Shaughnessy No.: 125601

Date Out of EAB: MAY 30 1985

To: Robert Taylor
Product Manager 25
Registration Division (TS-767)

From: Samuel Creeger, Chief
Review Section #1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

Attached, please find the EAB review of...

Reg./File # : 10182-EUP-GA

Chemical Name: Paclobutrazol

Type Product : Growth Regulator

Product Name : Clipper™ 2SC and [redacted]

Company Name : ICI Americas

Purpose : Protocol: PP333 - Dissipation and Leaching Following Sub-Surface Applications in Orchard Soils

Action Code(s): 352 EAB #(s) : 5311

Date Received: 2/15/85 TAIS Code: 67

Date Completed: 5/30/85 Total Reviewing Time: 0.5 days

Deferrals to: ___ Ecological Effects Branch

___ Residue Chemistry Branch

___ Toxicology Branch

1. CHEMICAL:

Paclobutrazol (±)-(R*,R*)-beta-[(4-chlorophenyl)methyl]-alpha-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol

2. TEST MATERIAL:

Formulated product of either Clipper™ 2 SC or [redacted] (no other details supplied by RD)

3. STUDY/ACTION TYPE:

Review of Protocol

4. STUDY IDENTIFICATION:

PP333: Dissipation and Leaching following Sub-surface Applications in Orchard Soils

5. REVIEWED BY:

Emil Regelman
Chemist
EAB/HED/OPP

Signature: Emil Regelman

Date: 5/30/85

6. APPROVED BY:

Samuel Creeger
Chief
Review Section #1
EAB/HED/OPP

Signature: Samuel Creeger

Date: MAY 30 1985

7. CONCLUSIONS:

The submitted protocol should be modified as follows:

7.1 Soil samples should be taken to a sufficient depth to adequately define the extent of leaching; the intended 12 inch limit may not be adequate.

7.2 Sampling during the first month should be more frequent, despite the 9 week half life reported in the aerobic soil metabolism study. The rate of degradation under field conditions may be significantly different from that observed in the laboratory.

7.3 If rainfall is inadequate during the experimental period, supplemental irrigation will be necessary; total rainfall + irrigation should approximate the heaviest 5-year yearly rainfall.

7.4 Soils from each of the 10 sample boxes should not be combined, but should be analyzed separately.

7.5 At each sampling interval (except at time zero), soil samples should be taken at depths greater than the proposed 6 inches.

7.6 A storage stability study must be submitted which confirms the stability of soil residues during the storage phase of the proposed study.

7.7 Assuming adoption of the above recommendations, the proposed course of study will be acceptable to EAB.

7.8 We cannot comment on the adequacy of the undescribed, alternative soil sampling method noted in section 6.6b of the protocol.

8. RECOMMENDATIONS:

RD should submit a copy of the [redacted] label for EAB's records.

9. BACKGROUND:

A. Introduction

Pursuant to their meeting with EAB on 11/8/84, ICI Americas has submitted a study protocol for EAB concurrence. A copy of that protocol is appended to this review.

According to the review of 3/15/84, paclobutrazol is refractory to both hydrolysis and aqueous photolysis, but degrades in soil under aerobic conditions with halflives ranging from 9.1 to 30.5 weeks, depending on soil organic content. The only major degradate is the paclobutrazol keto analog, which will be quantitated during the proposed experiment. Paclobutrazole was found to leach at a moderate rate (2 on the Helling scale of 1 to 5), especially in soils of low organic content.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES:

A. Study Identification

See ¶ 4, above.

B. Materials and Methods (Protocols)

C. Reported Results

D. Study Author's Conclusions/Quality Assurance Measures

E. Reviewer's Discussion and Interpretation of Study Results

See conclusions in section 7.

11. COMPLETION OF ONE-LINER:

No additional data have been added to the ongoing one-line data summary.

12. CBI APPENDIX:

The study protocol, appended to this review, may be considered to be CBI, and should be treated as such.

Paclobutrazol scientific review

Page _____ is not included in this copy.

Pages 5 through 16 are not included in this copy.

The material not included contains the following type of information:

___ Identity of product inert ingredients

___ Identity of product impurities

___ Description of the product manufacturing process

___ Description of product quality control procedures

___ Identity of the source of product ingredients

___ Sales or other commercial/financial information

___ A draft product label

___ The product confidential statement of formula

___ Information about a pending registration action

X FIFRA registration data

___ The document is a duplicate of page(s) _____

___ The document is not responsive to the request

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