



*Zdzislaw Filary, a visiting scientist from Pozan, Poland, going over the results with Dr. Harry Niemczyk who is on the right.*

## Movement of Insecticide Residues in Turfgrass Thatch and Soil

H.D. Niemczyk, Z. Filary and H. Krueger

Department of Entomology

Ohio Agricultural Research & Development Center

The Ohio State University

Wooster, OH 44691

Formulations of three insecticides were applied September 12 to 4 replicates of plots 10 by 10 ft. located on an Ohio golf course fairway with 0.75 inches thatch and silt loam soil. The purpose of the experiment was to trace the downward movement of recoverable residues in turfgrass thatch and underlying soil.

Isazofos (Triumph) 4EC and 2% granules, isofenphos (Of-tanol) 2 "flowable" and 5% granular were applied at 2 lb. AI/A. Ethoprop (Mocap) 10% granular was applied at 5 lb. AI/A. Liquid treatments were applied with a pressurized sprayer that delivered 4 gal. of spray/1000 sq. ft. Granules were applied with a drop spreader. Immediately after treatment, each plot was hand-irrigated with 200 gal/1000 sq. ft. The test site had no irrigation system but rainfall (including 0.75 inches, 2 days posttreatment) occurred regularly throughout the sampling period. A standard 1.0 inch soil probe was used to obtain samples of thatch, the first 1.0, and second 1.0 inches of soil from each plot at 2, 5, 15, 29, 57 and 91 days posttreatment. Samples were kept frozen at -18°C until analyzed by GLC for recoverable residues.

Analysis showed that at 2, 5, 15 and 29 days 97% + of recoverable residues from all treatments were found in the thatch (Table 1). At 57 and 91 days, 90% + of residues were still in the thatch. Mean residues in the first 1.0 inch of soil never exceeded 0.4 ppm. Despite water solubilities of 750, 150, and 20 ppm for technical ethoprop, isazofos and isofenphos, respectively, immediate posttreatment irrigation and regular rainfall, very little of these insecticides moved into the underlying soil. These results should be of considerable significance in terms of the role of turfgrass thatch in the potential for these materials to leach into groundwater. Thatch is apparently an excellent filter.

## Brain Food

by Dennis C. Wilson, Sunset Ridge Country Club

De we learn from the monthly meetings, NCTE programs and national convention? If your answer is no, then your brain has stopped growing.

At the NCTE, this year there was something for everyone. Workshops for the club mechanics, ITF educational workshops, morning and afternoon talks that sum up the whole 1987 season in three days, a trade show with reps present from all the different turf products and equipment who were willing to answer any and all questions. And of course, sitting down with friends over coffee or a cocktail and talking.

After being at the NCTE for three days a few of us stopped to have a cocktail. We got to talking about aerifying and different types of machines available to us. One Superintendent said it would be great to have a machine that could aerify without tearing up the golf course. We all laughed and made comments about his statement. Then one superintendent said, why does it have to be a machine? Why couldn't we use sound to loosen the soil.

Pretty far out, right. Well, maybe, but they take pictures of unborn babies with sound and you can break glass with sound, so why not loosen soil with sound. I know you're thinking we may have had two too many cocktails. But I remember in the 60's a young superintendent talking about computers for your irrigation systems and test equipment for disease control and what do we have now. Yes, we all thought he was a little far out.

The reason for this whole article is when you put that many people in the same place, all with the same goals in mind, things happen. Some thoughts a little far out, but nevertheless you are learning and I am glad to be a part of it.

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