

# The Western Wheat-Stem Saw-fly.

(*Cephus occidentalis*)

## Plants Injured

The Western Wheat-stem Saw-fly is a four-winged insect which attacks wheat, rye, barley, and some of our native grasses. Its damage at the present time is chiefly confined to wheat. This crop suffers a very great annual loss, much greater than the average farmer realizes. By actual count in one field in August, 1920, as many as 55% of the wheat stems were affected. In the corner of another field over 90% of the straws contained a worm. The heads of these straws contained shrunken grain, and the stand in general was below normal. Similar conditions prevail over a wide area of the Canadian West.

## Evidences of Injury

There are several symptoms by which the injury may be detected.

(1) A short time before the crop is ready for the binder, especially if it has been windy, many stalks will be bent over or broken off near their bases. The field will appear as if it had been visited by hail. The prevalence of this condition will depend upon how badly the field is affected.

(2) If the affected straws are split open lengthwise with a knife, there can be seen a fine yellowish powdery substance sometimes scattered along, and sometimes closely packed together, inside the straw. This is formed by the larva or worm as it works its way down the stalk. This is one of the best means of identifying the work of the saw fly.

(3) The larvae are found inside the stalks. These may be distinguished from other cereal infesting larvae by means of a tube-like projection which extends from the hind end of the body.

(4) Just before preparing their winter quarters, the larvae cut a ring around the inside of the stems about an inch above the surface of the ground. When the affected stems are pulled, they break away at that point very readily.

(5) In some cases the heads of the affected stems turn yellow prematurely. This symptom may be confused with injury by other grain insects, and cannot be relied upon unless accompanied by some of the other more reliable evidences of the presence of the Western Wheat-stem Saw-fly.

## Life History

The adult insect may be found during the last half of June and the first half of July resting in characteristic position, head downward, upon the stalks of grains and grasses. Eggs are laid near the top of the plant, and the young larva as soon as hatched begins to eat its way downward through the hollow stem, enlarging this hollow as it descends. About the first week in August, it reaches a point in the stem even with the surface of the ground. On its way down, it leaves a trail of yellow dust, which has been mentioned