US EPA ARCHIVE DOCUMENT

122804

Shaughnessy No.: 079402

Date out of EAB: 11 JUL 1984

To: Don Stubbs
Product Manager 41
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.: 84-FL-14

Chemical: Avermectin

Type Product: I

Product Name: Avid 0.15 EC

Company Name: State of Florida

Submission Purpose: Section 18 use on ornamentals

ZBB Code: 3(c)(5)

Action Code: 505

Date In: 6/28/84

EAB No.: 4427

Date Completed: 11 JUL 1984

TAIS (Level II)	Days
51	2

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

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1.0 INTRODUCTION

The State of Florida has submitted a request for an emergency exemption for use of Avermectin to control spider mites, leafminers and aphids on ornamental flowers and foliage.

2.0 Avid 0.15 EC: Avermectin

See figure for structure.

3.0 DISCUSSION

This section 18 request is for the use of avermectin on ornamental flowers growing in greenhouses and in fields. A total of 2837 acres ~~cases~~ will be treated. A treatment rate of 8.5 - 17 ounces product per acre is recommended at 7 day intervals or as necessary to maintain control until harvest time or infestation is controlled. The complete description provided of crop or site to be treated and proposed program is attached.

Avermectin is not expected to hydrolyze in the environment. It will undergo rapid photodegradation whether in water or on soil with halflives less than 1 day in either case. Soil metabolism studies indicate degradation does occur with a possible halflife of 2 months under aerobic conditions. Anaerobic degradation is slower. It is not expected to leach or to accumulate in fish. Avermertin solubility in water is determined to be 7.8 ppb.

4.0 RECOMMENDATION

The environmental fate data available support the use of avermectin on ornamentals for this section 18 request.

Note to PM:

The applicator exposure assessment for avermectin will be provided when a written request from Tox Branch is received.

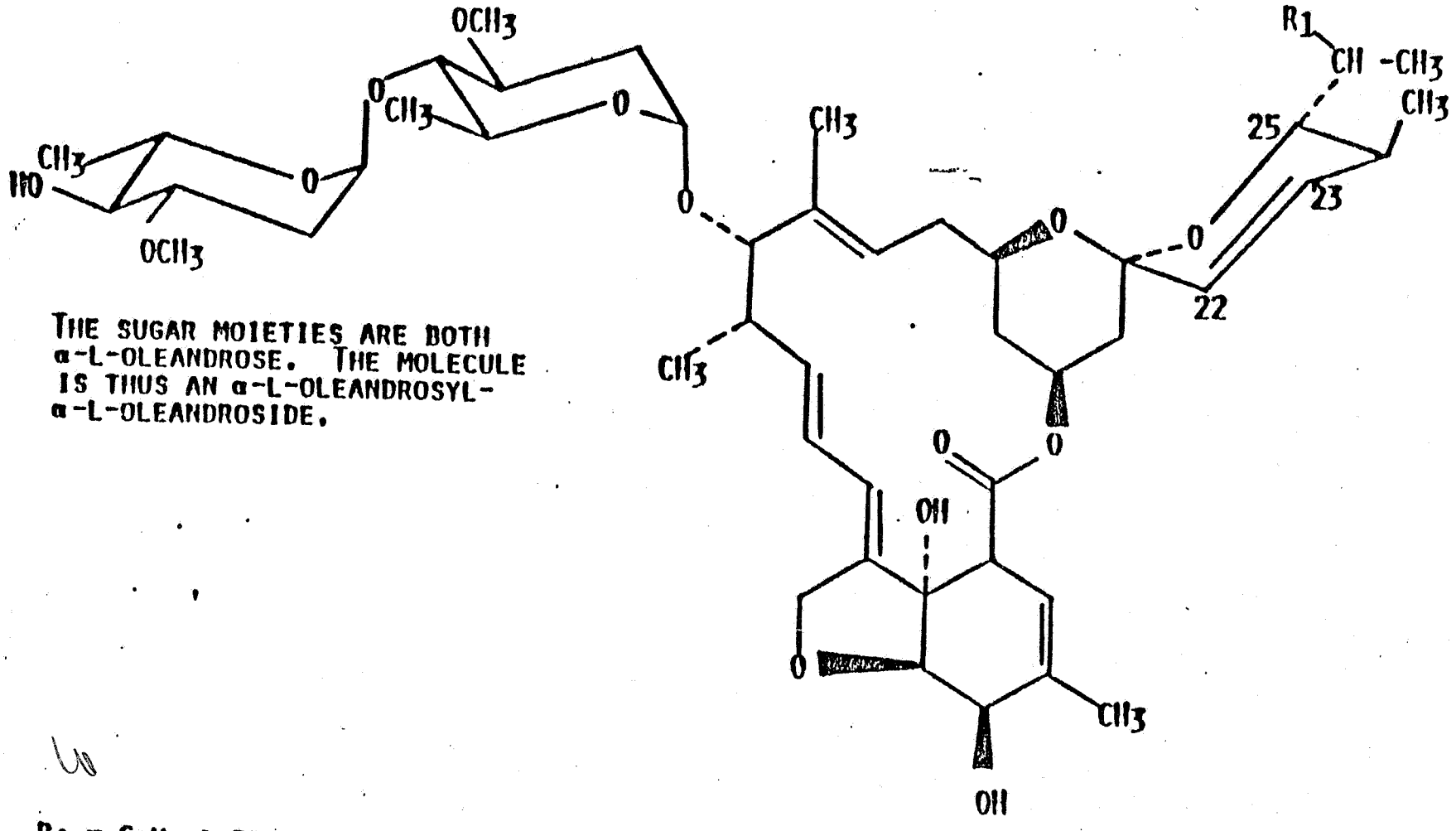
Richard V. Moraski

Richard V. Moraski
Chemist
Exposure Assessment Branch

MK-936

AVERMECTIN B_1

L-676,863



THE SUGAR MOIETIES ARE BOTH α-L-OLEANDROSE. THE MOLECULE IS THUS AN α-L-OLEANDROSYL-α-L-OLEANDROSIDE.

R_1 = C_2H_5 ≥ 80% (AVERMECTIN B_{1A}, L-676,895)

R_1 = CH_3 < 20% (

then the grower would switch to one of the other materials. It has only been recently that the grower finds that the second or even third choice will not clean up the mite problem. Control can be obtained with some of the materials, but only at very high rates and frequent spray intervals and this causes phytotoxicity problems for the grower.

B. CROP OR SITE

1. The name of the crop.

Leafminer: Chrysanthemum, Gerbera Daisy, Snapdragon, Gypsophila

Two-spotted spider mite: Chrysanthemum, Gerbera Daisy, snapdragon, Gypsophila, Foliage

2. Total acres planted to this crop.

Chrysanthemum - 357
Gerbera daisy - 10
Snapdragon - 20
Gypsophila - 350
Foliage - 2100
2837

3. Amount of critically affected acreage.

All.

4. Stage of growth when treatments will be made.

Entire cropping cycle.

5. How is crop marketed.

Cut flowers, potted plants, cuttings and bedding plants.

6. Will crop, by-products, etc., be fed to or grazed on by livestock.

No.

F. PROPOSED PROGRAM

1. Leafminer

Product: Avid 0.15 EC

Dosage: 8.5 to 17 ounces of Avid per acre

Dilution rate: apply in 50 to 100 gallons of water per acre.

Frequency/Timing of application: 7 day intervals or as necessary to obtain control.

Field re-entry interval: None. Let spray dry.

Pre-harvest interval: None. Let spray dry.

Date first application needed: When stipples are evident on plants or adults are found on yellow cards.

Date last application needed: up to harvest.

2. Two-spotted spider mite

PRODUCT: aVID 0.15 ec

DOSAGE: 8.5 to 17 ounces of Avid per acre.

DILUTION RATE: Apply in 50 to 100 gallons of water per acre.

FREQUENCY/TIMING OF APPLICATION: 7 day intervals or as necessary to maintain control.

FIELD RE-ENTRY INTERVAL: None. Let spray dry.

PRE-HARVEST INTERVAL: None. Let spray dry.

DATE FIRST APPLICATION NEEDED: When mites are found on plants.

DATE LAST APPLICATION NEEDED: Up to harvest or until mite infestation is controlled.