




Fall armyworm (FAW) on maize

Spodoptera frugiperda. Ye amerika mete temch

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Head showing yellow inverted Y shape (red circle) 4 dark dots in a square pattern (blue circle) (Russ Ottens, Bugwood.org)</p>	<ul style="list-style-type: none"> • Deep plough the soil to expose caterpillars and pupae to the upper surface where they are exposed to the sun or predators • 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 • Avoid staggered plantings (plots of different stages) • 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 	<ul style="list-style-type: none"> • Monitoring should be carried out by groups of farmers twice weekly from emergence. Inspect plants along a diagonal 'W-shaped' transect at five places in the field, looking for 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 pupae - 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). If the larvae is inside the whorl, use thin pointed stick like a porcupine quill (yejart eshock). 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 • When more than 5% infestation (more than 1 in 20 plants) chemical control is recommended. For larvae in the later stage use the higher concentration of the rates below • Diazinon (Diazinon 60% EC; Diazol 60 EC; Ethiozinon 60% EC; Hondize 60% EC). Apply at a rate of 1-2 Lt/ha. Organophosphate with contact action and stomach poison, IRAC Group: 1B • Chlorpyrifos (Dursban 48% EC; Ethiopyrifos 48% EC; Hanclopa 48% EC; Pyriban 48% EC; Pyrinex 48% EC). Apply at a rate of 0.5-1 Lt/ha. Organophosphate with contact action and stomach poison, IRAC Group: 1B 	<ul style="list-style-type: none"> • The caterpillars are more active during the night so spray insecticide either early in the morning or late afternoon. Apply 1-2 times per season from the time the pest is seen. • WHO II (Moderately hazardous). REI 1 days. PHI 30 days. Very toxic to aquatic organisms - do not use near water ways • WHO II (Moderately hazardous). REI 1 days. PHI 30 days. Dangerous for the environment and very toxic to aquatic organisms - do not use near water ways
 <p>Egg mass of FAW on underside of leaves (D Van Heerden)</p>					
 <p>Damage and frass produced by FAW larva (Zebdewos Salato, MoANR)</p>					



Ethiopia

CREATED/UPDATED:

AUTHOR(S): Zebdewos Salato (Crop Protection Directorate, MoANR, Ethiopia), Jayne Crozier (CABI), Negussie Efa (CABI), Margaret Mulaa (CABI) Updated by: Zebdewos Salato and Negussie Efa

EDITED BY: Plantwise

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