

f seeding that is best  
Some times it is  
es deeper and again  
get the seed buried  
st advantage of the  
deep that it will ex-  
the surface. When  
throws out a second  
and a half from the  
of, that in ordinarily  
should be put about  
a between seeding at  
growth is this: Any-  
or weaken the wheat  
s able to resist an at-  
ing smut. Generally  
t, but if shallow seed-  
ie young plant owing  
ot system to frosts,  
eding will have the  
ding. It is seldom,  
too shallow.  
ply also in the case of  
ally sown on spring  
lifying circumstances  
t is often necessary  
et them next to the  
hey would do better  
and the weather re-  
always tell what the  
so unless the land is  
ad better not be put

growers in Manitoba  
plants. They plant in  
arrow until the plants  
he rows as long as is  
Moulding them up  
dry out too much.

#### ass and Flax

ed with bluestone,

ing a ten-acre piece  
either brome grass,  
flax as a nurse crop.

O. K. LIPTON.  
I prefer formalde-  
it, but the bluestone  
me the best results  
years' experience,  
barley much more  
either the smut of  
ul treatment of the  
mical, I have usually  
t, whereas I have

pendent intends to  
ed from scrub, the  
stern rye grass, will  
a good crop of hay  
I would hesitate to  
land is open prairie

e good old plan of  
as thin as possible,  
st, plowing up from  
ional soil, and after-  
ut putting in a crop  
thoroughly rots the  
of wheat for some

king, it prevents the  
and, as it is almost  
i flax seed, you are  
from the beginning  
ad enough to get the  
rocess, but it is in-  
h your land infested  
ually found in flax

S. A. BEDFORD.

by contact with his  
oken words. He has  
ckwards for orders.  
that he is "bossing"  
prompt obedience is  
intelligence directs.  
nd, attached to the  
ot keep the eye hot  
vision, while it does  
ng backward, there-  
d attention for the



A TYPICAL NORTHERN ALBERTA FARMSTEAD ON FARM OF T. BOOKLESS NEAR INNISFAIL.

#### A Farm All Fenced

EDITOR "FARMER'S ADVOCATE":

I have a section and a half of land which is divided into quarters and fenced with three wires. On half a section, there is brome and timothy. The other section is nearly all plowed. In the spring, we turn the cattle onto the quarter-section. We are going to summer-fallow when they have this pretty well eaten down. They are turned into one of the others with grass on, and the other is kept for hay. When the hay is cut, they are put onto this, and the summer-fallow again. There are fences on the quarters where the stacks are put; so, as soon as stacking is done they are turned on the stubble. B. B. Wapella District, Sask.

#### Wheat on Breaking

Writing from Arelee, Sask., one of our correspondents asks for experiences in growing wheat on new breaking. In our February 17th number, we published a letter from D. B., Calgary, in which he told of the excellent crops of fall wheat sown on breaking, after discing four times, but we have very seldom heard of spring wheat doing well on new breaking. Experience points to the system of breaking and back-setting as being the best in the end, although flax is sometimes sown on breaking, if it is absolutely necessary to have some returns the first year.

#### Renewing Brome Sod

EDITOR "FARMER'S ADVOCATE":

Could you tell me in your paper how to renew a brome grass meadow? At what time should I plow it and how deep, and how treat it after it is plowed? Would it give a crop next summer if it is plowed after haying this summer?

Pembina, Mun., Man.

T. B.

I have always found that brome grass meadows will sooner or later become sod bound. This is, no doubt, caused by the abundant root stalks spreading out so freely that they occupy all the soil, and there is not enough moisture to go around. When this condition is reached, the plants fail to send up a sufficient number of stems to ensure a profitable crop.

The remedy is obvious, viz.: reduce the number of plants and the remaining ones will make a vigorous growth and produce a paying crop of hay or pasture. I have noticed that the following plan gives good results: After haying, the sod is plowed quite thin with a breaking plow; the furrows should be wide and straight so that the land will be quite smooth when rolled immediately afterwards. It will then be easy to mow the following years. I have found this treatment kill just enough of the brome grass plants to ensure a good crop of hay for a number of years and also leave the land in excellent condition to mow.

On breaking up a field of brome, I have often been surprised at the mass of roots that have accumulated. The soil is perfectly matted with them for a considerable depth and when they decay, it must add a large amount of humus to the soil.

M. A. C.

S. A. BEDFORD.

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"I am writing to thank you for the ADVOCATE knife which I received the other day. I am pleased with it and think it as good as any knife bought in the stores for seventy-five cents. I have shown it to many of my friends who say they are going to try to get one like it. As for the FARMER'S ADVOCATE it speaks for itself. I think it is the best agricultural magazine going."

DAVE RICHARDSON.  
MacDonald, Mun., Man.

#### Hydraulic Ram : Size of Ditch

EDITOR "FARMER'S ADVOCATE":

What would be the cost of installing a ram to pump water from a ditch up a rise of about 8 or 9 feet, and about 150 feet to the barn? The ditch or



WM. MONTGOMERY

One of Miamia's progressive farmers and winner of first prize for White Fife wheat at the provincial seed grain show, Winnipeg

creek is a spring creek, and has a fall of about 7 or 8 feet in 100 rods. Could I pipe enough water to one side of ditch, and put ram in a cement box? I would like water in the stable, if it would not cost too much, as cows get on the ice in winter, and sometimes hurt themselves.

2. What size ditch would it take to carry the same amount of water as a 12-inch tile? This tile drain would have a fall of about 6 or 8 feet in 50 rods, near the outlet.

S. W. H.

Ans.—1. It will be pretty difficult to get fall enough in a reasonable length of drive pipe where your fall is so slight as 7 or 8 feet in 100 rods. If you can so manage as to get, say, 18 inches of fall within 100 feet or so of the ram, the scheme is feasible, however. Your idea of leading sufficient water to one side of the ditch, and putting the ram in a box or well, will work all right if you can get drainage from the well to carry away the waste water. The cost will vary with the capacity of the outfit. A small-sized ram—i.e., one to work on a supply of, say, 2 gallons per minute—would cost about as follows:

Ram .....	\$9.00
100 ft. of 2-inch drive pipe, at about 6 cents.....	6.00
100 ft. of 3-8-inch discharge pipe, at about 3 cents.....	3.00
Digging and filling 200 feet of trench, say.....	4.00
Installing ram, say, 1 day's work of plumber .....	4.00
	<hr/> \$26.00

The cost of stable fittings would vary with their simplicity or elaborateness.

2. Various dimensions might be stated, depending on width of the ditch at the bottom and the slope of the sides. If the ditch were six inches wide at the bottom, and the slope of the sides 1 to 1, it would need to be 9½ inches deep. If, however, the sides sloped 1 horizontal to 2 vertical, and the ditch were 6 inches wide at the bottom, then it would have to be 11½ inches deep. But if the bottom width were 8 inches, it would only need to be 8½ inches deep. These dimensions are for a ditch with smooth earth sides and bottom, and running full. If the sides were rough, or grown with long grass, it would take a much larger ditch, as the friction would be very great. W. H. DAY.

#### Foreign Crop Conditions

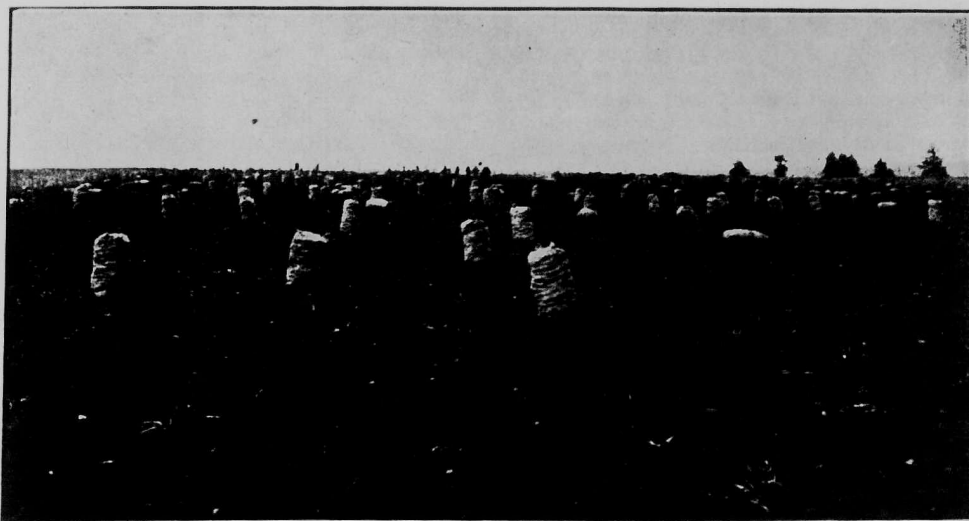
Crop conditions have been fully maintained in Western Europe, but in central and eastern Europe there has been undoubtedly more or less deterioration. The cold has not been excessive, but, owing to the variable temperature, the snow cover has been more or less deficient. The crops of Germany and Austria-Hungary, which were seeded late and under unfavorable conditions, have perhaps suffered most severely from the continued alternation of frost and thaw. From Russia, likewise, come pessimistic reports, but in the Balkan States and Roumania crops are thought to have withstood successfully the somewhat adverse conditions of the past month.

An extension of the wheat acreage in France by 400,000 acres this year is shown by a recent official estimate. According to a commercial estimate an increase of one-fourth that amount has likewise taken place in Great Britain. These gains, however, were probably more than offset by the impossibility of completing the sowings of winter grain in the countries of central and southeastern Europe.

The harvests in the Southern Hemisphere are now practically ended and that in India about to begin. This year once more the receipts from these midseason sources of supply will be unusually large. Reports during the last month indicate that the contribution of India and Argentina will be somewhat less and that of Australia somewhat more than had hitherto been expected.

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To pay the railway fare of all New Brunswick students wishing to attend the agricultural colleges at St. Anne de Bellevue or at Truro, was the offer made by Hon. Dr. Landry, Commissioner of Agriculture for that Province.



POTATO CROP, 9 TONS PER ACRE. ST. MARY'S PRAIRIE, NEAR CRANBROOK, B.C.