

## 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*.

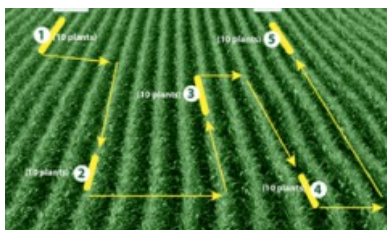


Diagram. Scouting for fall armyworm, *Spodoptera frugiperda* using a W-shaped sampling plan of five groups of 10 plants (FAO guidance Note 2).

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Information from John Wightman (2019) Fall armyworm update. Natural Resource Development Maleny Queensland. ([https://api.pestnet.org/media\\_store/submissions/2019/4/8855f10f-95cc-4b1c-8d78-1ed14562de1a/Fall%20armyworm%20note.pdf](https://api.pestnet.org/media_store/submissions/2019/4/8855f10f-95cc-4b1c-8d78-1ed14562de1a/Fall%20armyworm%20note.pdf)); and CABI (2019). *Spodoptera frugiperda* (fall armyworm) Crop Protection Compendium. (<https://www.cabi.org/cpc/restricted/?target=%2fcpc%2fdatasheet%2f29810>); and Fall armyworm. Wikipedia. ([https://en.wikipedia.org/wiki/Fall\\_armyworm](https://en.wikipedia.org/wiki/Fall_armyworm)); and FAO FAMEWS V3 app; and FAO Fall Armyworm Guidance Notes 1-5. (<http://www.fao.org/fall-armyworm/faw-management/pesticide-guidance/en/>); and from Kris Wyckhuys. Hanoi, Vietnam. Photo 1 Russ Ottens, University of Georgia, Bugwood.org. Photo 2 Frank Peairs, Colorado State University, Bugwood.org. Photo 3 John C. French Sr., Retired, Universities:Auburn, GA, Clemson and U of MO, Bugwood.org. Photo 4 Lyle Buss, University of Florida, Bugwood.org. Diagram from FAO FAW Guidance Note 2 Fall Armyworm Scouting. (<http://www.fao.org/3/i8321en/i8321en.pdf>).

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