

# Beneficial Insects

Used in this country since the late 1880's, predatory and parasitic insects (beneficials) are the best known form of biological control. They provide long-term pest control, helping to tip the scales in your favor when insect pests arrive. Beneficial Insects attack and destroy only insects, they are harmless to people, plants and pets.

For best results, release beneficial insects when pest levels are low to medium. If pest populations are high, use a least-toxic, short-lived pesticide (soap, botanical insecticide) to establish control, then release beneficials to maintain control.

**Planet Natural offers a large selection of Beneficial Insects.  
If you do not see what you are looking for... please ask!**



## Ladybug

A favorite with home gardeners, [ladybugs](#) are the best known beneficial insects around. Both the adult and the dark gray and orange marked larvae will feed on insect pests that are not too hard shelled, too fast moving, or too large.

Ladybugs may fly away soon after release. This can be prevented by late afternoon releases close to sunset, which gives them a chance to settle down overnight. Release one half pint (approximately 4,500) to treat a 3,000 sq. ft. growing area.

Note: Larvae will eat approximately 400 aphids prior to pupating. Adults will consume more than 5,000 aphids during their lifetime.



## Beneficial Nematode

In a moist dark environment, [beneficial nematodes](#) kill almost all pest insects. Therefore, these microscopic, worm-like organisms are ideally suited to combat pests that attack plants in areas such as root zones, lawn thatch, bark cracks, plant crowns and corn tassels. They will also work on insects that bore into wood, trees and shrubs.

Beneficial nematodes are easily applied using no specialized equipment. Simply scatter over the infested area, then water. Use one pint (7 million nematodes) to provide insect control in an area from 200 to 400 square feet. Killing action begins 24 hours after application.



## Fly Parasite

These small parasitic wasps attack and kill filth flies in their immature pupal stage. Very effective because they kill the pest before it can mature into a flying adult. They will not bother humans or animals.

For best results, apply [fly parasites](#) early (500 per large animal). Releasing small amounts weekly, every other week, or even monthly has proven to be more effective than one large release.

Note: Fly parasites do not attack adult flies, thus care must be taken to keep the existing population as low as possible. We recommend using them with fly traps and/ or baits.



## Predatory Mite

While not actually insects, these arachnids are closely related to spiders and are an important biological control of the spider mite. [Predatory mites](#) are orange-red colored, pear shaped and have front legs that are longer than those of its prey.

Release 2,000 predatory mites per 750 square feet, or 20-30 per medium sized plant, depending on infestation. Once released, they begin feeding on pest mites, which are often abundant on the underside of plant leaves.

Note: On heavier infestations it is important that you first reduce the pest infestation before releasing predatory mites. Consider spraying with an insecticidal soap or other natural insect control.



## Lacewing

Lacewing larvae vigorously attack their prey, injecting a paralyzing venom then drawing out the body fluids of the victim. Besides aphids, they feed on citrus mealybugs, cottony cushion scale, spider mites, thrips, young caterpillars, insect eggs, etc. Larvae will devour up to 200 pest insects

per week and are known to be cannibalistic if no other food source is available.

Green [lacewing](#) are shipped as eggs packaged in a carrier of rice hulls. Release 1,000 eggs per 2,500 square feet (50 x 50 foot area), as close as possible to pest infested areas. A second release, two weeks later, may be necessary.



## Praying Mantis

Shipped as egg cases, this ferocious predator will attack just about any insect in its path, which unfortunately includes other beneficial insects. Each egg case yields approximately 50 to 200 nymphs, which emerge through narrow slits in the case and immediately disperse into the foliage.

Use 3 [praying mantis](#) eggcases for smaller areas (under 5,000 square feet) and increase the amount accordingly for larger areas. To release, simply tie the egg cases to twigs or branches about three feet above the ground.

Note: It usually takes three to four weeks of warm temperatures for mantis egg cases to hatch.



## Trichogramma Wasp

The tiny [trichogramma wasp](#) is an efficient destroyer of the eggs of more than 200 species of moths and butterflies which are leaf eaters in the larval stage. It is a particularly effective biological control because it kills its host before a plant can be damaged. They will not bother humans or animals.

Release should begin when moths are first present and periodically thereafter. The use of insect traps to monitor pest presence can be helpful in determining when to start releases.

Use 5,000 trichogramma wasps (1 square) per 5,000 square feet, weekly or every other week, for 3 to 6 consecutive weeks.



## Composting Worm

Convert trash into treasure with "red wiggler" worms (*Eisenia foetida*). Perfect for use in worm bins and compost piles, these annelids (not insects) are extremely efficient and can process large amounts of kitchen scraps into nutrient-rich castings in as little as two months.

To get started, use 1,000 [redworms](#) (approximately 2 lbs) per bin or vermicomposter. This initial amount will convert up to 1 pound of food waste daily. If you prefer to start with less, reduce the amount of food scraps used until the population grows. When adding to compost piles, release 1 pound of worms per cubic foot of material.