

# Fall armyworm on sorghum

*Spodoptera frugiperda*



Eggs mass of *S. frugiperda* (Desiree van Heerden, Syngenta)



Early damage: "window pane" (Phil Sloderbeck, Kansas State University, Department of Entomology)



Whorl damage on sorghum (Z.M. Kinyua, KALRO)

Prevention	Monitoring	Direct Control
<ul style="list-style-type: none"> <li>Plant early with the first effective rains, as pest populations build up later in the crop season. This practice also breaks the synchrony between the pest and critical crop growth stages</li> <li>Use good quality seeds to increase plant vigor and potentially reduce damage</li> <li>Use short maturing and less preferred sorghum varieties with uniform heads to escape the pest infestation that might occur later in the season</li> <li>Use sorghum hybrids with loose panicles</li> <li>Avoid staggered planting (planting at different dates in the same field), as this provides a continuous source of food for the pest</li> <li>Ensure optimum use of fertilizer for strong sorghum plants able to compensate for damage done and apply at the right time</li> <li>Conserve shelters and flowering plants on the edges for beneficial insects such as ground beetles and parasitoids</li> <li>Avoid spraying broad spectrum insecticides as this will kill natural enemies that control the pest, and it may not be economical</li> </ul>	<ul style="list-style-type: none"> <li>Start monitoring plants from emergence until hard dough as fall armyworm (FAW) can attack sorghum from early development stage (whorl damage) to hard dough (head damage). Look for signs of FAW presence:                             <ul style="list-style-type: none"> <li>Egg masses are deposited on the underside of leaves or in panicles.</li> <li>Holes in leaves as they unroll from the whorl caused by larva feeding. The whorl of an infested plant contains frass produced by a larva as it feeds. The whorl leaf must be pulled from the plant and unfolded to find the larva.</li> <li>Small larvae will feed on florets and large larvae on developing kernels</li> </ul> </li> <li>Select and examine 50 plants per acre (125 plants per ha) at random in a zigzag pattern across the entire field.</li> <li>WHORL: 50% plants infested in the whorl pre-bloom stage</li> <li>HEAD: If 20% (range of 10–30%) of the plants are infested or have panicle damage, an insecticide application may be justified.</li> <li>Use a pheromone with the Universal Bucket Trap to estimate adult moth population</li> </ul>	<ul style="list-style-type: none"> <li>On small-scale farms, handpick and destroy the egg masses and larvae</li> <li>If available, spray young caterpillars with neem-based products before they move into the panicle.</li> <li>Thorough ploughing and cultivation of the field following the final harvest of the crop will also destroy large numbers of fall armyworm pupae in the soil and help to lessen pest infestation</li> <li>"Push-Pull" by intercropping sorghum with pest-repellent ("push") plant species (e.g., <i>Desmodium</i> spp.), surrounded by a border pest-attractive trap ("pull") plant species (such as napier grass or <i>Brachiaria</i>)</li> <li>Use microbial biopesticides based on bacteria, fungi and viruses if available</li> </ul>

Note: Pesticides may be available to control this pest. Please check with the Ministry of Agriculture in your country to find out which pesticides are registered in your country and the local restrictions for their use.