

UNIVERSITY FARM PRESS NEWS

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

VOL. XII

UNIVERSITY FARM, ST. PAUL, MINN., MAY 15, 1921

NO. 10

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

Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized July 29, 1918.

EDITOR'S COLUMN

Shakopee Tribune Thriving

D. W. Byrne and E. M. Lawless make a great team for The Shakopee Tribune. Together they are getting the business and putting out a strong paper editorially.

School Departments Popular

School departments in country papers are not as common as they ought to be in view of their popularity when given a good trial. It is never too late to begin.

Home Builders' Page in Vogue

A "Home Builders' Page" is now a feature of several exchanges which come to the desk of Farm Press News. As a business builder for the publisher, and let us hope for the advertiser as well, the page is so far a great success.

Editorial Prizes Awarded

The Springfield Advance-Press won the cash prize of \$50 offered by the St. Paul association for the best report of the winter meeting of the Minnesota State Editorial association, held recently in St. Paul. The Bemidji Sentinel was first in a similar contest concerning the last meeting of the northern Minnesota editors at Crookston. The Verdale Sun was second and the Bemidji Pioneer, Warren Sheaf and Fergus Falls Tribune were given honorable mention.

Letterheads for Farmers

Which sounds better, asks an exchange, "Maple Grove Farm, William Jones, proprietor," or "Bill Jones' place down by the river?" Nicely printed letterheads give tone and character to any business. Ask The (name of your paper) about them.

Minnesota Second in Potato Production

Minnesota makes a good showing among the leading potato growing states, ranking second both in the matter of total production and yield to the acre. Its total yield, based on five-year averages, 1915-1919, was 27,894,000 bushels, and its acre yield was 94 bushels for the same period. Maine, which supplements its climate with fertilizers to make up for soil deficiencies, stands the lowest for total production in the list of six ranking potato growing states, but is first in the order of acre yields. It raises an average of 190 bushels to the acre against Minnesota's 94. New York, first in bulk production, is only fourth in acre yield.

Real Measure of Success

Success in agriculture is measured not so much by the fertility of soil, or the kindness of nature or by environment, as it is by the ideals, the training and the initiative of the farmer himself.—Frank G. Heyler.

Death of C. T. Kelley a State Loss

The death of Charles T. Kelley, editor, state builder and public official, is sincerely regretted by a large circle of friends in the northwest. Mr. Kelley always gloried in the progress of Minnesota, particularly in the development of northern Minnesota to which he contributed in large degree.

CONCRETE WALKS FOR THE FARMER

Every enterprising village or city considers it absolutely necessary to have concrete sidewalks. H. B. White of the agricultural engineering division, University Farm, believes that such walks are even more necessary on farms than in towns.

"Permanent walks may be built," he says, "by removing a few inches of earth, filling in with gravel and making the walk four inches deep on top of the fill. One sack of Portland cement, two cubic feet of sand and four feet of coarse gravel will make a permanent walk at a cost of about \$1 per square yard.

"It is often an advantage to be able to do part of the work in bad weather, and in this case blocks two inches thick and two feet square may be made up under shelter and laid on gravel to serve for drainage and to prevent heaving by the frost. The blocks retail just now at 27 cents, but the farmer may be able to make them at even a lower cost.

"Floors and steps can also be made on the farm. Our division men will gladly respond to requests for further information."

ORCHARD AND GARDEN

May 15 to 22

The wheel hoe lightens the garden burden. Have you tried it?

Sow seed of late cabbage and cauliflower for transplanting next month.

Get leaf eating insects as soon as they begin to work. Some propagate remarkably fast, so it is best to keep ahead of them.

Golden currant, plums and double flowering plums were among the flowers out before May first this year.

Keep formal hedges neatly sheared all season. An ill kept formal hedge is no credit to the owner.

Plant sweet corn, peas, beans and, if the ground is warm and settled, cucumbers and squash may be planted.

Make sowings of root crops, lettuce, etc., now. Plan to keep a good vegetable and flower supply up all the time.

Nasturtiums do not require rich soil, in fact, if put on rich soil they will produce more vine than flowers.

Rosa rugosa makes a good guard plant at the entrance of a walk. It is stiff and yet its glossy foliage and bright flowers and fruit make it attractive all the season.—Le Roy Cady, associate horticulturist, University Farm, St. Paul.

ORCHARD AND GARDEN

May 22 to 29

Keep out all weeds before they get started. It is easier and cheaper.

Dahlias may be set now. They require cool moist weather for best development. So early fall as a rule gives best flowers.

Geraniums and other bedding plants may be put out now. Many annuals may be moved to permanent quarters.

Make at least three different plantings of gladiolus in the garden. There are few better flowers for all purposes.

Keep flowers of everbearing strawberries picked until about July first. Stronger plants will result, giving more fruit in the fall.

Extra good growth of musk melons may be had by putting a bushel or so of well rotted manure in the bottom of each hill. Plenty of water during warm dry weather also helps.

The Northwest Peony and Iris society will hold an iris show in the Pence automobile building, Minneapolis, early in June. Late in the month the summer meeting and show of the State Horticultural Society will be in order.—Le Roy Cady, associate horticulturist, University Farm, St. Paul.

FERTILIZERS TRIED OUT IN 8 COUNTIES

Commercial fertilizers used in trials made in 1920 by the university department of agriculture, cooperating with the American Agricultural Chemical company, on the fields of 27 potato growers in Anoka, Clay, Hennepin, Isanti, Mille Lacs, Ottertail, Sherburne, and Wadena counties, increased the yield from 25 to 54 bushels an acre when the application was light, and 19 to 136 bushels when the fertilizer was heavily applied. A 3-10-3 fertilizer—ammonia, 3 per cent, phosphoric acid, 10 per cent, and potash, 3 per cent, which now costs \$48 a ton—was used. Two rates of application were employed, the light one being 400 to 500 pounds and the heavy one 800 to 1,000 pounds.

"In most cases," says P. R. McMiller of the division of soils, University Farm, "the fertilizer was applied in the row by using a potato planter with fertilizer attachment, but where this machine was not available the furrows were opened with an ordinary planter, from which the covering disks had been removed, the fertilizer scattered by hand along the bottom of the row and covered with a shallow layer of soil; then using the planter with the disks replaced, the potatoes were put in the rows.

"The soils on which the trials were carried out were mostly sandy loams. The cost of the fertilizer for each bushel increase ranged from 18 cents to \$1.77, with an average of 36 cents per bushel with the light application and of 51 cents a bushel with the heavy application."

Mr. McMiller points out that excessive rainfall in the early part of 1920 and a prolonged drouth in the latter part served to reduce the increase in yield, and consequently to raise the cost of fertilizer for each bushel increase.

WILL COMMERCIAL FERTILIZERS PAY?

"The extent to which the application of a commercial fertilizer will affect the yield of potatoes in any field will depend," says P. R. McMiller of the division of soils at University Farm, "upon the weather as well as upon the soil and the composition of the fertilizer. The more favorable the weather the greater probability of a profitable increase, while the more productive the soil is naturally and the better it has been managed in the past, the less it is likely to respond. The profit will depend upon the selling price of the potatoes, the cost of the fertilizer, as well as upon the increase in yield.

"Commercial fertilizers contain either one, two or three fertilizing constituents—nitrogen (in the trade usually referred to in terms of ammonia), phosphoric acid and potash. A so-called 'complete fertilizer' is one that contains all three. The composition of a fertilizer is shown by a formula in which the percentages of the three constituents are always reported in the order—ammonia, phosphoric acid, potash. Thus a 3-10-3 fertilizer contains nitrogen (3 per cent expressed as ammonia), phosphoric acid, 10 per cent, and potash, 3 per cent, while a 0-10-10 contains no nitrogen but 10 per cent phosphoric acid and 10 per cent potash.

"While we may expect marked increase in yield from the use of the complete fertilizer, potato growers in general would be unwise to begin a large scale use of commercial fertilizers without having first tried the material on a small scale upon their own fields. For trial purposes we would advise a rate of 500 to 1,000 pounds per acre, using a complete fertilizer, such as a 2-8-5, 3-10-3, or 4-8-6. If any interested potato grower will fertilize a few rows through the center of his main field he will usually be able to obtain more information as to what will be profitable on his farm than the experiment station or any fertilizer company can give him.

PRESERVING EGGS A TASK FOR TODAY

Home preservation of eggs should be attended to this month if the task has been neglected so far in the rush of other spring work. Various methods have been tried, but Annabel Campbell and other poultry authorities of University Farm agree that water glass (sodium silicate) gives the best results.

Eggs used for preserving should have clean whole shells and should not be more than one week old. A stone jar makes the best receptacle, but wood, porcelain or glass can be used. Distilled or freshly caught rain water is best; hard water should never be used. The following directions are recommended by Miss Campbell:

Boil water, then allow it to cool and add water glass (one part water glass to nine parts water by measure). Beat mixture thoroughly with a wooden paddle, and place mixture in receptacle. Add eggs, rejecting all that have a tendency to float. The solution must cover the eggs completely. Cover receptacle closely to prevent evaporation. Examine eggs occasionally, and, if necessary, add more water, so that eggs will be at all times completely covered.

BRIGHTER LIGHTS FOR FARM HOME

Bright lights on the farm will help to keep the young people from going to the bright lights of the cities, in the opinion of E. A. Stewart of the division of agricultural engineering, University Farm.

"This is the time of year," he says, "when farmers should plan for any improvements in the fixed home equipment. Have you become disgusted with the old kerosene lamps? Now is the time to make your plans for installing an acetylene gas lighting plant, or an electric light plant. Many improvements in both of these types of lighting equipment have been made the last few years. They are a paying investment. If you feel that you cannot afford this outlay at the present time, make one step towards better light. You and your children will have better eyes, do more valuable reading and be more contented if good lights are provided in the home. There are several good portable gasoline lamps and lanterns on the market. They cost but a small amount and have given satisfactory results for years."

Information and advice on farm lighting systems can be secured by writing to Mr. Stewart at University Farm, St. Paul.

Story of Minnesota Wheat

BREEDING WHEAT RESISTANT TO RUST

One of the important projects of the experiment station at University Farm is the attempt to produce spring wheats which are resistant to black stem rust.

While no variety is as yet available for distribution, much progress has been made and the studies indicate that the rust problem eventually can be solved by the breeding of resistant varieties, although the task is a difficult one. Work is being carried on under the joint cooperation of a representative of the office of cereal investigation, U. S. Department of Agriculture, and the respective staffs of the stations of plant pathology and of plant breeding.

It has been learned that there are several strains of the black stem rust which can be differentiated only by their effect on wheat varieties. One step taken has been to determine the number of such racial strains of rust which are present in the northwest. The next step has been to find varieties resistant to each separate strain or to several strains.

The method of attack can best be illustrated by giving actual results. Kanred is a winter wheat which is resistant to several strains of stem rust. It has been crossed with Marquis and by the application of Mendel's law of heredity we now have a spring wheat resistant to the forms of rust to which Kanred is resistant. A resistant durum was crossed several years ago with Marquis. By growing extensive progeny we have obtained from this cross several resistant wheats which resemble Marquis in other characters.

The next step is to combine the resistance of these various wheat strains in a single variety. This can probably be accomplished by crossing and selection. Meanwhile the resistant strains which we now have will be tested for yielding ability and for milling quality.

In solving breeding problems the investigator first determines just what characters are needed in the final variety. Individual characters, yielding ability, rust resistance, etc., are then sought in known varieties. After finding varieties which excel in special

characters, crosses are then made. Re-combination of characters occurs in the second and later generations following a cross. By selection the desirable form may be isolated.—H. K. Hayes, professor of plant breeding, and E. C. Stakman, professor of plant pathology, University Farm, St. Paul.

BARBERRY ERADICATION TO PROTECT WHEAT

The common barberry should be eradicated from Minnesota. Not a single bush should be permitted to grow within the state. The destruction of the barberry is the only immediately available method for reducing the menace of black stem rust.

Black stem rust gets a start in the spring on the common barberry. The black stage of the rust cannot cause rust directly on grains and grasses, but must first infect the barberry from which the rust then spreads to grains and grasses.

Barberry bushes already are beginning to rust. Heavily rusted bushes were found on April 25 near Heron Lake and on April 26 near St. James. Within about ten days this rust will spread to grasses or winter wheat, and then it soon will spread to spring wheat.

There still are thousands of barberry bushes in Minnesota. Since the spring of 1918 more than 750,000 bushes have been found. Many have been destroyed, but many still remain to spread rust. The Minnesota Agricultural Experiment Station and the United States Department of Agriculture are doing everything possible to locate and destroy the bushes. Every farmer can help by reporting the presence of barberry bushes to his county agent or to the plant disease department of the experiment station.

The common barberry must be eradicated to help protect future wheat crops from rust. The Japanese barberry is harmless but the common barberry must be destroyed. It is illegal to sell, plant, propagate or maintain the rust-producing common barberry. The fight against the bush must continue in order to help protect our grain crops.—E. C. Stakman, University Farm, St. Paul.

FEED GRAIN EARLY TO SKIMMILK CALF

At the time calves are changed from whole to skimmilk, they are ready to begin eating small amounts of grain, which should be placed before them in small feeding boxes. Or if they are tied in stanchions for milk feeding, the grain can be put in the manger before they are released. Just a very small handful is all the calf will take at first, and only as much should be fed as the animal will clean up.

Ground corn is very palatable, and it can be fed alone or in combination with other grains, such as ground oats, bran, and some oil meal. It sometimes helps to get the calf started on grain by putting a small amount on its tongue and muzzle when the empty milk pail is taken away. This also puts a stop to sucking the ears of the calf in the next tie. After the young animal's appetite for grain has increased, the corn and oats can be fed whole, but many feeders continue to let them have ground grain.

A good grain mixture to feed to growing calves is made up of 500 pounds of ground corn, 300 pounds ground or whole oats, and 100 pounds linseed oil meal.

Hay can also be placed before the calves at this time in a small rack. Clover hay, mixed clover and timothy, or alfalfa hay not too leafy, are all satisfactory.

An early start in grain and hay insures the proper development of the digestive organs of the young animal, and assists in promoting vigorous growth.—M. H. Fohrman, superintendent of official testing, University Farm, St. Paul.

SWAT AND TRAP THE EARLY FLIES

Swat and trap the housefly now when the swatting and the trapping will do the most good. The first flies are those which have wintered over and will propagate the hordes of flies through the summer.

"Trapping is more efficient now than at any other time," says Dr. W. A. Riley, of University Farm. "Later the catch may be more spectacular, but it will make little or no impression on the total number. The selection of bait is important. The most effective is cheap molasses diluted with three parts of water and allowed to ferment. Next to this is milk. The use of fish and decayed meat is a mistake, as they attract other species of flies and are not especially useful as lures."

SHORT DAILY REST REAL LIFE SAVER

Lucy Cordiner, nutritionist of the office of extension work with women, University of Minnesota, approves the slogan, "Mother's Half Hour Every Day in Every Home." She believes that fatigue is a big factor in America's annual loss of more than 20,000 mothers.

"Mothers can lengthen their lives," she says, "increase their ability to meet daily annoyances, and prevent fatigue wrinkles by a daily rest of thirty minutes. The ideal method of resting is of course to undress and go to bed, but very few women feel that this is possible. The alternative is to find the easiest chair in the house, to place one's feet on another chair, and to lean back and relax, just as the men do. The short period will so refresh one that the remainder of the day's work will be done more easily and more rapidly and thus time will be saved instead of lost by the short breathing spell."

PLANT STRAWBERRY BED EVERY YEAR

R. S. Mackintosh, horticulturist with the extension division at University Farm, says it is a good plan to set out an everbearing strawberry bed every year. "This bed should not be kept too long in a place because of the danger of injury from the strawberry weevil," he says, "and it will be easier to keep the beds free from grass and weeds by changing their location occasionally. Set the plants early in the spring in rows three to five feet apart and the plants from 12 to 15 inches apart. Keep the flower buds picked off until about the first of July. From the end of July until the frost kills the fruit, which was not until the latter part of October last year, the grower will be in position to enjoy strawberries and cream and strawberry shortcake nearly every day. Strawberry beds should be well fertilized with fine stable manure and the plants should be kept well watered."

County agents and home demonstration agents are called upon for all sorts of information and to do all kinds of tasks. Recently one received a request for information as to how a nest of hornets under a house might be eradicated. The county agent has become the handy-man for all the countryside.