109702

FILE

Date Out EFB: 04 MAY 1983

TO: Franklin Gee
Product Manager 17
TS-767

FROM: Dr. Richard Moraski
Acting Chief
Review Section No. 1
Exposure Assessment Branch
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 279-GNET

Chemical: Cypermethrin

Type Product: Insecticide

Product Name: Ammo 2.5 EC

Company Name FMC Chemical Co.

Submission Purpose: Review new uses- use on tomatoes and lettuce

ZBB Code: (3)(c)(7)

ACTION CODE: 121

Date in: 2/4/83

EFB # 187,188

Date Completed: 5/4/83

TAIS (level II) Days

63 2

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

1.0 INTRODUCTION

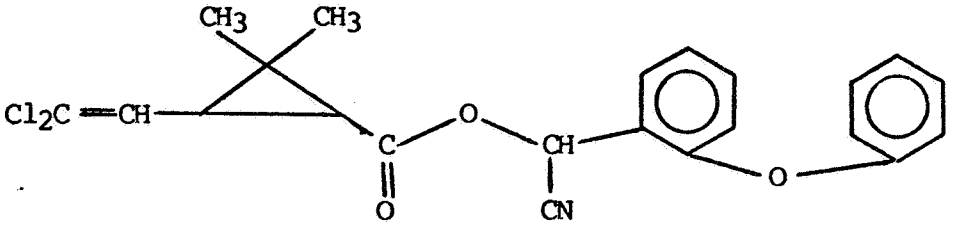
FMC Corporation has submitted applications to amend the registration of Ammo 2.5 EC (EPA Reg. No. 279-GNET, Cypermethrin as a. i.) to include uses on lettuce and tomatoes.

1.1 Chemical

Common name: Cypermethrin

Chemical name: (+) L-cyano-(phenoxyphenyl) (+)-cis, trans-3-(2,2-dichloroethenyl)-2,2-dimethyl-cyclopropane-carboxylate

Chemical structure:



cis/trans ratio: Max. 55 (±) cis and min. 45% (±) trans

Formulation: Ammo 2.5 EC is a formulation containing 2.5 lbs. a. i. per gallon.

2.0 DIRECTIONS FOR USE

Use directions are appended to this review.

3.0 DISCUSSION OF DATA

3.1 The submission contains authorization from ICI Americas allowing the use of their data in support of the FMC applications.

3.2 No additional data were included in the submission.

3.3 Data submitted in support of cypermethrin have been reviewed previously by EFB 5/14/81, 4/29/82 and 5/14/82.

3.3.1 The 4/29/82 review notes that the following studies were reviewed and accepted in the 5/14/81 EFB review:

Hydrolysis
Aerobic soil metabolism
Anaerobic soil metabolism
Leaching

The field dissipation study was found acceptable for the EUP only. It will not support registration since no analyses were made for the formation and decline of major soil metabolites as identified by the aerobic soil metabolism study.

Note: The current EAB file copy of the 5/4/81 review does not contain all the pages of the complete review. A number of the last pages are missing.

3.3.2 The EFB review dated 4/29/82 reviewed and accepted the following studies:

Photolysis
Fish accumulation
Adsorption/desorption
Aerobic aquatic metabolism
Anaerobic aquatic metabolism

Additional studies on aerobic soil metabolism and leaching (soil TLC and column) were reviewed.

Numerous studies on the degradation of permenthrin were submitted and reviewed.

Ancillary studies on the effects of the pesticide on microbes, microbial processes, earthworms, microarthropods, and activated sludge were submitted and reviewed.

The confined ^{14}C-cypermethrin rotational crop studies were reviewed but not accepted in support of registration.

3.3.3 The EFB review dated 5/14/82 reviewed and accepted the field rotational rotational crop study. EFB concluded that no (rotational crop) restriction is necessary for cypermethrin (when used) on cotton.

4.0 EXECUTIVE SUMMARY

4.1 All data requirements, with the exception of an adequate field dissipation study, have been satisfied for cypermethrin for the proposed uses.

4.2 The field dissipation study has been found inadequate since the soil analyses were for parent cypermethrin only but did not include the major soil metabolites as identified in the aerobic soil metabolism study.

5.0 RECOMMENDATION

5.1 EAB objects to the issuance of the proposed registrations on cypermethrin for use on lettuce and tomatoes. A valid field dissipation study has not been submitted.

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5.2 The registrant must provide either data on the formation and decline of soil metabolites for the field study or provide a justification as to why analysis of these metabolites was not done in the studies submitted.

Clinton Fletcher
Review Section No. 1
Exposure Assessment Branch
Hazard Evaluation Division

Crop	Pests	Rates		Remarks
		lb ai/acre	Fl. oz./acre	
Lettuce	Beet Armyworm Tobacco Budworm Black Cutworm Granulate Cutworm Corn Earworm Cabbage Looper Alfalfa Looper	0.04 - 0.1	2 to 5	Apply as necessary for insect control using a minimum of 15 gallons of finished spray per acre with ground equipment or 3 gallons per acre when applied by aircraft. Lower rates of Ammo 2.5EC should be used under light to moderate insect pressure. Higher rates should be used to control heavy insect populations. Do not make more than 15 applications per season. Do not plant rotational crops within 30 days of the last application. Ammo 2.5EC may be used up to the day of harvest.

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