

TURFGRASS TRENDS

Volume 10, Issue 6 • June 2001

TURFGRASS PEST CONTROL

The Changing of the Guard in White Grub Control Insecticides

By Kevin Mathias

A combination of federal regulatory rulings and economic decisions by insecticide manufacturers has dramatically changed the landscape of white grub insecticides and control strategies. At the beginning of the 1990's white grub control insecticides consisted mainly of organophosphate and carbamate based chemistries with only a few biorational products available (Table 1). As a group, the organophosphate and carbamate insecticides, have a relatively short residual activity and are highly efficacious when used in curative control programs.

Optimum results are attained if the products are applied in mid to late August or into September, as white grub damage is first noticed and when the grubs are young and relatively small.

Optimum results are attained if the products are applied in mid to late August or into September, as white grub damage is first noticed and when the grubs are young and relatively small.

As we enter the new millennium many of the curative control products have been replaced by a group of new insecticides. These insecticides, Merit and Mach 2, offer greater applicator safety, have less adverse effect on the environment, provide a longer window of application due to their extended soil residual activities, have minimal impact on beneficial predators, and provide excellent control (+90%) of white grubs.

Merit and Mach 2 affect the early instar stages of white grubs and are much more effective in preventative than in curative control programs. A review of field evaluations for white grub control reported in Arthropod Management Tests from 1998 to 1999 demonstrated that applications of Mach 2 or Merit applied within the early June to early August time period provided excellent control (+90%), however, if these

insecticide were applied from late August through September the average level of control dropped to 80%.

A recent survey conducted at the 2001 Maryland Turfgrass Conference illustrates how turfgrass managers have incorporated these new insecticides into their insect control programs (Figure 1). Merit was used by 60% of the respondents, followed by Dylox at 28%, and then Mach 2 at 19% for white grub control.

IN THIS ISSUE

■ The changing of the guard in white grub control insecticides.....1

Organophosphate/
carbamate update

New product information

Natural control influence
of insecticides

Multiple targeting

■ Site analysis for golf course development.....7

Climate

Topography

Drainage patterns

Water availability

Soils and geology

Environmental issues

Wetlands

Water quality

■ Letters to the editor.....14

■ From the editor.....15

We'll miss you, Mike