UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

Fall Armyworm

2019

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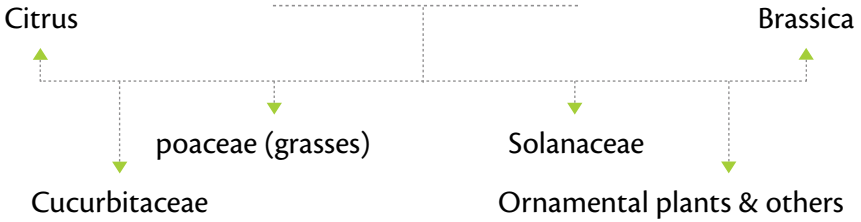
Scientific Name	Spodoptera frugiperda
Common Name	Fall Armyworm / American Armyworm
Classification	Noctuidae / Lepidoptera/ Insecta

80 – 100 Host Plants



Methods of proliferation & spreading

- The insect can spread during its various stages (full insect, larva, virgin, egg) on its hosts through international trade
- Spread naturally with the wind

Description

1

Eggs:
Spherical (0.75 mm diameter); they are green at the time of oviposition and become light brown prior to eclosion. The egg mass is usually covered with layer of grey-pink scales (setae) from the female abdomen.

2

Larvae:
Length: 2 mm long in the first instar and they reach 35-50 mm in the sixth instar.
Color: On hatching they are green with black lines and spots. If crowded (by a high population density and food shortage) the final instar can be almost black in its armyworm phase. Large larvae are characterized by an inverted Y-shape in yellow on the head, black dorsal pinaculae with long primary setae (two each side of each segment within the pale dorsal zone) and four black spots arranged in a square on the last abdominal segment.

3

Pupae:
Shorter than mature larvae (1.3-1.5 cm in males and 1.6-1.7 cm in females in Mexico), and are shiny brown.

4

Adult:
Body length: 1.6 cm
Wingspan: 3.7 cm
The color of the forewing: Mottled (light brown, grey, straw) with triangular patches at its tip and near its center
The color of the back wings: Between silver and white, and the edges are dark and narrow in both genders.

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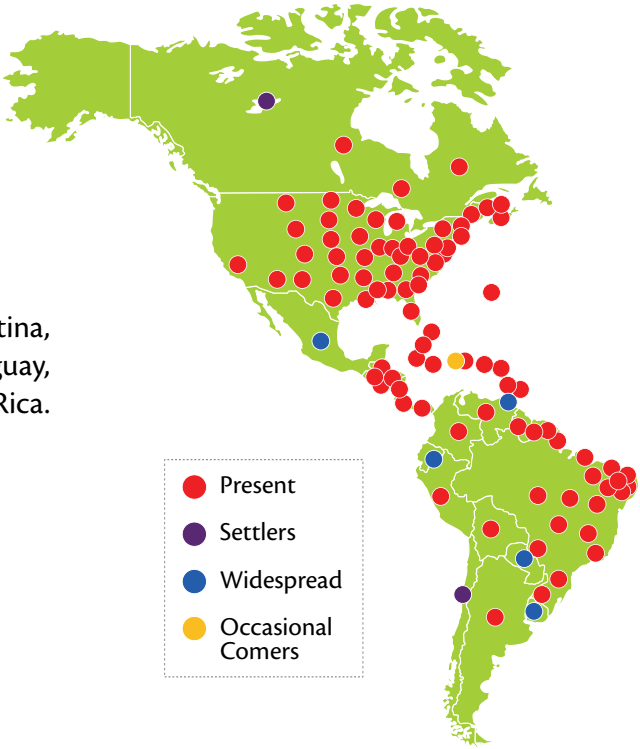
Symptoms

Seedlings are fed upon within the whorl. Larger larvae can cut the base of the plant. Mature plants suffer attack on reproductive structures. On tomato plants, buds and growing points may be eaten and fruits pierced. Maize leaves are eaten and the whorl (funnel) may be a mass of holes, ragged edges and larval frass. Young larvae skeletonize the leaf lamina. Early in the season, severe feeding damage to young plants can kill the growing point; a symptom called 'dead heart' in maize. Maize plants may have the cobs attacked by larvae boring through the kernels. At high densities, large larvae may act as armyworms and disperse in swarms, but they often remain in the locality on wild grasses, if available.

Biology and Ecology

1. The female armyworm lays her eggs on the lower surface of the leaves in tight clusters of 100-400.
2. Each female lays 1000 to 2000 eggs
3. Hatching usually requires 3-5 days revealing young larvae with black heads and greenish color.
4. The insect has 6 larvae and the last stage is the one that consumes the larger quantities of the host and the main cause of the damage.
5. The larva disappear during the day but comes out at night to feed on the leaves.
6. Pupation takes place inside a loose cocoon in an earthen cell 10 cm deep, or rarely between leaves on the host plant, and 7-14 days are required for development.
7. Adults emerge at night, and they typically use their natural pre-oviposition period to fly for many kilometers before they settle to oviposit, sometimes migrating for long distances. The life cycle takes one month in summer, two months in spring and autumn, and three months in winter.
   The insect has one generation or a few generations per year.

Geographical distribution

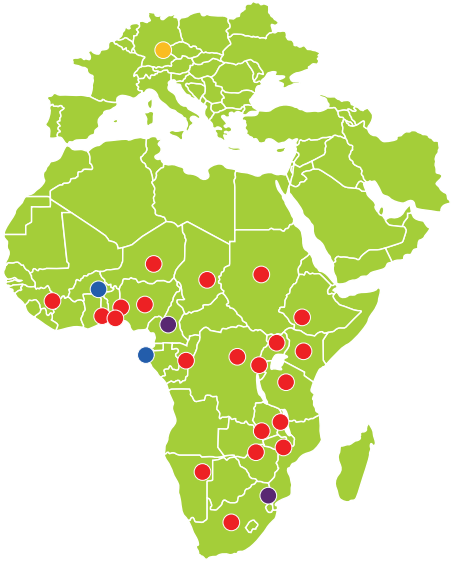


The Americas:

USA, Ecuador, Argentina, Brazil, Chile, Paraguay, Honduras and Costa Rica.

Africa:

Benin, Burkina Faso, Cameron, Chad, Congo, the Republic of the Congo, Ethiopia, Ghana, Guinea, Kenya, Malawi, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia and Zimbabwe.



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