

Effective Grub Options Shrink

Preventative or curative plans depend on your locations

BY PAT VITTUM

White grubs (Japanese beetles, European chafers, Oriental beetles, Northern or Southern masked chafers) continue to be among the most challenging turf insects to manage in many parts of the country.

White grubs feed in the root zone, often 1 to 4 inches below the thatch, so it can be difficult to achieve good contact with traditional insecticides. Until about five years ago, there was a long list of insecticides that had been proven to be effective against grubs, but many of those materials have been removed from the turf market (or withdrawn completely).

Remember isazofos, ethoprop and fonofos? All were organophosphates that penetrated the thatch and reached the grubs, but they are no longer available. More recently some insecticides have been removed from the turf market as a result of the Food Quality Protection Act.

Chlorpyrifos and diazinon will be phased out of the homeowner market by the end of this year. Bendiocarb and isofenphos will be eliminated in the commercial turf market at the end of the year.

All of these products had what we call an intermediate speed of efficacy — they killed grubs within three to seven days after application and remained active for three to six weeks in most cases.

By 2003, we will not have any intermediate compounds available for use on grubs. That will leave us with two options — using a quick-acting insecticide like trichlorfon to control grubs curatively or applying a slow-acting material preventively.

There are two slow-acting and relatively long-lasting materials currently on the market, and there are additional products in development that will have similar properties. Imidacloprid is a nerve poison that often takes two or three weeks to start working but remains active for as much as four or five months, at least the first time it's used.

Halofenozide is a molt-accelerating compound (a form of insect growth regulator that only affects white



grubs and some caterpillars). It sometimes takes two weeks to start working and remains active for as much as two or three months.

While halofenozide and imidacloprid are most effective when they are applied preventively, they can be justified in an integrated pest management (IPM) program because they are more environmentally friendly than older compounds.

An IPM program normally is based on scouting the property and documenting the presence of an insect problem before applying an insecticide. When turf managers had access to the intermediate products, such an approach was appropriate and relatively easy to accomplish.

Beginning in 2003, however, they'll only have one purely curative product in their arsenal. Trichlorfon kills grubs quickly — often within two or three days after application — but it normally breaks down within 10 days.

Therefore, it's an ideal profile for a clean-up material, and people managing turf with a history of grub activity probably should keep some in stock to spot treat areas as needed.

Although synthetic pyrethroids also work quickly they are relatively immobile once they enter the soil. Therefore, it's virtually impossible to get them through the thatch layer to the root zone. Those limitations mean that class of chemicals are seldom recommended for grub control.

So what is the best approach to take — curative or preventative? There is no simple answer — each turf setting has its own conditions. The timing of the applications for either approach depends on location and the species of grubs present.

In general, either approach can be effective, as long as the application is appropriate for the material, and the product is irrigated in as soon as possible after application with at least .1 inch of water.

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