

## Another Insecticide Bites the Dust

Daniel A. Potter

**A**ventis recently requested voluntary cancellation of Turcam<sup>®</sup> 20% and 76% WP and 2.5 G turf insecticides, and all other products containing bendiocarb, its active ingredient. Turcam was registered for control of white grubs, as well as certain other turf pests (e.g., chinch bugs, sod webworms, mole crickets, and European crane fly larvae). It was also used as a drench for fire ant mounds. Turcam was classified as a restricted use pesticide due to bird and fish toxicity. It was also highly toxic to bees and earthworms. Turcam thus joins diazinon, chlorpyrifos (Dursban<sup>®</sup>), ethoprop (Mocap<sup>®</sup>), fonofos (Crusade<sup>®</sup>), isafosfos (Triumph<sup>®</sup>), and isofenphos (Oftanol<sup>®</sup>) on the list of organophosphate (OP) and carbamate insecticides canceled or restricted by the EPA since 1990.

**Cancellation of Turcam should have little impact on the industry's ability to control surface-feeding pests.** Newer, reduced-risk products, especially pyrethroids (bifenthrin [Talstar<sup>®</sup>], cyfluthrin [Tempo<sup>®</sup>], deltamethrin [DeltaGard<sup>®</sup>], and lambda-cyhalothrin [Scimitar<sup>®</sup>] or spinosad [Conserve<sup>®</sup>]), work great on cutworms, armyworms, and sod webworms. Liquid halofenozide (MACH 2<sup>®</sup> 2SC) is also effective against those pests. Chinch bugs and greenbugs can be spot-treated with pyrethroids or controlled by soil-applied imidacloprid (Merit<sup>®</sup>). Fipronil (Choice<sup>®</sup>, TopChoice<sup>®</sup>) is especially effective against mole crickets. For fire ants, several new baits and drench products are generally more effective than was Turcam. For white grubs, most of the industry has shifted to preventive control with Merit or MACH 2.

Loss of Turcam does significantly reduce remaining options for curative grub control, especially "rescue" treatments after damage appears. Turf managers who practice selective preventive control must often spot-treat grub-damaged areas, especially where skunks and other predators are digging. Fast-acting soil insecticides provide the safety net to fall back on an IPM program for grubs.

**In the United States, only trichlorfon (Dylox<sup>®</sup>) and carbaryl (Sevin<sup>®</sup>) remain for rapid control of large, third-instar grubs.** University trials indicate that Dylox<sup>®</sup> has generally been faster and more consistently effective. Carbaryl also has the drawbacks of high use rate (8 lbs AI/acre), and being highly toxic to earthworms and bees. MACH 2 is also effective as an early curative (controls first and second instar grubs), but is it too slow-acting to discourage skunks and other varmints once grub damage appears. Turf managers should support Bayer in defending Dylox<sup>®</sup>, because its loss would leave few options but preventive control.

Turcam was among the most toxic of turf pesticides to earthworms. Although not labeled for earthworm control, some golf superintendents who used it were probably motivated by the "added value" of suppressing earthworms and castings on closely mowed playing surfaces. Other pesticides that suppress earthworms as a side-effect include Sevin and the fungicide thiophanate-methyl, but neither product is labeled for that purpose. Earthworms are generally beneficial in turf because their activities alleviate soil compaction, increase air and water infiltration, and help to break down thatch. 

## About Fairy Rings...

Continued from page 2

**Suppression is the most practical approach to combating Type 1 fairy rings in most situations.** The suppression approach is based on the premise that fairy rings are less conspicuous and less numerous where turf is well watered and fertilized. **This approach involves a combination of aeration, deep watering, use of wetting agents, and proper fertilization.** Aeration is beneficial since it aids in the penetration of air and water. The entire area occupied by the ring, to include a 2-foot (60 cm) periphery beyond the ring, should be aerified to remove soil cores on

2- to 4-inch (5.0 to 10 cm) centers. The area should then be irrigated to a depth of 4 to 6 inches (10 to 15 cm). Use of a wetting agent should help improve water infiltration. **The ring area should be re-treated in a similar fashion at the earliest indication of drought stress—that is, repeat the process whenever the dark-green grass turns blue-gray and begins to wilt.** When an aerator is not available, a deep root feeder with a garden hose attachment may be useful to force water into the dry soil. Apply recommended

Continued on page 5