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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460  
MAR 17 1994

Beverley Neale  
HELENA CHEMICAL CO  
6075 POPLAR AVE - SUITE 500  
MEMPHIS, TN 38119

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 07/08/93 in Response to PR Notice 93-7  
EPA Reg. No. 5905-72  
2, 4-D AMINE

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 SoyCandis Ink on paper that  
contains at least 50% recycled fiber

Page 2

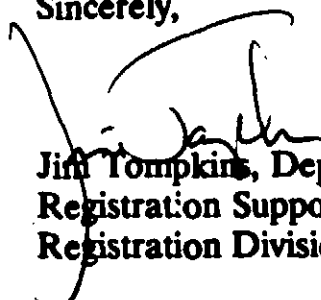
Submit the final printed labeling via the U.S. Postal Service to:

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

HELENA CHEMICAL CO.  
5905-72 07/08/93  
2, 4-D AMINE  
Original Submission

The Agricultural Use Requirements section must be located in a clearly separate box on the product labeling – with lines or other graphic indicators (such as contrasting color) to separate the section from the surrounding text.

Remove the statement "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." from its current position within the Agricultural Use Box and place it above the Agricultural Use Box.

The headgear requirement for early entry in the Agricultural Use Requirements box on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add "Chemical-resistant headgear for overhead exposure." The exact location is shown in Sections F and G on Part 2 of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

The circled statement(s) in the Non-Agricultural Use Requirements box contains errors. Use each statement exactly as it appears on your original label.

Correct the typographical errors circled on your proposed label.

## 2,4-D AMINE

ACTIVE INGREDIENT:	BY WT.
*Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid .....	46.6%
INERT INGREDIENT: .....	<u>53.4%</u>
TOTAL .....	100.0%

\*2,4-Dichlorophenoxyacetic acid equivalent 38.7%-3.76 lbs. per gallon.  
Isomer specific by AOAC method 6.D01-5.

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

EPA REG. NO. 5905-72  
EPA EST NO.

NET CONTENTS:

MANUFACTURED BY  
HELENA CHEMICAL COMPANY  
MEMPHIS, TN 38119

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAR 17 1994

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

5905-72

5 of 10

## **PRECAUTIONARY STATEMENTS**

### **CAUTION**

#### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes and clothing. May produce skin sensitization reaction in certain individuals. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

#### **PERSONAL PROTECTIVE EQUIPMENT**

##### **Applicators and other handlers must wear:**

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be re-used until it has been cleaned.

#### **Engineering Controls Statements**

If this container contains 5 gallons or more in capacity, a closed mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. The mechanical system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4)]. The handler PPE requirements may be reduced or modified as specified in the WPS.

When handlers use 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **STATEMENT OF PRACTICAL TREATMENT**

**IF SWALLOWED:** Call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if irritation persists.

**IF IN EYES:** Flush with plenty of water. Get medical attention if irritation persists.

### **ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

### **GROUNDWATER CONTAMINATION**

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

### **PHYSICAL OR CHEMICAL HAZARDS**

Do not use, pour, spill or store near heat or open flame.

### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### **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 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.

Do not enter or allow worker entry into treated arms 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 over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried or dust has settled.

### CHEMIGATION PROHIBITION

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

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Protect from freezing. If stored below 32°F and crystals form, warm to 72°F for 24 hours, periodically rolling drum to reconstitute.

#### PESTICIDE DISPOSAL:

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate, is a violation of Federal Law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### CONTAINER DISPOSAL:

Metal containers - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state or local authorities.

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.

### OBSERVE THESE PRECAUTIONS

Avoid applications of spray or drift of spray to desirable plants, as this product may injure cotton, tomatoes, beans, peas, most vegetables, ornamentals, grapes or others. Even minute quantities of the spray may cause severe injury. Accordingly, application by airplanes should be made only when there is no hazard from drift. All sprays are likely to drift under certain conditions. The finer the spray, the greater the likelihood of drift effect. Coarse sprays are less likely to drift.

Use only amount needed. **DO NOT OVERDOSE.**

Be sure that airplane spraying equipment has a quick-acting, effective cutoff valve, and is used from the lowest possible altitude by an aircraft operator experienced in the application of herbicides.

Do not use same equipment for other purposes. If necessary to use sprayer for any other spraying, be sure to thoroughly clean all equipment with a suitable chemical cleaner. (1 qt. of household ammonia in 20 to 25 gals. water - let stand overnight, then rinse thoroughly with water)

### FOLLOW THESE DIRECTIONS CAREFULLY

Always mix with water, so as to apply the recommended amount of 2,4-D Amine per acre in the amount of water necessary to cover an acre of ground with the spraying equipment used.

Apply 2,4-D sprays at low pressures of approximately 30 to 50 pounds, with nozzles adjusted to

give a coarse, wetting spray consisting of large droplets.

For best results apply 2,4-D sprays when soil and climatic conditions are conducive to rapid plant growth. This product may be applied when temperatures range from 50° to 95°; results may be unsatisfactory below 65° and above 90°. Sprays applied under adverse conditions (abnormally cool or hot and dry weather or when weeds are near maturity) should contain maximum recommended dosage. Under such conditions, control results may not always be entirely satisfactory.

The recommendations given are general. Because of varietal and local conditions, consult Agricultural Experiment Station or Extension Service weed specialists.

### THIS CONTAINER IS NON-RETURNABLE

Conversion Table						
2,4-D Acid Required	1 lb.	3/4 lb.	1/2 lb.	3/8 lb.	1/4 lb.	1/8 lb.
Amount 2,4-D Amine to use	2 pts.	1 1/2 pts.	1 pt.	3/4 pt.	1/2 pt.	1/4 pt.

### AMOUNTS OF SPRAY MIXTURE TO APPLY

**AIRPLANE APPLICATION** - Water - Dilute recommended amount of 2,4-D Amine in 3 to 10 gallons of water and apply per acre.

**GROUND SPRAYERS** - Dilute recommended amount in 8 to 20 or more gallons of water and apply per acre. The amount of water required will depend upon the crop and type of equipment used. Thorough agitation of spray mixture is necessary for best results.

### TO CONTROL WEEDS IN RESISTANT CROPS

2,4-D Amine is a selective water soluble herbicide for the control of susceptible broadleaved weeds in growing small grain crops, corn, sugar cane, pastures, lawns, and turf.

The following dosages are suggested on growing crops for the control of susceptible weeds such as mustard, sunflower, lambs-quarters, pigweed, ragweed, dock, cocklebur, sow thistle, marsh elder, and many other species. Perennial weeds are best when in bud or in early bloom stage of growth.

**WHEAT, OATS, BARLEY AND RYE** - 2,4-D sprays applied during seedling stage of growth may reduce yields. When crop plants are tillering (stooling), use 1/2 to 1 pint of 2,4-D Amine per acre and 1 to 1-1/2 pints per acre when fully tillered (stooled) - but before the early boot stage.

Sprays containing 2 to 3 pints per acre may be applied as an emergency weed control measure when seed in heads is past dough stage.

When small grain is underseeded with a legume such as alfalfa or clovers, use 1/4 to 1/2 pint of 2,4-D Amine per acre while the small grain is between tiller and boot stage. The legumes are less



9810

likely to be injured if a small grain foliage canopy is allowed to develop before application is made. Apply the lowest gallonage possible at low pressure in order to reduce penetration of the canopy with the spray.

Consult your local authorities: Fall applications of 2,4-D in crops are not recommended. Do not forage or graze treated grain fields within two weeks after treatment with 2,4-D. Do not feed treated straw to livestock.

**CORN AND SORGHUM** - Crop varieties vary in susceptibility to injury. 2,4-D sprays may cause some injury to stalks such as lodging, bending, and brittleness. Plants generally recover from lodging or bending. Stalks may remain brittle 5 to 7 days, during which time they are subject to breakage by high winds and cultivation. Avoid cultivating while this condition prevails. Injury is most likely when crop is growing rapidly.

Spray 1 pint of 2,4-D Amine per acre as soon as majority of weeds are actively growing. Do not apply 2,4-D sprays from tasseling to dough stage. Use extension nozzles to direct sprays away from the leaves of corn and sorghum that are 8 inches or more high.

**RICE** - To control Curly Indigo, Coffeeweed and other broadleaved weeds in rice, apply 2,4-D Amine at 1 to 2-1/2 pints per acre any time after rice is well tillered but before the joining or boot stage (4 to 8 weeks after emergence; or where flooded, treated between 7 and 9 weeks after seeding, when plants have emerged above water and leaves are standing erect). Rice plants are sensitive to 2,4-D in the early seedling, boot and early heading stages; avoid applications of 2,4-D Amine during these stages of growth. Avoid drift to cotton or other 2,4-D susceptible crops.

**SUGAR CANE** - Apply 2,4-D Amine at 1 or 2 quarts per acre when cane is 1 to 2 feet tall to control broadleaved weeds.

### **TO CONTROL WEEDS ON NON-CROPPED AREAS**

#### **Fence rows, vacant lots, around buildings**

Apply sprays containing 2 to 4 pints of 2,4-D Amine per acre (or 2 to 3 quarts of 2,4-D Amine in 100 gallons of water) for control of most broadleaved weeds. Use higher dosage to control more resistant weeds. Sufficient spray should be used to thoroughly wet all the weed foliage. Spray when weeds are growing actively. Deep rooted perennial weeds such as Bindweed, Canada Thistle, Hoary Cress, and Poison Ivy may require 4 to 6 pints per acre and repeat application may be necessary as new growth appears.

### **TO CONTROL WEEDS ON PASTURE, GOLF COURSES, PARKS, CEMETERIES, AND LARGE TURF AREAS**

For each application apply sprays containing 2 to 3 pints of 2,4-D Amine per acre per site for control of most broadleaved weeds. Use higher rate where perennial broadleaved weeds are the major problems. Spray when seeds are growing actively. Seedling grasses should not be sprayed until root systems are established and sod has been formed. Some injury to clover, creeping bent, carpet grass and St. Augustine grass may occur. Keep dairy animals off treated areas for 7 days. Do not cut grass for hay for 30 days after treatment. Do not slaughter for meat animals for 3 days after treatment. For use in hand sprayers, mix 1-1/2 to 2 teaspoons of 2,4-D Amine per gallon of water. Wet all foliage thoroughly.

**NOTES FOR ALL TURF SITES:**

The maximum number of broadcast applications per treatment site is 2 per year.

**CONDITIONS OF SALE - LIMITED WARRANTY  
AND LIMITATIONS OF LIABILITY AND REMEDIES**

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against the Company exceed the price of the product which causes the alleged loss, damage, injury, or other claim. The Company shall not be liable and any and all claims against the Company are waived for special indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income.

The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.