Food and Agriculture Organization of the United Nations

Integrated Fall Armyworm (FAW) Management

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What is Fall Armyworm?

Fall armyworm (*Spodoptera frugiperda* (JE Smith) is an insect pest that mainly infested on maize crops, at different stages of growth, from early vegetative to physiological maturity.

The adult moth can lay an average of 1 500 eggs and can fly up to 100 km in one night. 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 in a typical 'window-panning' damage. 'Window-panning' is the most common damage symptom at early whorl stage.

Early instar damage

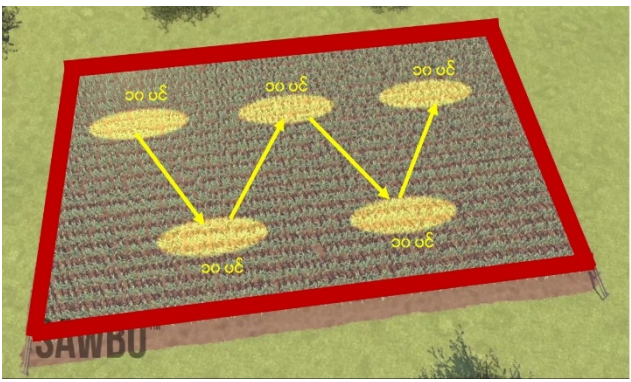
FAW in early whorl

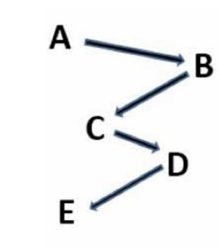
Damage symptom of FAW and window-panning

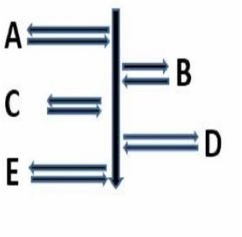
FAW infested maize field and FAW in tassel

Scouting

- The scout walks into the field about five meters.
- The scout then zigzags the field, stopping at five different locations.
- At each of these locations, the scout assesses 10-20 plants looking for signs of FAW feeding.
- Scouts should look for signs of FAW egg-hatch and feeding by early-instar larvae.
- Record infested whorls include fresh window-panning (in the whorl), FAW larvae, fresh fecal matter (frass), and fresh whorl-feeding-damage.







Scouting should begin one week after sowing and be practiced regularly.

Action thresholds and Recommendations

Stage	Growth stage	Action thresholds for small holders (%)	Action thresholds for key farmers (%)
Early whorl stage	Early vegetative – V6	20 (10–30)	20 (10–30)
Late whorl stage	V7–VT	40 (30–50)	40 (30–50)
Tasseling/ Silking	R1–R3	By not spraying insecticides	20 (10–30)

Intercropping

Intercropping reduces FAW infestation in maize.

Practice intercropping with soybean, pigeon pea and cowpea.

Maize with pigeon pea

Maize with soybean

Maize with Cowpea

Maize with other legumes

Management options:

Scouting should begin one week after sowing and be practiced regularly!

Egg stage: Hand pick and destroy the egg masses.

For first – second instar larvae: if you find the pin holes and window pane symptoms on the leaves, apply neem and bio-pesticides such as *Bt*.. Also try to reach also the underside of leaves.

For third instar – final instar: FAW enter into the whorls. Because faeces protect the larva from pesticide exposure, it is difficult to control the later instar larvae by insecticide spraying. Make conscious and judicious use of insecticides. When you have to use insecticides, choose the appropriate insecticides and apply safely. You can use the insecticides including a.i., 'indoxacarb', 'chlorantraniliprole', 'flubendiamide', 'emamectin benzoate'

DO NOT spray insecticides after tasseling.

Management options for next seasons:

- Clean the weeds and crop residues.
- Practice deep ploughing which reduces the survival of pupae in the soil. Apply 100 kg/ac neem cake before planting.
- Practice intercropping and with soybean, pigeon pea and cowpea.
- Practice harmonizing cultivation. Regularly monitor the field with pheromone traps.
- Release the egg parasite (*Trichogramma*) when you see the egg masses.
- Practice balanced fertilizers management and split application of urea fertilizers.
- Apply botanical/ home-made insecticides or repellents such as neem and tobacco extracts.
- Conserve the beneficial insects.

Contact us for further information:

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