

Tomatoes vs. Pests

Insects' incessant chomping and feeding can destroy a garden during the hot summer months, but some of those ravenous critters are actually beneficial. Knowing the difference is key to winning the battle against insect pests. Indiscriminately treating the garden with insecticide can kill friends and foes alike, and the foes generally recuperate faster. Pest-specific insecticides will leave beneficial insects alive to continue preying on other unwanted guests. However, when choosing insecticides, read all labels carefully.



Before using insecticides, try other pest control methods. Some insects, like hornworms, can simply be picked off vegetables. Stripped leaves on tomato plants may indicate hornworms, which range from green to brown and grow up to 5 inches in length. They're hard to spot amid green foliage. Search for black droppings on the ground and look for the characteristic horn.

Don't disturb caterpillars covered with small white cocoons. The cocoons contain parasitic wasps that eventually kill the host. Afterward, they fly on to seek more hornworms. Skeleton-like leaves on snap beans or lima beans are signs of a bean beetle. These copper-colored insects grow to about 1/4-inch in length and have black spots on their wings. The yellow to orange colored larvae have black-tipped spines on their backs. Look for yellow eggs on the undersides of leaves. Crush the eggs and clean up all plant debris in the fall to avoid overwintering by beetles.

Don't confuse bean beetles with ladybugs or ladybird beetles. Ladybird beetles are often red with black spots, but they can also be black or even bright orange. The adults and the larvae--which are flat and orange to gray in color--eat aphids, not leaves. Larvae can eat up to 25 aphids per day.

Don't be deceived by pretty white butterflies that skip across your cabbage. Adult cabbageworm moths attach yellow, bullet-shaped eggs on the undersides of leaves. Emerging green worms with light stripes down their backs can reach 1 to 1-1/2 inches in length. They leave round or irregular holes in the leaves of cabbage and all species of lettuce. Control these worms by applying the bacteria *Bacillus thuringiensis* (BT). This bacteria is relatively host-specific to these types of caterpillars, and to brownish cabbage loopers, which feed on lettuce and cole crops like cabbage, broccoli and cauliflower. The bacteria won't harm other insects or animals.

Before spraying a garden against pests, be sure populations are high enough to warrant such action and clearly identify targeted bugs. If in doubt, give us a call!

This article adapted from Cooperative State Research, Education and Extension Service, USDA. Please contact Ken Churches at cdcalaveras@ucdavis.edu or (209) 754-6475 with your agricultural questions. To speak with a Certified Master Gardener: Calaveras (209) 754-2880, Tuolumne (209) 533-5696, Amador (209) 223-6837, El Dorado (530) 621-5543.