FILE

081901

Date Out EFB:
MAR - 9 1983

TO: H. Jacoby
Product Manager 21
TS-767

FROM: Emil Regelman,
Acting Chief
Review Section No. 1
Environmental Fate Branch
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 677-313

Chemical: Chlorothalonil

Type Product: Fungicide

Product Name: Bravo 500

Company Name Diamond Shramrock

Submission Purpose: Review new use pattern

ZBB Code: Other ACTION CODE: 335

Date in: 1/14/83 EFB # 143

Date Completed: 3/8/83 TAIS (level II) Days

62 1.5

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

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1.0 INTRODUCTION

Diamond Shamrock Chemical Co. has submitted an application to amend the BRAVO 500 (chlorothalonil, as a. i.) registration for use on peaches by adding directions for use to control peach scab.

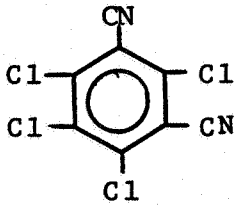
BRAVO 500 is currently registered for use on peaches for control of peach scab with application at the popcorn (pink, red or early white bud), full bloom, petal fall and up to shuck-split stages. No application is permitted after shuck-split and before harvest. The proposed use allows for additional applications after the shuck-split stage and up to 45 days before harvest.

1.1 Chemical

Common name: Chlorothalonil

Chemical name: Tetrachloroisophthalonitrile

Chemical structure:



Formulation: Bravo 500 is a formulation containing 4.17 lb. a.i. per gallon.

2.0 DIRECTIONS FOR USE

2.1 Current use directions

Control of leaf curl, Coryneum blight (shothole) on peach:

Apply 4 1/2 - 6 pints per acre.

Make one application in late autumn to early winter before hard freezing occurs. Make one or two additional applications mid to late winter before buds begin to swell. When Coryneum blight (shothole) occurs, apply once at petal fall or at shuck-split to prevent fruit infection.

Control of brown rot, blossom blight:

Apply 6 -8 pints/A for trees taller than 20 feet; 4 1/2 - 6 pints/A on smaller trees.

Make one application at popcorn stage. Make second application at full bloom. A third application is possibile at petal fall if weather conditions favor disease.

Control of peach scab:

In addition to above bloom applications, make one application at shuck-split stage. Do not apply Bravo 500 after shuck-split and before harvest.

2.2 Proposed use directions

Control of peach scab:

Apply 4 1/2 - 6 pints/A.

Make three applications at 10-14 day intervals beginning at shuck-split/fall (first cover). Make additional cover applications at 10-14 day intervals for as long as conditions favor continued increase in scab. Do not apply to peaches within 45 days of harvest.

3.0 DISUCSSION OF DATA

No additional data were submitted with application.

In the original review, EFB (1/19/82) did not concur with the proposed use of chlorothalonil on stone fruits (including peaches) since one of the data requirements for the use on orchard crops, leaching, had not been satisfied. It was also noted that the anaerobic soil metabolism study was still deficient.

In an earlier review of proposed use of chlorothalonil on citrus, EFB (10/21/80) noted that the soil degradation product of chlorothalonil, DAC 3701, (4-hydroxy-2,5,6-trichloroisothalonitrile) is persistent and mobile in soil. Groundwater contamination is a possibility since the proposed citrus use areas may include sandy soil. A groundwater monitoring study was recommended.

Note: The same citrus use was re-reviewed by EFB, 12/7/82, and EFB did not concur with the application noting the leaching study data requirement was still outstanding. This study was necessary for determining the need for a groundwater monitoring study. However, EFB (12/17/82) concurred with conditional registration of this use provided the registrant satisfies the leaching data gap within a reasonable time.

This reviewer was informed by the PM, H. Jacoby, that the registrant is currently conducting a groundwater monitoring study in place of the leaching study. However, EFB has no details on this study.

4.0 CONCLUSION

EFB is unable to evaluate the environmental fate of chlorothalonil residues resulting from the additional applications of chlorothalonil on peaches since the leaching potential has not been adequately defined for chlorothalonil or its degradation product, DAC 3701. These additional applications will add to the potential for groundwater contamination in sandy soil areas.

5.0 RECOMMENDATION

EFB cannot concur with the label amendment proposing additional applications of chlorothalonil to peaches until the issue of possible groundwater contamination is resolved.

EFB requests that the results of the field monitoring study be submitted. EFB recommends that this monitoring study include peach growing areas.

The registrant should be informed that EFB considers the leaching study still a data gap. If the registrant does not consider this study as a requirement, then a waiver should be requested.

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