

Fall armyworm (FAW) on maize

Spodoptera frugiperda. Local name: Ye amerika mete temch



Head showing yellow inverted Y shape (red circle) 4 dark dots in a square pattern (blue circle) (Russ Ottens, Bugwood.org)



Egg mass of FAW on underside of leaves (D Van Heerden)



Damage and frass produced by FAW larva (Zebdewos Salato, MoANR)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> Practice early planting or plant early maturing varieties (if available) to avoid a build up in populations of the pest as the season progresses Use recommended plant spacing when sowing and fertilizer rates for that particular variety Weed the field and surrounding area regularly to remove alternative hosts of the pest - especially grass weeds Do not move infested plant material from the farm to reduce spread Deep plough the soil to bring caterpillars and pupae to the upper surface where they are exposed to the sun or predators 	<ul style="list-style-type: none"> Monitoring should be carried out by groups of farmers twice weekly from emergence. Inspect plants along a diagonal transect in the field looking for the pest and symptoms. Adult: grey-brown moth. Egg mass: cream/grey with a felt-like covering on the underside leaves Caterpillars: light green/dark brown with longitudinal stripes. The head is dark with an upside down Y-shaped yellow marking. The second to last segment on the body has four dark spots forming a square (more prevalent on larvae in 3rd instar and above) Young caterpillars feed on the leaves causing ragged feeding holes and frass accumulates near the funnels and upper leaves - larger quantities of frass are produced than by stalk borer Older caterpillars feed inside funnels and bore into the cobs to feed inside If damage is less than 5% (1 in 20 plants) hand pick (green column) If damage is more than 5% (1 in 20 plants) use chemical control (yellow column) Monitor the soil for presence of brown pupae, 2-8cm below the surface. If present prepare for next infestation 	<ul style="list-style-type: none"> Hand pick caterpillars when infestation is less than 5% (1 in 20 plants). This can be done using a thin pointed stick like a porcupine quill (Yejart eshok). Kill the caterpillars by crushing or placing in hot water Put a handful of sand (mixed with lime or ash), sawdust or soil in the whorl of the attacked plants to kill the larvae Egg masses can be hand picked and destroyed to prevent larvae hatching 	<ul style="list-style-type: none"> When using a pesticide, always wear protective clothing and follow the instructions on the product label. Apply during calm weather when rain is not predicted to avoid drift and wash off Try to use chemicals with different modes of action to reduce the likelihood of resistance Always consult the most recent list of registered pesticides of MoANR, Plant Health Regulatory Directorate, Ethiopia All active ingredients: Organophosphate with contact action and stomach poison, IRAC Group: 1B When more than 5% infestation (1 in 20 plants) chemical control is recommended. For larvae in the later stage use the higher concentration of the rates below Malathion (Ethiolathion 50% EC; Fyfanon 50% EC; Helmathion 50% EC; Malt 50% EC). Apply at a rate of 1-2 Lt/ha Chlorpyrifos (Dursban 48% EC; Ethiopyrifos 48% EC; Hanclopa 48% EC; Pyriban 48% EC; Pynrex 48% EC). Apply at a rate of 0.5-1 Lt/ha Diazinon (Diazinon 60% EC; Diazol 60 EC; Ethiozinon 60% EC; Hondize 60% EC). Apply at a rate of 1-2 Lt/ha 	<ul style="list-style-type: none"> Armyworms are more active during the night so spray insecticide early in the morning or late afternoon. Apply 1-2 times per season from the time the pest is seen. WHO III (Slightly hazardous). REI 1 day. PHI 30 days. Highly toxic to bees and other beneficial insects WHO II (Moderately hazardous). REI 1 day. PHI 30 days. Dangerous for the environment and very toxic to aquatic organisms - do not use near water ways WHO II. REI 1 days. PHI 30 days. Very toxic to aquatic organisms - do not use near water ways

Ethiopia

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