



# TURFAX™

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## IN THIS ISSUE

- New Insecticides Expected to be Available in Summer 2000
- Previously Removed Herbicides Metsulfuron and Chlorsulfuron Return to Turf Market
- Invasive Weed Issue Emerges
- Summarizing Turf Rolling
- JB Comments: Spring Nitrogen Fertilization
- Ask Dr. Beard

## New Insecticides Expected to be Available in Summer 2000: Old Standbys Likely Will be Lost

Daniel A. Potter

The turf manager's palette of insecticides is rapidly changing as the EPA's targeting of organophosphates (OPs) and carbamates continues under the 1996 Food Quality Protection Act (FQPA). **Chlorpyrifos (Dursban®), long a mainstay for surface-feeding insect control, may soon be lost. Bendiocarb (Turcam) also has been challenged and will not be defended; thus, it is on its way out.** They likely will go the way of isazophos (Triumph®), isofenphos (Oftanol®), fonofos (Crusade®), diazinon, and other OPs that have been canceled or severely restricted in recent years.

Where do we stand insofar as suitable substitutes? **Pyrethroids such as bifenthrin (Talstar®), cyfluthrin (Tempo®), deltamethrin (DeltaGard®), and lambda-cyhalothrin (Scimitar®) are filling the void for cutworms, sod webworms, armyworms, chinch bugs, and other surface feeders, providing fast, reliable control at low use**

rates. Sprayable formulations of Spinosad (Conserve®) and halofenozide (MACH2®) are other options for caterpillars. Mole cricket control still relies heavily on OPs and carbamates; loss of such products as acephate (Orthene®), carbaryl (Sevin®), and chlorpyrifos would presently cause some real problems for southern turf managers.

**For white grubs, imidacloprid (Merit®) and halofenozide continue to provide excellent preventive control.** We'll be in real trouble, though, if we lose trichlorfon (Dylox®), the OP that currently is our most effective fast-acting curative control. Without it, professional turf managers may have few options for grub control once the damage appears and skunks start to dig. Research on biologicals, especially new strains of insect-pathogenic nematodes, is promising, but cost and availability may remain limiting.

Now, some good news.... Registrations are anticipated for two powerful new insecticides in 2000. These products offer another viable option for grub control, and a versatile granular product for controlling nuisance ants on golf courses.

**Thiamethoxam.** This summer, Novartis expects to introduce Meridian™ (thiamethoxam), a new turf and landscape insecticide that provides broad-spectrum preventive and curative control of all major white grub species at very low rates of active ingredient. Meridian is in a new chemical class called neonicotinoids that represents a mode-of-action different from that of all other insecticides discovered in recent decades. It is not a cholinesterase inhibitor like OPs and carbamates. It has a favorable ecological toxicology profile, with low toxicity to humans, wildlife, and earthworms. Meridian has been granted an expedited review by the EPA as a replacement for OPs, and is under concurrent review in California. Two formulations (25 WG and 0.33 G) will be available.

University tests across the United States indicate that Meridian provides excellent preventive grub control, comparable to Merit and MACH2, with a similar broad application window. **Ongoing work suggests that thiamethoxam also provides good curative control of**

Continued on page 6