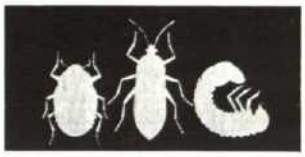

Wisconsin Entomology Report

Some Thoughts on Oftanol Insecticide

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In late 1983, Mobay Chemical Corporation received EPA labeling for nation-wide use of two formulations of Oftanol turf insecticide. Many managers of turfgrass plantings, especially golf courses, have been awaiting this registration because of some useful characteristics of this insecticide. This article is designed to discuss some of the attributes and usages of Oftanol.

Properties. Oftanol is Mobay's brand name for the turf labels of isofenphos insecticide. Isofenphos has also been sold by Mobay under the brand name Amaze (TM) which has applications for agronomic crops. Amaze is a different formulation than Oftanol, and does not have a turf registration. Some other formulators of turf insecticides are selling isofenphos under their own label, sometimes incorporated with a granular fertilizer.

The two formulations of Oftanol currently registered for use nationwide are Oftanol 5% Granular and Oftanol 2 Insecticide. Oftanol 2 is a liquid formulation containing 2 lbs. active ingredient per gallon of formulation.

A major benefit of isofenphos over other currently registered turfgrass insecticides is its longer residual life after application. Because of its residual life, some people have considered isofenphos to be a replacement for chlordane and other long-residential soil insecticides that have been banned. Keep in mind that chlordane was banned because it is extremely persistent in soils, with residues lasting for years. Isofenphos is not persistent to that degree; basically we can expect one growing season of activity under Wisconsin conditions.

Toxicity and precautions. Technical grade isofenphos has an acute oral LD50 of 28-38 and an acute dermal toxicity of 162-315. In this form it is one of the most toxic of turf insecticides. However, neither formulation of Oftanol carries a RESTRICTED USE label. While the Oftanol 2 (liquid) formulation carries a "WARNING" signal word, the 5% granular carries only a "CAUTION" label, indicating the lesser hazard of the granular formulation. Both Oftanol formulations are labeled "For commercial applicator use only," meaning that they are not to be used by home owners. However, both formulations can be used by professional applicators on residential as well as commercial turf.

Registrations. Oftanol 5% granular is currently registered for white grubs (including Phyllophaga and black turfgrass ataenius), billbug larvae, mole crickets (not a problem in Wisconsin), sod webworm larvae, and chinch bugs. The liquid formulation is registered for the same insects plus billbug adults.

Application Techniques. For soil insects (grubs, including ataenius, and billbug larvae) use maximum label rate.

There are two approaches to grub control with isofenphos. It can be used like any other curative turf insecticide when grubs are noted. But it can also be used as a preventive application where grubs are expected from past experience. For example, it can be used effectively as a preventive measure on golf course areas that have had a history of ataenius damage. Also, damage from Phyllophaga grubs frequently appears every third year; areas that were severely infested in 1981 may again be attacked in 1984. Such areas could be treated preventively. Because of the longer residual activity of isofenphos, an application in April or May should carry through the entire season.

Another aspect of the longer residual activity of isofenphos is that the granular formulations do not have to be immediately irrigated in when used in a preventive fashion. If applied prior to the occurrence of damage, as long as adequate rainfall occurs the active ingredient will be washed into the soil where it will eventually be needed for control. HOWEVER, if used to control an active infestation where damage is occurring, irrigation will be necessary as with any soil insecticide. Liquid formulations should be irrigated in as soon as possible after application (preferrably before sprays dry) for both preventive and curative control.

For surface inhabiting insects (sod webworms, chinch bugs, and billbug adults) ¼ — ½ inch of irrigation (or rainfall) must be applied within 12 hours of treatment, regardless of formulation.

Some Final Thoughts. In various university tests throughout the country, isofenphos has consistently provided good to excellent control of the labeled pests. However, it should also be noted that other turfgrass insecticides frequently have performed as well in these tests. In other words, as a curative insecticide for soil and surface inhabiting insects, isofenphos performs at about the same level as other good turf insecticides.

The benefits of isofenphos are two-fold. First, it has longer residual activity than other registered insecticides. A single application should provide season-long control. Secondly, because of its residual activity, it can be used preventively for soil insect contol, and when used in this fashion, it does not need to be irrigated in as long as sufficient rainfall occurs before the insects become damaging.

Finally, there are few situations where I recommend any form of preventive insecticide applications on Wisconsin turfgrass. Generally speaking, insect pressures on Wisconsin turf are quite light compared to other location and simply don't justify preventive insecticide applications. The exceptions to this include predictable grub problems, including black turfgrass ataenius. Isofenphos is not the answer to all turfgrass insect problems. Instead, it should be considered as a useful new tool to be used properly in the right circumstances.