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ORCHARD AND GARDEN.

October 1-8.

Save plenty of seed corn and seed potatoes for next year's planting.

Apples keep well, wrapped in paper and stored in a clean cellar where there are no odors.

Apples will keep better if they are picked carefully from the trees and wrapped immediately in paper and placed in boxes in a cool cellar. Rough handling causes quick decay.

Fall plowing disturbs many insects and weed seeds in the garden, consequently they do not come back next season. As a rule the land can be used earlier if fall plowed.

It is best to feed liquid manure to plants after they have been watered with clear water, as they are likely to take the liquid manure up too rapidly.

Rutabagas cut in two and hung in the chicken house make good green feed for the chickens during the winter. Mangles, large beets and cabbage are also good.

Euonymus, or Wahoo, and Japanese barberry fruits make good table decorations at this time of the year. Other plants with bright colored berries are the wild rose and thornapple.

Well rotted cow manure around chrysanthemum plants makes a good mulch, or it may be put in water and the liquid used once a week for watering the plants.

The commercial tobacco preparations will keep in check the green and black aphid found on chrysanthemums at this time of the year. Tobacco tea is easily made by soaking tobacco stems in water until the liquid is the color of strong tea. Spray this over the plants as often as insects are found on them. It is, of course, desirable to spray the plants with clean water 15 or 20 hours after using the tobacco water.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

ORCHARD AND GARDEN.

October 8-15.

Trim and lay down the grape vines ready for covering as soon as the ground begins to freeze.

Good celery can only be obtained by a liberal supply of moisture, food and careful blanching.

Cover roses with either soil or straw, taking particular pains to keep them dry during the winter.

This is a good time to rid the garden of weeds. Collect all green materials in the garden and either burn them or pile them in such a way that they will decay.

Tulips, hyacinths, daffodils and crocuses planted at this time of the year will give a variety of flowers in the window garden next spring.

A good collection of butternuts, walnuts and other home-grown nuts should be made at this time. These, properly dried and stored, will be much appreciated during the winter.

Plant outdoor tulips about three inches deep in well drained land. If the bulbs cannot be obtained before the ground freezes, it is well to cover the bed with straw to prevent freezing until the bulbs are planted.

In order to get good seed of sweet corn or popcorn it must be thoroughly dried before it is subject to cold. Hanging in an open, warm, ventilated room or shed, or even outdoors on bright days, is a good way to accomplish this.

Put a good supply of rich garden soil in the basement or cellar where it will not freeze and where it will be available for use in sowing seed and making the hotbed next spring.

It is said that oak leaves are splendid material for storing vegetables in over winter. The leaves from the soft maple and basswood are too light and collect moisture too easily. Only dry, coarse leaves are desirable for this purpose.

Many of the garden flowers, such as geraniums, nicotiana, petunias and others, may be lifted and grown until early winter in the house. Their places may be taken in late winter and early spring by a judicious selection of flowering bulbs. These all prove especially valuable for use in sick rooms.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

Restaurants and hotels are restricted to two pounds of sugar for every ninety meals served. This includes sugar for kitchen as well as table use.

The present household sugar ration—with little chance of increase—is two pounds a month in America, two pounds in England, one and one-half pounds in France, and one pound in Italy.

U. ALUMNI PLANNING TO AID RED CROSS

The alumni and friends of the University of Minnesota, in their campaign for \$30,000 to establish a University of Minnesota Relief Unit under the American Red Cross, have been offered the assistance of Maria Sanford, so widely known to Minnesotans.

Miss Sanford is 81 years young, a vigorous speaker and full of enthusiasm for this movement. She offers to any person or town subscribing \$100 to the Minnesota Relief Unit fund, to give a lecture at such place as may be designated, for her expenses, the proceeds of the lecture to go to the fund. If two small places will unite in guaranteeing \$20, \$10 to go to the Minnesota Relief Unit directly and \$10 to go as payment on Miss Sanford's pledge to the unit, Miss Sanford will give a lecture at either of the places, for her expenses, leaving the remainder of the proceeds as a further contribution to the unit.

Friends of Miss Sanford throughout the state, it is believed, will be glad to make arrangements to secure a lecture by so able a speaker on such favorable terms, especially when it stands for an expression of the University's ideal of service.

CLEAN MILK PAIL PROTECTS HEALTH

The chief cause of inferior milk is the presence of bacteria. Milk ordinarily contains from fifty thousand to a million or more bacteria per cubic centimeter (1 cc. equals 15 to 18 drops). Most of the bacteria which get into milk come from pails, strainers, coolers and separators which have not been thoroughly cleaned. R. M. Washburn of the dairy division of the University of Minnesota recommends the following method for cleaning utensils:

1. Rinse with cold or lukewarm water as soon after use as possible.
2. Wash with brush and hot water which contains washing powder.
3. Rinse with clean hot water.
4. Steam for thirty seconds if live steam with pressure is available, or for five minutes if the farm steam sterilizer is used.
5. When steaming is impossible, thoroughly sunning and airing is next best, care being taken, however, that road or barnyard dust does not undo the good work done.
6. After steaming or scalding cans, pails, etc., they should be dried by their own heat and by allowing steam to escape, not by wiping the inside with a cloth. Wiping reinfected the surface so recently cleansed.
7. Keep dry and protected from flies and dust.

EDITOR'S CORNER

NEWSPAPER HISTORY IS REPEATING ITSELF

Because ink is scarce, paper high, men are being drafted and lots of other things are happening to make it difficult for the editor to get out his paper these days, the editor must not think that his experience is unique. The same kind of thing happened during the War of the Rebellion. Those who are interested should get from their library James Melvin Lee's "History of American Journalism," recently published, and read the chapter on "The Civil War Period." Ink was so scarce in those days that home concoctions and "near inks" were used. Printing paper doubled in cost the first year and again in the second year, eventually bringing 30 cents a pound. Wages went soaring and men, often essential to the success of an enterprise, were called into service.

It may not help much to know all these things, but it is comforting to feel that the situation isn't so bad as it was for our forefathers.

Incidentally, it is interesting to note that out of the Civil War situation grew the use of "patents." Numerous country weeklies found themselves so severely handicapped that they had half of their pages printed in neighboring cities.

SURVEY OF WISCONSIN PRINTING INDUSTRY

A survey of the labor situation in the printing and publishing industry in Wisconsin made by Walter Mayer, secretary of the Wisconsin State Franklin Club, and R. G. Lee, of the extension division of the University of Wisconsin, indicates that there is not a large shortage of skilled workers in Wisconsin, and that wage increases have not been abnormal. It also shows that women are being used to a larger extent than heretofore to fill the gaps left by men departing for war. Many shops, though not so many as the situation demands, are training boys and girls as apprentices.

MINNESOTA BOYS EAGER FOR DRILL

Minnesota boys below draft age in great numbers are interested in preparing for possible future calls to military service. This is indicated by frequent inquiries at the office of D. D. Mayne, principal of the school of agriculture, University of Minnesota, as to where military drill may be obtained.

In writing to Mr. Mayne the boys are going right to headquarters. Mr. Mayne announces that the school of agriculture this year will put special emphasis on military drill, giving exactly the same sort of training to the students in the school that will be given to those of the Students' Army Training Corps in the various colleges of the university. The chief difference will be that the boys of the school will wear cadet grey uniforms instead of the khaki and will not be members of the United States army.

Mr. Mayne says this is the year for the boy to go to the agricultural school. By doing so he will prepare for two opportunities—one growing out of the increasing demand for skilled men for the farm, and the other out of the demand for men who know something about military matters.

DIFFICULT CHURNING NOT CAUSED BY FEED

Difficulty in churning never occurs when cream from fresh cows is used. Cream from only one cow and that a "stripper" churns hard because it contains more curd than the fresh cow's milk, and the fat is harder. The trouble has no connection with failure to supply salt or with the character of the feed given the animal, says C. H. Eckles, the new head of the dairy husbandry division of the Minnesota college of agriculture.

The first thing to do is to make certain that the cream is not too thin and that the temperature is right. Having these conditions right does not always remedy the trouble. In bad cases there is no practical remedy, especially when the milk all comes from one cow. A cow that is producing milk that does not churn easily should be dried up as soon as she has been in milk ten months or more. Adding cream from a fresh cow will generally remedy the trouble if not too thin and if the temperature is right.

PLANT MORE WHEAT; SAVE MORE WHEAT

David F. Houston, secretary of agriculture, is calling on American farmers to plan for a large acreage of wheat for 1919, and the food administration is urging upon American housewives the continued conservation of wheat flour, according to advices received from Washington at University Farm. The need is to replenish America's wheat surplus, which was practically exhausted by the extreme demands of the present year.

Conditions are such that there is little doubt that the farmers will plant more wheat this fall and next spring than ever before. A large crop of wheat this year and the hopeful change of conditions on the battlefield, however, may lead consumers to diminish their efforts at conservation. The food administration trusts that this will not be the case.

Help toward conservation of all kinds is found in a bulletin called "Conservation Recipes and Suggestions" issued by the agricultural extension division, University Farm, St. Paul. Copies of this bulletin may be had without charge by addressing Office of Publications, University Farm, St. Paul.

SUGAR-BEET SIRUP HELPS SAVE SUGAR

Every farmer who is within reach of a patch of sugar beets should make a batch of sirup for his own use during the coming winter. Sugar products of all kinds are so scarce that every quart of sirup made at home serves the cause.

By means of equipment that can be improvised on any farm, a very good sirup can be made from sugar beets. The sirup is good for both table and cooking purposes. One bushel of fairly good beets will make three quarts of sirup. No previous skill is necessary; only a little "horse sense" in following simple directions. Those interested in making some sirup can secure a bulletin describing the process by writing to Division of Publications, University Farm, St. Paul.—J. J. Willaman, plant chemist, University Farm.

Give your neighbor a lift—this war is a single front under a single command—what is anybody's trouble is everybody's trouble.

NEW MAIL COURSE TO MEET WAR NEEDS

A course in Business English, devoted to the use of English in business letters and other communications, is offered by the department of correspondence instruction of the General Extension Division of the University of Minnesota.

Many men and women are today applying for such a course because the rapid promotion of the kind that is now taking place does not permit them to "learn by experience," but requires them to get their training as quickly as possible while they continue in their positions. Practically the only solution of their problem is the night class or the correspondence course. The latter has the advantage of being available everywhere and of allowing a good deal of freedom in the time used. The course aims to give "punch" to business communications; to make them "take" with their readers.

A correspondence course in Banking is also offered to aid in the work of training men or women for banking positions.

FALL TREATMENT FOR THE INSECT PEST

Late fall plowing is generally recognized as one method of preventing insect injury to crops. It may be well, however, to remind farmers and gardeners that rubbish left in piles along fence rows or in fence corners or in the orchard or kitchen garden affords one of the best kinds of winter quarters for insect pests in various stages. Trash of this kind should be cleared away, preferably by burning. This will undoubtedly destroy many injurious insects which would lay their eggs in the spring or would complete their development in the spring.

Large numbers of cutworms and other caterpillars which pass the winter in the ground and start into activity in the spring have been parasitized by small flies which sting them and lay in them their eggs. These eggs hatch into tiny worms which live on the juices and substances of the bodies of the immature insects, so that in the spring, instead of completing their transformation or continuing their growth and their destructive work they perish.

The subject of beneficial insects—for there is a large class of insects that are helpful—is an extensive one and should be more fully discussed among farmers than it is. They should learn, as far as possible, to distinguish their friends in the insect world. Many of the parasites mentioned are so small that they would never be observed by the farmer, but there are many predaceous insects, beetles and others which the farmer should protect rather than destroy.—F. L. Washburn, division of entomology and economic zoology, University Farm, St. Paul.

PROTECT NAVY BEANS FROM WEEVIL PEST

Navy beans may be protected from the ravages of weevils by heating them in the oven or by the use of carbon bisulfide, says A. G. Ruggles, state entomologist.

For beans that are to be used as food, get from your grocer a package of heat testing wax, approved by the Minnesota food administration. One box of wax costs 5 cents and contains 20 tests. Put the beans in a pan, not more than four or five inches deep. Put the testing wax on a piece of paper on top of the beans and put the pan in the hottest part of the oven. Heat the beans until the testing wax melts down to a grease spot. With a coal or wood stove, have a slow fire, and with a gas, gasoline or kerosene stove have the fire as low as it will burn well. The wax should melt in ten or fifteen minutes. Then remove the wax and stir the beans well. Leave them in the oven for 45 minutes after the wax melts. With a coal or wood stove leave the oven door open, but with a gas, gasoline or kerosene stove, turn out the fire and leave the door closed.

As heating kills the life germ, beans that are to be used for seed must not be treated in this way. The best way is to put seed beans in a tight vessel or box and place a plate or saucer on the beans. Pour a small quantity of carbon bisulfide into the saucer and close the box tight for 36 hours. Use about a tablespoonful for each 10 or 15 pounds.

Carbon bisulfide must not be used near a fire or an open light, as it is as explosive as gasoline.

The coming year is the year of the big drive that should close the war. The big drive will require every ounce of energy that America can give. This means food conservation all along the line. BEGIN NOW!

A CATTLE RATION FOR WAR TIMES

"Can a satisfactory dairy ration be made from straw, bran and mill by-product feeds?" asks a Minnesota county agent. "The price of hay is so high that many farmers in this county threaten to sell off their herds rather than feed it."

The Wisconsin experiment station reports that such a ration would not properly nourish an animal's body.

The leafy part of the plant is necessary to furnish the elements needed for growth and reproduction. Silage furnishes these vital elements in an available form. A liberal supply of corn silage and straw, with a small amount of hay and a few pounds of mill by-product feeds, is the war-time cattle ration. Silage is the cheapest available roughage, considering its feeding value. It saves grain and prevents the loss of calves by properly nourishing the pregnant cows. A full silo means food insurance.—J. C. Cort, dairy division, University Farm, St. Paul.

SMALL QUICK GAINS FOR THE STOCKMEN

Small, quick gains in the handling of feeders is suggested by Carl W. Gay, head of the animal industry division of the department of agriculture, University of Minnesota. Feeders started at from 880 to 1,000 pounds and marketed at from 1,150 pounds to 1,250 pounds will give satisfactory results under conditions such as exist this year. It is possible to make this gain without the extensive use of grain. A high finish is not desirable this year.

The liberal use of corn silage, three pounds of old process linseed oil cake or high grade cottonseed meal, roughage of clover or alfalfa, or oats straw if the hay is not available, make a good ration.

WISE DAIRYMEN FEED COWS LIBERALLY NOW

Cows which are not well fed at this time of the year go into winter with a handicap, thin in flesh and with a reduced milk flow. For this reason authorities at University Farm say that wise dairymen feed their cows liberally during the fall months. It is not only expensive but useless to attempt to bring cows back to normal flow after they go on winter ration. It pays to begin feeding liberally early.

It pays also to provide cows with ample protection from fall winds and rains. Comfortable cows give more milk.

CITY LEAGUE WILL MEET IN ROCHESTER

Plans for the sixth annual convention of the League of Minnesota Municipalities at Rochester, Minn., October 16 and 17, were announced in the August issue of the Minnesota Municipalities, published in Minneapolis.

The league represents a large number of aggressive communities which are seeking to give their citizens the best in government and utilities available. Problems of public health, street paving in war times, the stopping of wastage, and the cleaning of water-works mains are some of the subjects that will be discussed, following reports of special committees. Charles Zueblin and C. G. Hoag are among the principal speakers. Rochester is planning to entertain the guests of the convention with whole-hearted hospitality.

BUTTER SHIPPED BY PARCEL POST

Parcel post has been found a useful means of sending butter from producer to consumer. Cheese may also be transported in the same way without difficulty. How to make use of the parcel post as a delivery agent is told in Farmers' Bulletin 930, issued by the United States department of agriculture. Copies may be had free by addressing the department at Washington, D. C.

VICTORY GARDENS FOR NEXT YEAR

Planning victory gardens for next year should be one of the fall and winter occupations of loyal Americans, says R. S. Mackintosh of the agricultural extension division of the University of Minnesota, and president of the Minnesota Horticultural Society. As a preliminary step to such planning, Mr. Mackintosh urges that gardens should all be cleared of weeds and other rubbish this fall and supplied with plenty of manure. With a beginning of this kind consistently followed up, Mr. Mackintosh believes that Americans will have a victory crop of choice vegetables to aid in the saving of wheat, meat, sugar and fats next year.