

Biopesticides Bazaar

If you're looking for alternatives to vary your pest control options, here are some good places to start



Keeping the storage facility stocked with a number of options allows superintendent the flexibility to meet different challenges as they appear each year.

One alternative that more superintendents are adding to the mix are biological pesticides, particularly in the face of increased scrutiny by governments who want to limit the cosmetic use of pesticides (a quick shout-out here to Montreal, Quebec, and Madison, Wis., just to name two of the latest examples). Researchers are looking more closely at the possibilities of biological control (see Sarah Thompson and Rick Brandenburg's article, "Scientists Pursue Biological Control for Turfgrass Pests Despite Challenges," in *Turfgrass Trends* on page 55), and more companies are realizing the possibilities of the products. Here is a list of some of the biopesticide products available from which you can choose.

Microbial fungicide

EcoGuard, a Novozymes Biologicals product, is a microbial biofungicide that the company says controls dollar spot as well as chemical fungicides when used in a rotation with them. EcoGuard is a concentrated suspension of the bacterial spores of the organism *Bacillus licheniformis* SB3086, which has been demonstrated to be a natural inhibitor of dollar spot and other pathogens.



Improved disease resistance

BioSafe Systems offers superintendents OxyGROW, a biological inoculant that combines oxygen, calcium and beneficial mycorrhizae to help establish healthy root systems. The product provides a slow-release oxygen, giving the root system an environment for establishing beneficial organisms. The calcium component helps the turf develop cell membranes that are more resistant to disease pathogens, according to the company.



Soil amendment

RUTOPIA is a soil amendment from Poulenger USA that the company says helps protect turf from soil-borne pathogenic fungi. The amendment contains six species of trichoderma, which the company says surrounds the root system and produces antibiotics, destroying the spores of pathogenic fungi and preventing diseases such as recurring fairy ring. The product also contains four strains of *bacillus thuringiensis* (Bt), which have an impact on plant-damaging nematodes and grubs, according to Poulenger.



Biological insecticide

Certis USA offers Deliver, a biological insecticide designed to control caterpillar pests on trees, ornamentals and turf with low risk to humans, wildlife and nontarget insect species. Deliver is a Bt biopesticide that provides excellent coverage and is easy to use, according to the company. Certis says it controls a broad spectrum of

worm pests, including leaf rollers, cutworms, budworms and sod webworms. It's EPA-registered.

Worm control

Worms can be a big problem in golf course turf, flower beds and ornamental trees, but DiPel Pro DF from Valent works to control them, according to the company. DiPel provides control of worms, including loopers, tobacco budworms and armyworms. Its dry, flowable formulation is dust-free and allows convenient handling and measuring. DiPel Pro DF is also biodegradable and will not harm beneficial insects, the company says.



All-natural insecticide

St. Gabriel's Laboratories provides its SharpShooter insecticide, a product that kills common insects such as ants, flies, roaches and mites. The new formula now includes peppermint, clove oil and other environmentally friendly ingredients. SharpShooter is available in convenient 24-ounce and gallon ready-to-use sizes. For larger jobs, the quart or gallon-size concentrate will tackle the job quickly in a hose-end sprayer.

Mole cricket control

Mole crickets can cause devastating damage to turf. Becker Underwood says Nematac S, a strain of the insect pathogenic nematode *Steinernema scapterisci* that's a biological predator of the insects, quickly attacks and destroys mole cricket adults (and late instars) before they destroy turf. Nematac S is easy to apply and safe to use. It poses no threat to people, turf or beneficial insects, according to the company. ■

