9-21-81

1.0 INTRODUCTION

1.1 Purpose

Ciba-Geigy is requesting review of the eighth ground water monitoring studies for metalaxyl 2E Fungicide (EFB #936, submitted on 8/20/81).

1.2 Previous Review

100 - 607 9/21/81

1.3 Background

Metalaxyl, a soil-applied systemic fungicide, is currently registered under 3(c)(7) for use on tobacco under the trade name Ridomil (#100-607); foliage plants, turf, and certain ornamentals under the trade name subdue (#100-609, approved on 7/27/81). The compound is being developed for use on cottonseed, potatoes, certain vegetables, hops and avocadoes. A state registration is currently approved under 24-C for use on non-bearing citrus in Florida (#Fla-8000-32).

Previous reviews of monitoring data have shown that metalaxyl residue in soils were relatively immobile and remained in the unsaturated zone profile, i.e., in the upper 3 feet layer of soil. No residues were detected in ground water in the test areas of Florida and Maryland. Accordingly, studies in Suwanee County, Florida were discontinued as of February, 1981.

Data reviewed in the seventh interim report, included the analytical results from samples collected at intervals until up to 287 days after application. No metalaxyl was detected below the 24 inches of the upper soil profile nor was any metalaxyl in well water samples analyzed to that date. Similarly, soil and water residue analysis for the acid degradate, CGA-62826, 76 days after metalaxyl application, showed no detectable residue of the metabolite. Program limitations under Maryland conditions, an analysis and discussion of Ciba Geigy's PESTAN Leaching Model and ours, were all included in the EFB review of 9/21/81 (7th report).

This report (8th), contains the analytical results for samples collected from the Tobacco Experimental Farm near Upper Marlboro, Maryland; 328 days after application. Also included in the results were the 0-day, 17-day, and 31-day post-treatment sample intervals for 1981 application.

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1.4 Environmental Fate Profile.

A detailed account on the fate of metalaxyl in the environment was given in the EFB review of 9/21/81.

2.0 DISCUSSION OF DATA

The eighth interim ground water monitoring study was submitted in volume 1 of 1, on 8/20/81, filed under accession No. 245835. No additional environmental chemistry data were submitted.

2.1 Data From the Tobacco Experimental Farm in Maryland

This study has now proceeded for 328 days after application including 31 days in the 1981 test program (6/5-7/20/81). On June 5, 1981, metalaxyl was applied and soil incorporated at 2 lbs ai/A. Tobacco was transplanted to the plot on June 5, 8, and 10. A total of 6.57 inches of rain has fallen since metalaxyl application on June 5th until July 20, 1981. Water samples from six wells and one control well,as well as soil samples to a depth of 48",were analyzed for parent only.

Soil residue analysis on the 17th to 31 days after the June 5, 1981 application (359 days after 1st application) showed that metalaxyl started to leach below the 24" of soil profile. A concentration of 0.07-0.1 ppm were observed in the 30-42" of soil profile. These residues are about twice the minimum detectable level of 0.05 ppm in soils. Well water analysis, however, at the same time interval showed no ($\leq$0.001 ppm) detectable metalaxyl in any of the samples analyzed.

3.0 CONCLUSIONS

A final assessment on the status of metalaxyl in relation to ground water contamination will be made at the conclusion of the 1981 monitoring program.

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