Date Out EFB: DEC 1 1981

To: Product Manager 21 Jacoby
TS-767

From Dr. Willa Garner
Chief, Review Section No. 1
Environmental Fate Branch

Attached please find the environmental fate review of:

Reg./File No.: 100-607

Chemical: Metalaxyl

Type Product: Fungicide

Product Name: Ridomil

Company Name: Ciba-Geigy

Submission Purpose: 9th groundwater monitoring status

ZBB Code: other

Date in: 11/3/81

Date Completed: DEC 1 1981

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

ACTION CODE: 571

EFB # 48

TAIS (level II)	Days
60	3

94

1.0 INTRODUCTION

1.1 Purpose

Ciba-Geigy is requesting review of the ninth ground water monitoring studies for metalaxyl 2E Fungicide (EFB #48, submitted on 10/28/81).

1.2 Previous Review

100 - 607	9/21/81
100 - 607	10/6/81

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 residue 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 eighth interim report, included the analytical results from samples collected at intervals until up to 329 days after application. 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 (<0.001 ppm) detectable metalaxyl in any of the 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 (9th), contains the analytical results for samples collected from the Tobacco Experimental Farm near Upper Marlboro, Maryland; at 45, 60, 77, and 90 days following the second annual application of Ridomil 2E on June 5, 1981.

1.4 Environmental Fate Profile

A detailed account on the fate of metalaxyl in the environment was given in the EFB review of 9/12/81.

2.0 DISCUSSION OF DATA

The ninth interim ground water monitoring study was submitted in volume 1 of 1, on 10/28/81, filed under accession No. 246160. No additional environmental chemistry data were submitted.

2.1 Data from the Tobacco Experimental Farm in Maryland

This study has now proceeded for 401 days after application including 90 days in the 1981 test program (6/5-9/3/81). 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 13.12 inches of rain has fallen since metalaxyl from six wells and one control well, as well as soil samples to a depth of 72", were analyzed for parent only.

Soil residue analysis at 45, 60 and 90 days post application, confirmed our previous assessment (EFB review of 10/6/81) that metalaxyl started to leach below the 24" of soil profile. At 90 days post-application, detectable metalaxyl residues reached a maximum of 0.12, 0.11, 0.21 and 0.07 ppm in the 36", 48" 54", and 72" of soil profile respectively. These residues exceeded 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 CONCLUSION

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

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3/3/96