

# American Cotton Bollworm

kai thulaippan *Helicoverpa armigera*



Damage on young cotton. Photo: O.P. Sharma, Bugwood.org, CC BY-NC



Adult moth. Photo: Steve L. Brown, University of Georgia, Bugwood.org, CC BY

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> <li>• Deep summer ploughing</li> <li>• Resistant variety (AKT)</li> <li>• Early sowing</li> <li>• Remove all the collateral and alternate hosts</li> <li>• 1kg of fenugreek powder in 1 litre of water soaked overnight. The next morning, take out the filtrate and add 40 litres of water, then spray.</li> <li>• Synchronized sowing with short duration varieties.</li> <li>• Avoid continuous cropping and ratooning.</li> <li>• Grow the less-preferred crops like green gram, black gram, soybean, castor, sorghum, etc along the border.</li> <li>• Remove and destroy crop residues immediately after harvest.</li> <li>• Optimal use and split application of N fertilizers.</li> <li>• Avoiding extended crop growth by continuous irrigation.</li> <li>• Sow trap crop of marigold plants</li> </ul>	<ul style="list-style-type: none"> <li>• Pheromone traps 4 to 8 per acre.</li> <li>• Light traps 2 per acre.</li> <li>• 1 larvae/ plant or 5% damage to fruiting bodies.</li> </ul>	<ul style="list-style-type: none"> <li>• Bird perches 8 to 10 / acre.</li> <li>• Release <i>Trichogramma chilonis</i> 2 to 3 cards per acre.</li> <li>• Spray 5% neem seed kernel extract at flowering stage.</li> <li>• Spray 3 times with HaNPV (<i>Helicoverpa armigera</i> Nuclear Polyhedrosis Virus) at 3 trillion POB / ha in evening hours at 7th and 12th week after sowing. Mixing 10% jaggery (adjuvant) is advisable.</li> <li>• Hand pick &amp; destroy various insect stages, affected plant parts and rosetted flowers.</li> <li>• Spray entomopathogenic fungi such as <i>Metarhizium anisopliae</i>, <i>Beauveria bassiana</i>.</li> <li>• Release of <i>Chrysoperla carnea</i> @ 1,00,000/ha at 6th, 13th and 14th week after sowing.</li> </ul>	<ul style="list-style-type: none"> <li>• Use of personal protective equipment (PPEs) such as gloves, mask, goggles and keeping antidotes are mandatory by the spray applicators</li> </ul>	<ul style="list-style-type: none"> <li>• WHO class III (slightly hazardous)</li> <li>• WHO class II (moderately hazardous)</li> <li>• Botanical pesticide; unlikely to present acute hazard in normal use</li> <li>• WHO class II (moderately hazardous)</li> <li>• WHO class II (moderately hazardous)</li> </ul>
			<ul style="list-style-type: none"> <li>• Spinosad 48 SC 50 - 75 or</li> <li>• Chlorpyrifos 20 EC 500 – 700 during fruiting stages</li> <li>• Neem products ( 1500 ppm ) 2.5 litre 40 – 60 day</li> <li>• Quinalphos 20 A F 500 - 700 during fruiting stages or</li> <li>• Profenofos 50 EC 1000 - 1250 during fruiting stages</li> </ul>	

## India

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