Shaughnessy No.: 114501

Date out of EAB: 15 JUN 1984

To: Ellenberrger/Comfort
Product Manager 12
Registration Division TS-767

From: Samuel M. Creeger, Chief
Environmental Chemistry Review Section 1
Exposure Assessment Branch
Hazard Evaluation Division TS-769c

Attached, please find the EAB review of:

Reg./File No.: 264-341

Chemical: Thiodicarb

Type Product: I

Product Name: Larvin

Company Name: Union Carbide

Submission Purpose: Review crop rotation data

ZBB Code: other

Action Code: 305

Date In: 4/10/84

EAB No.: 4288

Date Completed: 15 JUN 1984

TAIS (Level II)	Days
67	2

Deferrals To:

_____ Ecological Effects Branch

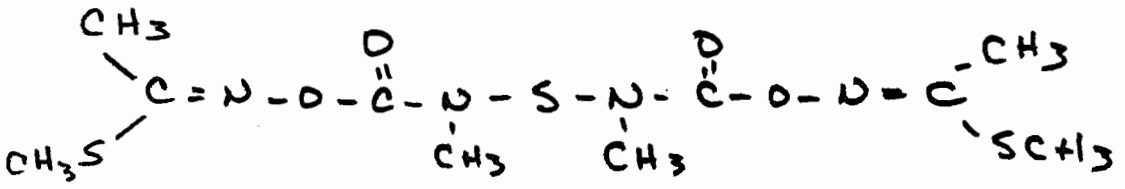
_____ Residue Chemistry Branch

_____ Toxicology Branch

1.0 INTRODUCTION

Union Carbide has submitted a crop rotation study with thiodicarb. Acc. No. 252757

2.0 Larvin; thiodicarb



N,N'(thiobis((methylimino)carbonyloxyl))bisdimethyl ester

3.0 DISCUSSION

Larvin, Thiodicarb, Field Accumulation Studies with Rotational Crops, T.W. Hunt and T.R. Langdon, 12/12/83, Project No. 804R11.

For this study wheat was used as the grain type, turnips and carrots for root type, and spinach and lettuce as the leafy type. Residues in wheat forage, straw and grain, in roots and tops and in edible positions from the leafy vegetables were analyzed. Soil samples were also analyzed for residues.

For this study, cotton was planted in California, Mississippi and N. Carolina. Thiodicarb was applied at a rate of 0.9 lb ai/acre using ground equipment. Eight applications were made in California and 15 in each of the other two states.

Within 4 hours of the last application the cotton was disced under and the follow crops were planted into the cotton fields at 0, 30, 60, and 90 days after last treatment.

Residues were taken at harvest time. Table 1 gives dates planting and harvest. Soil samples were also taken to 4 ft depths on day 0, 14, and 28 after the last application.

Results

Table II shows the results of the analysis of 210 samples. Six indicated levels above the detection limit (0.04 ppm). Five samples may have been contaminated as a result of spray drift to the wheat field from the treatment of a nearby apple orchard. Soil samples of the 30 days had no detectable residues. Apparent residues found in turnip roots were designated as interference when reanalyzed using a more sensitive method.

Soil sample residues are in Table III. After 28 days, no soil indicated residues above 0.02 ppm.

Thiodicarb residues consist of thiodicarb and its degradation product methomyl.

4.0 CONCLUSION

This rotational crop study is acceptable and indicator that thiodicarb residues would not be expected in follow crops even if planted 30 days after last treatment. A rotational crop restriction is not necessary.

Use of thiodicarb at rates higher than those at which the rotational crop studies were conducted may require the imposition of a rotational crop restriction.

Richard V. Moraski
Environmental Chemistry
Review Section No. 1

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Thiodicarb exposure assessment review

Page _____ is not included in this copy.

Pages 4 through 21 are not included in this copy.

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