Marker

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To: Susan Lewis
Product Manager PM 21
Registration Division (H7505C)

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

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

Attached, please find the EFGWB review of...

Reg./File # :

Chemical Name : Metalaxyl

Type Product : Fungicide

Product Name : Ridomil; Subdue; Apron; Pace

Company Name : CIBA-GEIGY Corporation

Purpose : Review of the detections of metalaxyl and simazine in ground water in Washington
Action Code : 405 Adverse 6(a)(2) EFGWB #(s): 920393 Total Review Time: 0.5 days

EFGWB Guideline/MRID Summary Table: The review in this package contains...										
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161-3		162-3		164-3		165-3		166-3		
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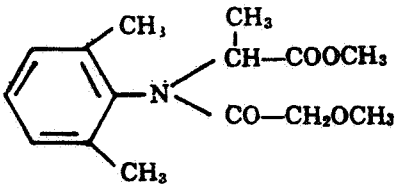
201-1		163-1		164-5		165-5		167-2		
202-1		163-3								

1. CHEMICAL:

Chemical name: N-(2,6-dimethylphenyl)-N-methoxyacetyl)-analine methyl ester
Common name: Metalaxyl
Trade name: Ridomil; Subdue; Apron; Pace
Structure:



2. TEST MATERIAL:

Metalaxyl and its degradation product metalaxyl acid

3. STUDY/ACTION TYPE

Review of the detections of metalaxyl and its degradation product metalaxyl acid and simazine in ground water in Washington (MRID 42113900 and 42113901).

4. STUDY IDENTIFICATION:

Title: "Fate of Carbofuran, metalaxyl, and Simazine in Western Washington Agroecosystems" - it was presented at the Society of Environmental Toxicology and Chemistry annual meeting in Seattle, Washington in November 1991.

Submitted by: Karen S. Stumpf
CIBA-GEIGY Corporation
P.O. Box 18300
Greensboro, NC 27419

5. REVIEWED BY:

Larry Liu, Ph.D. Signature: Larry Liu
Environmental Scientist
OPP/EFED/EFGWB/Ground-Water Section Date: 1-23-92

6. APPROVED BY:

Elizabeth Behl Signature: D N Wells for EB
Acting Section Chief
OPP/EFED/EFGWB/Ground-Water Section Date: 1/23/92

7. CONCLUSIONS:

Metalaxyl and its degradation product metalaxyl acid as well as simazine were detected in ground water in Washington. However, no residue levels were reported.

8. RECOMMENDATIONS:

The registrant should submit any available information about the wells with detections to the Agency.

9. BACKGROUND:

Metalaxyl is a systemic fungicide registered since 1980 for use on over 100 agricultural crops, ornamentals and turf. Some principle uses are tobacco, ornamentals, turf, fruit, citrus, non-bearing nursery stock, seed treatment, vegetables and peanuts.

Simazine is used for the control of most annual grasses and broadleaf weeds in corn, alfalfa, Bermudagrass, cherries, peaches, citrus, cranberries, grapes, apples, pears, certain nuts, asparagus, certain ornamental and tree nursery stock, and in turf grass sod production.

The MCL for simazine is 1 ppb and 4 ppb for carbofuran (EPA, Office of Water; 11/91).

10. DISCUSSION:

The purpose of this review is to comment on the detections of metalaxyl and its degradation product metalaxyl acid as well as simazine in the ground water in western Washington. Due to the lack of detailed information (such as residue levels, well location, site description, pesticide use history), discussion by the Agency is limited. The following were cited directly from the Abstract:

> "The persistence and vertical transport of carbofuran, metalaxyl, and simazine was monitored following application to raspberry and strawberry plantings on alluvial soils with shallow water tables in western Washington. Carbofuran was the most mobile but least persistent pesticide, It moved readily through the first meter of soil, but it's short persistence prevented accumulation in ground water. Metalaxyl remained largely in the top 30 cm of soil, but degraded much more slowly than carbofuran. Little metalaxyl acid was detected with increasing frequency and at increasing concentrations over the course of the study. Simazine remained primarily in the top 30 cm of the soil profile, but low levels were frequently found in ground water. Simazine

may be moving to ground water via transport on soluble organic matter".

According to the Metalaxyl Registration Standard issued in 1987, both the parent and the primary degradation product (CGA-62826) can leach in sand, silt loam, and sandy clay loam soils. Metalaxyl has been detected in ground water in Florida and North Carolina (Pesticides in Ground Water Data Base - 1988 Interim Report). Preliminary information from the Pesticide Monitoring Program Section (EFGWB) reports detections of simazine in ground water in 14 states and detections of carbofuran in ground water in 11 states.

Data previously submitted to EPA are inadequate to determine leaching potential fully, and as a result of their mobile characteristics and detections in ground water a small-scale retrospective ground-water monitoring study was required. The registrant agreed with the Agency to analyze ground-water samples for parent metalaxyl and its acid metabolite, CGA-62826 (letter dated 2/6/90 from Karen Stumpf of CIBA-GEIGY to Lois Rossi of SRRD/OPP/EPA). It was not clearly stated whether the degradation product (metalaxyl acid) reported in the Abstract was CGA-62826. Clarification is required.