MAINTENANCE

Natural pesticides: company proposes fighting bugs with bugs

By JOEL JOYNER

TUCSON, Ariz. — Between all the buzzing, biting, creeping, crawling and growing public scrutiny surrounding the use of pesticides, superintendents are finding themselves in greater need of alternatives. If you can fight fire with fire, why not fight bugs with bugs?

Don and Leah Cotton, owners and operators of Buglogical Control Systems, offer solutions that can eliminate your pest problems the natural way. Having supplied beneficial insects for use at universities, home gardens and Disney World, Don Cotton believes golf courses would be a natural environment for his pest-controlling products.

"For golf courses I would recommend nematodes, which would be very effective in attacking soil-dwelling insects like grubs, sod web-worms and beetles, just to name a few," explains Cotton. "Beneficial nematodes aggressively pursue insects, entering through the body openings of pest and releasing a bacteria that kills the prey within 48 hours."

The bacteria is harmless to humans and other organisms, he noted, and cannot live freely in nature.

"Nematodes are already in our soils," he said, "but a problem results from using insecticides that kill everything and make the area undesirable for returning beneficial insects. The pests, on the other hand, build up a resistance to frequently sprayed insecticides, requiring the use of stronger and more environmentally harmful chemicals."

NEMATODE SOLUTION

The nematodes are microscopic, non-segmented worms that may be mixed with water and distributed by a sprayer or watering can. Ideal conditions are a moist soil and cooler temperatures found in mornings and evenings. The soil should be consistently moist for two weeks, when another application of nematodes may be necessary.

"The important part is to establish a good habitat," said Cotton. "Once an area is free of insecticide spraying and a natural balance is established, then superintendents won't have to purchase anything for pest control."

Erin O'Brien, graduate student in plant ecology at the University of Illinois in Chicago, has discovered that chemical pesticides are harmful to her research in wild flowers. "By using parasitic wasps, midge flies, and ladybugs, we've not only controlled our pest problems, but we've been able to protect our plants and further our research by not applying pesticides. "The

ladybugs have done surprisingly well in controlling the aphids," she said, "and they're going strong since we introduced them into our green house last spring."



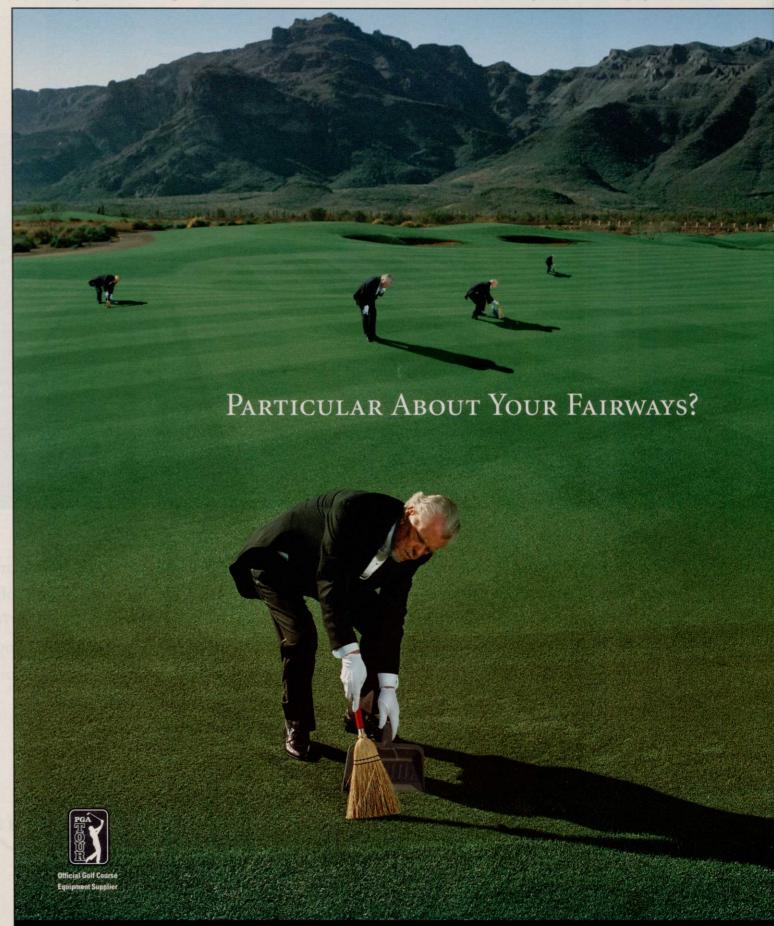
Ladybugs feeding on aphids

At the Department of Biologi- wild flowers.

cal Sciences, O'Brien has established a chemicalfree and mostly pestfree environment for her studies of Beneficial nematodes are also effective against the recent rise of Japanese beetles. Praying mantises may also be introduced to help control mosquitoes, which carry the West Nile virus. Trichogramma are useful for fighting leafworm and codling moth problems. And ladybugs feed on the destructive scales and aphids.

Small quantities of nematodes are grown on-site at Buglogical Control Systems. Larger quantities can be shipped from Europe throughout the world. An order of 100 million nematodes, enough to treat an acre, costs \$59.95.

For more information about pest control, visit www.buglogical.com.



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