If There is No Pesticide Registered for the Purpose, Do Not Cheat

Whenever a popular pesticide is no longer available, there is a mad rush to identify the most effective and least expensive replacement for it. This is currently true for many nematode control problems previously handled with ethylene dibromide (EDB) soil fumigants. However, there may be no alternatives registered for some of those uses, leading to "creative" pesticide use, outside the label restrictions for the product being tried. DON'T DO IT! The lack of registration may reflect some specific problems with that product on your crop, or maybe an unwillingness of the manufacturer to have its product used in a specific crop or site because of lack of efficacy, excessive product liability, or EPA limitations on the total amount of the product which can be used anywhere. Whatever the reason, use outside the label is ILLEGAL.

1. You are liable for fines and jail sentences.

2. Publicity in the press about illegal use, especially if there is some kind of human hazard or wildlife kill, reflects badly on all pesticide use and strengthens arguments for greater regulation and restriction of them.

Please do not, out of desperation, do something which can put us in even more desperate circumstances. Stick to the label.

ENTOMOLOGY AND NEMATOLOGY NEWS

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MOWER BLADE SHARPNESS EFFECTS ON TURF

D. H. Steinegger, R. C. Sherman,
T. P. Riordan and E. J. Kinbacker
Agronomy Journal, Vol. 75, No. 3

Park Kentucky bluegrass and a bluegrass blend of Baron, Glade and Adelphi were tested in Nebraska for response to rotary mowing with a dull blade. The following results were noted:

- Quality was reduced by the dull blade;

- Leafspot incidence increased on Park, but not on the blend when mowed with the dull blade;

- Thatch accumulations was not influenced by treatment;

- Water use rates were greater when turf was mowed with a sharp blade;

- The dull blade produced reduced shoot density and less verdure;

- Twenty-two percent more gasoline was used when mowing with a dull blade.

Cholinesterase Monitoring Important to Pesticide Safety

Regular testing of cholinesterase levels in the blood of applicators is a good way to monitor exposure to organic phosphate and carbamate pesticides, according to CHEM-LAWN toxicologist Roger Yeary. Pesticides that can be tracked this way include malathion, parathion, and acephate (Orthene) among the organic phosphates and aldicarb (TEMIK), carbaryl (Sevin), and benomyl (Benlate) among the carbamates.

Cholinesterase is an enzyme found in the nervous system, liver, red blood cells, and plasma. In the nervous system, organic phosphates and carbamates combine with the enzymes to disrupt the transmission of nerve impulses. As a result, the nervous system runs wild and the insect dies. Cholinesterase cannot be measured in the nervous system but it can be measured in the blood, where it binds to insecticides before they reach the nervous system. By periodically checking cholinesterase levels in the blood of pesticide applicators, chronic or low-level exposure and accumulation of pesticides in the body can be detected.

Yeary points out that when initiating a monitoring program, it is important to establish a baseline for comparison. Blood testing should begin 60 days before exposure to pesticides and should be repeated every three weeks or so. Research carried out by the U.S. Army has shown that cholinesterase levels in the body can be lowered gradually without symptoms of poisoning appearing. However, if cholinesterase levels are dropped quickly and suddenly — say 50 percent in 24 hours — symptoms of poisoning will appear.

A monitoring program is useful both to employers, who might find that reduced cholinesterase levels among employees were the result of poor handling practices, and to employees, who can be assured that they are not being unnecessarily exposed to pesticides. Yeary notes that its value lies in detecting chronic exposure rather than acute poisoning, which is best detected by awareness of such early symptoms as blurred vision, vomiting, coughing, or tightness of breath.

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