Ryan, Cedar; Lloyd Nelson, Litchfield.

Southern

Harry Haling, Rochester; Gordon McCourt, Austin; Owen Roberts, Austin; Julius Schottler, Austin; Edward Schottler, Austin; John Kruse, Worthington; Arthur Sorem, Bigelow; Hartley Schultz, Pipestone; Ernest Burnett, Blooming Prairie; Kenneth Wanstad, Tracy; Osmond Knutson, Blooming Prairie; Bessie Kellar, Austin; and Harry Melick, Comfrey.

Duroc-Jersey Prizes

The winners of prizes offered by the Duroc-Jersey Association are:

Harold Bemis, Long Prairie; Floyd Rieke, Fairfax; William Ross, Dundas; John Kruse, Worthington; Joseph Rutten, Osakis; Esther McGhee, Bemidji; and Hartley Schultz, Pipestone.

The winners of Duroc-Jersey pigs offered by breeders are:

Harold Bemis, Floyd Rieke, Cecil Ryan, Owen Roberts, and John Kruse.

Austin Wins Club Prize

The pig club of Austin with a membership of 15, won the first club prize, and Anoka won the second club prize. Blooming Prairie, Worthington, and East Grand Forks clubs received honorable mention.

The prizes in the northern, north central, and south central parts of the state were the gift of the St. Paul Union Stock Yards Company, and the prizes for the southern section were the gift of George A. Hormel and Company of Austin.

Special prizes of pure-bred Duroc-Jersey pigs were given by F. S. Vanderyde, West Concord; E. J. Wilson, Renville; William Shanks, Worthington; Peter Rutten, Osakis; and James L. Brandon, West Concord.

OUTSIDERS COMING TO DAIRY SCHOOL

A testimonial to the excellent work done by the Dairy School of the Department of Agriculture of the University of Minnesota is seen in the fact that among those who have registered in advance are considerable numbers from Wisconsin and the Dakotas. R. M. Washburn, in charge of the school, believes the limit of membership which will admit of efficient instruction will be reached.

There will still be room, however, for those who wish to take the new advanced creamery. This is the first time that work in advanced butter-making has been offered and is a sign of the increasing interest in good butter in Minnesota.

The School will open on November 8 and close December 4.

HOW TO UTILIZE THIS YEAR'S CORN

This year corn was about three weeks later than usual in developing. We have six silos to fill at University Farm, so we could not take the chances of postponing the cutting until a frost was clearly indicated. It generally takes two weeks to fill the silos, so we commenced filling the first silo September 15 when corn was in the milk stage. Two silos were filled and then work was suspended for a few days to allow the rest of the corn a little more time to mature. Chemical analysis was made of the silos filled first, and the dry-matter content was found to be 20.4 per cent, as against 26.03 per cent last year and 26.4 per cent as the average for the last ten years. Assuming that the stand was an average one this year, the corn is short in feeding value 21.5 per cent, or in round numbers one-fifth. This being the case, it behooves us to make the best use of it.

When the maturing process is arrested either by too early cutting or by frost, much of the nutriment remains in the leaves and stalk, and such corn will give the largest return if it is run through a fodder-cutter, cut into half-inch lengths, and fed in a feeding rack. In this way much of the stalk is eaten and little wasted. If this is supplemented with clover hay and a grain mixture of equal parts of barley meal, ground oats, and bran of flour middlings, feeding approximately half a pound of the mixture per 100 pounds live-weight, all young stock can make normal growth at a low and paying cost.

It is quite likely that much bundle corn will be fed and with equally good results, but in such cases larger quantities must be fed as more will be wasted than would be the case if it were cut up fine.

If corn is available it may be added to the list of concentrates mentioned, and if clover hay is not available, cotton-seed meal or oil meal, should be added to the mixture.

Fattening steers to be turned off the following May or June should make normal progress on one pound of the grain mixture daily for 100 pounds live-weight, and milk cows should receive daily at the rate of one pound of the grain mixture to two and one-half pounds of milk yielded per day.—T. L. Haecker, Division of Dairy and Animal Husbandry, Minnesota Experiment Station.

GIVE BEES GOOD WINTER QUARTERS

The winter losses of bees in Minnesota are great every year. Beekeepers can reduce these losses by preparing their bees for winter and giving them good winter quarters.

The chief known causes for winter losses are queenlessness, lack of numbers in colonies, insufficient food, poor food, dampness, lack of air, the breaking of clusters, and low temperatures. A queenless colony will certainly die in a few months.

If the number of bees in a colony is small, the cluster cannot generate enough heat or keep the heat it generates and the bees freeze. In the fall small colonies should be united into one big colony.

Bees must eat in the winter in order to generate heat. They must have about forty pounds of honey when they go into winter quarters. If they are short, they should be supplied early with finished frames or fed sugar syrup. Dark (not amber) honey is poor food for bees to winter on. All black honey should be removed and combs of white honey should be inserted.

Dampness in a cellar causes the combs and frames and the hive walls and cover to get wet and mouldy, and the bees perish from wet cold. Bees need fresh air. Foul air will cause excitement, and the bees will scatter and die. Excitement among bees in winter is fatal.

The present style of Hoffman frame divides the bee cluster in winter into eleven spaces, and the bees are unable to pass from one space to the other. When the bee cluster contracts during the winter, those left on the outside frames die. Some beekeepers perforate their frames for the easy passage of bees from one compartment to another. If kept in a warm place they can pass over or around the frames. In long-continued and severe cold the bees may not be able to move along the frame and they will sometimes die of hunger within an inch of the honey supply.

Bees should be kept in a cellar at a temperature of about (45 degrees). Very strong colonies, however, will survive almost any degree of cold. In hives well protected with leaves, excelsior, or shavings, bees have wintered in Minnesota very successfully, especially in sheltered localities.

Cellar wintering is at present general. But the bee-keeper should be sure to have a warm, dry, dark, well-ventilated cellar for his bees and they

should not be disturbed during their winter sleep.

With the best of care many colonies are lost every winter, which shows that there is still a great deal to learn about the best conditions for wintering.—Francis Jager, University Farm, St. Paul.

POTATOES ROTTING; STORE WITH CARE

Potato-growers in different parts of Minnesota are suffering losses through potato rots, and these losses will increase unless great care is used in storing the crop.

The two types of rot which are most serious, says E. C. Stakman of the Minnesota Experiment Station, are the late blight dry rot and black leg rot. The late blight dry rot appears on the surface of the potatoes as sunken, dark, purplish, or brownish areas. On cutting into these areas the flesh of the tuber is found to be undergoing a dry decomposition. If the air is moist such spots sometimes show white mold. The black leg rot usually gets in at the stem end of the tuber causing a soft decomposition, the margin of the decomposed areas often being quite dark or even black. If the rot gets into the flesh of the potato it may spread faster than on the outside.

For this year, says Mr. Stakman, the only thing to do is to store the potatoes in dry, well-ventilated, and cold places. A low temperature is essential. Tests have been made with potatoes, the vines of which had been destroyed by late blight, in storage at different temperatures. After two months at 40 degrees, 17 per cent of rot had occurred; at 55 degrees, 53 per cent; and at 70 degrees, 79 per cent. This kind of thing may happen to farmers this year if their storage conditions are not favorable.

Practically all of the loss sustained from late blight rot could have been prevented easily by proper spraying. Where tests have been made over a long period of years, an increase of 105 bushels to the acre has been obtained by spraying from two to four times, and other tests have shown that storage rot has been reduced from 75 per cent on unsprayed potatoes to less than 1 per cent on sprayed potatoes. The spray used is Bordeaux mixture which can be applied with Paris green at very slight expense.

To remove danger from black leg, all potatoes that show evidences of infection should be discarded when seed potatoes are selected in the spring, and after tubers have been selected they should be treated with corrosive sublimate—four ounces to thirty gallons of water.

Corrosive sublimate is a deadly poison and potatoes treated with it should not be eaten by man or fed to stock.

CARING FOR THE COLT IN WINTER

As the pastures dry up and cold weather approaches, the question of how to care for the growing colt through the winter confronts the farmer. Many colts will be taken from pasture with a goodly store of fat only to be turned out to a straw pile for feed and shelter, and will come out next spring lighter in weight than they are this fall. On the other hand, not a few colts may be ruined by heavy feeding in stalls, where they cannot take exercise.

The ideal shelter for colts is a tightly built shed, open to the south, where the animals may go in and out at their own pleasure, and where they may have the run of a good big field for exercise. Idle farm horses can best be sheltered in the same way. A dry bed and protection from cold winds, snow and rain is all that is needed.

Two parts of oats (preferably crushed) and one part of bran, makes a very suitable feed for growing colts. In cold weather a little corn may be added not to exceed 25 per cent of the ration. If clover or alfalfa is used as half of the roughage ration, no oil meal will be needed, but if the roughage consists of wild hay or corn stover, about 8 per cent of oil meal should be added to the grain ration. Where oats is high in price and barley is plentiful, a ration of crushed barley 60 per cent, bran 30 per cent, and oil meal 10 per cent should give good results.

There is a little danger of over-feeding a colt if it is properly exercised. A colt should receive at least one pound daily for each 100 pounds of live weight, and if out in the cold a little more may be used to advantage.

Growth can be made more rapidly and cheaply during the first year than at any other time, and feed should not be spared at this time.—J. S. Montgomery, University Farm, St. Paul, Minn.

See that all seeds saved from the garden are well cured, labeled and carefully stored for use next year.