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WORLD'S FOOD SUPPLY IS FAR BELOW NORMAL; BIG ACREAGE IS NEEDED

Situation as It Affects North Star State is Explained in Detail for Teachers

According to a report from the International Institute of Agriculture at Rome issued April 1 there exists a deficit in the world's supply of corn, wheat, rye, barley, and oats estimated at a total of 130,000,000 bushels, less than the normal requirements for countries open to trade. Present prices indicate something of the situation with reference to the food supply.

America has now entered the war and large numbers of men will be drawn from agriculture into the army and into other occupations. Europe at present has about 40,000,000 men in arms or out of productive employment. It looks as if every possible ounce of food that can be produced will be badly needed. In America the present outlook for the wheat crop, as shown by the April 1 report on the condition of winter wheat, indicates a very serious shortage. The present prospect is for 430,000,000 bushels of winter wheat as compared to 481,000,000 last year and 673,000,000 in 1915 and 684,000,000 in 1914. Much of the wheat in the winter wheat belt is so severely injured that the land will be plowed up and planted to oats or corn. In view of these facts it seems desirable that Minnesota increase as much as possible the spring wheat acreage and the corn acreage. We are recommending that every farmer in the wheat sections of the western part of Minnesota from Yellow Medicine and Renville counties north be encouraged to increase his wheat acreage as much as he reasonably can—seed and other conditions considered. If each one of the 30,000 farmers in this territory would put in an additional 10 acres of wheat it would make an important increase for the state and bring the total acreage up to 4,000,000 which should certainly be our minimum this year. Farmers in other sections of the state equipped to handle the wheat crop, and who can get the seed should also be encouraged to sow wheat.

Oats Not Emphasized

In view of the increased acreage of oats that will be planted in place of injured winter wheat, it does not seem desirable to emphasize especially the oats crop; in fact, we believe that it is desirable to increase the wheat crop at the expense of the oats crop. The state might decrease its oats acreage 300,000 acres without serious harm.

Why Plant Corn?

The average crop of corn in Minnesota produces 1,800 pounds of shelled corn per acre as compared with the average yield of oats, 1,000 pounds. The corn stover produced on an acre of corn is worth for feed approximately as much as the timothy hay produced on an acre. Hence, one acre in corn is worth one acre of timothy and two acres of oats or wheat, either for animal or human food. We would like to see at least 500,000 additional acres of corn planted this year. We have plenty of seed for this and there is yet considerable time to get in the crop. We would recommend the plowing up of timothy meadows, if necessary, to provide this increased acreage of corn. A few acres of early corn such as Minnesota No. 23, Northwestern Dent, or Flint should be planted on every farm where hogs are kept to furnish early feed for the hogs. These varieties of corn will ripen from 10 to 20 days earlier than the other varieties and furnish feed just that much quicker for the hogs. This should be planted where it could be hogged off.

Silos Are Needed Now

We believe that every farmer who is keeping a fair amount of stock and can possibly do so should be urged to build a silo. Silage and good clover or alfalfa hay furnish an economical and very satisfactory ration for cattle; in fact, cows this year in many herds have produced abundantly without additional grain feed when given silage or clover or alfalfa. The more silage and clover and alfalfa we can provide on our farms the greater the amount of grain that can be spared.

Clover and Alfalfa

There is a good supply of clover and alfalfa seed. We believe, therefore, from the standpoint of soil fertility and for production of food for livestock,

that clover seed should be sown with every acre of grain this spring. This will furnish valuable fall pasture, will furnish an abundance of valuable hay for next year, and will more than pay for itself through its benefit to the soil. Wherever feasible the acreage of alfalfa should be increased, because alfalfa will produce more cheap protein per acre than any other crop.

Potatoes Important

Potatoes are a very important crop in Minnesota. The best information we can get indicates an increase of acreage in potatoes in the South and in the East. Inasmuch as potatoes are a perishable crop and can not be carried over, we doubt the wisdom of attempting to materially increase the acreage in Minnesota. It has been pretty well demonstrated that reasonable results can be secured by planting as little as six bushels of potatoes per acre. To do this the potatoes must be cut by hand with each piece about one-half ounce in size. Considerable experimentation has shown the yield to be only a few bushels per acre less for the light planting than from the heavier planting. In view of the high price of seed it will be desirable in many cases to cut the pieces smaller and save seed.

Miscellaneous Crops

Flax acreage should be increased if possible and also barley and buckwheat. We would not especially urge these crops except where it is impossible to get the land into wheat or oats or corn.

A Garden for Every Home

Every home should have a garden and plan to raise all vegetables needed and to preserve fruit and vegetables enough for a two years' supply.

WHAT YOUR TOWN CAN DO

Every Town Can Help to Prevent a Shortage of Foodstuffs

1. Develop a strong public opinion that every one able, men, women, boys, and girls, should work at productive employment; that labor is honorable; that those who do not work are shirking and causing others to overwork and do more than their share.

2. Mobilize all labor suitable for farm work.

a. See that every experienced farmer hand possible is employed on the farms.

b. See that every town boy and girl has a chance to raise at least an acre of some crop.

(1) Ten boys can raise from 10 to 40 acres of corn, beans, or potatoes.

(2) The baseball team can raise from 40 to 100 acres of crops.

c. Encourage schools to dismiss with full credit for the remainder of the school year all boys capable of doing farm labor, so far as such labor is needed.

d. Light employment and outdoor work should be provided now to get every one used to the more strenuous labor required later in the season.

e. One man and boy can be equipped with a hand-feed potato planter which can plant an acre of potatoes on each of 25 farms in a week.

f. One man can be equipped with a sprayer and spray 100 or more acres of potatoes in a week.

g. Two men can be equipped with a one-man tractor and plow in 24 hours six acres for each 14-inch plow.

h. Automobiles can be provided to deliver and distribute labor where needed in each locality.

i. Places of business should be closed or left in charge of the women during the few days of each extra busy period, such as haying, harvesting, threshing, etc., and every available person go to the farms of the locality where labor is needed to help with the field work. Many of the women of the towns can assist with the extra work required in these periods in the farm homes.

3. Make a survey of the local situation and organize to

a. Determine how much labor will be needed.

b. Determine how much is locally available.

c. Obtain plenty of good seed for the locality, particularly seed wheat.

d. Obtain the machinery needed.

e. Encourage the sowing of more clover and alfalfa and the purchase of good seed.

f. Secure ample supply of rape or other seed necessary for good hog pastures.

g. Have gardens for every home on the farms planted so that field tools can be used in cultivating so far as possible; if not, so that wheel hoe or similar tools may be used to reduce labor. Encourage ample planting of such products as may be canned, preserved, or otherwise stored for winter use.

THIS IS A WAR NUMBER

The urgency for a campaign for increasing food production because of war conditions has led to the withdrawal of the material prepared for the April Visitor. In its place has been substituted matter which it is hoped will assist agricultural instructors in Minnesota high schools to discharge effectively the obligations which the nation's needs in the present crisis place upon them.

h. Encourage the building of more silos and assist in their construction.

i. Provide spraying equipment and chemicals.

j. Provide canning and evaporating equipment to fully conserve perishable food products raised.

k. Utilize vacant lots in the production of food.

l. Organize to make use of everything produced.

m. Organize a definite campaign to economize in food and clothing.

FOOD SUPPLY IN MINNESOTA

Prices Will be High and Every Farmer Should Do His Utmost

A. Prices for farm products for the next year will be abnormally high, according to all present indications. Facts which lead to this conclusion are:

(1) The present world's food supply is far below normal.

(2) A large amount of labor has been diverted from farms by the war, to serve as fighting men and to fill other positions paying high wages.

(3) The present condition of the winter wheat crop is very poor.

(4) The excessive price of seed, farm machinery, and farm labor will have a tendency to decrease rather than increase the production of the country.

Farmers can therefore, with reasonable assurance, undertake the production of maximum crops. It is hoped that a minimum price for staple farm products may at an early date be guaranteed by the Government.

B. It is the patriotic duty of every one in the state, especially those in towns and cities, to give every possible assistance, both directly and indirectly, that will increase the amount of labor available on farms and also to do everything possible to guarantee producers against loss by encouraging the Government to guarantee minimum prices for farm products and the economical distribution of farm products and supplies.

C. To meet this serious labor situation:

(1) Make use of family labor by giving the members financial interest.

(2) Organize towns to release farm-trained labor.

(3) Encourage good prices for labor.

(4) Use labor-saving methods such as hog pastures, self-feeders, large teams and machines.

D. Increase the wheat acreage at the expense of oats and barley. Sow clover seed with all grain crops.

E. Increase the corn acreage. Use all manure that available labor can get out. Break up for corn 500,000 acres of timothy sod by using tractors, 24 hours per day where possible.

F. Increase as much as possible the production of meat, especially pork.

G. Plant potatoes,

Economize in seed, Treat all seed for scab. Spray for bugs and blight.

H. Give every family a garden. Can or otherwise preserve fruit and vegetables for two years.

I. Economize in food and clothing:

(1) Utilize all food.

(2) Eliminate waste.

CUT SEED POTATOES SMALL

Scarcity of Seed Makes It Necessary to Practice Economy

Potato seed is scarce and high in price and many persons are asking if it is not possible to use less seed per acre this year. Repeated experiments show that in normal times it is best to use seed pieces weighing from one to two ounces, which means using from 10 to 20 bushels of seed per acre. Experiments also show that good crops may be grown from pieces as small as one-half ounce in size, or even by planting the eyes dug out of tubers to be eaten.

For field planting.—By using medium sized or small potatoes and cutting into small pieces by hand (pieces about one-half ounce in size), six bushels may be made to plant an acre. It will be necessary to plant such small pieces with a hand-regulated planter, or by hand. Spe-

cial care should be exercised to prepare the soil especially well, and not to plant until conditions are favorable, because these small pieces can not withstand adverse conditions as well as full-sized pieces.

Scab and other diseases.—Scab is prevented by soaking seed for 1½ hours in a solution made by mixing one pint or one pound of 40 per cent formaldehyde with 30 gallons of water, or by dissolving 4 ounces of corrosive sublimate in 30 gallons of water. The corrosive sublimate is more effective but is very poisonous when taken internally, and must be used with care. It is a crime to allow disease and insects to reduce the yield of potatoes. Hence, spraying for bugs and blight is urged.

For the garden.—Eyes and seed ends of potatoes used for the table may be saved and planted by hand in the garden. The most satisfactory way is to plant these eyes or small seed pieces in a shallow box kept in a warm, light place in the house, the plants to be transplanted to the garden as soon as soil and weather warrant, or from May 20 to June 20. It is not advisable to plant these small pieces outside until the soil and the weather are warm.

Begin now to cut off the "seed" end of the tubers used each day for table use and put into a box of soil. The box should be 3 or 4 inches deep, 14 to 16 inches wide, and 20 to 24 inches long. Fill with fine garden loam and keep in the house in as light and warm a place as can be found. Be careful to select the best potatoes for this purpose.

The land should be given more attention this year. It should be plowed six or eight inches deep and thoroughly harrowed, especially just before planting. This makes the soil fine and in best condition for the seed—pieces or plants. When ready to plant, open a furrow about three inches deep and put the pieces 12 to 16 inches apart and cover with two inches of soil. From this time on keep the surface of the soil loose by constant cultivation.

LETTER TO AGRICULTURISTS

High School Men Looked To as Representatives of Farm Industry

To High School Agriculturists:

As agriculturist in your high school we look to you as the most direct representative of the agricultural department in your community. I am sure that you feel the responsibility of the occasion and are anxious to do everything you can to increase the food supply of the country.

It will help us all if we understand one another in what we are trying to do, so with this end in view I am making a few statements outlining what we are attempting to push from the College.

The wheat acreage should be increased just as much as possible. This may be done at the expense of the acreage of oats, because wheat is more needed than oats.

The corn acreage should also be increased to the limit, because corn produces more human food and more animal food per acre than any of the grain crops.

We believe in encouraging sowing clover with all grain crops—the clover to be used for fall pasture or for hay the following year.

We do not deem it advisable to attempt to increase the acreage of potatoes because of the cost of seed and because of the fact that the acreage of potatoes is being increased in the East and the South.

We believe it desirable to plow up a considerable amount of the old timothy sod or light pasture sod and plant it to corn, because the corn stover will produce as much feed as the timothy and will give the grain crop in addition.

In Northeastern Minnesota we are recommending the growing of as many root crops as possible, especially rutabagas. Rutabagas are a very valuable human food and if there is no market for them they can be used for stock food.

Every one should save an abundance of roughage for livestock and take extra pains in saving it in good shape so that stock may be wintered with a minimum amount of grain.

We believe every farmer with a good herd of livestock should be encouraged especially this year to build a silo. With silage and clover, stock may be wintered with very little grain feed and we should plan to release every bit of grain that we possibly can for export.

We believe it good business at this time to discourage all kinds of building except silos and what else is absolutely necessary, chiefly because this will release labor that is needed on the land.

If you need any special information for your community this institution will be glad to make every effort to furnish it for you.

Yours very truly,
A. D. WILSON

HOG CHOLERA OUT-BREAK MAY BE PREVENTED BY USE OF TESTED SERUM

Local Storage of Cure and Sanitary Measures are Safest Precautions

The following material of interest to high school agricultural instructors in their work in farmers' clubs and other adult extension work, as well as to county agents and farmers themselves, is taken from a recent letter of Dr. M. H. Reynolds, chairman of the veterinary division of the college of agriculture. Doctor Reynolds reports that during August, September, and October a considerable amount of hog cholera serum was sent into a section of country bordering the state on the west, south of Stevens county and along the southern edge as far north as Scott county.

A good corn crop next year, a heavy stock of hogs and a dry season during the fall may bring about a serious prevalence of cholera, particularly in this section. He advises that all possible preventive measures be taken, especially in this section. Extension workers should be particularly active during the winter and spring in warning the people about hog cholera and in overcoming the present feeling of security against the disease. He states that it will be wise to make advance arrangements for prompt local storage of state serum.

Doctor Reynolds points out that in the recent experience with hog cholera it has been found that one-half to two-thirds of the total outbreaks could have been easily prevented through checking the spread of virus, as government statistics show that 57.7 per cent of hog cholera outbreaks are due to (1) exchange in farm labor and visiting infected premises (2) allowing the virus to be harbored on the premises through imperfectly buried carcasses; (3) by dogs roaming over the country, and (4) by careless exposure to sick hogs on adjoining farms. The not uncommon belief that hog cholera may be due to worms, new corn, or similar causes should be upset.

Experience in Minnesota, says Dr. Reynolds, supported by statistics on a large scale, show that serum-only treatment, coupled with sanitary precautions, is highly satisfactory in sick and exposed herds. A surprising percentage of hogs sick at the time of treatment and over ninety per cent of apparently healthy hogs in sick herds have been saved by this treatment. He further points out that there is practically no danger in carefully administered serum treatment of pregnant sows and that very young pigs may be treated where there is good reason for it.

Experience and actual statistics show that there is a very small percentage of recurrences after the serum-only treatment when reasonable sanitary precautions are taken. In only about one herd out of twenty was there any subsequent recurrence of cholera. Such recurrences are easily controlled by another treatment of serum.

"The state serum plant," says Dr. Reynolds, "has a heavy reserve supply of tested serum on hand and apparently will be able to ship promptly in any needed quantity. State serum is reliable and costs one cent per cubic centimeter, plus cost of shipment. Experience has taught the wisdom of preliminary arrangements for local serum storage and for prompt administration." Dr. Reynolds strongly recommends that every one concerned look out for trouble next year and takes all possible preventive measures in the meantime. With proper cooperation it will be comparatively easy to prevent any serious outbreak.

FROM PRESIDENT'S SPEECH

Woodrow Wilson's Views of the Gravity of Food Situation

"We are rapidly putting our navy on an effective war footing and are about to create and equip a great army, but these are the simplest parts of the great task to which we have addressed ourselves.

"The supreme need of our own nation and of the nations with which we are cooperating is an abundance of supplies, and especially foodstuffs.

"The importance of adequate food supply, especially for the present year, is superlative.

"On the farmers of this country, therefore, in large measure, rests the fate of the war and the fate of the nations. May the nation not count upon them to omit no step that will increase the production of their land or that will bring about the most effectual cooperation in the sale and distribution of their products? The time is short.

"It is of the most imperative importance that everything possible be done and done immediately to make sure of large harvests.

"I call on young men and old alike and on the able-bodied boys of the land to accept and act on this duty—to turn in hosts to the farms and make certain that no pains and no labor is lacking in this great matter."