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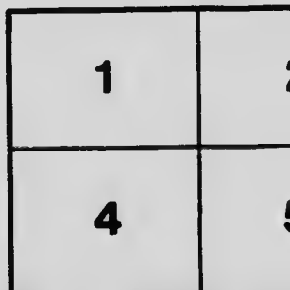
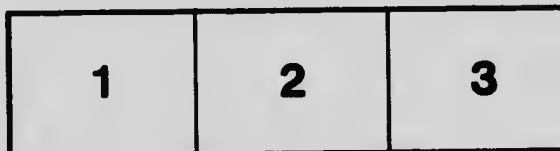
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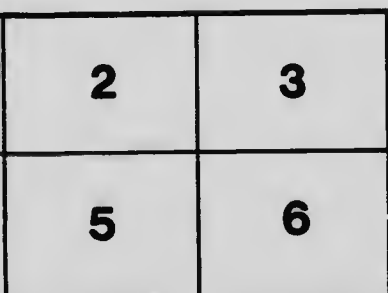
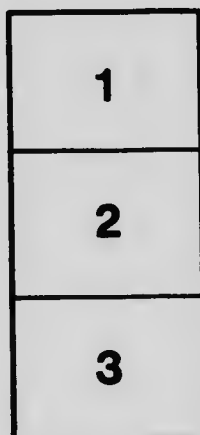
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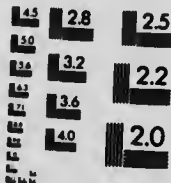
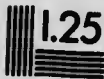
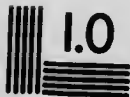
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CANADA.
DEPARTMENT OF AGRICULTURE
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ARTHUR GIBSON, ACTING DOMINION ENTOMOLOGIST.

Crop Protection Leaflet No. 13.

THE EUROPEAN CORN BORER.*

(*Pyrausta nubilalis* Hbn.)

The European Corn Borer has recently been discovered (August and September, 1920) in corn, both sweet and field, in the province of Ontario, particularly in certain counties bordering on Lake Erie. Up to the present time corn is the only crop in which the borer has been found. In the State of Massachusetts where the pest was first discovered, the following plants are also attacked: celery, bean, beet, spinach, potato, tomato, turnip, rhubarb, dahlia, crysanthemum, gladiolus, etc.

NATURE OF THE INJURY.

All parts of corn which is the most favoured food plant are attacked, except the fibrous roots. The most serious damage is caused to the stalks and ears which are partially or totally destroyed. The borer generally enters the stalk at the upper end near the base of the tassel and at first tunnels upward. The damage so weakens the tassel stalk that it breaks over before the tassel matures, resulting in loss of pollen and normal fertilization of grain in the ears. After destroying the tassel the borers tunnel downwards through the stalk gradually increasing the size of their tunnels as they develop

DESCRIPTION OF THE BORER.

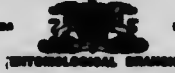
When mature the European Corn Borer is about one inch long. It is of a light brownish or flesh colour, some specimens being darker than others. The head is dark brown, the neck or thoracic shield paler brown, as are also the warts or tubercles on the body. This borer is closely allied to other species and usually an expert determination is necessary.

HABITS.

Judging from the habits of the insect in New York State, which is the nearest known infestation to Canada, there is only one annual generation of the borer in Ontario. The female moth lays its eggs in clusters on the leaves of the corn or other

*By Arthur Gibson, Acting Dominion Entomologist and Chief of the Division of Field Crop Insects, and L. S. McLaine, Chief of the Division of Foreign Pests Suppression.

GOVERNMENT OF CANADA



DEPARTMENT OF AGRICULTURE

ENTOMOLOGICAL BRANCH


WARNING

THE EUROPEAN CORN BORER


This pest attacks **CORN, POTATOES, OATS, FOODEN AND GARDEN CROPS** and has recently been found in the United States where it is doing great damage.

THERE IS GRAVE DANGER OF THIS SERIOUS FOREIGN PEST BEING BROUGHT INTO CANADA.


HOW TO RECOGNIZE IT



Holes in the stalks of the above mentioned plants with sawdust-like material issuing from them indicate the presence of the borer or caterpillar. In the case of corn broken tassels also show where the borer is at work.



If the infested stems are split open the caterpillars will be found at work. These are often found just above the roots.



The insect spends the winter as a caterpillar in old stalks of corn or other food plants and changes to a reddish-brown pupa late in the spring. The pupa soon turns into a moth.



Illustrations reproduced by courtesy of the Bureau of Entomology, U. S. Department of Agriculture.

All persons are urgently requested to keep a constant lookout for this most dangerous pest and to report immediately all suspicious cases. Infested plants together with the insects themselves should be forwarded to the **DOMINION ENTOMOLOGIST, DEPT. OF AGRICULTURE, OTTAWA, ONT.** Packages under twelve ounces in weight may be sent free of postage.

host plant and about ten days later the eggs hatch. The young borers are about one-fifth of an inch long, with a black head and white body. They feed for a few days upon the surface of the leaf and then migrate to the opening tassel, bore a hole in the stem and complete their caterpillar life within the plant. The borer changes its skin five or six times as it grows and spends the winter as a full grown or nearly full grown caterpillar within its tunnels. With the advent of warm weather the following spring the borer resumes feeding but soon changes to the pupa or resting stage. The insect remains in this condition for about two weeks, when the adult moths emerge.

The illustration on the opposite page is a reduced copy of the "Warning Poster" which was widely distributed during the spring and summer of 1919 and 1920, before the borer was discovered in Ontario. It illustrates graphically the life-history of the insect and shows typical damage to the corn plant.

MEANS OF CONTROL.

1. Cut corn stalks as close to the ground as possible, thus reducing the number of borers left in the stubble (see illustration). The earlier in the season the corn is cut the better. Some farmers this year are cutting the worst infested patches by hand with a sharpened, short-handled, hoe. With such a tool the stalks may be cut almost level with the ground. Ploughing under infested stubble will not kill the borers. Experiments have shown that they will work their way up through sixteen inches of soil.

2. Put corn fodder in the silo, or at least feed the stalks to stock.

3. Keep the fields free from weeds. The borers have already been found in smartweed, lambs' quarters, ragweed, and certain thick-stemmed grasses and other weeds.

4. Burn or bury deeply in the spring all infested corn stalks, cobs, waste, etc., after winter feeding of stock. Do not mix with horse manure. There is not sufficient heat generated in cow manure to kill the borers.

5. Burn over weedy and infested corn fields to destroy hibernating borers.

SOME IMPORTANT DON'TS.

Don't leave corn stalks standing in the fields all winter to be ploughed under in spring. Unused corn stalks should be burned in early spring.

Don't throw old stalks, cobs, litter, etc., into the cow yard to be trampled on by cattle in the hope of destroying the borer.

Don't spread the corn borer into new territory by shipping infested stalks, corn on the cob, or corn cobs, either for feed for stock or packing purposes.

OTTAWA, September 24, 1920.



