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ORCHARD AND GARDEN

October 15-22.

Send your friends flowers instead of candy, and save sugar.

Take good care of vegetable and flower seed, as they probably will be very much needed next season.

It is estimated the amount of fruit and vegetables canned in the homes this year is 50 per cent greater than last year, probably more than 1,500,000,000 quarts.

An average of less than four bushels of potatoes per capita were consumed in this country each year in the ten years preceding the war. This is very greatly increased under present conditions.

The aphids may be kept off the chrysanthemum by spraying with some of the tobacco preparations, or in some cases by dusting with tobacco dust.

Do not wet the foliage of celery in storage. It is likely to decay. See that the water is applied so as to wet only the roots.

Bulbs may still be planted for indoor flowering. Hyacinths and daffodils are the best two sorts to plant. Put as many in a flower pot as it will easily hold.

There is no reason why a cemetery, in either country or town, should not be kept up as well as a park. All up-to-date communities are recognizing this more and more, yet in traveling over the country many well located cemeteries are seen growing up to weeds, brush and grass.

Do not use leaves from box elder, elm or soft maple for covering garden plants. They take up the moisture and cause the plants they are protecting to mildew and decay. Use oak leaves, as they are not so much inclined to pack.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

ORCHARD AND GARDEN

October 22-29

Plant butternuts and walnuts now before the nut becomes dry.

Soil makes a good winter protection for roses and grape vines.

Mangels and overgrown beets should be stored for chicken feed this winter.

String beans planted early in July gave a splendid quality of green beans just before frost. It is well worth while planting a few of them late.

Pyrethrum uliginosum, boltonia and the New England aster are perennials that are especially worth while for autumn flowers.

Handle potatoes and squash, and in fact all vegetables that are to be stored over winter, carefully. They will keep much longer for careful treatment.

Mulching of trees and shrubs with manure late in the fall tends to protect the roots from freezing and thawing and also helps to hold moisture in the soil.

Old fences, fence posts and fallen timber should be used this season as wood.

Be sure that evergreens and in fact all shrub plantings have a good supply of moisture at their roots before freezing weather sets in. Otherwise they are likely to die out before spring.

Some towns in the eastern states are planting a tree for every boy who has gone overseas in the army. It might be worth while to plant the Scenic and Jefferson highways through this state with trees representing boys or groups of boys gone from localities through which these highways run. A good white elm tree is as good a monument as most of the stone and granite used.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

OUTLET OF TILE DRAIN

OF FIRST IMPORTANCE

The outlet is of the first importance in tile drainage. There must be a clear fall away from it. Submerged outlets, so-called, are no outlets. They still leave that land undrained where the tile lies below the level of the water at the outlet.

An outlet right, purchased, through another man's land is usually worth what it costs. Protect your outlet with a concrete abutment. Screen it against the entrance of birds and animals.—H. B. Roe, assistant professor in agricultural engineering, University Farm, St. Paul.

CLOTHING FOR BELGIANS
REACHES DESTINATION

Stories have been afloat lately, inspired perhaps by German propagandists, that clothing to be collected for the commission for relief in Belgium by the American Red Cross for distribution by the commission to the civilians in Belgium and the occupied regions of northern France will fall ultimately into German hands.

The following telegram has been sent out by the Red Cross at its Washington headquarters:

"All clothing collected in America for Belgians is consigned 'Office commission for relief in Belgium, Rotterdam,' placed in sealed barges and sent into Belgium to neutral Holland-Spanish committee, which, working under protection of Holland-Spanish ministers in Brussels, controls final distribution of this clothing to Belgian civilians and accounts to commission for every article of clothing sent to it. Absolutely none of this clothing falls into German hands."

CHOLERA SERUM
SAVES STATE'S HOGS

The hog cholera serum plant at University Farm in August and September sent out 541,250 cubic centimeters of hog cholera serum. This was more than half of the yearly supply produced by the plant. The fact that there have been no sweeping losses through hog cholera in Minnesota this summer and fall, it may be assumed, is in part due to the fact that serum was freely used—at least this is the belief of those at University Farm interested in the cholera problem.

The United States department of agriculture says that the increased use of serum, noted in the United States, arises from increasing confidence on the part of hog raisers in the value of serum as a preventive of hog cholera.

"Serum will prevent the disease, but will not cure it," says Dr. C. P. Fitch of the department of agriculture of the University of Minnesota. "If hog cholera is complicated with necrobacillosis poor results almost always attend the use of serum."

The law under which serum is manufactured provides that it should be sold at or near cost. Because of the increased cost of pigs and labor the price of serum will be 1½ or 2 cents a cubic centimeter. Heretofore it has been sold at 1 cent a cubic centimeter.

EDITOR'S CORNER

YOUNG WOMEN WILL
STUDY JOURNALISM

Young women are showing increased interest in the work in journalism at the University of Minnesota. The outlook is for a considerable class of young women who see in the present situation, when the newspaper offices of the state are being depleted of young men because of the war, an opportunity to find attractive and remunerative service in a great profession.

The University of Minnesota offers courses which should be attractive to young women wishing training as reporters and copy readers, or who may wish to carry the work farther into editorial writing. Courses in other phases of newspaper work, such as advertising writing, will be offered later.

The demand for well trained young women in the newspaper field is constantly increasing.

SUBSCRIPTION RATES GO UP

Newspaper subscription rates are advancing in Iowa. Out of 110 newspapers reporting to Secretary G. L. Caswell of the Iowa press association, at the beginning of this year, in 1908 all but three had a subscription rate of \$1.50 a year or less, 39 of these having a subscription rate of only \$1. At the beginning of the current year only two papers of the 110 had a subscription rate of \$1 and 27 had increased their rate to \$2. The average rate in 1908 was \$1.30; the average rate in 1918, \$1.60.

It is time more subscription rates in Minnesota were advanced.

Dean Walter Williams of the school of journalism, University of Missouri, left last Sunday for the Orient on a government commission. He is to establish at Tokio the Trans-Pacific International Magazine of Finance and Economics, which is said to have the endorsement of both the American, Japanese and Chinese governments.

It is expected that the magazine will have an important influence on the policies of the nations bordering on the Pacific in the reconstruction work following the war.

NEW POINTS ABOUT
FOOD IN ENSILAGE

As the maximum quantity of nutrients is not present in corn when it is ensiled at the time usually recommended, i.e., about 10 days before it is ready to cut for shocking, it should be left until ready to cut and shock in order to obtain the maximum weight of nutrients per acre, according to a statement made by Professor Grindley of Illinois Agricultural Experiment Station at the annual meeting of the American Chemical Society in Cleveland, Ohio, Sept. 10-13.

If the ensilage is to be fed to milch cows, the entire corn plant should be utilized, but if a wintering ration only is desired the corn can profitably be husked and the grain sold and ensilage made from the remaining stover. On such ensilage fed with one pound of linseed meal per day there is an increase in weight in yearling cattle and good maintenance for the breeding herd. The cost of over-wintering animals on this ration is only about 7 cents per day, as compared with approximately 21 cents when the silage is made from the entire corn plant. Less than 50 per cent of the corn stover is utilized when it is pastured in the open, and the feed, being less palatable than the stover silage, does not produce as good nutritional results.

Another advantage in using the corn stover silage is that the silo is full all the time and ensilage is available during the late spring and early summer, for if the dry stover is kept under cover it does not deteriorate to any considerable extent and can be used to fill the depleted silos in the spring.

Filling the silos with the chopped stover does not differ from the usual methods with the exception that sufficient water must be added to produce about the degree of moisture ordinarily present when the green corn plant is used. The ensilage should be packed well in order to exclude air pockets. If these conditions are observed the farmer will find that the chemist has solved the problem for a cheap over-wintering feed and has also increased the amount of corn available for human food.—R. A. Gortner, division of agricultural biochemistry, University Farm, St. Paul.

SHEEP MAKE CLOTHING
AND FOOD FROM WASTE

The slogan "A hundred hens on every farm" might be supplemented by "A bunch of sheep on every farm," because "they are profitable; they eat weeds; they convert waste into profit; they improve the farm's appearance; they do not require expensive shelter."

As a war measure more sheep should be raised because there is a world-wide shortage of wool and mutton, and the flocks are being rapidly reduced, say members of the staff at University Farm, St. Paul. In January, 1917, there were but 541,000 sheep in Minnesota, a reduction of 97,000 since 1910.

No animal approaches the sheep in converting weeds and waste into food and clothing. There is a wealth of both in the wasted grass and weeds of barn lots, fields and roadsides. Let there be "A bunch of sheep on every farm."

The agricultural extension department of the International Harvester Company of New Jersey has issued a new bulletin giving reports from 5,000 farmers who have raised sheep and found them profitable. Send for one and help feed and clothe the world.

COURSES BY MAIL
IN USES OF WOODS

Lumbering is one of the big industries of the state of Minnesota and with its allied wood-working industries employs a large number of men, yet there is little opportunity for learning about woods, their structure, uses, qualities, etc., in the schools of the state, and the young man who goes into this industry usually does so unequipped. An opportunity for these men to study lumber and its uses is offered by the correspondence-study department of the General Extension Division of the University.

The strength of different woods, the strain they will bear, lightness, preservatives that may allow a cheaper wood to replace a more expensive kind, standard sizes, comparative tables of prices, and other matters are treated in the course. Its value is increased at present by the need for inspectors of wood in securing material for airplane construction and other war industries.

Only the simple life is honorable or even decent today.

1,000,000 BUSHEL
SAVED BY THRESHERS

A great saving of grains was made by the threshing division of the federal food administration for Minnesota this summer. The saving amounts to more than one million bushels of wheat and many thousands of bushels of other grains. The wheat alone, at \$2.06 a bushel—the average price on the farm—was worth \$2,060,000.

These figures are taken from the report of L. B. Bassett, head of the threshing division.

This result was accomplished through a series of educational meetings held in advance of the threshing season which were attended by nearly seven thousand threshermen and others interested, and by the inspection and testing of threshing machines in operation, to reduce the waste. In many cases the waste was cut 80 per cent or more. Some machines that were daily wasting nearly 24 bushels of wheat, worth \$50 or more, cut their losses to less than 5 bushels a day.

Mr. Bassett believes that the saving accomplished this year should be repeated and even improved upon next year. He suggests as a means to this end a school for threshermen to be held after corn planting time next spring. Mr. Bassett believes that the conservation of wheat through proper threshing should become a permanent policy in Minnesota.

PLANT CLOVER SEED
FREE FROM DODDER

Do not select clover seed for next year's planting from fields known to be infested with dodder, is the advice of R. C. Dahlberg, seed laboratory, University Farm, St. Paul. Dodder is a noxious weed that was practically unknown in Minnesota a few years ago. It has spread rapidly and is now found in most of the counties in the southern part of the state as well as in scattered localities farther north, as is shown by the presence of dodder seed in samples of seed sent to the seed laboratory.

Dodder is a parasite; that is, it has no root, but obtains its food from the plant on which it grows. The plant may be described as a mass of yellow or orange colored vine, and one plant may cover a square rod of area. In this state it grows almost entirely on red clover, although it is found on alfalfa, peas, raspberry vines, potatoes and various weeds. On clover it reduces the amount of forage, and if the crop is left for seed, the production is materially affected.

If in doubt as to the purity of clover or alfalfa seed, send a sample to the seed laboratory to be tested.

SO-CALLED OLIVE OIL
IS MUCH ADULTERATED

Buyers are warned that as very little genuine olive oil is being imported, the abnormally high price has tempted unscrupulous dealers to mix cheaper vegetable oils with a little genuine olive oil and to sell the mixture as olive oil. Cottonseed oil, corn oil and soy-bean oil are the principal substitutes used.

Officials in charge of the enforcement of the federal food and drugs act have instructed state and city food inspectors to watch interstate shipments of olive oil in order to prevent the sale of this mixed oil. These oils are palatable and are not injurious to health and there is no objection to their sale as food when properly labeled, say the officials, but their sale as olive oil is a fraud, and their shipment as olive oil is a violation of the food and drugs act, and also of the laws of most states.

FIGHT INSECT PESTS
BY FALL PLOWING

The more fall cultivation the less trouble from insects next year. Where grasshoppers have been abundant, plowing alone is not sufficient, disking and harrowing are necessary to break up the egg cases, says A. G. Ruggles, University Farm, St. Paul.

Eggs of stalk borers are now massed on the basis of old stalks, and all old stalks should be burned to prevent injury next year. In fact, all rubbish should be gathered and burned, as it harbors all kinds of insects.

Oak and birch trees killed by borers should be cut down close to the ground, cut into firewood and burned before next May. Dead twigs and limbs should also be removed.

Spraying machinery should be thoroughly cleaned and oiled before being put away for the winter.

We are giving our work, our time and our money, but "They" are giving their lives.

PLEDGE OF HONOR
FOR MILL FEEDS

The United States Food Administration, through A. D. Wilson, federal food administrator for Minnesota, is announcing to the people of Minnesota a pledge card system of control in the purchase of mill feeds, taking effect October 1, 1918.

This plan was adopted in order that mill feed might be distributed more uniformly, checking the lavish use of such feeds in areas near mills, where the feeds are very cheap.

The pledge as designed by Mr. Hoover reads as follows:

"In order to assist the food administration in the distribution of wheat mill feeds, I hereby undertake on honor not to use wheat mill feeds for any other purpose than the feeding of dairy cattle, poultry, young pigs or young calves, or the preparation of a weekly bran mash for working animals."

"I will not feed any more wheat mill feeds than is customarily fed to such animals, and I further agree not to have at any one time more than a sixty-day supply of wheat feeds on hand."

The food administration will also undertake to see that wheat mill feeds are rationed among the states according to the needs of each state.

GOOD PRICES FOR
HOGS ARE ASSURED

Assurance of a minimum of \$15.50 per hundred for the average of packers' droves at Chicago for hogs farrowed this fall has been given by Herbert C. Hoover, United States food administrator, to H. C. Stuart, chairman of the agricultural advisory board of the United States food administration. Announcement of this plan was received by A. D. Wilson, federal food administrator for Minnesota, at University Farm Saturday.

Mr. Hoover, in his letter to Mr. Stuart, says further: "We can consider the outlook in a few months as to the extension of this again to spring farrowing. I have myself little doubt that we will be able to continue. I do want it made clear in all these matters of price influence by the government that this is not a guarantee—it is a policy—and this will only be defeated by some unlooked-for interruption, distribution, transportation or consumption—a risk of war we must all take."

INCREASE PROFITABLE
BUTTERFAT PRODUCTION

The following are essentials in profitable butterfat production, according to H. H. Kildee, formerly of the dairy husbandry division of the University of Minnesota, University Farm, St. Paul:

Proper shelter in a warm, light, well ventilated barn. The leeward side of a barbed wire fence is an expensive shelter for milk cows.

A knowledge of the herd through the use of milk scales and the Babcock test.

Corn silage and clover or alfalfa hay as patriotic, profitable, palatable feeds.

A grain ration in proportion to milk and butterfat produced.

Fall calving as a means of increasing production as well as price at a time when more labor is available.

A bushel of grain fed before calving rather than two fed afterward. Prepare the cows for the milking period.

Water of moderate temperature. Ice water is not conducive to greatest milk production.

A milking machine in case of labor shortage.

Cooperation with the neighbors in organizing cow-testing associations and purchasing feeds in carload lots.

NEW U COURSES
FOR MAN IN SHOP

Recognizing that the work of the man in the shop is of the greatest importance in winning the war, the General Extension Division of the University is offering two courses, Shop Mathematics and Mechanical Drawing, which are of special interest to him. These courses give the workman a chance to learn his work much more rapidly than by the old method of learning by experience, and appeal particularly to the young man who sees opportunity for advancement without being ready for it. Shop Mathematics includes the mathematical material from fractions to trigonometry that a shop man must know in order to work out his problems. Its exercises are practical problems such as he meets constantly in his work. The Mechanical Drawing course is equally practical. It teaches how to read blue-prints and how to make working drawings of parts of machines.