


Tomato fruit borer

Helicoverpa armigera Hubner Loodi

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 <p>Tomato fruit borer larvae (W. Billen, Pflanzenbeschaustelle, Bugwood.org)</p>	<ul style="list-style-type: none"> • Deep summer ploughing. • Early planting can help avoid this pest. • Avoid monocropping. Grow simultaneously 40 day-old African marigold with 25 day-old tomato seedlings, in the 1:16 rows. • Correctly space your seeds/ seedlings. Spacing depends upon variety but in general should be 60 x 45 cm. • Install bird perches in the field to encourage predatory birds. • Avoid the use of broad spectrum insecticides to conserve natural pest enemies (such as spiders, ants, parasitic wasps and robber flies). 	<ul style="list-style-type: none"> • Regular monitoring of the crop to check for caterpillars on the leaves, ideally during morning and evening hours. Threshold is 5-10% of leaves infested. • Use pheromone and/or light traps to check for the presence of the adult moths. Use 1 trap per acre. Action threshold is 3 or more adult moths in a trap. 	<ul style="list-style-type: none"> • Install pheromomone traps (5 traps per acre) for mass trapping of male moths. Change the lure every 15 days. • Install light traps to attract and kill adult moths. • Release the egg parasitoid <i>Trichogramma brassilences</i> or <i>T. pretiosum</i> at a rate of 40000-60000 parasitoids per acre once the action threshold is reached, or at the time of flowering. Repeat at 15-day intervals. • Spray neem-based insecticides e.g. NSKE (5% or Neem oil at a rate of 3 ml/L of water). • Foliar spray of the virus HaNPV (250 LE/Ha) with 20 Jaggery in the evening hours. • Foliar spray of the bacterium <i>Bacillus thuringiensis</i> var. <i>kurstaki</i> (1-1.5 kg/Ha). 	<ul style="list-style-type: none"> • Follow pesticide rotation to avoid pest resistance • Frequency of spray depends upon the pest intensity • Use of personal protective equipment (PPE) is recommended while using chemical pesticides • Spray the crop with Spinosad 45 SC at a rate of 0.5 ml/L. • Spray with either of the following: Flubendamide 48 SC, Chlorantraniliprole 18.5%, Indoxacarb at 0.1% or HaNPV at 250 LE and a half dose of any of the aforementioned chemicals. 	<ul style="list-style-type: none"> • WHO Class III (slightly hazardous). • Flubendamide and Indoxacarb WHO Class II (moderately hazardous); Chlorantraniliprole WHO Class U (unlikely to present acute hazards in normal use).

India

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