



Beneficial Insects Information

Learn more about the army of beneficial insects--predatory and parasitic--available to help you get rid of bad bugs in your garden.

By Susan Brackney
Courtesy USDA/Scott Bauer

A lady beetle (good bug) eats a pea aphid (bad bug).

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Integrated Pest Management Whether it's the whiteflies blanketing your tomatoes or those squash vine borers worming their way into the pumpkin patch again, you're probably already well acquainted with the bad guys in your garden.

The good news? You don't have to rely on synthetic or organic pesticides to be rid of insect pests. Turns out, there are plenty of good guys out there—including ladybugs, nematodes and lacewings—that are perfectly happy to work for you.

Such beneficial insects naturally reduce the numbers of many other, not-so-beneficial bugs, either: by preying on them directly or by parasitizing them—laying their eggs in or on the host insect of their choice.

Gardeners looking to quickly boost the numbers of beneficials in their own gardens can purchase both predatory and parasitic types from specialty retailers, but, to use beneficial insects most effectively, you'll need to know a bit about their life cycles and eating habits.

In other words? Knowing just what kinds of insect helpers to enlist really depends on what sorts of insect pests you're fighting.

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Predatory Insects

Here are some of the most popular and effective predatory beneficial insects.

Ladybugs

For aphid infestations, ladybugs are especially useful. Both larval and adult ladybugs will eat thousands of aphids as well as many soft-bodied beetle larvae, whiteflies, mites and thrips.

Although they're among the most widely used of the beneficials, not just any ladybugs will do. Look for the native species, *Hippodamia convergens*, and, even though they are more expensive, opt for preconditioned ladybugs. By feeding them just long enough that they're ready to lay eggs, insect supply companies "precondition" ladybugs to linger in the areas where they're released. To further discourage your investment from flying off, you can spray the plants on which they'll be released with water and then, because ladybugs don't typically fly at night, turn the insects loose at dusk.

The Midwest-based Gardens Alive is one beneficial insect supplier that offers preconditioned ladybugs.

Green Lacewing Larvae

Since green lacewing larvae are not yet winged adults, you needn't worry that they'll fly off—at least not right away. As long as they are around, they'll prey on mealy bugs, spider mites, scale, whiteflies, thrips and aphids, too.

About 5,000 green lacewing eggs will cover an acre and, during its two- to three-week predacious period, each green lacewing can eat hundreds of insects a day.

Green lacewing larvae are widely available; The Beneficial Insect Company is one of many suppliers carrying them.



Praying Mantis

Known for its voracious appetite, the praying mantis also has its merits in the garden. As they'll eat virtually any insect they can physically overcome, they're handy to have on hand for those particularly bad Japanese beetle years.

The only problem? Praying mantids don't discriminate. Not only will they eat your other beneficial insects, but also, if food is scarce, they'll even go after one another!

A single praying mantis can grow to be four inches long, and just one praying mantis egg case will hatch between 100 and 200 young. The egg cases are available from GardeningZone.com; the on-line retailer recommends placing two egg cases per every 3,000 square feet.

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Parasitic Insects

Here are some of the most popular and effective parasitic beneficial insects.

Parasitic wasps

They won't sting, but parasitic wasps do effectively combat over 200 species of caterpillars, including tomato hornworms, squash vine borers, cabbage loopers and bagworms. Just don't expect to see them in action.

The wasps are so tiny that three or four of them will fit on the head of a pin. The way they work? Adult females lay their eggs inside the eggs of the insect pests, and, when parasitic wasp larvae hatch, they feed on the host egg.

Planet Natural sells 5,000 parasitic wasp pupae per one-inch-square paper tabs; releasing just one square's worth covers 5,000 square feet in the garden.

Nematodes

As with parasitic wasps, beneficial nematodes are tiny, but they also pack a punch.

The tiny roundworms parasitize the larvae of over 250 kinds of insects by boring into the bodies of soil-dwelling grubs like cutworms and Japanese beetle or flea beetle larvae.

More than one million nematodes will fit onto a two-inch sponge and will cover about 3,000 square feet. Nematodes are dispersed into the garden by way of a hose or watering can. Once established in the soil, nematodes can live up to eight weeks.

Nematodes are available online via March Biological Natural Pest Control.

Planning, Storage and Care Suggestions

No matter which predatory or parasitic insects you decide will work best in your garden, be sure to ask for rush delivery, and follow any accompanying release instructions carefully so that you'll get the most benefit for your buck.

In some cases, you can refrigerate beneficials; for example, if you'd like to use successive groups of ladybugs, they can be put into cold storage for a month or two.

Aside from plenty of insect pests upon which to prey, beneficial insects also require a water source. A terra cotta saucer filled with a little water makes a fine bug bath.

Beneficial insects also need nectar and pollen; by always having something in bloom, you'll be more likely to sustain their populations from early spring through late summer.

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In fact, better than buying beneficial bugs when you need them is naturally attracting them to your garden for free by including a wider variety of the types of plants they like.

For instance, parasitic wasps are typically drawn to flower heads comprised of multiple, smaller flowers. As such, growing herbs like dill, fennel, coriander, parsley and thyme should keep the tiny parasites from straying from your garden. Several good sources of nectar and pollen for ladybugs, lacewings and other beneficials include bee balm, calendula, clover,



daisies, lobelia, sunflowers, asters and coreopsis.

Still not sure just where to start? Suitable for planting in garden borders or even between plant rows, March Biological's "Bug Blend" seed mix contains evening primrose, red, white, and crimson clovers, yarrow, alyssum, black-eyed Susans, and more.

Finally, whether you purchase beneficials outright or choose to attract them one by one, plan to swear off insecticides -- even the all-natural kinds -- since they'll kill the good guys along with the bad.

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