

EXOTIC PEST FACT SHEET 4

Western Corn Rootworm (*Diabrotica virgifera* ss. *virgifera*)

What are the main hosts?

Western corn rootworm is polyphagous. Corn is the major economic host. Other hosts include pumpkin, marrow, peas and maize.

What do they look like?

Eggs are white, oval shaped and less than 1 mm long. Mature larvae are around 10mm long, and are creamy white with a yellowish brown head and brownish plate on the last abdomen section (Fig 1). Adults are about 6 mm long with yellow bodies and have three black stripes on the forewings (Fig 2). The stripes may overlap making the wings appear solid black.

Why are they an issue?

The main cause of damage is from larvae feeding on corn roots (Fig 3). Newly-hatched larvae feed mainly on root hairs but as they grow they burrow into the roots. Burrowing and larval 'root pruning' puts the plants under severe physiological stress by reducing water and nutrient uptake. Adult rootworms feed on corn silks by clipping them off. When this happens prior to pollination this can result in poorly filled ears. Adult Western corn rootworm can feed on pollen, flowers, and foliage of other crops.

What should I look for?

Root damage and root pruning are the most obvious signs of the presence of Western corn rootworm. Adults can also cause damage when feeding on corn leaves resulting in a parchment-like appearance to the damaged area (Fig 4).

How do they spread?

Adults are able to fly over short and longer distances. Adults may also be carried by weather events such as cold fronts and thunderstorms.



Fig 1. Western corn rootworm larvae.
Image Scott Bauer, USDA Agricultural Research Service, Bugwood.org



Fig 2. Western corn rootworm adult.
Image Winston Beck, Iowa State University, Bugwood.org

Where are they present?

Western corn rootworm is present in North (USA, Canada) and Central America (Mexico, Guatemala, Nicaragua, Costa Rica), Europe and Russia.

How can I protect my industry?

Check your production sites frequently for the presence of new diseases and unusual symptoms. Make sure you are familiar with common pests and diseases of your industry so you can recognise something different.



Fig 3. Maize root system damaged by Western corn rootworm (top), little to no visible damage (bottom).
Image Richard C. Edwards, Purdue University, Bugwood.org



Fig 4. Damage to the leaf of a corn plant, caused by feeding of adult Western corn rootworm beetles.
Image Eugene E. Nelson, Bugwood.org