



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 14 1994

Williard F. Cummings
UNIROYAL CHEMICAL CO., INC.
74 Amity Road
BETHANY, CT. 06524

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 08/08/93 In Response to PR Notice 93-7
EPA Reg. No. 400-155
HARVADE-5F

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

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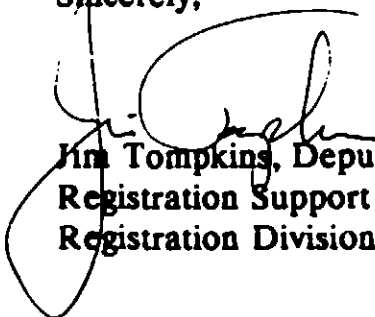
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division

Willard F Cummings
UNIROYAL CHEMICAL CO INC
74 AMITY RD
BETHANY CT 06524

Subject: Label Amendment Submission of 08/08/93
to Comply with WPS Labeling Requirements
EPA Reg Nr. 400-155
HARVADE-5F

The following specific comments pertain to your
WPS labeling submission concerning the product
cited above:

There is a typographical error(s) in the PPE statements
that you added to the Precautionary Statements.

HARVADE®-5F

4 7 6

HARVEST GROWTH REGULANT FOR COTTON



ACCEPTED
with COMMENTS
in EPA Letter Dated

JAN 14 1994

Under the Federal Insecticide,
Fungicide and Rodenticide Act
as amended. For the pesticide
registered under EPA Reg. No.
400-155

COMPOSITION

Active ingredient: (% by weight)	
dimethipin (2,3-Dihydro-5,6-dimethyl-1, 4-dithiin 1,1,4,4-tetraoxide*)	48.0%**
Inert ingredients	52.0%
Total:	100.0%

*U.S. Patent No. 3,920,438

**Contains 4.9 pounds of active ingredient per gallon.

UNIROYAL CHEMICAL COMPANY, INC., Middlebury, CT 06749
EPA REG. NO. 400-155
EPA EST. NO.

004WPS

NET CONTENTS:

KEEP OUT OF REACH OF CHILDREN CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Drink two large glasses of water and induce vomiting. Contact a physician.

IF ON SKIN: Wash affected area with plenty of soap and water.

IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. Contact a physician.

IF INHALED: Remove to fresh air; if abnormal symptoms develop, contact a physician.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or inhaled. Do not breathe vapors or spray mist. Avoid contact with skin, eyes or clothing. Keep away from food or food products.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category E on an EPA chemical resistant Category selection chart.

Applicators and Other Handlers Must Wear: Long-sleeved shirt and long pants; chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber, or viton; shoes plus socks.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from treated area.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling

Do not apply this product through any type of irrigation system.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

BEST AVAILABLE COPY

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls
- chemical resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber, or viton
- shoes plus socks

MIXING INSTRUCTIONS

SHAKE CONTAINER VIGOROUSLY BEFORE USE. Fill the spray tank with 2/3 of the required amount of water. Add the desired amount of HARVADE-5F, the selected crop oil concentrate and remaining required amount of water. The HARVADE-5F and crop oil concentrate will suspend easily with minimum agitation. To assure that container content is emptied - TRIPLE RINSE INTO SPRAY TANK.

GENERAL INFORMATION

HARVADE-5F is a plant growth regulant that effects certain plant processes which lead to defoliation in cotton. Since HARVADE-5F must enter the plant through the leaves for optimum activity, it must be applied in a manner that will allow maximum penetration through the leaf surface. Complete coverage of the entire plant is essential for optimum effectiveness. HARVADE-5F MUST BE USED WITH A MINIMUM OF ONE PINT/A OF THE DESIGNATED CROP OIL CONCENTRATES. HARVADE-5F will improve the harvest operation by also desiccating most mature morningglory species. Desiccation/defoliation of other weed species such as sicklepod, cruton, and teaweed has been observed. Good coverage of these above weeds is necessary for optimum results.

Application Equipment:

Nearly all spray application equipment is suitable for applying HARVADE-5F if fine spray droplets can be deposited. If aerial equipment is used, it should be fitted with a fixed boom set at 45-90° relative to the trailing edge of wing and flown 10-12 ft. above the crop canopy.

Compatibility:

HARVADE-5F is compatible with most commonly used cotton desiccants, defoliants, and insecticides. HARVADE-5F has been shown to be incompatible with EPN when used as a tank mix. Consult your supplier or Uniroyal for details.

Application Timing

Optimum defoliation will be obtained when HARVADE-5F is applied to mature cotton plants; i.e. 70% or more of the bolls open, no active growth, lower leaves have purple tinge. Apply 7-14 days prior to anticipated harvest.

Application Rate

Air Application: Mix 8 fl. oz. of HARVADE-5F plus one pint of the crop oil concentrate designated below in a minimum of 5 gallons of spray solution per acre. If cotton is rank or conditions favor regrowth, see application notes.

Ground Application:

Mix 8 fl. oz. of HARVADE-5F plus one pint of the crop oil concentrates

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designated below in 10-20 gallons of spray solution per acre. If cotton is rank or conditions favor regrowth, see application notes. One gallon of HARVADE 5F will treat 16 acres of cotton, when applied at the 8 fl. oz. rate.

Application Notes: Partial defoliation from the first application will most likely result from one or more of the following conditions:

- Rank cotton foliage is dense enough to inhibit spray droplets from reaching bottom leaves.
- Plants are actively growing, with new growth and fruiting evident at the top.
- Bolls are not 70% open.
- Cotton is drought stressed. Under this condition, applications should be made before mid morning or at late afternoon.
- Night temperatures are below 60°F for 3-4 nights before or after application.
- Rainfall occurs within 6 hours after application.

Under these conditions a second application of 6 oz/A may be required 5-7 days after initial application. If only one application is desired on rank or actively growing cotton, a mixture of HARVADE-5F with a phosphate defoliant has been shown to be advantageous.

TANK MIX COMBINATIONS

HARVADE-5F plus PREP®:

HARVADE-5F may be applied with 1½- 2¾ pints of PREP® to enhance boll opening and control regrowth. Apply this tank mixture when the bolls are 60-70% open.

HARVADE-5F plus GRAMOXONE® SUPER:**

On rain-belt cotton if a high percentage of cotton leaves are still actively growing, then 4-6 fl. oz./A of GRAMOXONE® SUPER should be added to the labeled rate of HARVADE-5F for more complete defoliation.

HARVADE-5F plus DROPP® 50WP***:

Under conditions that promote excessive regrowth, a tank mix of HARVADE-5F at 6.5 oz/A with one pint of crop oil plus DROPP 50WP at 0.1-0.2 lb/A provides excellent regrowth control. This combination also provides defoliation when night time temperatures are below 60°-70°F for 2-3 nights preceding or following application.

*PREP® is the registered trademark of Rhone Poulenc Ag Company

**GRAMOXONE® SUPER is the registered trademark of ICI Americas, Inc.

***DROPP® is the registered trademark of NOR-AM Chemical Co.

CROP OIL CONCENTRATES REQUIRED WITH HARVADE-5F

Any petroleum based crop oil concentrate (83-17) or similar to those listed below must be added at 1-2 pints per acre: Agridex¹, Prime Oil², Super Oil³, Surf Oil⁴, Peptoil⁵, Clean Crop Oil Concentrate⁶ and Super Savof⁷. These crop oil concentrates are trademarks of ¹Helena Chemical Company, ²Terra International Inc., ³Red Panther Cooperative, ⁴Cleveland Chemical Company, ⁵Drexel Chemical Co., ⁶United Agri-Products, Inc. and ⁷Leffingwell.

USE PRECAUTIONS

1. Do not plant rotational crops within 6 months after application.
2. Keep HARVADE drift from non-target areas.
- 3a. Do not apply HARVADE-5F directly to, or permit mist to drift onto citrus, broccoli, almonds, grapes, peppers, tomatoes, lettuce, alfalfa, sugarbeets or wheat. These crops may sustain significant injury if contacted with HARVADE-5F.
- b. Do not apply HARVADE-5F to, or permit mist to drift onto soil that will subsequently be seeded to peppers, tomatoes, lettuce, broccoli, alfalfa or sugarbeets. Significant crop injury may occur from such an application.
- c. Do not apply HARVADE-5F to, or permit mist to drift onto, irrigation water that will subsequently be applied to peppers, tomatoes or lettuce.

SHAKE WELL BEFORE USING

BEST AVAILABLE COPY

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STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility

CONTAINER DISPOSAL:

Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

IMPORTANT NOTICE—Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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