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Ms. Nik Ramswick
Universal Cooperatives, Inc.
7501 Metro Parkway
P.O. Box 460
Minneapolis, Minnesota 55440

Dear Ms. Ramswick:

Subject: 2,4-D Lo-V Ester Weed Killer
EPA Registration No. 1386-60
Application Dated August 23, 1992
Request To Amend Product Registration
by Adding Pest Weeds To List of Weeds Claimed
To Be Controlled, and Adding No-Till or
Minimum Till Use in Culture of Soybeans,

The proposed amendment to add other pest weeds to the list of weeds claimed to be controlled is acceptable under section 3 of the Federal Insecticide, Fungicide and Rodenticide Act as amended provided that you submit one copy of your final printed labeling before you release the product for shipment.

The proposed amendment to add add no-till or minimum till use of this product in the culture of soybeans is conditionally accepted under section 3(c)(7)(B) of the Federal Insecticide, Fungicide Act (FIFRA) as amended, with an expiration date of December 31, 1995, and based on a permissible level of residues of the active ingredient 2,4-D of 0.1 part per million. In addition, during the period that this amendment is in effect, it will be subject to the conditions listed below:

1. That the Industry Task Force II for 2,4-D Research Data will submit to this Agency the following data from field studies:
 - a. Residue chemistry data from TN, AR, IL, IN, MN, MO and either MS or LA; due before January 31, 1994.
 - b. Data from exaggerated residue chemistry studies in three locations, likely IL, MN and either MS or LA; due before January 31, 1994.

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- c. Data from plant metabolism studies in three representative, dissimilar crops; due before January 31, 1994
- d. Data from animal metabolism studies (poultry and ruminants) as outlined in the Residue Chemistry Chapter of the 2,4-D Registration Standard; due before January 31, 1994
- e. Adequate storage stability data for all analyses must be submitted before January 31, 1994.

- 2. Submit/cite all data required for registration/regrgistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
- 3. Submit production information (pounds or gallons produced) for the product for the fiscal year in which this use is conditionally registered, in accordance with FIFRA section 29. The fiscal year begins October 1 and ends September 30. The product information will be submitted to the Agency no later than November 15, following the end of the preceding fiscal year. The production information must be submitted to:

Registration Support Branch
 Registration Division (.7505C)
 Office of Pesticide Programs
 US Environmental Protection Agency
 Washington, DC 20460

- 4. Submit one (1) copy of your final printed labeling before you release the product for shipment. If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(a). Your release for shipment of the product constitutes acceptance of this condition.

You should note that if you or others fail to satisfy any of the conditions imposed on this registration, e.g., the Industry Task Force II for 2,4-D Research Data fails to submit the required data by the specified deadlines or the data submitted are not generated in accordance with EPA guidelines, EPA may issue a notice to cancel this amendment under FIFRA section 6(e).

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You should also note that, regardless of whether you satisfy all applicable conditions, this conditional registration will expire automatically on December 31, 1995. Sale and distribution of the subject product bearing labeling for this use on reduced or no-tillage soybeans (pre-plant only) covered under this amendment after December 31, 1995 will be illegal. The tolerance authorizing residues of the subject product in or on soybeans will also expire automatically, two (2) years after the date published in the FEDERAL REGISTER. After that date, sale or distribution of the raw agricultural commodity, soybeans will be a violation of the Federal Food and Drug, and Cosmetic Act.

After the final required data have been submitted and a permanent tolerance established for the residues of 2,4-D resulting from this use, EPA will entertain an application to amend the registration under section 3(c)(5) of FIFRA as amended without any special limitation on the duration of the amended registration.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

Joanne I. Miller
Product Manager 23
Fungicide-Herbicide Branch
Registration Division (H-7505C)

Enclosure

E.wilson:Diskette#2,4-D-1:11:05:92

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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%
INERT INGREDIENTS	34.9%
Total	100.0%

*Isomer Specific Acid Equivalent (43.20% or 3.76 lbs./gal.) by AOAC Method No. 6.D01-5.

Net Contents: 2½ Gallons

EPA Reg. No. 1386-60
EPA Est. No. 1386-OH-15



UNIVERSAL COOPERATIVES, INC., MINNEAPOLIS, MN 55440

UNIVERSAL COOPERATIVES, INC.
In EPA License District

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing. When handling this product, wear chemical resistant gloves. Wash thoroughly before eating or smoking. Keep out of the reach of children.

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 until washed. 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.

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. Do not apply directly to water, 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.

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 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 more restrictive reentry intervals for various crops treated with this product, 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 or in an area about to be treated with this product. Read the above reentry 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.)"

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:

*Alfalfa	*Clover, Red	Lambsquarters, Common	Sagebrush
Alligatorweed	Cocklebur, Common	Locoweed	Shepherdspurse
Arrowhead	Coffeebean	Mexicanweed	*Smartweed
Artichoke	Creeping Jenny	Morningglory, Annual	Sowthistle
*Bindweed (Hedge, Field, European)	Curly Indigo	Mustard	Stinkweed
Bitter Wintercress	Dandelion	Parrotfeather	Sumac
Bittercress, Smallflowered	*Dock	Pennycress, Field	Sunflower
Boxelder	Duckweed	Pennywort	Velvetleaf
Buckhorn	Elderberry	*Peppercress	Vetch, Hairy
Bull Thistle	Evening Primrose, Cutleaf	Pigweed	Virginia Creeper
Bullnettle	*Goldenrod	Plantain	Waterhyacinth
Bulrush	*Ground Ivy	Poison Ivy	Waterlily
Burdock	Hemp	Pokeweed	Waterprimrose
Bur Ragweed	*Hoary Cress	Povertyweed	*Wild Garlic
Buttercup	Honeysuckle	Puncturevine	Wild Lettuce
Catnip	Horseweed or Marestail	Purslane	*Wild Onion
Chickweed	Indigo	Ragweed	Wild Radish
Chicory	Ironweed	Rush	Willow
	Jimsonweed	*Russian Thistle	

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*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 road-sides, 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 and 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.

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.

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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. Rerun 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 seedling 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.

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Preplant (Field Corn): To control emerged broadleaf weed seedlings or existing cover crops prior to planting corn. Apply 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.

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.

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Post-emergence: 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.

Pre-harvest: 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 (MILO): 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)
SMALL GRAINS (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	
OATS		
Spring	1/2 Pint	
Fall	1/4 to 3/4 Pint	3/4 to 1 1/4 Pints
Preharvest	1 to 2 Pints	
CORN		
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	
SORGHUM (Milo)		
Postemergence	1/2 Pint	1/2 to 3/4 Pint

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*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.

SOYBEANS (PREPLANT ONLY): 2,4-D Lo-V Ester Weed Killer may be used in Crop Residue Management Systems in Soybeans, Preplant Only, where emerged weeds are present. 2,4-D Lo-V Ester Weed Killer will control many emerged, susceptible annual and perennial broadleaf weeds and cover crops such as those listed on the label. Do not use tillage operations between application of 2,4-D Lo-V Ester Weed Killer and planting soybeans.

Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may increase the herbicidal effectiveness of 2,4-D on certain weeds and may be added to the spray tank. Read and follow all directions and precautions on this label and on all labels of adjuvants or fertilizers mixed with this product, including compatibility testing.

Apply using air or ground equipment in sufficient galionage to obtain adequate coverage of weeds. Use 2 or more gallons of water per acre in aerial equipment and 10 or more gallons of water per acre in ground equipment.

Application Timing And Use Rates

2,4-D Lo-V Ester Weed Killer	2/3 Pint (0.5 Lb. A.E./Acre)	Apply not less than 15 days prior to planting.
	1 1/3 Pint (1.0 Lb. A.E./Acre)	Apply not less than 30 days prior to planting.

Application Restrictions and Precautions: Injury to soybeans planted in fields treated with 2,4-D Lo-V Ester Weed Killer may occur. Do not apply 2,4-D Lo-V Ester Weed Killer prior to planting soybeans if you are not prepared to accept the results of soybean injury, including possible loss of stand and yield. Whether or not soybean injury occurs and the extent of injury will depend on weather conditions (temperature and rainfall) from herbicide application to soybean emergence and agronomic factors such as the amount of vegetation and previous crop residue present. Injury is more likely to occur under cool, rainy conditions and where there is less weed vegetation and crop residue present.

Do not apply on low organic sandy soils (less than 1%). Apply a maximum of one application per growing season, regardless of the treatment.

In fields treated with 2,4-D Lo-V Ester Weed Killer, plant soybean seed as deep as practical, with a minimum of 1 inch deep. Adjust the planter, if necessary, to assure that the seed is completely covered.

Do not replant fields treated with 2,4-D Lo-V Ester Weed Killer in the same growing season with crops other than those labeled for 2,4-D use.

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 July, 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.

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.

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FALLOW LAND: On established perennial species such as Canada thistle and Field bindweed, apply up to 3 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, Croton, Oncks, 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 to 6 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.

Sand Shinnery Oak and Sand 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 to 6 pints per acre in 2 to 3 gallons of oil or in 2 to 5 gallons of oil-water emulsion spray. For rabbitbrush, the 6 pint rate is usually required. 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 to 6 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 3 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.

Woody 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 to 3 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. Haro 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, tanoak, and similar species to release hemlock, spruce, and fir, apply 3 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 3 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 to 4 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 1/2 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.

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CONTAINER DISPOSAL: 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.

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.

CO-OP IS A REGISTERED TRADEMARK OF UNIVERSAL COOPERATIVES, INC.