Alfalfa Caterpillar

The alfalfa caterpillar (also called "alfalfa butterfly") is a sporadic warm weather pest. Natural enemies often maintain this insect below economic levels most years.

Identification (and life cycle/seasonal history)

Adult alfalfa caterpillars (alfalfa butterflies) are medium-sized, with yellow or whitish wings that are solid on the top surface and bordered by black on the lower surface. The wingspan is about two inches. When they are seen flying about, they have probably just emerged from the field where they wintered as pupae. Females lay eggs singly onto alfalfa under one foot high. In about one week, the eggs hatch, and the larvae grow rapidly. They grow to one inch long at maturity about three weeks later. Larvae are green, covered with white hairs, and the larger larvae have thin white stripes along the sides of their bodies. Alfalfa caterpillars are favored by hot dry weather, abnormally slowly growing crops and by low densities of natural enemies.

Plant Response and Damage

Alfalfa caterpillars consume the leaves whole, whereas armyworms skeletonize the leaves. Damage is worst in newly planted fields, where the plants are too small to withstand much defoliation.

Management Approaches

Cultural Methods

In established fields, early harvest avoids serious damage from dense caterpillar populations.

Host Plant Resistance

None, although mature plants are able to withstand a great deal of defoliation.

Biological Controls

Preservation of natural enemies may keep alfalfa caterpillar from becoming economic most years. Besides general predators such as spiders, parasitic wasps and pathogens specific to this pest are common. *Bacillus thuringiensis kurstaki* is also active against alfalfa caterpillar (the larval stages only). Diseased and parasitized larvae tend to be abnormally colored, and are not as active. Natural enemies are preserved by avoiding unnecessary insecticide applications and by practicing non-chemical controls, such as early harvesting.

Chemical Control
Sampling/Surveying/Timing of sampling
Fields should be checked twice monthly, with more frequent monitoring after the adults are seen flying, especially when the plants are young and weather is hot and dry. Alfalfa caterpillars are best monitored with a sweep net. Diseased and parasitized larvae in high numbers compared to normal larvae indicate good control by natural enemies, so the threshold given below may be adjusted upwards, thus avoiding unnecessary insecticide applications.

Economic thresholds
An average of one caterpillar per two plants is the threshold for chemical control. However, as noted above, many diseased or parasitized caterpillars indicate natural enemy populations are present, so insecticide use may disrupt future control. Bacillus thuringiensis kurstaki should be considered because only butterfly and moth larvae are killed, preserving alfalfa caterpillar's natural enemies.

Product List for Alfalfa Caterpillar:

Insecticide | Product per acre (Fl oz. or Preharvest Interval, remarks oz. product) |
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Bacillus thuringiensis2 | See labels 0 days. Use of a spreader-sticker is recommended |
Baythroid 2E,XLR,1 | 1.6 – 2.8 7 days. 12 hr REI. Extremely Hazardous to Bees! Do not apply to alfalfa in bloom. Maximum of 2.8 oz per acre applied per cutting. Total 11.2 oz/A applied per season. |
carbaryl1,2 | See labels 7 days. 12 hr REI. Most formulations are Extremely Hazardous to Bees! Do not apply to alfalfa in bloom. Sevin XLR+ is safe for bees if applied at <1.5 lbs ai/acre when no bees are in the field. Do not apply more than once per cutting. |
chlorpyrifos 4ER1,2 | 16 - 32 14 days (1 pt), 21 days (over 1 pt rate). 24 hr REI. Do not make more than 4 applications/year or more than one application per cutting. Extremely Hazardous to Bees! Do not apply when bees are present. Minor phytotoxicity may occur on rapidly growing foliage. |
CobaltR1 | 13-26 7 days after application of 13 fl oz, 14 days after application of 26 fl oz, 21 days after application of rates above 26 fl oz per acre. Extremely Hazardous to Bees! Do not apply when bees are present. |
lambda cyhalothrinR,1,2 | 1.92 – 3.20 7 days for hay. 24 hr REI. Extremely Hazardous to Bees! Do not apply to alfalfa in bloom. Do not apply more than 0.24 pt /A per cutting. Do not apply more than 0.96 pt/A per season. Advisable to move bees during application and allow 3 (low rate) or 5 (high rate) days before re-introduction of bees |
LannateR SP, LV | 8-16 (SP) 7 days to graze or feeding. 48 hr REI. Do
malathion 2 See labels

Mustang Max ECR, 1 2.24 – 4.0

permethrin R, 1, 2 See labels

Proaxis R, 1 1.92 – 3.20

Steward 1 6.7 – 11.3

**RResticted use pesticide** 1 **Labeled for chemigation** 2 **Generic active ingredient, several formulations.**

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Pesticides must be applied legally complying with all label directions and precautions on the pesticide container and any supplemental labeling and rules of state and federal pesticide regulatory agencies. State rules and regulations and special pesticide use allowances may vary from state to state: contact your State Department of Agriculture for the rules, regulations and allowances applicable in your state and locality.

Categories: Alfalfa, Insects, Alfalfa caterpillar

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