TURFGRASS INSECTICIDE UPDATES — 1986

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EPA REVIEW OF DIAZINON

The Environmental Protection Agency has initiated a Special Review of the insecticide diazinon (trade names Diazinon, D Z N, Spectracide, etc.). The Special Review was initiated because of large scale mortality of geese on eastern United States golf courses after treatment with diazinon. The bird mortality has been confirmed to have been caused by diazinon. Although the review was initiated because of usage on turfgrass, all usages of the product will be under review.

At this point in time, it appears that at least some usage patterns of diazinon will be affected. A final ruling is expected either late in 1986 or in 1987. It is still legal to use the product in Wisconsin and other states.

Users of diazinon on turfgrass should be certain to apply it by label directions. When making applications for white grubs or other soil insects, make certain to irrigate it into the soil IMMEDIATELY after application.

Some Oftanol Failures Reported in 1985

In some locations in 1985, isofenphos (Oftanol) did not provide adequate control of various white grub species. Mobay has attributed these failures to several possible explanations:

1) improper usage patterns,
2) lower than label rates used,
3) dry weather in some areas, so inadequate rainfall to water material into soil,
4) no irrigation or improper amounts of irrigation applied to water material into soil,
5) rapid decomposition within the soil.

The first four possible explanations are easily understandable and can happen to any product when label instructions are not closely followed. The fifth possibility requires a little additional explanation.

Oftanol is supposed to have one of the longest residual lives of modern turfgrass insecticides. Early studies showed it to be active in the soil and effective for an entire growing season. So, what would be causing rapid decomposition?

In recent years, agricultural chemists and pest control scientists have been studying a natural soil phenomenon called "microbial degradation." In most soils there is a complex community of tiny microorganisms that help recycle soil nutrients. The abundance and species composition varies depending on location, soil type, and other factors. These microorganisms are capable of breaking down various kinds of complex organic molecules. Modern pesticides are man-made organic molecules. Some microorganisms can actually derive nourishment from some types of pesticides, deactivating them in the process.

When such a pesticide is applied to a soil containing degrading microorganisms, these microorganisms suddenly have an abundance of food and their numbers can rapidly increase. With each succeeding application of that same pesticide, its activity may be decreased more and more rapidly, until it eventually becomes completely ineffective.

Although microbial degradation of Oftanol on turfgrass has not yet been confirmed, there is reason to believe it might happen. Such evidence comes from the corn rootworm insecticide Amaze. Amaze contains the same active ingredient as Oftanol (isofenphos). After being on the market only a couple of years, Amaze was removed from usage because of several control failures that have since been attributed to microbial degradation.

We have never recommended the usage of Oftanol in a preventive program for any turfgrass insect pest. Such continued usage can eventually result in the failure of any product. Continue to use Oftanol where it is the best product for your particular situation. However, until we finally know whether or not microbial degradation is possible with this product on turfgrass, use it only when needed, do not use it as a preventive measure, and rotate its usage with other effective products.

WDATCP Cancels All Wisconsin Uses of Miticide Dicofol

All uses of the acaricie (miticide) Kelthane and other products containing the active ingredient dicofol have been cancelled by the Wisconsin Department of Agriculture, Trade, and Consumer Protection. Dicofol is chemically closely related to DDT and contains trace amounts of DDT-related materials as impurities from the manufacturing process. Wisconsin law states that no products containing DDT will be used in the state.

Although widely used for spider mite and gall mite control on trees and shrubs, dicofol has had limited usage on Wisconsin turfgrass. The primary turf usage has been for control of clover mites. Clover mites do not damage turfgrass, but, instead, feed on clover and other broadleaf weeds in turf areas. Clover mites can build up to large numbers and invade homes and offices, creating a nuisance. An approach to solving this nuisance problem is to spray infested turf areas with a registered and effective pesticide, and dicofol has been one of the materials of choice. Effective alternative pesticides for clover mite control in turfgrass areas include diazinon, Dursban, Turcam, and Ficam.

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