

## Western corn rootworm

*Diabrotica virgifera virgifera* Le Conte

### Plant Pest Information Note

#### What is it?

*Diabrotica virgifera virgifera*, commonly known as the western corn rootworm, originated in North America where it is the most important insect pest of Maize (*Zea mays*). It was first found in Europe near an airport in Serbia in 1992 and has steadily expanded its range since then. It is currently present in most eastern and central European countries and has spread as far as France. A finding in the UK in 2003 was successfully eradicated. It has never been found in Ireland. A study into its potential spread found that it is likely to develop where ever maize is grown in Europe. For these reasons it is crucial to maintain vigilance against this pest to ensure it does not become established here.



The adult beetle (opposite) is very small at only 5-7mm in length, with a gold body, black head and dark stripes running down its wing covers, the extent of these stripes may vary between individuals. It over-winters as eggs in the soil that were laid there late the previous summer. The eggs hatch into larvae around late-May to June. The larvae live in the soil and can grow to 10-18mm, they are narrow, wrinkled, a dullish yellow-brown colour with a brown head, see photograph below. The larvae pupate in June-July becoming adults.

#### Why should we be worried about it?

In the United States the western corn rootworm is estimated to cost the maize industry a billion dollars per year. Its favoured crop and main host is maize (*Zea mays*), however adult beetles may also feed on other plants. The larvae that live in the soil cause most damage by feeding on roots, thus causing the plant to grow poorly with reduced water and nutrient uptake. Additionally the lost or weakened roots can cause the plant to lodge and eventually can lead to total crop failure. While adult beetles feed on maize leaves this is not considered a serious issue, however their feeding on the new maize silks is problematic as this will reduce the corn yield.



### What are its hosts?

The full range of hosts for this pest is still under investigation however the main host for this pest is maize (*Zea mays*) but the adults are also known to feed on other plants. Larvae are not known to find these plants suitable as host plants.



### What are its symptoms?

Due to the feeding on the roots by the larvae, lodging of the maize crop can be a symptom of this pest. Plants are normally more easily pulled from the ground by hand because of the root damage. The older/larger larvae are known to burrow into the root system of the plants, so sometimes 'root tunnels' can be visible. Feeding by the adult does not have any form of characteristic symptom; however they are known to become most active at dawn and dusk. The picture above shows roots of a maize plant damaged by larvae compared to non-damaged maize roots.



### How does it spread?

The adults are capable of flight and can travel large distances which can cause spreading within an area, however, the main method of long distance spread is 'hitch-hiking', where they travel on cargo in aircraft, boats and lorries across great distances. Therefore each year DAFF conducts a specific survey near airports, ports, motorway service areas and maize fields to try to detect any incursions of this pest.

### Action in the event of suspect cases

This pest is known as a quarantine pest and is legislated for under the European Plant Health Directive. If you see suspicious symptoms please contact your local plant health inspector or the Division Headquarters at the number below.

All Photographs are courtesy of EPPO.

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Further information and symptoms of this pest can be viewed on the website of the European and Mediterranean Plant Protection Organization (EPPO) by clicking on the link below.

[Diabrotica virgifera virgifera EPPO Information](#)

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