

PM 23 1386-60

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

MAR 24 1994

Nik Ramswick  
UNIVERSAL COOPERATIVES INC.  
P. O. Box 460 - 7801 Metro Parkway  
Minneapolis, MN 55440

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 07/16/93 in Response to PR Notice 93-7  
EPA Reg. No. 1386-60  
UNICO 2,4-D LO-V ESTER WEED KILLER

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

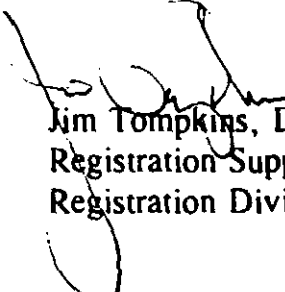
Submit the final printed labeling via the U.S. Postal Service to:

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division

Nik Ramswick  
UNIVERSAL COOPERATIVES INC  
P.O. BOX 460 7801 METRO PARKWAY  
MINNEAPOLIS MN 55440

Comment for: EPA Reg Nr.1386-60  
UNICO 2,4-D LO-V ESTER WEED KILLER

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

Add the following sentence to the paragraph on laundering PPE: "After each day of use, clothing or PPE must not be reused until it has been cleaned." Please refer to the special 2,4-D guidance issued by EPA on September 13, 1993 (page 4) for placement of the sentence.

Please conform with the special 2,4-D guidance issued by EPA on September 13, 1993 for adding WPS statements.

User Safety Recommendations must either be placed in a box or printed on the label in a contrasting color from surrounding text.

Add the following User Safety Recommendation to the label in the location shown in Section A on Part 1 of the Product Worksheet in Supplement Three-A to PR Notice 93-7: "Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing."

Add the following User Safety Recommendation to the label in the location shown in Section A on Part I of the Product Worksheet in Supplement Three-A to PR Notice 93-7: "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."

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

UNIVERSAL COOPERATIVES INC  
EPA Reg. Number: 1386-60  
UNICO 2,4-D LO-V ESTER WEED KILLER  
Application date: 07/16/93  
Original Submission

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 Non-Agricultural Use Requirements section must either be placed in a box or printed on the label in a contrasting color from the surrounding text.

Delete the crossed-out statements on your proposed label. They are redundant statements or phrases.

# 2,4-D Lo-V Ester Weed Killer

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**  
See Side Panel For Additional Precautionary Statements

ACTIVE INGREDIENT:

2-Ethylhexyl ester of	
2,4-dichlorophenoxyacetic acid*	65.1%
<b>INERT INGREDIENTS</b>	<b>34.9%</b>
Total	100.0%

\*Isomer Specific Acid Equivalent (43.20% or 376 lbs./gal.) by AOAC Method No. 6.D01-5.

Product 105

EPA Reg. No. 1386-60  
EPA Est. No. 1386-OH-1



**UNIVERSAL COOPERATIVES, INC., MINNEAPOLIS, MN 55440**

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ACCEPTED  
with COMMENTS  
In EPA Letter Dated

2 24 1964

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

1386-60

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing.

**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 resistance category selection chart.

**Applicators and Other Handlers Must Wear:**

- \*Long-sleeved shirt and long pants
- \*Chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, or viton.
- \*Shoes plus socks
- \*Protective eyewear

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.

**Engineering Controls Statements:** A closed system must be used for mixing and loading. The closed systems 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)(4-6)]. The handler PPE requirements may be reduced or modified as specified in the WPS.

**User Safety Recommendations:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

**STATEMENT OF PRACTICAL TREATMENT**

If Swallowed: Call a physician or Poison Control Center immediately. Do not induce vomiting unless directed by a physician since aspiration hazard exists with this product.  
 If on Skin: Remove contaminated clothing and wash affected areas with soap and water. Do not reuse contaminated clothing. Get medical attention if irritation persists.  
 If in Eyes: Flush with water for at least 15 minutes. Call a physician immediately.  
 If Inhaled: Remove victim to fresh air. Apply respiration if indicated.  
 For Medical Emergency information call 1-800-228-5635, extension 138.

*delete*

**ENVIRONMENTAL HAZARDS**

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.

**NONAQUATIC USES**

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 intended for irrigation or domestic purposes. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from target areas.

**AQUATIC USES**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water except as specified on this label. Do not contaminate water when disposing of equipment washwaters.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

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### 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.

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### 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 areas during the restricted entry interval (REI) of 12 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, nitrile rubber, neoprene rubber, or viton
- \*Shoes plus socks
- \*Protective eyewear

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### 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 apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require grower registration, consult your State Department of Agriculture for further information. Written or oral warnings must be given to workers who are expected to be in a treated area at an area about to be treated with this product. Read the above warning statement and the precautionary statements to workers. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION: Area treated with 2,4-D Lo-V Ester Weed Killer (contains 2,4-D) on (date of application). Do not enter without appropriate protective clothing until sprays have dried. (Insert here Statement of Practical Treatment from label.)"

*delete - not non ag use language*

**DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.**

- 2,4-D Lo-V Ester Weed Killer will kill or control the following as well as many other noxious plants susceptible to 2,4-D:
- |                                   |                           |                      |                  |
|-----------------------------------|---------------------------|----------------------|------------------|
| *Ailanthus                        | *Clover, Red              | Lambquarters, Common | Sagebrush        |
| Alligatorweed                     | Cocklebur, Common         | Locoweed             | Shepherdspurse   |
| Arrowhead                         | Coffeebean                | Mexicanweed          | *Smartweed       |
| Arichoke                          | Creeping Jenny            | Morningglory, Annual | Sowthistle       |
| *Banweed (Hedge, Field, European) | Curly Indigo              | Mustard              | Stinkweed        |
| Bitter Wintercress                | Dandelion                 | Parrotfeather        | Sumac            |
| Bittercress, Smallflowered        | *Dock                     | Pennycress, Field    | Sunflower        |
| Bowelder                          | Duckweed                  | Pennywort            | Velvetleaf       |
| Buckhorn                          | Elderberry                | *Peppergrass         | Vetch, Hairy     |
| Bull Thistle                      | Evening Primrose, Cutleaf | Pigweed              | Virginia Creeper |
| Bullwattle                        | *Goldenrod                | Plantain             | Waterhyacinth    |
| Bu.rush                           | *Ground Ivy               | Poison Ivy           | Waterlily        |
| Burdock                           | Hemp                      | Poleweed             | Waterprimrose    |
| Bur Ragweed                       | *Hoary Cress              | Povertyweed          | *Wild Garlic     |
| Buttercup                         | Honeysuckle               | Puncturevine         | Wild Lettuce     |
| Catnip                            | Horseweed or Maretail     | Purslane             | *Wild Onion      |
| Crackweed                         | Indigo                    | Ragweed              | Wild Radish      |
| Chickory                          | Ironweed                  | Rush                 | Willow           |
|                                   | Jimsonweed                | *Russian Thistle     |                  |

\*These species may require repeat applications and/or use of the higher rate recommended on this product label even under ideal conditions for application.

2,4-D Lo-V Ester Weed Killer should be used as a water diluted spray, or may be applied in liquid nitrogen fertilizer (see below), for selective control of susceptible weeds growing in small grain crops, corn, grass seed crops and ornamental turf, and for non-selective control of certain weeds not in growing crops, such as roadsides, fence rows, and drainage ditch banks.

Do not use in or near a greenhouse. Crops contacted by 2,4-D Lo-V Ester Weed Killer sprays or spray drift may be killed or suffer significant stand loss with extensive quality and yield reduction.

Apply when the weeds are young and in a succulent, rapidly growing condition, since best results are obtained when soil moisture and temperature conditions are favorable for rapid growth of weed plants. Sprays applied when weeds have stopped growing rapidly, or when they are affected by a lack of moisture in the soil, are often not effective against many

kinds of weeds. Spray perennial weeds after they are completely emerged, but before the bloom stage. Kill of weeds may not be evident for 2 to 3 weeks after spraying. Retreatment of areas infested with perennial weeds may be necessary.

Considerable caution must be exercised in using 2,4-D sprays to avoid injury to crops and desirable plants. Do not apply directly to vegetables, grapes, fruit trees, ornamentals, cotton, soybeans, tomatoes or other desirable plants which are sensitive to 2,4-D and do not permit spray mist to drift onto them since even minute quantities may cause severe injury during the growing or dormant periods. Excessive amounts of this product in the soil may temporarily inhibit seed germination of all plant growth. Coarse sprays are less likely to drift. At high air or ground surface temperatures, vapor from this product may injure susceptible plants in the immediate vicinity. Do not use on creeping grasses, such as Bent. Most legumes, including white clover, are usually damaged and under some conditions, killed.

Aerial application should be used only when there is no danger of drift to susceptible crops. Many states have regulations concerning aerial application of 2,4-D formulations. Do not apply with hollow cone type insecticide or other nozzles that produce fine spray droplets. Drift from aerial or ground application may be reduced by: (1) applying as near to the target as possible in order to obtain coverage; (2) by increasing the volume of spray mix per acre; (3) by decreasing the pounds of pressure at the nozzle tips; (4) by using nozzles which produce a coarse spray pattern; (5) by not applying when wind is blowing toward susceptible valuable plants. Consult local regulatory authorities before making applications.

Users should note that herbicide treatment of public water requires a permit from appropriate state agencies in most states. Your State Conservation Department or Game and Fish Commission will aid you in securing a permit in your state.

**PREPARATION OF SPRAY AND APPLICATION:** Recommended quantities of 2,4-D Lo-V Ester Weed Killer should be added to water in the spray tank at time of application. Agitate or stir to assure a good mixture and continue some agitation during application. The quantity of spray solution to make up will depend upon the equipment to be used. When using a low volume sprayer, the proper dosage should be applied in at least 15 gallons of water per acre, although as little as 5 to 10 gallons per acre have been used successfully in certain instances. When using a high pressure sprayer, apply in 150 to 200 gallons of water per acre. For aerial application, apply in 1 to 5 gallons of water per acre. Always use the proper amount of this 2,4-D weed killer per unit of area regardless of the quantity of water.

Do not use the spray equipment for other purposes unless thoroughly cleaned.

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USE IN LIQUID NITROGEN FERTILIZER: 2,4-D Lo-V Ester Weed Killer may be combined with some liquid nitrogen fertilizers. However, the compatibility of 2,4-D Lo-V Ester with the fertilizer must be tested before combining in the spray tank.

**JAR TEST**

Amount of 2,4-D Lo-V Ester to add to one pint of liquid nitrogen fertilizer

2,4-D Lo-V Ester Rate/Acre	Level Teaspoons of 2,4-D Lo-V Ester Volume of 25 Gal./Acre	Volume of 100 Gal./Acre
1/2 Pint	1/4 Teaspoon	1/16 Teaspoon
1 Pint	1/2 Teaspoon	1/8 Teaspoon
2 Pints	1 Teaspoon	1/4 Teaspoon
4 Pints	2 Teaspoons	1/2 Teaspoon

The amount of herbicide to be tested, as indicated in the above table, is based on either 25 gallons or 100 gallons of finished spray per acre. When using lower or higher spray volumes make appropriate changes in the ingredients of the compatibility test.

In a quart jar add the appropriate amount of 2,4-D Lo-V Ester, as determined from the above chart, to one pint of liquid nitrogen fertilizer. Cover the jar and shake it well. Observe the mixture after 5 minutes and again after 30 minutes.

If the mixture does not ball up or form flakes, sludge, gels, oily films or layers or other precipitates, then the tested combination is compatible. If precipitates form but the mixture can be resuspended with agitation, the combination may be used, provided good agitation is maintained throughout the mixing and application operations.

If incompatibility occurs, the use of a suitable compatibility agent may solve the problem. Run the above compatibility test, but add 1/4 teaspoon of a compatibility agent prior to adding the 2,4-D Lo-V Ester. (The 1/4 teaspoon is equivalent to 2 pints per 100 gallons of liquid nitrogen fertilizer.) If the mixture is still incompatible, DO NOT USE.

**TANK MIXING SEQUENCE**

If the 2,4-D Lo-V Ester/fertilizer mixture is compatible without the use of a compatibility agent, fill the spray tank with half the amount of fertilizer to be used. Add the 2,4-D Lo-V Ester, with agitation, and complete filling the tank with the fertilizer. Apply immediately and continue agitation in the spray tank during application.

If a compatibility agent must be used, add it to the spray tank prior to adding the 2,4-D Lo-V Ester. Follow applicable recommendations and field application rates on the fertilizer and compatibility agent labeling, as well as the 2,4-D Lo-V Ester labeling.

**CROPS**

**SMALL GRAIN CROPS (Wheat, Barley, Rye, Oats):** See table for recommended use rates.

Spray when weeds are small after grains are well tillered (usually 4 to 8 inches tall), but before the boot stage. Do not apply during the seeding stage, late jointing stage or after heading begins. To control large weeds that will interfere with harvest or to suppress perennial weeds, preharvest treatment can be applied when the grain is in the dough stage.

Spring Planted Oats: Use 1/2 pint per acre in sufficient water to give good coverage. Apply after the fully tillered stage, except during the boot to dough stage.

Fall Planted Oats: Apply 1/4 to 1 1/4 pints per acre after full tillering but before the early boot stage. Some difficult weeds may require higher rates (3/4 to 1 1/4 pints per acre) for maximum control, but crop injury may result. Do not spray during or immediately following cold weather.

NOTE: Do not use on grain interplanted with legumes. Do not forage or graze treated grain fields within 14 days after treatment. Do not feed treated straw to livestock.

**CORN**

See table for recommended use rates.

Preplant (Field Corn): This product may be applied prior to planting field corn to provide foliar burn-down control of susceptible annual and perennial broadleaf weeds and certain broadleaf cover crops such as those listed on this label. To control emerged broadleaf weed seedlings or existing cover crops prior to planting corn, apply 1 to 2 pints per acre 7 to 14 days before planting. Do not use on light, sandy soil or where moisture is inadequate for normal weed growth. Use high rate for control of less susceptible weeds or cover crops such as alfalfa.

Preemergence: Apply to soil after planting but before corn emerges. Do not use on very light, sandy soils or where soil moisture is inadequate for normal weed growth. Use lower rate of application on loam soils and higher rate on clay soils. Use high rate on soil high in organic matter. Plant corn as deep as practical.

Postemergence: Best results are usually obtained when weeds are small and corn is 4 to 18 inches tall. When corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage as much as possible. Do not apply from tasseling to dough stage. If corn is growing rapidly and temperature and soil moisture content is high, use 1/2 pint per acre rate to reduce the possibility of crop damage. Delay cultivation for 8 to 10 days after application to reduce possibility of stalk breakage from temporary brittleness caused by 2,4-D. Hybrid corn should be sprayed only if the cross or line is known to be tolerant to 2,4-D at the recommended dosage, or after experience has shown the particular crosses or lines being grown to be tolerant to 2,4-D treatment.

Preharvest: After the hard dough or denting stage, apply 1 to 2 pints per acre by air or ground equipment to suppress perennial weeds, decrease weed seed production, and control tall weeds such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, sunflower, velvetleaf, and vines that interfere with harvesting. Do not forage or feed corn fodder to livestock for 7 days following application.

**SORGHUM (MILK):** See table for recommended use rates.

Apply when sorghum is 4 to 12 inches high with secondary roots well established. When crop is over 10 inches tall, use drop nozzles to keep spray off foliage as much as possible. Do not apply from flowering to dough stage. Do not use with oil. Temporary crop injury may occur under conditions of high soil moisture and high air temperature. Hybrids should be sprayed only if the cross or line is known to be tolerant to 2,4-D at the recommended dosage or after experience has shown the particular crosses or lines being grown to be tolerant to 2,4-D treatment.

**RECOMMENDED RATES OF 2,4-D LO-V ESTER WEED KILLER**

Crop (See Detailed Instructions Above)	Dosage Per Acre**	
	Normal Rates (Usually Safe To Crop)	Higher Rates for Special Situations* (More Likely To Injure Crop)
<b>SMALL GRAINS</b> (Wheat, Barley, Rye)		
Annual Weeds	1/2 to 1 Pint	1 to 2 Pints
Perennial Weeds	1 Pint	1 1/4 to 2 Pints
Preharvest	1 to 2 Pints	
<b>OATS</b>		
Spring	1/2 Pint	
Fall	1/4 to 3/4 Pint	3/4 to 1 1/4 Pints
Preharvest	1 to 2 Pints	
<b>CORN</b>		
Preplant (Field Corn)	1 to 2 Pints	
Preemergence	1 to 2 Quarts	
Postemergence	1/2 Pint	1/2 to 3/4 Pint
Preharvest	1 to 2 Pints	
<b>SORGHUM (Milo)</b>		
Postemergence	1/2 Pint	1/2 to 3/4 Pint

\*The higher rates as recommended above may be necessary to control difficult weed problems such as under dry conditions in the Western states. They should not be used, however, unless possible crop injury is acceptable. Consult State Agricultural Experiment Station or Extension Service Weed Specialists for recommendations or suggestions to fit local conditions.

\*\*If band treatment is used, base the dosage rate on the actual area sprayed.

**FOR USE IN CROP RESIDUE MANAGEMENT SYSTEMS IN SOYBEANS**

(Preplant Application Only)

2,4-D Lo-V Ester Weed Killer may be used for postemergence control of many susceptible annual and perennial broadleaf weeds. This product may be applied prior to planting soybeans to provide foliar burn-down control of susceptible annual and perennial broadleaf weeds and certain broadleaf cover crops such as those listed on this label. Make only preplant applications to emerged weeds prior to planting soybeans grown in reduced tillage production systems. Apply only according to instructions given below.

Do not use any tillage operations between herbicide application and planting of soybeans.

Mixing Instructions: Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixture to increase the herbicidal effectiveness of 2,4-D Lo-V Ester Weed Killer on certain weeds. Read and follow all directions and precautions on this label and on the label of each product added to the spray mixture.

Application Procedures: Apply using air or ground equipment in a spray volume sufficient to provide uniform coverage of weeds. Use 2 or more gallons of total spray volume per acre for aerial application and 10 or more gallons per acre for ground equipment.



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**APPLICATION TIMING AND USE RATES**

PRODUCT	BROADCAST APPLICATION RATE	WHEN TO APPLY (Days Prior To Planting Soybeans)
2,4-D Lo-V Ester	1 Pint/Acre 2 Pints/Acre	Not Less Than 7 Days Not Less Than 30 Days

For best weed control results, application should be made when weeds are small, actively growing and free of stress caused by temperature extremes, moisture stress, diseases, or insect damage. The control of individual weed species may be variable. Consult your local county agent or State Agricultural Extension Specialist or Crop Consultant for advice. Use Precautions and Restrictions:

- \*Important Notice — Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of such injury will depend on weather (temperature and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.
  - \*Do not use on sandy soils with less than 1.0% organic matter.
  - \*Do not make more than one application per season regardless of the application rate used.
  - \*Do not apply when weather conditions such as atmospheric temperature inversion or when wind direction favors drift from the treated area to susceptible plants.
  - \*Do not allow livestock grazing or harvest hay, forage or fodder from treated fields. Livestock should be restricted from feeding/grazing of treated cover crops.
  - \*In treated fields, plant soybean seed as deep as practical, but not less than 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is adequately covered.
  - \*Do not apply 2,4-D Lo-V Ester Weed Killer as described unless you are prepared to accept the results of soybean injury, including possible stand loss and/or yield reduction.
  - \*During the growing season following application, do not replant treated fields with crops other than those labeled for use with 2,4-D Lo-V Ester Weed Killer.
- SUGARCANE:** Use 2 pints per acre as a preemergence application before canes appear or 2 quarts per acre as a blanket spray after cane emerges and through layby, to aid in the control of Johnsongrass seedlings and susceptible broadleaf weeds.
- LAWN AND ORNAMENTAL TURF:** Use 1 to 3 pints of 2,4-D Lo-V Ester Weed Killer in enough water to give good coverage to one acre on established stands of perennial grasses. Do not apply to creeping grasses such as bent except for spot spraying. Newly seeded turf should not be treated until after the second mowing and the lower dosage rate should be used. Reseeding of treated areas should be delayed following treatment. With spring application, reseed in the fall; with fall application, reseed in the spring. Legumes are usually damaged or killed, therefore, do not treat areas where the legumes are desired. Deep-rooted perennial weeds may require repeated treatments in the same season or in subsequent years. The maximum number of broadcast applications per treatment site is 2 per year.

**GRASS SEED CROPS:** Apply 1 to 4 pints of 2,4-D Lo-V Ester Weed Killer in the spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the five leaf stage, using 3/4 to 1 pint per acre to control small seedling weeds. After the grass is well established, higher rates of up to 4 pints can be used to control hard to kill annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth. Do not use on Bent unless injury can be tolerated. Do not graze dairy animals nor cut forage for hay within 7 days of application.

**FALLOW LAND:** On established perennial species such as Canada thistle and Field bindweed, apply up to 2 quarts per acre of 2,4-D Lo-V Ester Weed Killer. For annual broadleaf weeds, apply 1 to 2 quarts per acre. Do not plant any crop for 3 months after treatment or until 2,4-D has disappeared from the soil.

**PASTURE AND RANGELAND:** NOTE: Do not graze dairy animals on treated areas within 7 days after application. Do not harvest grass for hay within 30 days of application. Do not graze meat animals on treated areas within 3 days of slaughter. Do not use on bent grass, alfalfa, clover, or other legumes or on newly seeded pastures. Do not apply after heading begins or when grass is in the boot to milk stage where grass seed production is desired.

**Bitterweed, Broomweed, Cretona, Dock, Kochia, Marshelder, Muskthistle, and Other Broadleaf Weeds:** Use 4 pints of 2,4-D Lo-V Ester Weed Killer per acre in the amount of water needed for uniform application. If the weeds are young and growing actively, 2 pints per acre will provide control of some species. Deep-rooted perennial weeds may require repeated treatments in the same year or in subsequent years.

**Wild Garlic and Wild Onion:** Apply 4 pints per acre, making three applications (fall-spring-fall or spring-fall-spring) starting in late fall or early spring.

**Weed Control in Newly Sprigged Coastal Bermudagrass:** Apply 2 to 4 pints per acre preemergence and/or postemergence.

**Seed Shiny Oak and Seed Sagebrush:** On the oak, use 2 pints in 5 gallons of oil or in 4 gallons of water plus 1 gallon of oil per acre. Apply by aircraft between May 15 and June 15. On the sagebrush, use 2 pints in 3 gallons of oil per acre and apply by aircraft when foliage is fully expanded and the brush is actively growing.

**Big Sagebrush and Rabbitbrush:** Use 4 pints per acre in 2 to 3 gallons of oil or in 3 to 5 gallons of oil-water emulsion spray. Brush should be leaved out and growing actively when treated. Retreatment may be needed.

**Chamise, Manzanita, Buckbrush, Coastal Sage, Coyotebrush, and Certain Other Chaparral Species:** Use 4 pints per acre in 5 to 10 gallons of water. One gallon of fuel oil may be included in the spray mixture for added effectiveness. Make applications by aircraft or ground equipment to obtain uniform spray coverage. For effective control, the brush must be fully leaved out and growing actively when sprayed. Retreatment may be needed.

**General Weed Control (Airfields, Roadsides, Vacant Lots, Drainage Ditch Banks, Fence Rows, Industrial Sites, and Similar Areas):** Use 1 to 2 quarts per acre. Usually 2 quarts per acre will give adequate control. Do not use on herbaceous ground covers or creeping grass such as Bent. Legumes will usually be damaged or killed. Deep-rooted perennials may require repeat applications. Do not use on freshly seeded turf until grass is well established. Delay reseeding for 30 days or until 2,4-D has disappeared from soil. The maximum number of broadcast applications per treatment site is 2 per year.

**Weedy Plant Control:** To control woody plants susceptible to 2,4-D, such as Alder, Buckbrush, Elderberry, Sumac, and Willow on non-crop areas, use 2 quarts in 100 gallons of water. Wet all parts of the plants thoroughly, including stem and foliage, to the point of run off. Higher volumes of up to 400 gallons per acre are necessary where the brush is very dense, and over 6 to 8 feet high. Applications are more effective when made on actively growing plants. Treatment should not be made during time of severe drought or in early fall when leaves lose their green color. Hard to control species may require retreatment next season.

**USES IN FOREST MANAGEMENT**

**Conifer Release:** For control of alder, apply 1 1/2 to 2 quarts of product per acre in 8 to 25 gallons of water, and apply as a foliage spray between mid-May and mid-June.

For control of madrone, manzanita, oak, tan oak, and similar species to release hemlock, spruce, and firs, apply 2 quarts of product per acre in 8 to 25 gallons of water, just prior to or during budbreak of Douglas fir.

After northern conifers, jack pine, red pine, black spruce, and white spruce cease growth and "harden off" in late summer, a spray of 1 1/2 to 2 quarts in 8 to 25 gallons of water per acre may be applied by air to control certain competing hardwood species such as alder, aspen, birch, hazel, and willow. Since this treatment may cause occasional conifer injury, do not use if such injury cannot be tolerated. Consult your regional or extension forester or state herbicide specialist for recommendations to fit local conditions.

For control of hazel brush and similar species in the Lake states area, apply 2 quarts of product per acre in 8 to 25 gallons of water when new shoot growth of Hazel is complete.

**Site Preparation:**

(As Budbreak Spray)—For control of alder prior to planting seedlings, apply 2 quarts of product per acre in 8 to 25 gallons of water, after alder budbreak but before foliage is 1/4 full size.

(As Foliage Spray)—For control of alder prior to planting seedlings apply 2 quarts of product per acre in 8 to 25 gallons of water, after most alder leaves are full size.

**Aquatic Applications:**

For Aquatic Weeds in Lakes, Ponds, Drainage Ditches, and Marshes: Use 2 1/2 to 4 pints of product in 50 to 100 gallons of water per acre. Spray to wet foliage thoroughly. Application should be made when leaves are fully developed above waterline and plants are actively growing. Your State Conservation Department or Game and Fish Commission will assist you in determining the best time and rate for application under local conditions.

DO NOT APPLY to more than 1/3 to 1/2 of a lake or pond in any one month because excessive decaying vegetation may deplete oxygen content of water and kill fish.

Perennial and other hard to control weeds may require a repeat application to give adequate control.

**STORAGE AND DISPOSAL**

**STORAGE:** Do not contaminate water, food, or feed by storage or disposal. Do not store near fertilizers, seeds, insecticides, or fungicides. Do not use or store near heat or open flame.

**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.

**BEST AVAILABLE COPY**

**CONTAINER DISPOSAL:** 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 and local authorities.

**WARRANTY AND LIMITATION OF DAMAGES**

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability, and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.

