

Fall Army Worm



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Fall Army worm Identification and Management.

Background on FAW in Uganda
Native to the Americas, the fall army-worm (Spodoptera frugiperda) was first reported as present on the African continent in January 2016 (Goergen et al. 2016). Subsequent investigations have identified the pest in nearly all of sub-Saharan Africa (SSA), where it is causing extensive damage, especially to maize fields and to a lesser degree sorghum and other crops. Currently, over 30 countries in Africa have identified the pest within their borders. In Uganda, the fall Army worm was first reported in the second season of 2016 in the districts of Kasese, Kayunga and Bukedea affecting 40% Of the maize crops in the fields. To date, the pest has been confirmed in over twenty (20) districts including; Kibaale, Kamwenge, Masindi, Nwoya, Mayuge, Kyenjojo, Mukono, Kamuli, Nkwoya, Luwero, Rakai, Buliisa, Kabarole, Kumi, Serere Kibaale, Kiryandongo, Luuka, Bugiri, Wakiso and Iganga and continues to spread to other districts at a very high rate. Facts on the Fall Army Worm

1. The male and female adult FAW can be differentiated from each other by comparing the forewings. The male moth's forewing is generally shaded grey and brown with a triangular white spot at the tip and near the centre of the wing while the adult female's forewings are less distinctly marked ranging from a uniform greyish brown to a fine mottling of grey and brown
2. The adult moths move in large swarms at night with each female laying up to 2500 eggs and the emerging caterpillars are aggressive feeders with the potential to destroy a hectare within 72 hours its later stages.

3. The destructive stage of the pest is the caterpillar and can be identified by its inverted "Y" mark on front of the head and four large spots towards the end of the body. The colour of the larvae ranges from a light brown to dark army green at the later stages.

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4. The caterpillar feeds aggressively on most parts of the plant including the leaves, stems, maize cobs and tassels except the roots. The damage caused by the feeding activities results in yield reduction and low grain quality.
5. The pest is known to feed on more than 80 plant species, including cereals (maize, millet, sorghum, sugarcane, rice and wheat), legumes (cowpea, groundnuts and soybean), cotton and many pasture grasses (Rhodes grass, Kikuyu grass, Lucerne and other pasture grasses) that are the main sources of cattle feed in the country. Identification of fall army worm:
FAW has 4 main stages of development: Egg, Larva, Pupa and Adult.
•FAW adult moths lay eggs in batches on maize plants, normally on fresh leaves.
•The white egg masses are normally covered with wool/cotton-like material of the adult moth scales.
•Larvae emerge from eggs and grow in size as they continue feeding.
•There are 6 'stages'/sizes of larvae, called instars.
•Young larvae (1st to 3rd instar) are greenish or yellowish brown in colour and have hair-like spikes. They are very small and not easy to notice.
•Late-stage larvae are light to dark brown or even blackish, and the hair-like spikes are less evident.
•Larvae have 3 thin light-coloured stripes along the back. Management of the FAW

The following are the key measures, and should be applied in an integrated management approach (Combining several intervention measures) since every positive action has an additive effect:
1. Plant early in the season, avoiding late and off-season planting. Early planting allows maturity of maize before high pest population build-up.
2. Use mechanical control methods Examples include the following:
•Handpicking and squashing egg masses.
•Picking and crushing caterpillars or drowning them in soapy water.
•Ploughing before onset of rains to expose pupae to predators and solar heat.
•Application of suffocating materials such as wood ash, dry soil/sand in plant whorls.
3. Use of pesticides
•Spray late in the evening or very early in the morning when the larvae are active (not hiding).
•Direct the spray to the plant whorls (funnel) and top leaves
•Repeat spraying 2 to 3 times to target young larvae that emerge after earlier sprays – it can be at 2 weeks intervals or as guided by scouting observations
•Ensure food safety, protection of human health and avoid environmental pollution; spray only when necessary on the basis of scouting observations and avoid spraying 2 months to maturity of maize.
•Choose an appropriate insecticide on the basis of experience or recommendation from agricultural extension agents.
•Several Pesticides are effective against fall army worm, subject to appropriate application. These include:
•Alternate products with different active ingredients, preferably after 2 applications, to prevent pesticide resistance development.
4. Restrict/prevent movement of infested plant materials, destroy infested materials or feed them to livestock as close to the affected farm as possible. Be very careful when feeding livestock after disposal; particularly if spraying had been done recently, to avoid animal poisoning.

