Fall armyworm (401)

Summary

- Widespread, and spreading. Present in Asia, but not Indonesia, the Philippines, Oceania. Hosts: maize, millets, rice, sorghum, sugarcane, and many others of economic importance.
- Damage: larvae eat leaves and bore into fruits, e.g., maize cobs. Crops losses across Africa since 2016 have cost billions of dollars.
- Eggs masses (up to 200) on underside of leaves. Young larvae green, feed together, later brown with three whitish lines along back, dark spots with spines, and upside-down Y on head. Larger larvae cannibalistic and nocturnal. Adults, brown forewings and white hindwings, up to 40 mm wingspan.
- Spread is rapid on the wing, and on air currents. Highly invasive.
- Natural enemies: many parasitoids and predators known, and pathogens.
- Cultural control: avoid overlapping crops; avoid planting new crops next to old; plant *napier* or *Brachicaria* grass (attracts moths) around crops, and *Desmodium* (repels moths) between crops; monitor; crush egg masses; bird perches; attract ants; ash for maize whorls; collect and burn debris after harvest,
- Chemical control: biorational pesticides: (i) botanicals (chillies, neem, derris, pyrethrum); (ii) microbials e.g., Bt *(Bacillus thuringiensis* subspecies *kurstaki)* against young caterpillars, spinosad, *Beauveria*; (iii) avoid other kinds of pesticides as moths have resistance to them, or will develop it, and (iv) will kill natural enemies.

Common Name

Fall armyworm. Named after its flight into North America where it lays eggs, and the larvae develop in the Fall or Autumn.

Scientific Name

Spodoptera frugiperda

Photo 1. Mature larva of the fall armyworm, *Spodoptera frugiperda*. Note the inverted Y on the head, and the bristles from black spots. Another distinguishing characteristic is the four black dots (in a square) on the last abdominal segment.

Photo 2. Mature larva of the fall armyworm, *Spodoptera frugiperda*.

Photo 3. Mature larva of the fall armyworm, *Spodoptera frugiperda*, inside a maize cob. The whorl of leaves are usually the part most affected by the armyworm.

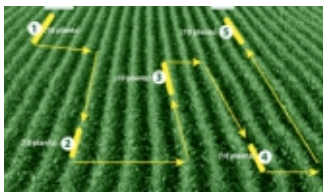Photo 4. Adult (male) fall armyworm, *Spodoptera frugiperda*.

Diagram. Scouting for fall armyworm, *Spodoptera frugiperda* using a W-shaped sampling plan of five groups of 10 plants (FAO guidance Note 2).

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