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ORCHARD AND GARDEN
November 1-8

Farmers' Bulletin No. 879 United States Department of Agriculture, is an interesting discussion of the home storage of vegetables. Send for it. Send to the Division of Publications, Washington, D. C. for Farmers' Bulletin No. 842, "Modern Methods of Protection Against Lightning." Draw up the currant and gooseberry branches and tie them together. This will prevent the snow from breaking them down. It is well to tie young trees to stakes to prevent their being whipped about by the wind. Put a small quantity of manure about shrubs just before snow flies to prevent the freezing and thawing of the roots. Dig a few hills of rhubarb and let them freeze outside for a few weeks. Then they may be put in the cellar in soil, sand, or ashes, watered well, and shaded from sunlight, and will give some much appreciated sauce material during the winter. Garden land should be plowed late in fall and left rough. This will destroy many insects, allow the water to go deep into the soil and give a chance for sod or green manure to decay. The winter meeting of the State Horticultural society will be held in Minneapolis, December 4 to 7. Plan to take a vacation of a few days to attend this meeting.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

ORCHARD AND GARDEN
November 8-15

Look over the fruits and vegetables in the cellar and see that none are decaying. A little sand over the carrots, beets, and other root crops will hold the moisture more evenly and prevent the roots shriveling and drying out. They should be kept in a cool place. Send to the Division of Publications, Washington D. C., for Farmers' Bulletin No. 829 on asparagus and No. 837 on the asparagus beetle. Protect trees and shrubs from rabbits now. Some of the wire or wood protectors are good. Burlap, paper, or even corn fodder, may be tied on with good results. Thoroughly rotted manure scattered over the lawn just before snow comes helps to keep the snow on over winter and also adds much needed fertility to the soil. Be sure the ground is clear about trees and shrubs. This will prevent mice from finding a nesting place near the trunk and save the trees from being girdled. The United States Department of Agriculture experts have estimated that the war gardens of the United States have added more than \$100,000,000 to the country's wealth. They at least have acquainted many with gardening and outdoor life who did not appreciate either before. Tobacco preparations will keep the aphid or green fly found on house plants in check, but will not have much effect on the white fly. When plants are infested with white fly they may be thoroughly washed by dipping in water. If white flies are numerous, it may be safest to destroy the plant entirely to prevent the insect spreading to other plants.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

FARMERS WARNED
OF OATS FRAUD

The Minnesota Crop Improvement association has received word of a seed salesman operating in southeastern Minnesota who is offering farmers seed of a new kind of oats "that will not lodge." The man is said to have persuaded not a few farmers to buy at exorbitant prices. C. P. Bull, secretary of the crop improvement association warns the public against such traffickers. The most fascinating thing about the deal is the price, \$3 per bushel, and the contract plainly states that the verbal statements of agents are not to be relied upon. Everyone knows that there is no such thing as a variety of oats that will not lodge, when planted on rich or heavy soil, and when market oats are selling for from 50 to 60 cents there should be a good profit in selling at \$3. If the people would only realize that the experiment station could and would give valuable advice in regard to fake varieties, there would be fewer agents getting rich.

FEED CRISIS AND WINTER FEEDING

Coarse fodders as well as grains are scarce in the wooded sections of northern Minnesota. Yet it is advisable to winter the high-class stock and to sell only the culls. How can cattle be rationed and safely wintered under existing conditions? For several years at the Northeast Experiment Station we have wintered our horses on oat straw with a light grain ration for those doing some work. Weighed at stated intervals, they showed no appreciable losses. When we cut the straw we get better results and less wastage. We use sawdust, cull wild hay, etc., for bedding. Young cattle and dry cows are fed oat straw and rutabagas. Last winter monthly weighings showed a thrifty condition for all stock. A great deal of straw is wasted even in the timber country by exposure or by use as bedding, although many farms are near peat bogs that yield an inexpensive, abundant and superior bedding. During this season we have carried our breed sows on pasteurized buttermilk at one cent a gallon, and on pasture, with one-fourth pound of grain per hundredweight. They are going into winter quarters in good condition and have raised two litters each of strong pigs. Clover hay will form the bulk of the winter ration. Poultry presents even a greater problem. As with cattle we cull out the unproductive and unpromising stock before going into winter quarters. A great loss is entailed annually in carrying cockerels too late into the fall, feeding them longer than necessary, and facing a constantly diminishing price. We are feeding much buttermilk as a source of protein and with excellent results. Barley is being fed as a corn substitute at a saving of about 35 per cent. With wheat screenings at \$2.75 per hundredweight and oats at \$1.90 per hundredweight, we are feeding our chickens at nearly one-third under scratch-feed prices, by mixing our own feeds.—M. J. Thompson, Northeast Experiment Station, Duluth, Minn.

POTATOES MAKING EYES AT BRAINERD

Potatoes of Minnesota are turning their eyes toward Brainerd, where the third annual meeting of the Minnesota Potato Growers' association will be held in conjunction with the annual meeting of the Northern Minnesota Development association, December 6 and 7. Those in charge of the potato exhibit, which will be one of the features of the meeting, predict a fine display and excellent results in promoting the potato industry of the state. Great progress has already been made in the adoption of varieties recommended for Minnesota, and it is hoped to show at this exhibit the results of the selection of suitable varieties. Two classes of exhibits will be shown—individual and county. The individual exhibits will each consist of 15 pounds of some variety recommended for Minnesota. Prizes varying from \$6 for the best to \$1 for the sixth best will be offered. The county exhibits will consist of 15 half-bushel samples obtained from 15 farmers in the county. Not more than four varieties will be allowed in a single county exhibit. One variety is to be preferred. The first premium for the county will be a silver loving cup, the second a red silk banner and the third a white silk banner.

SEALS HELP TO GET COMMUNITY NURSES

"A tuberculosis week program, a baby week program, an epidemic, or the annual Red Cross seal campaign, may serve as an entering wedge for a permanent community nurse," says Miss C. Frances Cameron, head nurse of the Minnesota Public Health association. "In most communities of this state," adds Miss Cameron, "tuberculosis, school health and baby welfare work have been begun through the sale of Red Cross seals. As the result of the 1916 seal sale, fifty-nine Minnesota villages won a prize nurse for from one to seven weeks. Whenever the nursing service authorized as a result of the seal sale was not sufficient to make an adequate survey almost without exception association nurses have been employed an additional length of time at public or private expense. At present many of these towns are hiring permanent nurses by grouping with other small towns or having one nurse cover the entire county."

DEMONSTRATION FARM FOR EVERY COUNTY

George J. Baker, in charge of the demonstration farms, supervised by the agricultural extension division of the University of Minnesota, announces that the division is expecting to add several farms to the 18 already on its list. These demonstration farms are not owned by the division, but are operated by the owner under the direction of representatives of the division, and the desire is to have one such farm in every county in the state. The requirements are that the owner shall be progressive, yet conservative, in his business dealings; that he shall make the farm his home; shall be a married man, his wife being in sympathy with the plan of co-operation with the division and the family in the right attitude toward the community and having the confidence of the community. The farm should not be more than three or four miles from town. It may rest under a considerable indebtedness, be in need of drainage or infested with quack grass, wild mustard, Canadian thistle or other noxious weeds. The object of establishing such demonstration farms is to bring to the attention of farmers in surrounding territory the methods and practices worked out by the department of agriculture of the university, and in the operation of the farms the extension division is reasonable and practical in its requirements as to equipment. The division is soliciting the co-operation of commercial clubs, farmers' clubs and other groups in establishing such farms. Persons interested should address George J. Baker, University Farm, St. Paul.

PROTECT COWS' TEATS AND UDDER

Prevention of injury to cows' teats and udders is most important, says M. H. Reynolds, veterinarian, University Farm. Injury may be caused by dragging over high door sills, by hurrying the cows from pasture when the udder is full, and by allowing them to lie on cold, bare cement floors. The teats, especially the hind teats of low-hanging udders, are sometimes injured between the cows' hocks and the floor when the cow rises. If the injury is slight, there may be only a bit of dry blood on the end of the teat and the cow may be a little harder to milk than usual. Such cases usually heal promptly, but if the bruised end becomes infected the teat canal and the udder may become inflamed. Sometimes the end of the milk duct is permanently damaged. A severe bruise may result from a teat's being stepped on by a cow in a neighboring stall, while the cow is lying down, and if she jumps up suddenly actual tearing may result. The treatment varies greatly according to the case. Conservative treatment will often save teats that are only slightly injured. Long continued bathing with hot water and gentle massage, if given early, will often open a closed canal. Much less damage may result from leaving milk in an injured quarter for twelve or even twenty-four hours than from an attempt to force open the end of an injured teat with a milk tube or probe. When teats are badly damaged a competent veterinarian should be called. Repeated chilling of cows' udders, especially by washing and then exposing them to the cold air, often causes trouble, says Dr. Reynolds. The canal becomes partially blocked, making milking difficult. Small masses of flaky material appear in the milk. In some cases the end of the canal is partly or wholly closed by a scablike formation. Considerable irritation of the skin, particularly around the base of the teats, will usually be noticed. The remedy is, of course, a different method of cleaning the udder, in cold weather.

FOOD NEEDS PARAMOUNT

In a recent magazine appeared a striking illustration showing David Lloyd George witnessing a potato-treating demonstration presumably in England. When the director or administrator of the affairs of a great nation pressed in desperate military conflict, takes the time to observe the performance of a single principle employed to stimulate improved and increased agricultural production, it is an emphatic indication of a paramount need—more food. Such an illustration should encourage everyone aiding to help meet this need, which serves as recognition of fundamental service.

HOW TO GET CANDY BUT SAVE SUGAR

The problem of satisfying one's craving for candy without depleting the supply of sugar needed for the nations allied against Germany has been solved in part at least by the home economics division of the department of agriculture of the University of Minnesota. The solution suggests the use of corn syrup in the making of taffy. The recipe follows: 2 cups yellow Karo 1 teaspoon grated or scraped lemon rind 3 tablespoons lemon juice 1 teaspoon vanilla Boil Karo to the hard crack stage as for any taffy. Remove from the fire and stir in scraped lemon rind, lemon juice and vanilla. Pour in well-oiled tins, and when cool enough to handle, pull until light and break into pieces. The annual consumption of sugar in the United States is normally about ninety pounds per capita. In order that the immediate pressing needs of America's allies may be met, it has been suggested that the amount of sugar consumed in each household be reduced one-third. The preceding recipe points out a substitute and is recommended by those who have tried it.

PROPER SHELTER SAVES DAIRY FEED

Concentrates and roughage make very costly fuel with which to warm dairy cows sheltered on the leeward side of a wire fence these cold wintery days. Proper shelter decreases the fuel, feed, cost, and results in increased milk production. Successful dairy farmers do not overfeed, and do not feed from dirty pails, but they do feed regularly the heifer calves that are to grow into profitable cows. They also provide dry, well-lighted and ventilated pens. Careful consideration must be given to the relative cost and value of feedstuffs this winter, and the dairy man with silage, roots and clover and alfalfa hay has even more advantage than usual.—H. H. Kildee, University Farm, St. Paul.

SEED SEEKERS ARE LOOKING TO MINN.

The eyes of the seekers after seed supplies are on Minnesota, if conclusions may be drawn from the number of inquiries being received by the State Committee of Food Production and Conservation and by the Minnesota Crop Improvement association, of both of which C. P. Bull, University Farm, is secretary. "Northern Wisconsin, North Dakota and Montana want our early corn," says Mr. Bull. "South Dakota will demand supplies of Minnesota No. 13 corn and of Rustler. North Dakota and Montana are looking to us for small grains especially oats, wheat and flax. Northern Minnesota will need seed corn for both grain and fodder production. Northern Minnesota, therefore, should get its orders in early."

In order to be in touch with all of the seed supplies available, the crop improvement association has sent out large numbers of letters asking for information of persons who will have seed of any kind for sale. If seed will be specially needed in any place, the fact will be noted, and efforts will be made to bring supply and demand together.

WAR PROBLEMS FOR THE SHORT COURSES

The agricultural extension division of the University of Minnesota is planning to include in its short courses held in various parts of the state discussions of topics of pressing importance in connection with the war. Discussions of this kind will be in addition to the regular courses of permanent interest to farmers and farmers' wives. The number of five-day short courses this winter will be limited. The rules that have been observed in the past will be followed closely this year. Only one such course will be given in a county, only two will be given in succession in the same community. Local committees will be required to furnish rooms needed, janitor service, heat, lighting, drayage and supplies used locally in giving demonstrations. Such supplies seldom cost more than \$10. Petitions for first year courses must be signed by 75 men and 40 women; for second year courses, by 100 men and 50 women. Full information may be had by addressing agricultural extension division, University Farm, St. Paul.

SALE OF BREEDING STOCK MEANS LOSS

Feed crops for livestock are shorter than they have been for many years and grain prices are higher. The temptation to accept the present high prices for meat stock is great. The farmers in many places are yielding to the temptation to sell, and for this they are likely to pay the usual penalty for yielding to temptation, which is repentance. Reports of heavy shipments from territory that sadly needs livestock are frequent. Foundation breeding stock even is being sacrificed in some cases. All agree that this is no time to keep surplus stock that is not yielding a product or making gains, but never was the need so great nor the reward more promising for maintaining on every farm an adequate foundation of the best breeding stock. Farmers should save the breeding stock. To maintain fertility: The application of manures from livestock has proved to be the best and most economical way of maintaining production. Land that is not manured frequently becomes so depleted in fertility that profitable yields cannot be obtained. On light sandy lands or lands that are subject to drouth especially, it is important to apply manures. Therefore, even those who this year are short of feed owing to drouth, should manage, if possible, to maintain their foundation stock. To convert waste products into cash: Waste land and stubble fields may be pastured, corn stalks, straw, and other coarse feeds, otherwise unmarketable, may be turned into cash for the farmer by cattle or sheep. Through the pasturing process it will be possible at the same time to retain on the farm valuable fertilizing material. To supply meat products: The meat supply of the United States is shrinking. It is estimated that there is now produced only one-half of a beef and three-fifths of a hog per capita, which is below former years. Good prices for livestock are likely to prevail for some time and it will be possible to make good profits from properly conducted stock raising. While there are other reasons which might be advised for keeping livestock, the three mentioned are fundamental and sufficient, warranting every land owner in borrowing money to buy feed and going to almost any extreme to preserve his foundation of breeding stock.—Andrew Boss, University Farm, St. Paul.

RED CROSS SEALS ARE KIND TO BUY

From the office of Dr. I. J. Murphy, state manager of the Minnesota Public Health association, comes the statement that certain persons with apparently malicious intent, are disseminating misinformation regarding Red Cross Christmas seals. The Red Cross, greatly extending its work now that the country is at war, plans this year to support in every state a war tuberculosis fund. In some counties there are workers who are launching seal campaigns of their own to support a nurse or nurses in the county. The acute need of today in Minnesota is not funds for the employment of nurses, but more qualified nurses; there are not enough to fill half the places already open in the state. The American Red Cross seal campaign is part of a national movement for the control of tuberculosis. A nation-wide campaign will always overshadow any local campaign no matter how great the local interest. Anyone who proposes to obtain Red Cross Christmas seals from any source except through the Minnesota Public Health association attempts deceit. The association has the exclusive control of the campaign in the state. The intelligent co-operation of every individual and every organization is needed in order to meet our war obligations and to place Minnesota in line for the national pennant the third consecutive year.

HANDBOOK FOR COUNTRY EDITORS

The division of publications and rural journalism in the department of agriculture of the University of Minnesota has a supply of stylebooks for the use of editors and newspaper correspondents. Copies of these handbooks for the use of country correspondents of Minnesota's weekly papers may be had without cost by addressing: Office of Publications, University Farm, St. Paul.