10-13-82

113501
SHAUGHNESSEY NO.

REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 8/16/82 OUT 10/13/82

FILE OR REG. NO. 100-607

PETITION OR EXP. PERMIT NO.

DATE OF SUBMISSION 8/12/82

DATE RECEIVED BY HED 8/16/82

TD REQUESTED COMPLETION DATE 11/1/82

EEB ESTIMATED COMPLETION DATE 10/25/82

TD ACTION CODE/TYPE OF REVIEW 330 - Amendment - New Use - Food or feed

TYPE PRODUCT(S): I, D, H, F, N, R, S Fungicide

DATA ACCESSION NO(S). N/A

PROJECT MANAGER NO. 21 - Jacoby

PRODUCT NAME(S) Ridomil 2E

COMPANY NAME Ciba-Geigy

SUBMISSION PURPOSE Amendment to add pineapple "seed piece dip" for control of heart rot disease of pineapple caused by Phytophthora.

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
113501	Met alaxyl	25.11%

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100 Pesticide Label Information

100.1 Pesticide Use

Applied as a "seed piece" dip for use on pineapples.

100.2 Formulation Information

One gallon of Ridomil 2E contains 2 lbs of active ingredient (metalaxyl).

100.3 Application Methods, Directions, Rates

Apply Ridomil 2E as a preplant crown dip at the rate of 2 quarts per 100 gals of water. Use 75 to 100 gallons of dip solution per planted acre, depending on crown size, plant density and dipping techniques.

100.4 Target Organism

Heart rot disease of pineapple caused by Phytophthora spp.

101 Physical and Chemical Properties

See Review by J. Tice, 6/26/81.

102 Behavior in the Environment

(Summarized from EEB review by J. Tice, 6/26/81)

Under conditions likely to be found in the environment, Ridomil is expected to be stable to hydrolysis and soil surface photolysis. It will photodegrade in water with a half-life of one week; the presence of photosensitizers greatly accelerates degradation to a half-life of one hour. In soil, under aerobic and anaerobic conditions, the half-lives are 7 weeks and 9 weeks, respectively. Under field conditions, the half-life is 2 weeks. In whole fish, Ridomil does not accumulate above 10X, and accumulated residues are rapidly discharged during depuration.

Ridomil is highly mobile via leaching in soils especially in sandy soils of low organic matter content. Because of this soil mobility, Ridomil has been monitored at Suwanee County and Indian River, Florida and at a tobacco site in Maryland. According to the most recent information (EFB review by J.W. Holder, 6/19/81), no metalaxyl or the acid metabolite has been detected in soil or well water at the Suwanee County site and no metalaxyl (acid metabolite not determined) has been found in Maryland soil or well water. The results from the worst case site at Indian River, Florida were not available at that time. Except for the Suwanee County site, these sites are still being monitored (as of 9/1/81) for soil and well water contamination.

Because of EFB's concern over the mobility of Ridomil and the potential for well water contamination, EFB has stated (review, J.W. Holder) that "the final decision as to the permanent registration of Ridomil will depend on the results, and review of those results, of the Indian River soil and water studies."

103 Toxicological Properties

(Summarized from EEB review by J. Tice, 6/26/81)

103.1 Mammals

Rats, Acute Oral LD50 (Tech., 90% a.i.) = 669 mg/kg

Rats, Acute Oral LD50 (Ridomil 2E, 27.8% a.i.) = 1889.48 mg/kg

103.2 Birds

Organism	Test	Results	% Active
Mallard duck	Acute oral LD50	1466 mg/kg	Tech.
Bobwhite quail	Dietary LC50	>10,000 ppm	Tech.
Mallard duck	Dietary LC50	>10,000 ppm	Tech.

103.3 Fish

Organism	Test	Results	% Active
Bluegill	96-hr LC50	150 mg/l	Tech.
Rainbow trout	96-hr LC50	130 mg/l	Tech.
Bluegill	96-hr LC50	27.0 ppm	Ridomil 2EG
Rainbow trout	96-hr LC50	18.4 ppm	Ridomil 2EG
Fathead minnow	Embryo-larvae	MTC >9.1 mg/l	Tech.

103.4 Aquatic invertebrate

Organism	Test	Results	% Active
Daphnia magna	48-hr EC50	28 mg/l	Tech.
Daphnia magna	48-hr EC50	12.5 ppm	Ridomil 2EG
Daphnia magna	Life-cycle	Adverse response between 1.2 & 2.7 mg/l	Tech.

104 Hazard Assessment

104.1 Discussion

The label directions state that a maximum of 100 gallons of dip solution is to be used per planted acre. This is equivalent to an application rate of 1 pound a.i./acre and is a somewhat higher application rate than for many of the other registered uses. However, when repeat applications for these other uses are taken into consideration, the potential residue levels resulting from the use of Ridomil on pineapple are no higher than from these other uses.

104.2 Likelihood of Adverse Effects to Non-Target Organisms

Metalaxyl is slightly toxic (acutely) to mammals and birds and practically non-toxic to birds when administered through the diet. It is practically non-toxic to fish and aquatic invertebrates.

Since Ridomil is applied as a seed piece dip rather than sprayed or broadcast over a field, the potential for exposure to fish and wildlife is very remote. This low potential for exposure coupled with the material's low toxicity should result in no acute hazard to terrestrial or aquatic organisms. Furthermore, maximum residues found in ground water monitoring tests are below the critical levels determined by chronic aquatic testing, therefore chronic hazards to aquatic organisms should not be a problem (See EEB Review, Tice, 6/26/81). This proposed use is also not expected to result in adverse effects to endangered species.

104.3 Adequacy of Toxicity Data

The available data are adequate to perform a hazard assessment.

105 Conclusions

105.1 Recommendations

EEB has completed an incremental risk assessment of the proposed conditional registration of Ridomil 2E for use as a seed piece dip on pineapples. Based upon the available data, EEB concludes that the proposed use provides for no significant increase in exposure or acute or chronic risks to non-target organisms.

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