

METHODS OF CONTROL.

PREVENTIVE MEASURES.

CLEAN SUMMER-FALLOW.

When we described the egg laying habits of this species we stated that the moths always lay their eggs in the vicinity of green vegetation, even though we believe that they are usually laid in the soil.

On fields which have borne a good stand of grain there is very little green growth during September and early October, and we have not found evidence of extensive infestation originating in such clean stubble land. Gillette (1904) states that, in Colorado, barley stubble is a favourite breeding place. We have no data to confirm this statement under Alberta conditions, for little barley is grown here, while probably less will be grown in the future.

The various swarms of larvæ which migrated on to all kinds of land during the spring of 1915 appeared to originate, in nearly every case, upon land which had been summer fallowed in 1914, and had been allowed to become weedy during September, or upon land on which there had been a crop failure resulting in a strong growth of weeds later in the season.

Weedy summer-fallow appears to be specially adapted to the requirements of these moths. They hide under the clods by day, and are surrounded with the green vegetation among which they lay their eggs.

In a large tract of fallow land examined during September, we turned up many more moths when moving clods on such parts as bore weeds than we did upon the clean areas.

It is essential, therefore, that summer-fallow be kept clean—absolutely clean—from the middle of August until after the end of September. In this way only can summer-fallow be rendered unattractive for egg laying to the moths of the Army Cutworm, as well as to the moths of other cutworms.

It is advisable, also, that the surface be worked up as finely as is compatible with good farming practices in order that it may offer as little shelter as possible to the moths.

Gillette (1904) states that the moths lay their eggs freely on the prairie. This is true, apparently, in Alberta also, for we have found the larvæ far out in unbroken tracts of prairie. They do less harm there than they would on grain fields, and if fallow land is made less attractive to the moths, more of them will lay their eggs on the prairie instead of on cultivated land.

REMEDIAL MEASURES.

On account of the migratory habits of these larvæ, no unprotected fields are absolutely safe from attack in years when the larvæ are sufficiently numerous to be moving across the county in search of food. At such times they may arrive in swarms upon fields where every precaution has been taken to prevent them from breeding. When army cutworms are abundant, therefore, everyone must keep a sharp lookout for them, and take steps to deal with them immediately if they appear on his farm.

POISONED BAITS.

The Army Cutworm can be controlled in a similar manner to other cutworms by the judicious use of poisoned baits.

These can be applied broadcast to attacked fields, but it is advisable so to use them only when the larvæ are present in large numbers in a crop which is well above the ground. For such a use we have obtained the best results by