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Substitutes for Wheat.

Owing to the backward spring this year, the area sown to wheat in some sections will be greatly reduced, and already many enquiries have been made for suitable substitutes for this, our main cash crop. By the time that this is printed, it will be too late to sow oats, but early-ripening varieties of barley may still be sown with fair prospects of success. Although the demand here for malting barley is limited, this is one of our most useful feed grains and generally brings a fair price for this purpose.

The Mensury variety is a very vigorous, stiff-strawed and productive kind, averaging on the Experimental Farm 54 bushels per acre for the past six years, while common barley averaged 51 bushels during the same years. Two bushels of seed is none too much on rich soil.

As rapid germination is very important with barley, it should not be sown on fall plowing, but the drill should follow the plow and harrows very closely. Germination will then be rapid and the grain will get an even start with the weeds and soon smother them.

Flax has been a paying crop in this province for some years, is always in demand, and can be sown later than any other grain. In 1896, flax sown on the Experimental Farm on June 6th, yielded over 17 bushels per acre, and in 1897, the sowing of June 16th gave nearly 12 bushels per acre. Opinions differ widely regarding the proper quantity of seed required for the best results. On the Experimental Farm, the average for four years was as follows:

40 pounds of seed per acre, 14 bushels.
80 pounds of seed per acre, 15 bushels.

This is a much heavier seeding than generally recommended. In 1901, 20 pounds of seed yielded 11 bushels and 14 pounds per acre, while 40 pounds of seed gave a return of 15 bushels per acre. The land should be made fine and free of weeds. It can be sown either broadcast or in drills. From 2 to 2½ inches is deep enough for this small seed.

One of the greatest objections to flax is the almost universal foulness of the seed offered for sale. The small size of flaxseed makes it difficult to separate from the many kinds of mustard seed found mixed with it. The only way to overcome this difficulty is for the farmer to sow a small plot with the cleanest sample obtainable, then hand weed the plot during the growing season, and use the product as the foundation of his future supply of flaxseed. S. A. BEDFORD,
Supt. Brandon Exp. Farm.

Summer-fallowing.

As suggested by Experimental Farm Superintendent Bedford, elsewhere in this issue, it is not yet too late to sow barley or even flax. Barley is an excellent feed grain and yields abundantly in nearly all sections of the West. Either barley or oats can be sown very late and cut green for fodder, and under ordinary conditions we consider these crops preferable to the millets for late sowing, as they are less liable to introduce noxious weed seeds and are more easily harvested in good condition.

At this writing the prospects seem most favorable for grass seeding, and the importance of establishing a grass rotation should be recognized by everyone. Those who have not yet discovered which variety of grass best suits their land and conditions should not let another summer go by without testing the several varieties that are generally recommended.

On account of the impossibility of getting land ready for crop last fall, and the wet, backward spring, there will be a much larger area than usual devoted to summer-fallowing this season. Doubtless, many will undertake a good deal more fallow than they can properly attend to. A neglected fallow is worse for the land than though it were seeded to some late crop for fodder.

There are no absolute rules applicable to all the West as to how a fallow should be worked. The objects to be attained must, however, be understood, and then the work done in a way best calculated to accomplish the desired objects. The treatment of a fallow will, of course, depend largely upon the nature of the weeds to be eradicated. In any event, the plowing should be done before any weeds have matured seeds far enough even to ripen after being turned under. It is a mistake to imagine that a heavy crop of weeds plowed under is of much manurial benefit to the soil. The risk of their producing seeds and the moisture taken up by them in an ordinary season is more injurious than any possible good that might otherwise result. If it is simply annual weeds—such as mustard, lamb's-quarters, wild buckwheat, ragweed, etc.—that one wants to free the land of, then one good plowing, followed by frequent surface cultivation, will do much to germinate the seeds that lie near the surface, and each succeeding cultivation should destroy all germinated seeds and bring others into favorable position for germination, and towards the end of the season, when harvest is on, simple annuals may be left to be killed by the first frosts. But if the weeds are winter annuals—such as stinkweed, shepherd's-purse, peppergrass, blue bur, etc., then the frost will not do the killing and they must have attention right up to the end of the growing season, or neglect may mean that a whole season's work has been in vain. If the weeds are perennials, it is important to know something of their habit of growth. Shallow-rooted perennials, such as couch grass, should either be plowed deeply to smother, or shallow to expose the roots to the sun, according to the season and other conditions; while deep-rooted perennials, such as Canada thistle, must be prevented from storing up nourishment in their roots by keeping leaves from forming, which can only be done by constant cultivation. Weed-killing is, however, only one object in summer-fallowing. A very important one is the conserving of soil moisture by the formation of a soil mulch. The fact that this spring has been wet is no guarantee that there will be sufficient moisture next year.

There is land that will not stand much surface cultivation. It may become so finely pulverized as to be liable to drift or become too compact and hard. There is no land, however, that will not be benefited by a grass rotation, and when a regular system of grass rotation is adopted there will be less need of bare fallows, and where necessary or desirable the root fiber, humus, supplied by the grass roots will prevent the soil from drifting or becoming too compact.

The grasses most generally found applicable to our conditions are timothy, native rye grass and bromus. Native rye grass (*Agropyrum tenerum*) gives good satisfaction in nearly all localities where it has been tried. The seed is reasonable in price, can be sown without much difficulty, is reasonably sure of making a catch sown with a grain crop, and makes excellent hay when cut early, which is easily cured, and it is also readily eradicated when desired. Bromus inermis is also very highly thought of by many. Its strongest point lies in its excellence as a pasture grass

and in its pertinacity when once established. It will yield large crops of hay of very high quality, but on account of its leafiness is difficult to cure if the weather is catchy. In some soils, however, it may be hard to get rid of, especially in moist seasons, and on that account is a little feared by some. Timothy is a good hay grass wherever it suits, but in many localities makes a very poor showing.

Farm Siftings.

Fly time.

Don't expect the cows to give a large milk yield if they have to fight flies night and day. Stable the milkers at nights and try some of the preparations offered to keep off flies.

Don't expect the calves to keep healthy and thrive on sour milk.

The wife will appreciate a little help in the garden this month, and the vegetables will taste sweeter just because you helped to grow them.

Not very much use, after all, in bothering with a garden unless it is well fenced and protected from the winds by shelter belts of trees.

Speaking of trees, this has been a very favorable spring for setting out trees, but if it comes dry don't neglect them. Cultivate about them frequently to retain the soil moisture and keep down grass and weeds.

If the soil is liable to blow, so you are afraid, cultivate frequently, then mulch about your trees with rotten straw 10 or 12 inches deep.

No use trying to grow apples or Ontario maples until you have learned to grow the hardy native maple, Russian poplars, willows, etc.

After you have grown good wind-breaks of the hardy sorts of trees, then you can safely try the more ornamental varieties and some hardy fruits.

There will be a lot of road work required this year and little time to give to it. Hope your municipality has done away with statute labor and adopted a thorough system of computation.

An honest, capable road commissioner would be a profitable investment for many municipalities.

Grass seed, native rye grass or bromus, sown on the road allowances and cut every year is a great improvement over weeds.

By the way, weeds are growing luxuriantly this year.

It's time to be at the summer-fallow.

British Breeding Stock.

Those who predicted a brisk export trade in pedigree stock for the present year have so far found their forecasts verified. April stands a long way in front of the corresponding month last year in both number and value of stock exported. The aggregate declared value of live stock exported in April, 1902, was £60,811, an increase of upwards of 20 per cent. on April, 1901. There were 2,022 horses sent abroad, value £41,720; cattle, 223 head, value £13,773. The value of sheep exported in April was £773, and pigs, £674.—London Meat Trades Journal.