

Going Green

by Amy Stewart

Beneficial Insects

As demand surges, gardeners look to IGCs for advice

BENEFICIALS ARE THE ULTIMATE eco-friendly solution for pest control problems. But stocking your shelves with live insects brings a set of challenges: How do you keep them alive? How do you market them? How do you measure their effectiveness?

Chris McDonald, Retail Manager of Ray Wiegand's Nursery & Garden Center in Macomb Township, MI, has brought in beneficials twice in recent years, and during both runs, has monitored what works and what doesn't when it comes to the good-bug business.

"We had beneficials five or six years ago for a few years, but we stopped carrying them because they didn't sell," he says. "We were ahead of our time back then - the whole 'go green' thing had just not started to hit Michigan yet."

Now, his customers are asking for beneficials, so he brought them back. This time, he ordered a complete retail starter kit from Orcon, which includes a small glass-front refrigerator to house the insects. Getting set up cost about \$1,500, a worthwhile investment, McDonald says.

"Last time we did this, we did not have the fridge, and that was a mistake," he says. "[Without a refrigerator], praying mantis egg cases will start to hatch, nematodes won't stay viable and ladybugs won't stay dormant, meaning that you'll have to sell them a lot faster." He continues, "The package is not really all that expensive, and it creates a presence in the store. It shows that you mean business - you're not

just doing this as an afterthought."

Orcon supplies it all. "I bought the whole package, which offers everything live that they sell," McDonald says. It includes ladybugs, praying mantises and beneficial nematodes. Other options, such as trichogramma wasps and green lacewings, are available via mail order. "Basically, they sell you a box that has a mail-order coupon in it," McDonald explains. "That's because some of these insects just aren't going to live long enough for you have them in the garden center for weeks at a time." But he has decided not to offer the mail-order products. "They didn't sell for us," he says. "People are looking for instant satisfaction."

Promotions

Wiegand's advertising strategy has changed since the first time it carried beneficials. It creates flyers in-house, making it easier to incorporate new products like the beneficial insects into their promotions.

The garden center has a green section of the store, too, which helps draw attention to beneficials. "We've got composters, worm bins and beneficials all in one section. That helps to make more of a statement to our customers," McDonald says. "It's about having the products, but it's also a form of advertising - it lets people know that this is where they should come for green solutions."

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praying mantises

These large, exotic-looking insects eat almost anything - good bugs and bad. They target grasshoppers, grubs, beetles and caterpillars, among others.

Praying mantis eggs require no care, basically staying in a state of suspended animation until they come out of the refrigerator. Outside, once they get warm, they start hatching. People release them throughout the growing season during the spring and summer. As many as 150 insects can hatch from a single egg case; most packages include two cases. Managing customers' expectations is important with the praying mantises, especially since they eat everything. "If it's a bug, they're going to eat it," says Chris McDonald, Retail Manager of Ray Wiegand's Nursery & Garden Center in Macomb Township, MI, who adds, "I think we sell them as a novelty for little kids as much as anything. It's neat to have some around the yard. But they don't really do much for spider mites or other small creatures like aphids."

Tips on Succeeding with Beneficials

trichogramma wasps

These tiny species of wasps are almost invisible to the naked eye and live just two weeks in the garden. Adults lay their eggs inside caterpillars, and when the eggs hatch, they feed on the caterpillar. The caterpillar dies, and tiny wasps emerge to continue the life cycle. These wasps are particularly effective against corn borers, tomato hornworms, cabbage worms and cabbage loopers. To ensure their success, it's important to release them when caterpillars are active in the garden.

predatory mites

Just as some species of snails devour other snails, gardeners plagued by spider mites can turn to another species of mite to do the job. Predatory mites are usually shipped as hungry adults and come in a cornmeal solution. They should be released the same day they arrive. Wait until evening, and shake them out around plants where infestation is a problem. These beneficials have a 10-day lifespan and should lay eggs during that time to continue the cycle.

green lacewings

These delicate, pale green beneficials go after mealybugs, whiteflies, aphids and other soft-bodied insects, as well as moths, butterflies and other caterpillars. Green lacewings are usually shipped as ready-to-hatch eggs, so it's important to release them when pests are active. The larvae can eat several hundred aphids before they emerge into their adult stage. As adults, they may disperse over a large area before laying eggs again, so gardeners should not necessarily expect to see one generation after another in their back yard.

beneficial nematodes

Beneficial nematodes, microscopic worm-like creatures, target fungus gnats that come in on houseplants. (Other species of nematodes target other pests; check packages for details.) “A little carton of a soil mix contains millions of nematodes,” McDonald says. “You mix it with water and basically water it into your houseplants.” The nematodes sell better in the winter, when fungus gnats on houseplants start to become bothersome. “We encourage customers to try this because houseplants are indoors, and we’re uncomfortable selling chemical treatments that people will be breathing indoors, even if it is a chemical that is listed for indoor use,” McDonald says. In addition to fungus gnats, nematodes will go after cutworms, armyworms, rootworms, weevils, and grubs.

aphytis melinus

Also called red scale parasite, this tiny parasitic wasp lays eggs inside scale, destroying the scale and producing more adult parasites. These beneficials are somewhat sensitive to temperature, requiring a range of 50 to 100 degrees in order to be effective. As with other beneficials, make sure the infested plants have not been sprayed with pesticides or horticultural oils before introducing them.

ladybugs

Ladybugs devour aphids, scale, mealybugs and other soft-bodied pests, making them a popular option, especially in early spring. They come in a carton that holds about 1500 ladybugs. McDonald says that it’s normal to find a few dead insects when the shipment arrives, simply because of the volume of bugs in the container. But overall, they stay dormant in cooler temperatures inside the refrigerator and require no care maintenance. “We put them in the fridge and forget about them,” he says. He orders 12 to 24 at a time, a quantity that will last 4 to 6 weeks during the season. Ladybugs are a popular solution for aphids in the garden, but McDonald tries to keep customers’ expectations realistic. “We suggest releasing them at night. If you have infested trees or flowers, it’s best to release them at the base of that plant, and the ladybugs will crawl up the plant to eat. As long as there’s food in the area, they will hang around. But once their food source is gone, they will fly away. They move to wherever the food is. So people shouldn’t expect to see them in their garden forever.”