

one frame—is more effective than the ordinary disc, but the latter will answer the purpose where nothing else is available. To be most effective the packer should follow the plow closely.

The amount of cultivation necessary during the balance of the season will depend upon the weed growth and the number of heavy rains. If the annual weeds have been controlled before plowing and the seeds all germinated they will give little more trouble, but perennials may need attention. Heavy rains may result in a heavy crust forming, and this should be broken up.

When cultivation is necessary it should be given with tools that do not pulverize the surface as the object should be to keep a granular or even a clod mulch on the surface. The duckfoot cultivator, the rod weeder and the spring tooth harrow are safe tools to use, while the disc and the drag harrow should be avoided on account of their pulverizing action. The amount of cultivation necessary after plowing will be much reduced if the spring and early summer work has been thorough and timely.

In districts where the Pale Western Cutworm is troublesome an effort should be made to keep off the summerfallow during the last week of July and the month of August. It is during this period that the cutworm moth lays its eggs and it prefers freshly stirred soil as a place to deposit them. If a light crust covers the land at that time the number of eggs laid is likely to be greatly reduced and damage from cutworms the following year minimized.

#### LATE FALL CULTIVATION.

On account of danger of drifting the surface should be left as rough as possible in the fall. The duckfoot cultivator or the spring tooth harrow with teeth a foot apart may be used to ridge the land at right angles to the prevailing winds. The ridges retard the action of the wind and also catch considerable snow that would drift off a smooth surface. If this ridging is done when the surface is wet it is much more effective.

#### OBJECTIONS TO SUMMERFALLOWS.

The chief objection urged against the bare summerfallow in Southern Alberta is that it promotes soil drifting by working the fibre out of the soil and leaving a full surface exposed to the action of the wind. Soil drifting has become a real problem in some districts and is difficult to combat. The danger can be reduced by keeping a rough granular or cloddy surface instead of a finely pulverized one, and by ridging the surface as above outlined. It can be helped too by not having large areas in a block in summerfallow, as most of the damage is on bare fields of considerable size. The method of working the farm in strips fifteen or twenty rods wide with alternate strips in fallow and in stubble is being used with good promise of success in some districts. It has not yet been practised long enough to speak definitely regarding it. The method is open to serious objections, but it has such distinct advantages where drifting is a menace that it is worthy of a trial.

The only real cure for drifting is to put back into the soil some of the fibre that years of cropping and summerfallowing have removed. Brome grass and Western Rye grass will do this better than any other crops now available and information is accumulating year by year as to how they can best be used.