

CANADA.
DEPARTMENT OF AGRICULTURE.
ENTOMOLOGICAL BRANCH.

C. GORDON HEWITT, DOMINION ENTOMOLOGIST.

Crop Protection Leaflet No. 6.

How to Control Locusts or Grasshoppers.*

Locusts, or "grasshoppers," as they are more generally spoken of, are true biting insects which feed actively throughout all their stages after hatching from the eggs. The latter enclosed in packets or pods, are deposited freely, chiefly in old neglected pasture lands, stubble fields, and along roadsides, etc., in spots where the soil is dry, not too hard, and largely free of vegetation. Egg-laying takes place in late summer and in autumn, the young locusts not hatching until about May of the following year.

In early life these insects have no wings, and their chief habits are eating and growing. As they develop they cast off their skins from time to time until after the fifth moult, when they attain fully developed wings. After becoming full grown, which is generally in the latter half of June and early July, their feeding habits are less active, and their attention is directed more towards mating and egg-laying.



Locust laying eggs. (Original).

The crops attacked by these insects are oats, barley, timothy, rye, wheat, buckwheat, corn, turnip, rape, clover, potato, cabbage, onion, bean, carrot, etc. In the province of British Columbia, in some years serious injury is effected to native grasses on range land.

REMEDIES.

Poisoned Baits.—In Eastern Canada large areas have been entirely freed from the ravages of destructive locusts by broadcasting over the infested fields the following mixture:—

Bran	20 pounds
Paris green or white arsenic	$\frac{1}{2}$ pound
Molasses	2 quarts
Oranges or lemons	3 fruits
Water	2 to 2 $\frac{1}{2}$ gallons.

In preparing this bran mash, the bran and Paris green, or white arsenic, are mixed thoroughly in a wash tub while dry. The juice of the oranges or lemons is squeezed into the water, and to this is also added the pulp and peel after cutting into fine bits. The molasses should then be added, and when dissolved the mixture should be poured onto the dry bran and poison, stirring

*By Arthur Gibson, Chief Assistant Entomologist, in charge of Field Crop Insect Investigations, and Norman Criddle, Field Officer for Manitoba.