Shaughnessy No.: 122804
Date Out of EFGWB:
APR 16 1990

TO: G. LaRocca /A. Heyward
Product Manager # 15
Registration Division (H7505C)

APR 16 1990

FROM:

Paul Mastradone, Section Chief
Environmental Chemistry Review Section #1
Environmental Fate and Groundwater Branch

THRU:

Henry Jacoby, Chief
Environmental Fate and Groundwater Branch
Environmental Fate and Groundwater Division (H7507C)

Attached please find the EFGWB review of:

Reg./File # : 618-98

Chemical Name: Avermectin

Product Type : Miticide/ Insecticide

Product Name : AGRI-MEK 0.15 EC

Company Name : Merck & Co., Inc.

Purpose : Review attached labelling and data on file for avermectin B1 to support the proposed use on pears

Date Received: 8/23/89 Action Code: 330

Date Completed: 3/30/90 EFGWB No. 90730

Total Reviewing Time (decimal days): 3.0

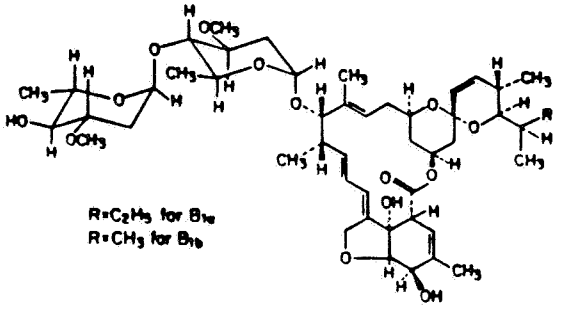
Deferrals to:
_____Ecological Effects Branch, EFED
_____Science Integration & Policy Staff, EFED
_____Non-Dietary Exposure Branch, HED
_____Dietary Exposure Branch
_____Toxicology Branch, HED

1.0 CHEMICAL: Common Name: Abamectin

Chemical Name: Avermectin

Trade Name: AGRI-MEK 0.15 EC

Chemical Structure:



2.0 TEST MATERIAL: N/A

3.0 STUDY/ACTION TYPE:

Request to review attached labelling and data on file for avermectin B1 to support the proposed use on pears.

4.0 STUDY IDENTIFICATION:

Application for amended pesticide registration of AGRI-MEK miticide for use on pears.

5.0 REVIEWED BY:

George Tompkins
Entomologist, Review Section 1
EFGWB/EFED

Signature: George Tompkins
Date: April 16, 1990

6.0 APPROVED BY:

Paul Mastradone
Section Chief, Review Section 1
EFGWB/EFED

Signature: Paul J Mastradone
Date: APR

7.0 CONCLUSIONS:

1. The use of avermectin on pears is considered a terrestrial food crop use. The following environmental fate data requirements are necessary: Hydrolysis (161-1), Photodegradation in water (161-2), Photodegradation on soil (161-3), Aerobic soil metabolism (162-1), Anaerobic soil metabolism (162-2), Leaching and adsorption/desorption (163-1), Field dissipation (164-1), Rotational crops (165-1,165-2), and Fish accumulation (165-4).

2. The data requirement for Field dissipation (164-1) has not been satisfied (EFGWB #'s 90710, 90711 dated 3 April 1990). The crop rotation field study requirement was previously waived (EFGWB #'s 90073, 90463 dated 24 April 1989). All other of the above environmental fate data requirements for the use of this pesticide on pears have been satisfied.

3. Information from previously submitted acceptable studies indicate that avermectin is stable to hydrolysis at pH5,7,and 9; photodegrades with a half-life of <12 hours in water and <1 day on soil; the aerobic metabolism half-life varies from 2 weeks to 2 months depending on soil type; does not degrade under anaerobic conditions; and is not very mobile in the soil (K_{ads} of 9.7 to 134 depending on soil type).

8.0 RECOMMENDATIONS:

Recommend that the data requirements for the Field dissipation study be completed and resubmitted.

9.0 BACKGROUND:

The registrant is requesting a review of data on file for avermectin B1 to support the proposed use on pears. The crop rotation field study requirement was previously waived (EFGWB #'s 90073, 90463 dated 24 April 1989). All other of the environmental fate data requirements listed in the Conclusion section, with the exception of the Field dissipation study (164-1), have been previously fulfilled.

10.0 DISCUSSION OF INDIVIDUAL STUDIES: N/A

11.0 COMPLETION OF ONE-LINER: N/A.. No new data submitted.

12.0 CBI APPENDIX: There is no CBI in this submission.