

**FILE**


090201

079801

Date Out EFB:

18 MAY 1984

TO: Hank Jacoby  
Product Manager 21  
Registration Division  
TS-767

FROM: Samuel Creeger, Chief   
Review Section No. 1  
Exposure Assessment Branch  
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 400-112

Chemical: Carboxin and Thiram

Type Product: Fungicide

Product Name: Vitavax 200

Company Name: Uniroyal

Submission Purpose: Review new use as safflower seed treatment

ZBB Code: Other

ACTION CODE: 335

Date in: 3/27/84

EFB # 425

Date Completed: 5/18/84

TAIS (level II) Days

63

1

Deferrals To:

----- Ecological Effects Branch

----- Residue Chemistry Branch

----- Toxicology Branch

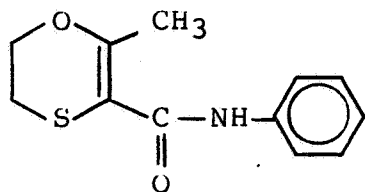
## 1.0 INTRODUCTION

Uniroyal Chemical Co. has submitted an application for registration of Vitavax-200 Flowable Fungicide, Reg. No. 400-112 (Carboxin and Thiram as active ingredients) for use as a safflower seed treatment.

### 1.1 Chemicals

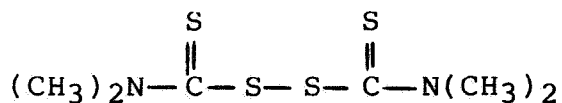
#### Carboxin

5,6-dihydro-2-methyl-1,4-oxathiin-3-carbonanilide



#### Thiram

Tetramethylthiuram disulfide



## 2.0 DIRECTIONS FOR USE

The complete label is appended to this review. Briefly, 4 fluid ounces of Vitavax-200 Flowable Fungicide is used per 100 pounds of seed. Apply as a slurry treatment by machine.

[Note: This application rate calculates to about 0.0125 lb. each a. i. per acre. Density Vitavax 200 = 9.6 lb/gal; 17% each a. i.; 25 lb. seed/acre (telecom. IR-4, 5/18/84)]

## 3.0 DISCUSSION OF DATA

3.1 No additional data were included with submission.

### 3.2 Carboxin

Previous EAB reviews, including a review of data in response to the registration standard, indicate that

the following are data deficiencies for carboxin:

- Photodegradation studies
- Aerobic soil metabolism study
- Anaerobic soil metabolism
- Terrestrial field dissipation study
- Rotational crop study

EAB review dated 6/21/83 noted these deficiencies still exist and requested that the registrant should address them directly and expeditiously. Also, data presented in the photodegradation study bring the results of the hydrolysis study into question. It appears that the dark photolysis control sample showed degradation suggesting carboxin hydrolyzes. However, the hydrolysis study indicated that carboxin was stable to hydrolysis. EAB noted that the registrant stated that an additional photolysis study was (then) currently underway.

EAB review of the bean seed use dated 12/18/80 concluded that the increased environmental burden resulting from the use as a seed treatment on beans would be minimal.

#### Conclusion

Because of the low application rate per acre and unlikelihood of residues getting to aquatic areas from the use, data on field dissipation, rotational crop and fish accumulation will not be necessary for this use.

Also, since the treated seed is to be planted, photolysis will not be a route of degradation. However, other deficiencies must be resolved.

### 3.3 Thiram

The registrant states that thiram is currently registered in several products as a seed treatment on safflower; i.e. (EPA Reg. No.) 352-277.

The EAB file for thiram shows no data have ever been submitted to support any use of thiram, including the use on safflower.

#### Conclusion

Data deficiencies exist for this chemical which must be resolved.

B

#### 4.0 RECOMMENDATION

- 4.1 Data deficiencies exist for carboxin and thiram such that the environmental fate of these chemicals is not adequately defined.
- 4.2 For this limited use, EAB can concur with conditional registration of Vitavax 200 (carboxin and thiram, as a. i) provided the registrant submits additional information. At a minimum, an acceptable aerobic soil metabolism study for each active ingredient, a hydrolysis study for thiram, and clarification of the carboxin hydrolysis question are needed to support registration of Vitavax 200 for this limited use.
- 4.3 Other uses of Vitavax 200 may need the support of additional data.



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

Carboxin/Thiram exposure assessment review

---

Page    is not included in this copy.

Pages   5   through   6   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
  - FIFRA registration data
  - The document is a duplicate of page(s) \_\_\_\_\_
  - The document is not responsive to the request
- 

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

---