DP Barcode : 174433
PC Code No. : 113501
EFGWB Out :

JUN 8 1992

TO: Susan Lewis
Product Manager # 21
Special Review and Reregistration Division (H7508W)

FROM: Elizabeth Behl, Head ~~(acting)~~ EBehl
Ground Water Technology Section
Environmental Fate & Ground Water Branch/EFED (H7507C)

THRU: Henry Jacoby, Chief Henry Jacoby
Environmental Fate & Ground Water Branch/EFED (H7507C)

Attached, please find the EFGWB review of...

Reg./File # : ID#: 283256

Common Name : Metalaxyl

Product Name : Fungicide

Company Name : Ridomil

Purpose : Ciba-Geigy

Type Product : Report Possible Adverse Pesticide Residue data

Action Code : 405 (6(a)2) EFGWB #(s): 92-0528 Total Review Time = 1/4 days

EFGWB Guideline/MRID/Status Summary Table: The review in this package contains...

161-1	162-4	164-4	166-1
161-2	163-1	164-5	166-2
161-3	163-2	165-1	166-3
161-4	163-3	165-2	167-1
162-1	164-1	165-3	167-2
162-2	164-2	165-4	201-1
162-3	164-3	165-5	202-1

Y = Acceptable (Study satisfied the Guideline)/Concur P = Partial (Study partially satisfied the Guideline, but additional information is still needed)
S = Supplemental (Study provided useful information, but Guideline was not satisfied) N = Unacceptable (Study was rejected)/Non-Concur

Agricultural Division
CIBA-GEIGY Corporation
P.O. Box 18300
Greensboro, North Carolina 27419-8300
Telephone 919 632 6000

CIBA-GEIGY

March 28, 1991

FIFRA Section 6(a)(2) Document Processing Desk
Program Management and Support Division (H7504C)
U.S. Environmental Protection Agency
401 M. Street, S.W.
Washington, D.C. 20460

Attn: Ms. Susan Lewis, PM 21

Dear Ms. Lewis:

SUBJECT: FINDING OF METALAXYL IN NORTH CAROLINA WELL

Recently, CIBA-GEIGY received a copy of a press release from the State of North Carolina Pesticide Board reporting the detection of various levels of pesticides across the state. The monitoring was conducted as part of the Testing and Education Program of the North Carolina Agricultural Extension Service. There were no findings for any CIBA-GEIGY pesticide over the established HAL for that pesticide.

However, metalaxyl was detected in one location at 136 ppb. Because there is not an established HAL for metalaxyl, CIBA-GEIGY is reporting this finding for the Agency's information. CIBA-GEIGY has estimated an HAL for metalaxyl at about 430 ppb.

CIBA-GEIGY attempted to followup on this detection, but the state would not release any information about the location or the conditions surrounding this finding. The only piece of information obtained was that the location was in the eastern part of the state.

Sincerely,

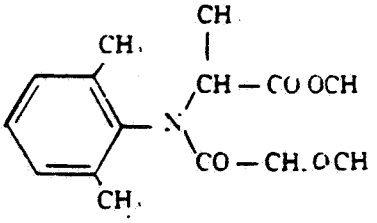
Karen S. Stumpf

Karen S. Stumpf
Senior Regulatory Specialist
Regulatory Affairs

1. CHEMICAL: Common name(s): metalaxyl

Chemical name(s): N-(2,6-dimethylphenyl)-N-(methoxyacetyl)alanine, methyl ester

Structure (s):



2. TEST MATERIAL: N/A

3. STUDY/ACTION TYPE: Acknowledge receipt of a metalaxyl residue detection in a well and request additional information.

4. STUDY IDENTIFICATION: A documentation of detections from monitoring wells.

5. REVIEWED BY: John H. Jordan, Microbiologist
OPP/EFED/EFGWB/Ground-Water Section
Signature: John H. Jordan Date: 6/4/92

6. APPROVED BY: Elizabeth Behl, Head
OPP/EFED/EFGWB/Ground-Water Section
Signature: Eliz Behl Date: 6/4/92

7. CONCLUSIONS: The pesticide residue detections have been received by the Ground-Water Technology Section. More detailed information has been required as specified in the Background/Discussion Section below.

8. RECOMMENDATIONS: The EFGW Branch contacted the study director and requested the data and a study report. Pertinent data will be incorporated into the Pesticides and Ground-Water Data Base.

9. BACKGROUND/DISCUSSIONS: The data in this action were submitted under Section 6(a)2 of FIFRA. The report of detections contained results of analysis of a pesticide (metalaxyl) detected in a sample of ground water. The maximum level of detection was 815 ppb which occurred in March, 1991. No maximum contaminant level (MCL) has been established for this compound.

The North Carolina Pesticide Board reported pesticide detections from across the state. Detections reported by the Board were from monitoring studies conducted by the North Carolina Agricultural Extension Service. The registrant was requested to supply the name of the study director, because they did not conduct the monitoring program. The Ground-Water Technology Section contacted the North Carolina Extension Service and requested information concerning the June, 1990, 136 ppb detect. They have sent some information and other data will be requested.

This incident is apparently the result of pesticide mixing and loading activities, and will be included in OPP's Pesticides in Ground-Water Data Base. The metalaxyl detections resulted from a point source.

Environmental Fate & Effects Division
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY
METALAXYL
Last Update on April 29, 1992
[V] = Validated Study [S] = Supplemental Study [U] = USDA Data

LOGOUT	Reviewer:	Section Head: EB	Date: 6/14/92

Common Name:METALAXYL
PC Code # :113501 CAS #:57837-19-1 Caswell #:

Chem. Name :N-(2,6-DIMETHYLPHENYL)-N-(METHOXYACETYL)-ALANINE METHYL ESTER
Action Type:FUNGICIDE

Trade Names:APRON 25WP; CGA 48988; RIDOMIL
(Formul'tn):EC 2 LBS/GAL; FLOWABLE CONC.
Physical State:

Use Patterns (% Usage) :CONTROL OF SOIL-BORNE DISEASES CAUSED BY PYTHIUM AND PHYTOPHORA, AND FOLIAR DISEASES CAUSED BY DOWNY MILDEW.

Empirical Form: $C_{15}H_{21}NO_4$
Molecular Wgt.: 279.34 Vapor Pressure: 2.20E -6 Torr
Melting Point : °C Boiling Point: °C
Log Kow : pKa: @ °C
Henry's : E Atm. M3/Mol (Measured) 1.14E-10 (calc'd)

Solubility in ...					Comments
Water	7.10E	3	ppm	@20.0 °C	
Acetone	E		ppm	@ °C	
Acetonitrile	E		ppm	@ °C	
Benzene	E		ppm	@ °C	
Chloroform	E		ppm	@ °C	?
Ethanol	E		ppm	@ °C	
Methanol	E		ppm	@ °C	
Toluene	E		ppm	@ °C	
Xylene	E		ppm	@ °C	
	E		ppm	@ °C	
	E		ppm	@ °C	

Hydrolysis (161-1)
[V] pH 5.0:200 DA
[V] pH 7.0:200 DA
[V] pH 9.0:115 DA
[ ] pH :
[ ] pH :
[ ] pH :

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Photolysis (161-2, -3, -4)
[V] Water: 1 WK
[ ] :
[ ] :
[ ] :

[V] Soil : STABLE
[ ] Air :

Aerobic Soil Metabolism (162-1)
[S] 7 WK (SOIL?)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Anaerobic Soil Metabolism (162-2)
[S] 9 WK (SOIL?)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Anaerobic Aquatic Metabolism (162-3)
[ ]
[ ]
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[ ]
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[ ]

Aerobic Aquatic Metabolism (162-4)
[ ]
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Soil Partition Coefficient (Kd) (163-1)
[S] 0.43-0.48 SAND
[S] 0.87 SILT LOAM
[S] 1.40 SANDY CLAY LOAM
[ ]
[ ]
[ ]

Soil Rf Factors (163-1)
[S] 70% IN LEACHATE
[ ]
[ ]
[ ]
[ ]
[ ]

Laboratory Volatility (163-2)
[S] LOSS DUE TO VOLATILIZATION SHOULD BE <0.5%.
[ ]

Field Volatility (163-3)
[ ]
[ ]

Terrestrial Field Dissipation (164-1)
[S] 2 WK (SOIL?). MAJOR DEGRADATE PEAKED DURING THE FIRST
[ ] MONTH AT 20%, DECLINED TO 0.5% OF THE APPLIED AT A YEAR.
[ ] HOWEVER, IN ANOTHER STUDY THE AMT. REMAINING IN A YEAR WAS
[ ] 23% OF THAT APPLIED.
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Aquatic Dissipation (164-2)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Forestry Dissipation (164-3)
[ ]
[ ]

Long-Term Soil Dissipation (164-5)
[ ]
[ ]

Accumulation in Rotational Crops, Confined (165-1)
[S] LETTUCE - .11 PPM; OATS (WHOLE PLANT) .33;
[ ] CORN .06 PPM; SOYBEANS 0.8 PPM; SUGARBEETS .16 PPM

Accumulation in Rotational Crops, Field (165-2)
[S] PLANTED IN ROTATION TO POTATOES: CORN .02 PPM;
[ ] SUGARBEETS <.05 IN ROOTS; SOYBEANS .83 PPM

Accumulation in Irrigated Crops (165-3)
[ ]
[ ]

Bioaccumulation in Fish (165-4)
[ ] BLUEGILL 1X EDIB; 14X VISC; 6X WHOLE
[ ] CATFISH 1X EDIB; 1X VISC; 1X WHOLE

Bioaccumulation in Non-Target Organisms (165-5)
[S] NO ADVERSE EFFECTS EXPECTED ON AVIAN, MAMMALIAN,
[ ] OR FRESHWATER AQUATIC SPECIES.

Ground Water Monitoring, Prospective (166-1)
[ ]
[ ]
[ ]
[ ]

Ground Water Monitoring, Small Scale Retrospective (166-2)
[ ] CIBA-GEIGY HAS SUBMITTED A PROTOCOL AND THREE SITE CHARACTERI-
[ ] ZATION REPORTS (FL, CA, WI).
[ ]
[ ]

Ground Water Monitoring, Large Scale Retrospective (166-3)
[ ]
[ ]
[ ]
[ ]

Ground Water Monitoring, Miscellaneous Data (158.75)
[S] METALAXYL HAS BEEN REPORTED IN GROUND WATER IN FLORIDA,
[ ] NORTH CAROLINA, AND TENNESSEE.
[ ]

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Field Runoff (167-1)
[ ]
[ ]
[ ]
[ ]

Surface Water Monitoring (167-2)
[ ]
[ ]
[ ]
[ ]

Spray Drift, Droplet Spectrum (201-1)
[ ]
[ ]
[ ]
[ ]

Spray Drift, Field Evaluation (202-1)
[ ]
[ ]
[ ]
[ ]

Degradation Products

(N-(2,6-dimethylphenyl)-N-(2'-methoxyacetyl) alanine is the major degradate.

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Comments

Parent compound leached rapidly in sand soils with up to 92% of radioactivity recovered in leachate. In SdClLm soils, majority of radioact. was in 6-12 cm soil with less than 0.4% in leachate. Soil Koc = 16.

References: EFGWB REVIEWS
Writer : SJS, PJH, SLL, EW