Recognize the problem
Caterpillars of the fall armyworm destroy maize and other cereals. Young caterpillars, of about 1 cm, are greenish with black heads. Older, up to 3 cm, larvae are light brownish. They have an inverted light Y marking on the forehead and four tiny black spots arranged in a square on the last part of the body. They also have elevated spots all over the body and pale bands along the top of the body and dark stripes on the sides. Young caterpillars eat leaves from one side, leaving the opposite side intact. This causes a window-like appearance in leaves. Older caterpillars cause ‘tattering’ and ‘ragging’ of leaves.

Fall armyworms differ from African Armyworms and stalk borers. They produce a lot of frass and feed mostly in the leaf whorl or cob, not inside the stem.

Background
Inspect field 1 to 2 times per week. If 3 to 6 out of 20 plants have feeding windows in leaves or have armyworm caterpillars, chemical control may be needed. Dean is a combination of 2 insecticides, emamectin benzoate and imidacloprid. Emamectin benzoate is a contact insecticide and imidacloprid is a systemic insecticide. This insecticide combination kills young fall armyworm larvae, and adult moths. Older larvae are difficult to control since they hide deep inside the leaf whorl. Dean should be applied only during the vegetative stage due to its systemic action. Imidacloprid and emamectin benzoate are considered moderately poisonous to humans and animals. Imidacloprid is toxic to bees, thus never spray near flowering crops or bee hives.

Management
• Rinse the sprayer at least 3 times with clean water to ensure that the sprayer has no pesticide residues that may destroy the crop
• Add 8 litres of water through the knapsack sprayer and sieve
• Add 40ml of Dean concentrate. Double check with product label to confirm the actual dosage
• Close lid and swirl knapsack to mix water and chemical properly.
• Add another 8 litres of water, so that the sprayer is nearly full, close and mix again.
• Spray into the funnels of the maize leaves mid-morning or late in the afternoon when the fall armyworm actively feeds
• Ensure that the weather is calm to avoid drifting of chemical.
• Spray, if possible, all, so that there are no leftovers.
• Thoroughly wash knapsack sprayer with clean water and soap.

Scientific name(s) > Spodoptera frugiperda

The recommendations in this factsheet are relevant to: Zambia

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Edited by Plantwise.

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