

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

6 OCT 1993

Alice Walker, Ph.D  
Regulatory Consulting  
47 Country Club Drive  
Senatobia, MS 38668

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Dear Dr. Walker

Subject: Label Amendment  
2,4-D LV 6  
EPA Registration Number 42750-20  
Your Submission Dated March 6, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided the following changes are made:

1. On page 2, under Hazards to Humans and Domestic Animals, in the third paragraph, add "eating, smoking or drinking. Wash hands and arms" so the complete sentence reads "Wash hands, face and arms with soap and water before eating, smoking or drinking. Wash hands and arms before using toilet."
2. On page 3, under "Soybeans (Preplant Only)" add "per acre" so the sentence reads, "Apply 1/2 to 2/3 pint per acre not less than 7 days prior to planting soybeans or 2/3 to 1 1/3 pints per acre not less than 30 days prior to planting."
3. On page 9, under "Sorghum (Milo)", add "to" so the sentence reads "Apply to sorghum when crop is 4 to 12 inches high with...."
4. On page 13, under "Conifer Release" change the rate from "3 quarts" to "2 2/3 quarts" so it reads "ceanothus in ponderosa pine, apply up to 2 2/3 quarts per acre before pine growth begins in..."
5. On page 13, under "Conifer Release" add "per acre" so it reads "Sitka spruce or grand fir, apply up to 2 quarts per acre of product before new growth on..." and "ceanothus in ponderosa pine, apply up to 2 2/3 quarts per acre before pine growth begins in..."

CONCURRENCES

SYMBOL	7500C						
SURNAME	Robbins						
DATE	10/1/93						

2816

[2]

This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under the WPS labeling regulations at 40 CFR part 156, subpart K, § 156.200(c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

Please submit three (3) copies of final printed labeling with the above corrections made. A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

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

Enclosure

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CONCURRENCES

SYMBOL	7505C							
SURNAME	Robbins							
DATE	6/1/93							

3 of 16

ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

6 OCT 1993

ALBAUGH, INC.

2,4-D LV 6

LOW VOLATILE HERBICIDE

42750-20

**ACTIVE INGREDIENT:**

Isooctyl Ester of 2,4-Dichlorophenoxyacetic Acid\*.....89.5%

INERT INGREDIENTS:.....10.5%

TOTAL.....100.0%

\* Equivalent to 59.4% of 2,4-Dichlorophenoxyacetic acid or 5.64 lb./gal. Isomer specific by AOAC Method.

EPA Reg. No. 42750-20

EPA Est. No. 42545-MO-1

KEEP OUT OF REACH OF CHILDREN

**CAUTION**

**PRECAUCION AL USUARIO:** Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

**STATEMENT OF PRACTICAL TREATMENT**

**IF SWALLOWED:** Do not induce vomiting. Get medical attention. Contains petroleum distillates. Get medical attention.

**IF ON SKIN:** Wash contaminated areas thoroughly with soap and water. Do not reuse contaminated clothing until washed. Get medical attention if irritation persists.

**IF IN EYES:** Flush with plenty of clean water for 10 - 15 minutes. Get medical attention.

**NOTE TO ATTENDING PHYSICIAN:** May cause chemical pneumonitis if aspirated. If lavage is performed, suggest endotracheal and/or esophagosopic control.

**FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE**

**CALL CHEMTREC (800) 424-9300**

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2 8

## PRECAUTIONARY STATEMENTS

### CAUTION

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed. Avoid breathing spray mist. Avoid contact with eyes, skin, or clothing. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. 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.

When mixing, loading, or applying this product or repairing or cleaning equipment used with this product, wear eye protection (face shield or safety glasses), chemical-resistant gloves (nitrile), long-sleeved shirt, long pants, socks and shoes. For aerial applicators in enclosed cockpits and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required.

Wash hands, face and arms with soap and water as soon as possible after mixing, loading, or applying this product. Wash hands, face and arms with soap and water before using toilet. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry. Remove saturated clothing as soon as possible and shower.

If this container contains over 1 gallon and less than 5 gallons, persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron.

If this container contains 5 gallons or more in capacity, a 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.

#### ENVIRONMENTAL HAZARDS

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.

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.

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### PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

Before buying or using this product, read "Warranty Limitations and Disclaimer" elsewhere on this label. If terms are not acceptable, return unopened package at once to seller for full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under the Warranty Limitations and Disclaimer.

### WARRANTY LIMITATIONS AND DISCLAIMER

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the DIRECTIONS FOR USE when used under normal conditions. THIS IS THE ONLY WARRANTY MADE ON THIS PRODUCT. NO OTHER EXPRESS AND NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OUTSIDE OF THIS LABEL. Therefore, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), under abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes, etc.) or under conditions not reasonably foreseeable to or beyond the control of seller. When buyer or user suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), buyer or user must promptly notify seller, in writing, of any claims to be eligible to receive either remedy given below. The EXCLUSIVE REMEDY OF THE BUYER OR USER and the LIMIT OF LIABILITY of seller will be one of the following, at the election of the seller:

1. Refund of purchase price paid by buyer or user for product bought or
2. Replacement of amount of product used.

The seller will not be liable for consequential or incidental damages or losses.

The terms of this Warranty Limitations and Disclaimer cannot be varied by any written or verbal statements or agreements. Any employee or sales agent of the seller is not authorized to vary or exceed the terms of this Warranty Limitations and Disclaimer in any manner.

### 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.

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## AGRICULTURAL USE REQUIREMENTS

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. 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.

**Re-Entry for Turf Sites (excluding sod farms):** Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

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, wear: eye protection (face shield or safety glasses), chemical-resistant gloves (nitrile), long-sleeved shirt, long pants, socks, and shoes.

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. The front panel PRECAUTIONARY STATEMENTS should be read to workers as well as the instruction not to enter until sprays have dried. When oral warnings are given, warnings shall be given in a language customarily understood by the 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 on (date of application). Do not enter without appropriate protective clothing for 12 hours. (Insert here Statements of Practical Treatment as on front panel.)

## STORAGE AND DISPOSAL

**STORAGE:** Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not store this product near fertilizers, seeds, insecticides, or fungicides. Do not store near heat or open flame. Reclose all partially used containers by thoroughly tightening screw cap. Absorb any spill with a suitable clay absorbent and dispose of as indicated under "Pesticide Disposal".

For safety and prevention of unauthorized use, all pesticides should be stored in locked facilities.

To prevent accidental misuse, different pesticides should be stored in separate areas with enough distance between to provide clear identification.

Opened, partially used pesticides should be stored in original labeled containers when possible. When transfer to another container is necessary because of leakage or damage, carefully mark and identify contents of the new container.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law and may contaminate

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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), adding rinsate to spray tank. 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.

**PLASTIC CONTAINERS:** Triple rinse (or equivalent), adding rinsate to spray tank. 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.

### GENERAL INFORMATION

Performance of this product may be affected by local conditions, crop varieties, and application method. User should consult local Extension Service, Agricultural Experiment, or University Weed Specialists, and state regulatory agencies for recommendations in your area.

Best results are obtained when product is applied to young succulent weeds that are actively growing. The lower recommended rates will be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry areas of the western states, where control is difficult, the higher recommended rates should be used.

When product is used for weed control in crops, the growth stage of the crop must be considered.

Some plants and weeds, especially woody varieties, are difficult to control and may require repeat applications.

Application rates should be 1 to 5 gallons of total spray by air or 5 to 25 gallons by ground equipment unless otherwise directed. In either case, use the same amount of 2,4-D recommended per acre. For crop uses, do not mix with oil, surfactants, or other adjuvants unless specifically recommended. To do so may reduce herbicide's selectivity and could result in crop damage.

Aerial applications 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. Consult local regulatory authorities before making applications. Although this product is a low volatile formulation, at temperatures above 90°F vapors may damage susceptible crops growing nearby.

Because coarse sprays are less likely to drift than fine, do not use equipment (such as hollow cone small orifice nozzles) or conditions (such as high pressure) that produce such sprays.

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Product should not be allowed to come into contact with desirable, susceptible plants such as beans, cotton, fruit trees, grapes, legumes, ornamentals, peas, tomatoes, and other vegetables. Product should not be used in greenhouses. Excessive amounts of this product in the soil may temporarily inhibit seed germination and all plant growth.

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.

If stored below freezing, efficacy is not affected if product is warmed to 40°F and agitated before using.

Spray equipment used to apply 2,4-D should not be used for any other purpose until thoroughly cleaned.

**Spray Preparation:** Add the recommended amount of product to approximately 1/2 the volume of water to be used for spraying. Agitate well, then add the remainder of the water. Continue agitation during application until spray tank is empty.

**Use in Liquid Nitrogen Fertilizer:** Product may be combined with liquid nitrogen fertilizer suitable for foliar application on corn, grass, pastures, or small grains in one operation. Use product according to directions on this label for those crops. Use liquid nitrogen fertilizer at rates recommended by supplier or Extension Service Specialist. Mix the product and fertilizer according to the following instructions:

Fill the spray tank approximately 1/2 full with the liquid nitrogen fertilizer. Add the product while agitating the tank. Add the remainder of the fertilizer while continuing to agitate. Apply immediately, maintaining agitation during application until tank is empty. **DO NOT APPLY DURING COLD (NEAR FREEZING) WEATHER.** Spray mixture must be used immediately and may not be stored.

**NOTE:** (1) If good, continuous agitation is not maintained, separation of the spray mixture and/or clogging of the nozzles is likely to occur.

**NOTE:** (2) If user's spray program includes frequent application of 2,4-D in liquid fertilizer, consideration should be given to using SF® 2,4-D I which is specially designed and formulated for such use.

### WHERE TO USE

This product is used to control broadleaf weeds in cereal crops, corn, and sorghum; weeds, and brush in rangeland, pastures, rights-of-way, and similar noncrop uses; and for aquatic weed control.

### WEEDS CONTROLLED

When used properly, product will kill or control the following, in addition to many other noxious plants susceptible to 2,4-D:

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Alligatorweed  
 Arrowhead  
 Artichoke  
 Bindweed (hedge)  
 (field and  
 European)  
 Bitter wintercress  
 Boxelder  
 Buckhorn  
 Bull thistle  
 Bulrush  
 Burdock  
 Bur ragweed  
 Buttercup  
 Catnip  
 Chickweed  
 Chickory  
 Cocklebur  
 Coffeebean  
 Creeping jenny  
 Curly indigo  
 Dandelion  
 Dock  
 Duckweed  
 Elderberry  
 Goldenrod  
 Ground ivy  
 Hemp  
 Hoary cress  
 Honeysuckle  
 Indigo

Ironweed  
 Jimson weed  
 Lambsquarters  
 Locoweed  
 Mexican weed  
 Morningglory  
 Mustard  
 Parrotfeather  
 Pennywort  
 Pigweed  
 Plantain  
 Pokeweed  
 Povertyweed  
 Puncturevine  
 Purslane  
 Rush  
 Russian thistle  
 Sagebrush  
 Shepherdspurse  
 Sowthistle  
 Stinkweed  
 Sumac  
 Sunflower  
 Virginia creeper  
 Waterhyacinth  
 Waterlily  
 Water primrose  
 Wild lettuce  
 Wild radish  
 Willow

**LESS SUSCEPTIBLE WEEDS**

Kochia  
 Pigweed (hybrid).  
 Poison ivy

Smartweed  
 Wild garlic  
 Wild onion

**CROPS**

**Small grains (barley, oats, wheat, rye), not underseeded with a legume:** See table for recommended use rates. Spray when weeds are small after grain begins tillering but before boot stage (usually 4 to 8 inches tall). Do not apply before the tiller stage nor from early boot through milk stage. 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. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

**Spring Planted Oats:** Use 1/3 pint per acre in sufficient water to give good coverage. Apply after the fully tillered stage, except during the boot to dough stage.

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**Fall Planted Oats:** Apply 1/6 to 5/6 pints per acre after full tillering but before early boot stage. Some difficult weeds may require the higher rates of 1/2 to 5/6 pints per acre for maximum control, but injury may result. Do not spray during or immediately following cold weather.

**Note:** Oats are less tolerant to 2,4-D than wheat or barley and more likely to be injured. Do not forage or graze treated grain fields within 14 days after treatment with 2,4-D. Do not feed treated straw to livestock.

**Wheat and Barley: Control of Wild Garlic and Wild Onion.** For improved control of difficult weeds including Wild Garlic and Wild Onion, apply 1/3 to 1-1/3 pints of product per acre. Since these rates may injure the crop, do not use unless possible crop damage is acceptable. For the higher rates on spring wheat and barley, consult your local State Agricultural Experiment Station or Extension Service Weed Specialist for recommendations or suggestions to fit local conditions.

**Control of Wild Garlic in Stubble Grain Fields:**

Following the harvest of small grains, Wild Garlic often produces new fall growth. This should be sprayed with 1-1/3 to 2 quarts of product per acre. This is a useful practice as one part of Wild Garlic control program. Do not forage for 14 days following applications. Do not plant any crop for three months after treatment.

**Corn:** See table for recommended use rates.

**Preemergent:** Apply product to emerged weeds from 3 to 5 days after planting but before corn emerges. Do not use on very light, sandy soils. Use the higher rates on heavy soils. Plant corn as deep as practical. Product will not control weeds which have not emerged.

**Post Emergent:** 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 is high, use 1/3 pint per acre to reduce possibility of crop damage. Delay cultivation for 8 to 10 days to prevent stalk breakage due to temporary brittleness caused by 2,4-D. Application rates of up to 2/3 pint per acre may be used to control some hard to control weeds. However, the possibility of injury to the corn is increased.

Do not use with atrazine, oil or other adjuvants. Since the tolerance to 2,4-D of individual hybrids varies, consult your seed supplier, local Extension Service, Agricultural Experiment Station, or University Weed Specialist for information.

**Pre-Harvest:** After the hard dough or denting stage, apply 2/3 to 1-1/3 pints of product 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.

**Post-Harvest:** Following the harvest of corn, Wild Garlic often produces new fall growth. This should be sprayed with 1-1/3 to 2 quarts of product per acre. This is a useful practice as one part of a Wild Garlic control program. Do not forage for 7 days following application. Do not plant any crop for three months after treatment.

**Sorghum (Milo):** See table for recommended rate.

Apply sorghum when crop is 4 to 12 inches high with secondary roots well established. Use drop nozzles when crop is over 10 inches high. Do not apply from flowering to dough stage. Rates of up to 2/3 pint per acre may be used to control some hard to control weeds. However, the chance of crop injury is increased with the higher rates. Do not use with oil. Use lower rate if conditions of high temperature and high soil moisture exist.

**RECOMMENDED RATES OF PRODUCT PER ACRE\*\***

<b>CROP (SEE DETAILED INSTRUCTIONS ABOVE)</b>	<b>RATE, AVERAGE CONDITIONS</b>	<b>RATE, DRY CONDITIONS AS IN WESTERN STATES*</b>
<b>Small Grains (Wheat, Barley, Rye):</b>		
Annual Weeds	1/3 to 2/3 pts	2/3 to 1-1/3 pts.
Perennial Weeds	2/3 pt.	5/6 to 1-1/3 pts.
Preharvest	2/3 to 1-1/3 pts.	
<b>Oats:</b>		
Spring	1/3 pint	
Fall	1/3 to 1/2 pint	
<b>Corn:</b>		
Preemergent	2/3 to 1-1/3 qts.	
Postemergent	1/3 pint	1/3 to 1/2 pt.
Preharvest	2/3 to 1-1/3 pts.	
<b>Sorghum (Milo):</b>		
Postemergent	1/3 pint	1/3 to 1/2 pt

\*Arizona, Idaho, Montana, Oregon, Utah, Washington, Wyoming.

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

**Soybeans (Preplant Only) - For Use in Crop Residue Management Systems:** Apply 1/2 to 2/3 pint not less than 7 days prior to planting soybeans or 2/3 to 1-1/3 pints not less than 30 days prior to planting. Apply to postemergent weeds when small, actively growing, and free of stress caused by extremes in climatic conditions, diseases, or insect damage. The response of individual weed species is variable. Consult your local county agent or state Agricultural Extension Service or crop consultant for advice. Use the higher rate on larger weeds and when perennials are present. (See WEEDS CONTROLLED below.)



Apply using air or ground equipment in sufficient gallonage 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.

**WEEDS CONTROLLED**

alfalfa*	horseweed or maretail	ragweed, giant
bindweed*	ironweed	shepherdspurse
bullnettle	lambsquarters, common	smartweed, Pennsylvania*
bittercress, smallflowered	lettuce, prickly	sowthistle, annual
buttercup, smallflowered	morningglory, annual	speedwell
Carolina geranium	mousetail	thistle, Canada*
cinquefoil, common & rough	mustard, wild	thistle, bull
clover, red*	onion, wild*	velvetleaf
cocklebur, common	pennycress, field	vetch, hairy*
dandelion*	peppergrass*	Virginia copperleaf
dock, curly	plantains	
evening primrose, cutleaf	purslane, common	*Partially controlled
garlic, wild*	ragweed, common	

After applying, plant soybean seed as deep as practical or at least 1-1/2 to 2 inches deep. Adjust the planter press wheel, if necessary, to ensure that planted seed is completely covered.

If desired, this product may be applied preplant to soybeans in tank mixtures with other herbicides such as Poast, Poast Plus, Roundup, Roundup D-Pak, Honcho, Gramoxone Extra, Prowl, Pursuit Plus, Scepter 70 DG, Squadron and others that are registered for preplant soybean use.

Compatible crop oil concentrates, agricultural surfactant, 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.

NOTE: Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of the injury will depend on weather and agronomic factors such as the amount of weed vegetation and previous crop residue present. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.

Not registered for use in California.

**RESTRICTIONS AND LIMITATIONS FOR USE IN SOYBEANS**

Do not apply this product prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield.

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Do not use on low organic sandy soils (less than 1.0%).

Do not apply this product when weather conditions such as temperature, air inversions, or wind favor drift from treated areas to susceptible plants.

Do not mow or cultivate weeds prior to treating with this product as poor control may result.

Do not feed treated hay, forage, or fodder or graze treated soybeans to livestock. Do not feed or graze treated cover crops to livestock.

Only one application of this product may be made prior to planting soybeans per growing season.

Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D use.

**Sugarcane:** Use 1-1/3 pints per acre as a preemergent application to control already emerged weeds before canes appear or 2-2/3 pints per acre as a blanket spray after cane emerges and through layby. Consult local Agricultural Experiment or Extension Service Weed Specialists on specific use of this product or in combination with Dalapon to control broadleaved and grass weeds.

**Ornamental Turf:** Use 2/3 to 2 pints of product in enough water to give good coverage to one acre on established stands of perennial grasses, depending on type of weeds and stage of growth. Do not use on 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.

**NOTES FOR ALL TURF SITES (EXCLUDING SOD FARMS):**

Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

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

When using this product, wear long-sleeved shirt, long pants, socks, shoes, and chemical-resistant gloves.

After using this product, rinse gloves before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower.

**Grass Seed Crops:** Apply 2/3 to 2-2/3 pints of product per acre 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 1/2 to 2/3 pint per acre to control small seedling weeds. After the grass is well established,

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higher rates of up to 2-2/3 pints per acre can be used to control hard to control 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 cattle within 7 days of application. Do not apply this product within 30 days of cutting grass for hay. Remove meat animals from treated areas 3 days prior to slaughter.

**Fallow Land:** On established perennial species such as Canada thistle and Field bindweed, apply up to 4 pints of product per acre. For annual broadleaf weeds, apply 1-1/3 to 2-2/3 pints per acre. Do not plant any crop for 3 months after treatment.

**Established Pastures and Rangelands:** Use 2/3 to 2-2/3 pints of product in sufficient water to give good coverage to one acre depending on type of weeds and stage of growth. Use only on established stands of perennial grasses. Do not graze dairy cattle within 7 days of application. Do not apply this product within 30 days of cutting grass for hay. Remove meat animals from treated areas 3 days prior to slaughter.

**Wild Garlic and Wild Onion Control:** Apply 2-2/3 to 4 pints of product per acre making three applications, fall-spring-fall or spring-fall-spring, starting in the late fall or early spring. DO NOT graze dairy animals nor cut forage for hay within 7 days of application.

**General Weed Control:** (Airfields, Roadsides, Vacant Lots, Drainage Ditch Banks, Fence Rows, Industrial Sites and similar areas):

Use 1-1/3 to 4 pints of product per acre. Usually 2-2/3 pints 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.

**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 1-1/3 to 2 quarts of product per acre in 100 gallons of water. Wet all parts of the plants thoroughly, including stem and foliage, to the point of runoff. 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 re-treatment next season.

**USES IN FOREST MANAGEMENT**

**Conifer Release:** For control of alder, apply 2/3 to 2 quarts of product per acre in 8 to 25 gallons of water, and apply as a foliage spray. Treat when 3/4 of the brush foliage has attained full size leaves and before new conifer growth reaches 2" in length. This is usually between early May and mid-June. Adjust treatment date depending on stage of growth and brush species. This may cause leader deformation on

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exposed firs, but they should overcome this during the second year after spraying.

To control susceptible brush species such as ceanothus spp., chinquapin, madrone, manzanita, oak and tanoak and to release Douglas fir, hemlock, Sitka spruce or grand fir, apply up to 2 quarts of product before new growth on Douglas fir is 2" long. To control manzanita and ceanothus in ponderosa pine, apply up to 3 quarts before pine growth begins in spring. To increase performance, add 2 to 4 quarts of diesel, fuel oil, kerosene, or a suitable approved agricultural surfactant at recommended label rate.

After northern conifers, jack pine, red pine, black spruce, and white spruce cease growth and "harden off" in late summer, a spray of 1 to 2 quarts of product 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.

**Tree Injections (Pine Release):** To control hardwoods, such as Oaks, Hickory, Maple, Pecan, Elm, Sumac, Sweetgum and Hawthorn in forest and other noncrop areas, apply undiluted product in a concentrate tree injector calibrated to apply .7 ml. per injection. Space injections 2" apart, edge to edge, completely around the tree and close to the base. The injector bit must penetrate the inner bark. On hard-to-kill species such as Hickory, Dogwood, Red maple, Blue beech and Ash, make injections 1 to 1-1/2 inches apart, edge to edge. Treatment may be made at any time of the year. For best results, injections should be made during growing season, May 15-October 15. For dilute injections, mix 2/3 gallon of product in 19 gallons of water.

**Dormant Application (other than pine):** For the control of susceptible deciduous brush species such as alder, cascara, cherry, poplar and service berry, apply up to 2 quarts of product per acre in sufficient diesel, fuel oil or kerosene for good coverage. Application may be made by ground or air and should be made before conifer bud break.

**Pine Only:** Make application while pine buds are still dormant. Apply 1-1/3 quarts of product per acre in sufficient water for good coverage by air or ground equipment. Do not use this application unless some pine injury is acceptable. Use of diesel, kerosene, or other oil, or addition of surfactants to spray mix may cause unacceptable pine injury.

**Herbaceous Weed Control:** To control over-wintering susceptible weeds such as false dandelion, klamath weed, plantain, and tansy ragwort apply 2/3 to 2 quarts of product per acre in sufficient water for good coverage. Make application at rates and timing indicated above if pines are present. For control of hazel brush and similar species in the Lake States area, apply 1-1/3 quarts of product per acre in 8 to 25 gallons of water, when new shoot growth of Hazel is complete.

**Site Preparation: (As Dormant Spray)** - For control of alder prior to planting seedlings, apply 1-1/3 to 2-2/3 quarts of product per acre in diesel, fuel oil, or similar

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oil before foliage is 1/4 full size. Application may be made by air or ground. (As Foliage Spray) - For control of alder prior to planting seedlings, apply 1-1/3 to 2-2/3 quarts of product per acre in 8 to 25 gallons of water, after most alder leaves are full size. To increase penetration, 2 to 4 quarts per acre of diesel, fuel oil, kerosene, or a suitable approved agriculture surfactant at recommended label rates, may be added to the spray mixture.

### **AQUATIC APPLICATIONS**

**For Aquatic Weeds in Lakes, Ponds, Drainage Ditches, and Marshes:** Use 1-2/3 to 3 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 water line, 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.

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