



A SIGNIFICANT EPA DECISION!

By Dr. Gayle L. Worf
Extension Plant Pathologist
University of Wisconsin-Madison

In the mail this week (February 16) came some good news from the "EBDC/ETU Task Force". The letter indicated that the EPA has completed the Special Review on these chemicals by announcing "Position Document 4 (PD 4)". PD 4 is the EPA's final disposition of investigations concerning a given pesticide under special review, and essentially indicates whether the chemical will be "up or out".

At issue has been whether these products, including mancozeb, maneb or metiram (Dithane M45, Manzate 200, Lesco 4, Fore, Formec and Pace are examples of products including one of these compounds) could be continue to be used on 45 different food crops. Their continued use on turf or ornamentals was not a direct question, although the long term availability would soon become a concern if their more popular uses were lost. Already announced was the continued commercial use for turf and ornamentals, providing stepped up protective clothing and other steps were followed. (Supposedly, homeowner use has been banned, but I didn't note that on several 1992 labels I examined.)

More important to turf and nursery managers was the process that was used, and the outcome it generated. You may recall our discussion of this earlier. EBDC's have been available since the 1940's and have been more heavily used than any other fungicide nationally and internationally. The 1940's prediction that "there never would be found a more effective fungicide" has essentially held true, though not necessarily in the turf world. Until the mid-1970's it was regarded as "completely safe". It was registered on nearly 90 food crops.

Then in the re-registration process concerns mounted over ETU (ethylene thiourea), a metabolite of the parent compound. Seems it had been found to be carcinogenic in new tests. The protocol in place called for banning the products outright. But wait! This product has already been used for almost half a century without any evidence of problems. And the arithmetic about alleged residues on our potatoes and tomatoes (and other crops) leading to the severe allegations was claimed by industry to be based upon totally inaccurate use patterns.

To EPA's credit, they set in motion a very detailed and deliberate study in 1987, establishing via intensive Market Basket Surveys and other means to measure how much EBDC's, and ETU, society was consuming and exposed to, including babies and infirmed folks. Almost 6,000 samples were screened, both by earlier methods and by newer procedures that had to be developed to prove that "there was no needle in the haystack". More than 80% of the samples showed no residues, even with the most sophisticated procedures, and almost all the remaining were at the lower limits of analytical detection. EPA was also willing to look at their formula which assumed that every crop on the label was sprayed 100%, and at the frequency and rate that was legal according to the label.

In coming to the verdict, the industry has agreed to reduce the number of food crops on the label, essentially eliminating those crops on which EBDC's use were trivial at most. But it improves the concern about theoretical exposure. They also set some restrictions on frequency of application that are in fact what was being used at the time of the Market Basket Survey. The result of this is that the fungicide has survived, and it sets forth what hopefully will continue to be a realistic posture by the EPA in dealing with the application of the provisions of the Delaney Amendment. The Task Force has commended the EPA for this new approach. One wonders how much the Alar scare had upon this new look. But in any event, agriculture, society, industry and the EPA are the better for it.

I would like to believe the new posture will signal more sensitivity to turf and ornamental fungicide use patterns, too, but that's a light year jump ahead.

Fungicide stability, then and now

EBDC's are one of the two fungicides I would most want to have for ornamental foliage disease control, along with Benlate (which is now no longer available for this purpose!) It never made its way to the top in turf circles for Wisconsin, probably as much as anything because it's poor on dollar spot. But I wish the new chemicals were as stable in effectiveness over the years. In nearly a half century of use on millions of acres and hundreds of pathogens, there never has been a single report, to my knowledge, of fungicide resistance emerging! Quite a success record.

I wish we could say that for the systemics. The concern about resistance with the sterol inhibitors apparently is heating up, with increasing evidence of dollar spot resistance occurring in other states. I don't yet know of similar problems in Wisconsin. Are we using them more prudently? Or have we just been lucky? Probably the latter. Interesting—and challenging—times.

Poa annua by a bacterial disease?

In the recent IR-4 Committee minutes there was brief mention of the project Dr. David Roberts, Michigan State University, is involved with concerning the use of *Xanthomonas campestris* as a potential for the control of annual bluegrass. Dave found this bacterial isolate as a follow-up of his work in which he established that a species of this bacterium, *Xanthomonas campestris* pv. *graminis*, was the mysterious cause of "C-15 decline", or bacterial wilt of 'Toronto' bentgrass as we now recognize it. I've not talked with Dave about this project. I don't know how far along it may be at present. But I can imagine some of the questions that EPA—and maybe golf course superintendents—might have about it.

One might be: "How stable is the bacterium? How do I know that it won't 'cross over' onto bentgrass or some other beneficial turf?"

One answer might be the extreme host specificity that *Xanthomonas* species have demonstrated on other crops over the last 75 years. During that time a great many related diseases have been found on a lot of crops. All have been quite host specific, to my knowledge.

Another question could be: "Poa annua is important to me—I want to keep it!! I don't want the bacterium on my course!" Of course, the bacterium would only be deployed on those courses or areas where Poa is unwanted, such as on the new University Ridge golf course, for instance.

"Yes, but how do I know it won't be tracked onto my Poa greens by a visiting golfer?" Well, the bacterium already exists in nature. That's where it was found; it wasn't created in the laboratory via a transgenic process. And there's

presumably little evidence of its having spread naturally. There probably is considerable research ongoing to determine pathogen survivability in the soil, on shoes, in plants, debris, etc. And ideally, from a commercial perspective, the bacterium would have to be applied annually, or periodically, e.g., would have relatively short survivability, in order for a pharmaceutical house to become interested in its production.

Time was when this approach would have been brushed off with little appeal. But given the anti-pesticide posture of many, coupled with the continuing difficulty of controlling Poa where it is not wanted, I suspect there will be lots of interest if the bacterium is made commercially available.

But it serves to prove again the old adage: "No pain, no gain!"

NATURAL ATHLETIC TURF INC.

GOLF COURSE CONSTRUCTION

Specializing in

Greens—Tees—Bunkers
& Drainage Systems

Also: ASTROTURF CH-4 "DRAG MATS"

By Contract or "T & M" Basis

ROY G. ZEHREN 11040 N. Buntrock Ave.
(414) 242-5740 Mequon, WI 53092



(608) 836-7041

LEE BRUCE
GOLF COURSE CONSTRUCTION

2830 W. Beltline Hwy. • P.O. Box 330
Middleton, Wisconsin 53562

Wilbur-Ellis

Ideas to grow with.

YOUR ENVIRONMENTAL COMPLIANCE COMPANY

We Deliver Service...

Custom Rinsate Pad Designs • Worker Right-to-Know Training
Sara Tier II Reporting Assistance

We Also Deliver Products...

A Complete Line of Turf & Ornamental Plant Protectants,
Plant Nutrients, Grass Seed, Herbicides, and More!

Fast, Free Delivery Within 24 Hours

J.W. Wollner

800-728-1090 Wisconsin • 800-747-7400 Illinois