FILE

D174356
DP BARCODE (RECORD)

113501
SHAUGHNESSEY NO.

REVIEW NUMBER

ECOLOGICAL EFFECTS BRANCH REVIEW

DATE: IN 2-21-92 **OUT** OCT 2 1992

CASE # : 053228
SUBMISSION # : S411468
ID # : 100-601

REREG CASE # :
LIST A, B, C, D

DATE OF SUBMISSION 12-30-92

DATE RECEIVED BY EFED 2-18-92

SRRD/RD REQUESTED COMPLETION DATE 6-11-92

EEB ESTIMATED COMPLETION DATE 6-11-92

SRRD/RD ACTION CODE/TYPE OF REVIEW 330 NEW FOOD USE

MRID #(S)

DP TYPE

PRODUCT MANAGER, NO. SUSAN LEWIS, 21

PRODUCT NAME(S) metalaxyl technical

TYPE PRODUCT: I, D, H, F, N, R, S FUNGICIDE

COMPANY NAME CIBA GEIGY CORP.

SUBMISSION PURPOSE ADD USE ON BRASSICA (COLE) LEAFY VEGETABLE

INCLUDE USE(S) CROPS TO LABEL

COMMON CHEMICAL NAME METALAXYL

2 actions contained in to one review

D174391
DP BARCODE (RECORD)

113501
SHAUGHNESSEY NO.

REVIEW NUMBER

ECOLOGICAL EFFECTS BRANCH REVIEW

DATE: IN 2-21-92 **OUT** OCT 2 1992

CASE # : 047624
SUBMISSION # : S411507
ID # : 100-607

REREG CASE # :
LIST A, B, C, D

DATE OF SUBMISSION 12-30-92

DATE RECEIVED BY EFED 2-18-92

SRRD/RD REQUESTED COMPLETION DATE 6-11-92

EEB ESTIMATED COMPLETION DATE 6-11-92

SRRD/RD ACTION CODE/TYPE OF REVIEW 330 NEW FOOD USE

MRID #(S)

DP TYPE

PRODUCT MANAGER, NO. SUSAN LEWIS, 21

PRODUCT NAME(S) RIDOMIL 2E

TYPE PRODUCT: I, D, H, F, N, R, S FUNGICIDE

COMPANY NAME CIBA GEIGY CORP.

SUBMISSION PURPOSE ADD USE ON BRASSICA (COLE) LEAFY VEGETABLE

INCLUDE USE(S) CROPS TO LABEL

COMMON CHEMICAL NAME METALAXYL

EEB REVIEW

Chemical: Ridomil 2E
Metalaxyl Technical

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

Ciba-Geigy Corporation has requested a registration amendment for Ridomil 2E Fungicide and the active ingredient Metalaxyl, to allow application to all members of the Brassica (Cole) leafy vegetables crop grouping members for control of diseases caused by Phytophtora spp. and Pythium spp.

100.2 Formulation Information (taken from label):

Metalaxyl Technical Product:
Active Ingredient: Metalaxyl: N-((2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester 90.1%

Ridomil 2E:
Active Ingredient: Metalaxyl: N-((2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester 25.1%

Inert Ingredients: 74.9%

Ridomil 2E contains 2 lb. a.i. per gallon.

100.3 Application Rate, Method, Directions

Application Rate and Directions
Apply up to 2 lbs. a.i. of metalaxyl per treated acre as a broadcast soil application or as a preplant incorporated application.
Up to 8 pts. (2 lbs. a.i.) of Ridomil 2E applied as a broadcast preplant incorporated or surface spray at planting.

Application Method
Apply metalaxyl 1-2 lbs a.i. as a preplant or surface application. Apply in a minimum of 20 gallons of water for ground applications and 5 gallons of water by air. For banded applications, a 7-inch band is recommended.

Apply Ridomil 2E by ground or air in sufficient water or liquid fertilizer to provide uniform coverage of the soil surface. Apply in a minimum of 20 gallons of water for ground applications and 5 gallons of water by air. For banded applications, a 7-inch band is recommended.

100.4 Target Organism Ridomil 2E is applied to control certain diseases caused by members of the Oomycete class of fungi on members of the Brassica (Cole) leafy vegetables crop grouping (broccoli, brussels sprouts, cabbage, cauliflower, cucurbit vegetables, onions, potatoes and tomatoes).

100.5 Precautionary Labeling
"Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate".

101 Hazard Assessment

101.1 Discussion
Ridomil 2E is a liquid systemic fungicide that is currently registered for use on fruit and vegetable crops, as well as soybeans, peanuts, alfalfa, cotton, hops, tobacco, walnuts, and almonds for the control of Phytophthora and Pythium diseases. A request for a tolerance of 5.0 ppm for the leafy vegetable crop grouping has been submitted.

101.2 Likelihood of Adverse Effects to Non-target Organisms
The Estimated Environmental Concentrations (EEC) for Ridomil 2E at a rate of 2 lbs. a.i./A are as follows:

Un-incorporated ground application
1A pond, 6 foot deep = .0122 ppm
1A pond, 6 inch deep = .1468 ppm

Aerial application with total loading of .22 lbs.
1A pond, 6 foot deep = .0134 ppm
1A pond, 6 inch deep = .1615 ppm

The maximum expected vegetative residues are as follows:

Short rangegrass	480 ppm
Long grass	220 ppm
Leaves and leafy crops	250 ppm
Forage and insects	116 ppm
Pod containing seeds	24 ppm
Fruit	14 ppm

Terrestrial The following data was taken from previous EEB reviews:

Mallard	LD50 = 1466 mg/kg
Mallard	LC50 = >10,000 ppm

Bobwhite	LC50 =	>10,000 ppm
Rat	LD50 =	669 mg/kg
Rabbit Dermal	LD50 =	>6000 ppm

Based on LD50, LC50 and residue values, it is believed that non-target terrestrial organisms will not be at risk due to the proposed use of Ridomil 2E.

Aquatic
Data from previous EEB reviews found the following:

Rainbow trout	LC50 = >100 ppm
Bluegill sunfish	LC50 = >100 ppm
Daphnia magna	LC50 = 28 ppm

Based on the LC50 and EEC values it is not believed that non-target aquatic organisms will be at risk due to the proposed use of Ridomil 2E.

101.3 Endangered Species Considerations
The proposed use does not raise any endangered/threatened species concerns.

101.4 Adequacy of the Toxicity Data
The existing data was adequate to assess hazards to nontarget species for this proposed use.

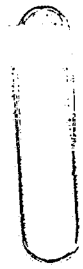
101.5 Adequacy of Labeling
Label is adequate.

102 Conclusions
EEB has reviewed the proposed use of Ridomil 2E and Metalaxyl Technical for use on members of the Brassica (Cole) leafy vegetable crop group for control of diseases caused by Phytophtora spp. and Pythium spp.. Based on the data, application method and label information, it is believed there will be minimal risk to non-target organisms due to the proposed use.

Dana Lateulere, Biologist
EEB/EFED/OPP
Date: 6/12/92

Ann Stavola, Section Head 5
EEB/EFED/OPP
Date: 9/25/92

Doug Urban, Acting Branch Chief
EEB/EFED/OPP
Date: 10/1/92



2 lb ai / gallon

8 pts/A

EEC Calculation Sheet

I. **Un-incorporated ground application.**

Runoff

2 lb(s) x 0.01 (%runoff) x 10A (from 10A drainage basin) = .2 lb(s)

EEC of 1 lb. a.i. direct application to 1A pond 6-foot deep = 61 ppb,

Therefore, EEC = 61 ppb x .2 (lb) = ppb. = 12.2 = .0122 ppm

II. **For incorporated ground application**

Runoff

___ lb(s) ÷ ___ (cm) (depth of incorp.) x 0.0___ (% runoff) x 10A = ___ lb(s)

Therefore, EEC = 61 ppb x ___ bl(s) = ppb

III. **For aerial application (or mist blower).**

A. Runoff

2 lb(s) x 0.6 (appl. efficiency) x 0.01 (%runoff) x 10 A (basin) = .12 lb(s) (tot. runoff)

B. Drift

2 lb(s) x 0.05 (5% drift) = .1 lb(s) total drift

Tot. loading = .12 lb(s) (total runoff) + .1 lb(s) (total drift) = .22 lb(s)

Therefore, EEC = 61 ppb x .22 lb(s) = 13.42 ppb = .01342 ppm

734 ppb x .22 lb = 161.48 ppb = .1615 ppm