The Summerfallow
in Southern Alberta

With an average annual rainfall varying in different districts from twelve to eighteen inches, Southern Alberta forms part of the great plains region east of the Rocky Mountains that is classified as semi-arid. In occasional years only is there sufficient rainfall in a season to produce a full crop of grain unless there is a reserve of moisture stored in the soil from the previous year. The method of cultivation followed to store up this reserve is known as summerfallowing.

Much of the success that has attended the growing of grain in Southern Alberta during the past fifteen years is due to the extensive practise of good summerfallow methods, while many failures are accounted for by a neglect of the best known practises of cultivation. The experience of the last four years has shown that even the best summerfallow will not produce a good crop every year when a number of seasons of very light rainfall succeed one another, but they have shown equally clearly that on good land an absolute failure is rare when good cultural methods are consistently followed.

The Object of Summerfallowing.

The main object of summerfallowing under Southern Alberta condi- ore moisture from one season to help grow a crop the following ..tally, when careful methods are followed, the land is cleared ..nd a supply of plant food liberated. The building up of the ..serve is so much more important here than the other objects ..hould always be kept to the fore.

Why Moisture is Necessary.

Plants, it should be remembered, take all their nourishment in liquid form; they drink all their food. Incidentally they take it in a very diluted solution so that enormous amounts of water are needed—from 400 to 1,000 pounds for each pound of dry matter produced. No matter how rich a soil may be, if there is not water enough present to furnish the plant with the nutrient solution in sufficient quantity, the soil is comparatively unproductive. On a fertile soil the solution is more concentrated and a limited amount of moisture will go further toward producing a crop than on a poor soil. This accounts for the big yields that are often harvested from the rich soils that are characteristic of semi-arid regions. Cultiva- which helps to make plant food more easily soluble helps toward the production of a crop.

To get the necessary moisture the roots of grain crops will penetrate the soil for six or eight inches, and often much further. But they will go only as deep as the moisture extends. They will not penetrate dry soil