

US EPA ARCHIVE DOCUMENT

179149
RECORD NO.

109801
SHAUGHNESSEY NO.

REVIEW NO.

EEB REVIEW

JUN 10 1987

DATE: IN 9-2-86 OUT _____

FILE OR REG. NO. 359-685

PETITION OR EXP. NO. _____

DATE OF SUBMISSION 7-24-86

DATE RECEIVED BY HED 8-25-86

RD REQUESTED COMPLETION DATE 11-11-86

EEB ESTIMATED COMPLETION DATE 11-7-86

RD ACTION CODE/TYPE OF REVIEW 335

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

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. H. Jacoby (21)

PRODUCT NAME(S) Rovral

COMPANY NAME *Rhone-Poulenc, Inc.

SUBMISSION PURPOSE Proposed registration of rice use
Includes crayfish and catfish test

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

EEB REVIEW

Iprodione

100.0 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

With this submission, the registrant Rhone-Poulenc, Inc. proposes to register Rovral[®] for use on rice.

100.2 Formulation and Information

Rovral is 50% active ingredient (Iprodione).

100.3 Application Methods, Directions, Rates

Crop	Disease	Dosage Rate Lbs. A.I./acre	Directions
Rice (in all areas except Calif.)	Sheath blight <u>Rhizoctonia solani</u>	0.5	Rovral may be applied twice per year. The first application between joint movement and booting. The second 2 weeks later, but no later than heading.

Aerial spray equipment is to be used.

100.5 Precautionary Labeling

Do not apply to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes.

101.0 Hazard Assessment

101.1 Discussion

Iprodione is to be applied at 0.5 lb. ai/acre to flooded rice fields in southern United States.

101.2 Likelihood of Adverse Effects on Nontarget Organisms
Terrestrial

Acutely, Iprodione is slightly toxic to practically nontoxic to birds and mammals. Chronically, Avian reproduction was not significantly affected at 300 ppm. The rat 3-generation NOEL was 500 ppm.

Maximum Residues (ppm) on Terrestrial Food Items*

<u>Short Grass</u>	<u>Long Grass</u>	<u>Leafy Crops</u>	<u>Insects, Foliage</u>	<u>Seeds, Pods</u>	<u>Fruit</u>
120	55	63	29	6	3.5

*Following application of 0.5 lb. ai/acre

These residues are lower than the lowest avian LC₅₀ (9200 ppm) and avian reproductive NOEL (300 ppm). They are also lower than the rat 24-month feeding NOEL (> 1000 ppm) and the 3-generation rat NOEL (500 ppm). It is unlikely that the use of Iprodione on rice at 0.5 lb. ai/acre would adversely affect terrestrial organisms.

Aquatic

Several assumptions were made to estimate exposure to aquatic or estuarine organisms from this rice use.

- A. A heavy rain may occur shortly (<48 hrs.) after treatment.
- B. Following heavy rains 100% of applied pesticide is available to transport off the field.
- C. Following a 2-inch rain, levee gates will overflow allowing contaminated water to enter adjacent aquatic habitat. This 2" of rain may be over a 2- or even 3-day period.
- D. Iprodione will persist in the rice fields and in adjacent aquatic habitat for several weeks allowing chronic exposure.
- E. Dilution of no more than 50% will occur in receiving water.
- F. Rice floodwater is 3" deep.

Based on these assumptions, which may be changed with appropriate data, the following EEC is calculated.

0.5 lb. ai/acre into 3" water = 734 ppb.
2 inches of rain dilutes concentration to 440 ppb.
Discharge water is 440 ppb which is diluted by 50%
in the receiving water to 220 ppb.

This is less than 1/10 the lowest fish LC₅₀ 3.1 ppm.

$$3.1/10 = 310 \text{ ppb}$$

This exceeds 1/2 the lowest aquatic invertebrate.

$$\text{LC}_{50} 0.43 \text{ ppm}/2 = 215 \text{ ppb}$$

However, there are numerous data requirements. These include both toxicity test results and environmental fate information. When these requirements have been

fulfilled, EEB will complete a risk assessment for aquatic organisms from this proposed rice use.

101.3 Endangered Species Consideration

The use of Iprodione on rice at 0.5 lb. ai/acre is not expected to affect endangered terresetrial species.

However, no conclusion of safety can be made for this use to endangered aquatic species. When the required data are available, an assessment of possible effects to endangered aquatic species will be made.

Only one endangered species occurs in the southern rice growing region, the fat pocketbook pearly mussel in Arkansas. According to the USFWS, to protect this species, pesticides toxic to aquatic organisms should not be used on rice in the following Arkansas counties:

Lee
Cross

St. Francis
Poinsett

Crittenden

Mississippi

101.4 Adequacy of Toxicity Data

The data were adequate to complete a risk assessment for terrestrial organisms.

The available data were not sufficient to complete a risk assessment for aquatic and estuarine organisms. The following toxicological data are required.

A. Formulated Product Testing with Rovral® Fungicide (50% ai). This includes acute tests with one species of fish (preferably warmwater) and an aquatic invertabrate.

B. Chronic test results with fish and aquatic invertebrates. This includes an early-life stage test with either a freshwater or estuarine fish, a Daphnia magna 21-day life cycle test, and a shrimp life-cycle test.

C. Results of acute tests with technical Iprodione and estuarine organisms. This includes a 96-hour fish test, a 96-hour shrimp test, and either a 48-hour mollusk embryo-larvae test or a 96-hour mollusk shell deposition test.

In addition to these laboratory tests, EEB requires the following environmental fate information.

Handwritten notes:
MFC 73.0635...
L 0.0075...
Fate E-L 70,26
0.65...

Handwritten notes:
Submitted
Submitted
Submitted

A. The halflife of Iprodione in hydrosol in and adjacent to rice fields. $t_{1/2} = 50 \text{ days}$

Application

B. The rate at which Iprodione will absorb to rice or other vegetation to which it is applied.

C. How much Iprodione will remain bound to sediment in the rice fields and how much will transport to adjacent aquatic habitat during periods of floodwater discharge or overflow.

*Soil Adsorption
Ka
ADD
K_d*

The above information, including the toxicity data and environmental fate information, may lead to the conclusion that residue monitoring is required. It is also possible that residue monitoring may be required to answer the questions on environmental fate if available data are not sufficient.

The results of residue monitoring may trigger the need for an aquatic mesocosm field study if exposure concentrations exceed a concern level.

101.5 Adequacy of Labeling

The following statement is required on all Iprodione labels.

"This pesticide is toxic to aquatic invertebrates."

103.0 Conclusion

The Ecological Effects Branch has reviewed the proposed registration of Iprodione on rice in southern United States. Based on available data and use information, EEB concludes that this use is likely to have minimal effects on terrestrial organisms. However, there are insufficient data to complete a risk assessment for nontarget aquatic and estuarine organisms. The additional required data and information are listed in section 101.4 Adequacy of Data.

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