

Tobacco caterpillar

Spodoptera litura



Adult: *Spodoptera litura* (Photo: Natasha Wright, Florida Dept of Agriculture & Consumer Services, Bugwood.org)



Egg mass covered with hairy scales (Photo: M. Shepard, G. R. Carner, and P.A.C Ooi, Bugwood.org)



Larva. (Photo: K. Kiritani, Bugwood.org)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions	
<ul style="list-style-type: none"> • Deep ploughing to expose <i>Spodoptera</i> pupae to natural enemies and weather-related factors. • Plant trap crops like sunflower, taro and castor around and within fields. 	<ul style="list-style-type: none"> • Use of para-pheromone traps (<i>Spodolure</i>) to predict <i>Spodoptera</i> egg laying • Observe egg masses (covered with white brown hair), just hatched larvae on leaves, underside of leaves. • Observe for the presence of 'scratch' marks on the leaf surface made by newly hatched larvae. • Look for older larvae in the soil around the base of plants during the day. • Observe leaf damage caused by chewing/ striping of large areas of the leaves in the field. 	<ul style="list-style-type: none"> • Collect and destroy egg masses and larvae from trap plants and host plants, on alternate days based on the 'warning' from the pheromone traps. • Spray Azadirachtin 0.16% EC @ 3ml per litre of water after observing of egg masses. • Releases the parasitoid <i>Trichogramma chilonis</i> in the crop field @ 50000 egg/ha/wk up to 6 weeks wherever available. • Apply nuclear polyhedrosis virus (NPV) @ 100 LE 1.5 ml with Nir 5 drops/litre in the evening (25 litre of water per ropani). or • Spray <i>Novaluran</i> 10% EC @ 1 ml per litre (25 litre of water per ropani). WHO class U (IV). or • Spray Chlorantraniliprole 18.5% SC @ 1 ml per 10 litre (25 litre of water per ropani). WHO class U (IV) 	<ul style="list-style-type: none"> • Use personnel protection equipment (PPE). 	<ul style="list-style-type: none"> • <i>Bt</i> is WHO class III (slightly hazardous) 	
			<ul style="list-style-type: none"> • Use of <i>Bacillus thuringiensis</i> (Bt) @ 1 gm/litre of water (25 litres of water per ropani) or 	<ul style="list-style-type: none"> • Use poison bait: Spread poison bait @ 10 kg rice or wheat bran + 1 kg of jaggery + 500 gm of Chlorpyrifos 3 % G per hectare in furrow & the repeat the bait for 2-3 days. or 	<ul style="list-style-type: none"> • <i>Fenvelarate</i>, Chlorpyrifos, Carbaryl, Emamectin benzoate fall under WHO class II (moderately hazardous)
			<ul style="list-style-type: none"> • Spray Fenvelarate 20% EC@ 2 ml/litre of water in 7 days interval 2 times. or 	<ul style="list-style-type: none"> • PHI of Fenvelarate, Chlorpyrifos 28-35 days (see label), Carbaryl 21 days, and Emamectin benzoate 3-7 days. 	
			<ul style="list-style-type: none"> • Dust carbaryl 5% DP @ 20-25 kg/hectare. or • Spray Emamectin benzoate 5% SG @ 2 gm/ 15 litre of water in 7 days interval 2 times. 		



Nepal

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