



FALL ARMYWORM

(*Spodoptera frugiperda*):
Identification, biology and ecology

Fall Armyworm (FAW) is a new pest in Africa, attacking maize, but can also feed on other crops.

DAMAGE

- Leaf damage is usually characterized by ragged feeding, and moist sawdust-like frass near the funnel and upper leaves. Early feeding can appear to be similar to other caterpillars. Deep feeding in the leaf funnel may destroy the growing points and developing tassels.
- Caterpillars tend to enter through the side of the ear and feed on developing kernels. This is in contrast to stem borer caterpillars that normally enter the ear from the top or the bottom.

DESCRIPTION

- Outer wings of male moths have whitish patches at the lower outer edges (arrowed) while inner wings are white with dark trimmings.

- The egg masses are cream, grey or whitish with felt-like covering.
- The caterpillar has a dark head with an upside down pale Y-shaped marking on the front (blue circle).
- Each of the body segments has a pattern of four raised spots when seen from above (yellow circle).
- It has four dark spots forming a square on the second to last body segment (red circle).
- Its skin looks rough but is smooth to the touch. A full-sized caterpillar is slightly shorter than a match stick (4-5cm).

BIOLOGY

- Eggs are laid in masses of 50-200 eggs. Caterpillars generally emerge 3 to 5 days following oviposition and migrate to the whorl. There are 6 stages of caterpillar growth.

In the 2nd and 3rd instar stages, caterpillars are often cannibalistic, resulting in only one larva in the whorl.

- Pupation normally takes place in the soil, at a depth 2 to 8 cm. The caterpillar constructs a loose cocoon, oval in shape and 20 to 30 mm in length, by tying together particles of soil with silk. Pupal stage duration is 8-30 days.
- The life cycle is completed in about 30 days in optimum conditions.

ECOLOGY

The adult female moth is a strong flyer, travelling up to 100 km in a night. She lays masses of eggs directly on maize leaves. In 3-5 days the young caterpillars emerge and can spin off onto other plants, or begin to burrow into the whorl. The Fall Armyworm has many natural enemies that help control their population levels, including generalist predators (ants, earwigs, etc.), specialized parasitoids (small wasps that kill eggs or larvae), and pathogens (bacteria, virus and fungus).