



MIXED FARMING

MANITOBA - SASKATCHEWAN - ALBERTA

BY W.C. McKILLICAN B.S.A



No. 9

Growing Corn and Field Roots

MIXED farming in Western Canada cannot realize its greatest possibilities without the use of hoed crops. They are of very great value on account of the large quantities of fodder they produce, on account of the feeding quality of that fodder and on account of their usefulness in cleaning the land and preparing it for grain crops. The hoed crops best suited to Western conditions are corn, turnips and mangels. It has been amply proven that these crops are a success in most parts of the West. Corn for fodder does well in all the settled parts of Manitoba and in most of the warmer districts of Saskatchewan and Alberta. Mangels may be grown further north than corn, but do not do so well in very dry districts. Turnips have the widest range of any, and should be a practical crop in all parts of the West.

Selection of Seed

Success in corn growing depends to a great degree on the choice of a suitable variety. Varieties that have been found successful in the corn belt states or in Eastern Canada will not suit in the West. Our season is short and our nights cool, and we require a specially developed type of corn that matures quickly and is able to grow in cool weather. In order to get this type we must choose varieties that do not grow as large as the Southern varieties. Some of the best varieties for Western use are: Northwestern Dent, Longfellow, North Dakota White and Minnesota No. 13. These are all early and at the same time produce a large quantity of fodder. Earlier yet than these, and, therefore, able to ripen seed in some seasons, are the following: Squaw, Free Press and Gehu. However, these are more or less dwarfed and do not produce enough fodder to be valuable for general production.

There is not as much difference between varieties of field roots as there is in corn. Two lots of seed of the same variety often show greater difference in productiveness than two different varieties. There are however certain varieties that show up

best in the average of many years' test at the Experimental Farm. Among those worthy of special mention are: Hall's Westbury, Bangholm, Perfection Purple Top Turnips, and Prize Mammoth Long Red, Giant Yellow Intermediate and Giant Yellow Globe Mangels.

Equally important is the variety in the case of corn, and much more important in root seeds, is the vitality of the seed. Very often poor crops or failures are directly traceable to poor seed. The Western farmer does not grow his own seed and is thus ignorant of the conditions

is the only safe way of growing these crops. But in practically all Manitoba and much of the moister districts of the other two provinces it is not necessary to have summer-fallow. Wherever the moisture is sufficient, good crops of corn and roots may be grown on sod land and also on land that has grown grain, provided it is not too filthy with weeds. Corn and roots may often be used to very good advantage as a substitute for summer-fallow. Where the land is dry or dirty, it is advisable to summer-fallow first, but where the supply of moisture is good,

should be broken and backset as described for the other kinds. When plowed only once, it should be plowed in July if possible or as soon after the crop of hay is taken off as conditions will permit. Early summer plowing kills and rots the sod so that it is in a much better condition to work up into a fine seed bed the next spring than it would be if plowed in fall or spring. Sod land should be disced several times during the summer after plowing in order to kill the grass and prepare a seed bed. Land handled in this way is ready for corn or roots in the spring and can be got into a fine state of tilth with comparatively little work.

When corn follows grain crops, the land should be well manured. The manure may be applied either in the fall, winter or spring, depending on the time of plowing and other circumstances. The best time for plowing differs in different districts. At Brandon we find that fall plowing gives best results, but it is well known that exactly opposite results are obtained with other types of soils. Plow, therefore, at the time that experience shows is best for your own locality. When plowing in manure, do not plow very deep. Deep plowing is good, but some other occasion should be chosen as it is not advisable to bury the manure out of reach. The land should be well disced in the spring to incorporate the manure with the soil and to make a fine seed bed. After thorough discing and harrowing so that the soil is in a fine mellow condition, the packer or roller should be applied to make the seed bed firm. It is then ready to be planted.

Planting

Corn may be planted with a hand planter, a grain drill or a corn drill.

Most of the corn planted in Western Canada is put in with the ordinary grain drill. This machine can be used quite successfully. By stopping up most of the spouts, one can plant the corn in drills three feet, or whatever distance apart is desired. This method is quick and does not require any extra machinery. The only objection is that the corn is in drills only and not in



A bumper crop of spuds.

under which it has been grown, harvested and stored and of its age when it reaches him. Thus he must make up in vigilance at the time of buying for the lack of the care which he was prevented from exercising at an earlier date. It is always advisable to make an actual test of the germination of seed corn and turnips and mangel seed before using it. This may easily be done at home by planting one hundred average grains in soil or by wrapping them in moist cloth or blotting paper and keeping them at a temperature suitable for growth. Tests may also be obtained by sending samples to the Dominion Government's Seed Laboratories at Ottawa and Calgary.

Preparation of Land

The largest crops of corn and roots are obtained by planting them in well summer-fallowed land. In large areas of the West where the rainfall is sparse this

the land reasonably free from weeds and manure available, then the hoed crop may follow grain in the place of summer-fallow.

When summer-fallow is prepared for corn or roots, it should be cultivated frequently throughout the summer so that all weeds may be killed. This makes it possible to keep the corn clean with very little hoeing. A well prepared summer-fallow will need very little spring work to put it in suitable condition for planting.

When corn or roots are planted on sod land, the sod should be plowed the previous summer. If it is native prairie, brome grass or alfalfa sod, it should be plowed shallow early in the summer and backset about two inches deeper in August or September. Sod of timothy, Western rye grass or clover need only be plowed once unless it is old and tough, in which case it