

# U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7504P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460

EPA Registration Number: Date of Issuance:

42750·232

NOTICE OF PESTICIDE:

X Registration
Reregistration

(under FIFRA, as amended)

Term of Issuance: Unconditional

Name of Pesticide Product:

88.8% 2,4-D Ester

Name and Address of Registrant (include ZIP Code):

Albaugh, Inc. P.O. Box 2127 Valdosta, GA 31604

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA sec 3(c)(7)(A) provided that you:

- 1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
- 2. Make the following label revisions
  - a. Revise the EPA Reg. No. to 42750-232
  - b.. Assure that the establishment number and net content are also added to the label.
  - c. Pg. 16. Under Fallowland Change "Plant only crops within 29 days following last application" to read "Only labeled crops may be planted within 30 days of application."
- 3. Submit one copy of the revised final printed label before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

If you have any questions regarding the Notice, please contact Grant Rowland at (703) 347-0254 or <a href="mailto:rowland.grant@epa.gov">rowland.grant@epa.gov</a>.

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Signature of Approving Official:

Kathryn Montague Product Manager 23 Herbicide Branch

Registration Division (7505P)

Date:

OCT - 2 000

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EPA Form 8570-6

# 88.8% 2,4-D ESTER

#### SOLVENTLESS HERBICIDE

ACCEPTED with COMMENTS In EPA Letter Dated:

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

42750-232

ACTIVE INGREDIENT:	
2-ethylhexyl ester of 2,4-dichlorophenoxyacetic acid*	88.8%
OTHER INGREDIENTS**:	11.2%
TOTAL:	100.0%

\*Equivalent to 57.9% of 2,4-dichlorophenoxyacetic acid or 5.5 lb./gal. Isomer specific by AOAC Method.

# KEEP OUT OF REACH OF CHILDREN

# **CAUTION**

Si usted no entiende la etiqueta. Busque a alguien para que se la explique a usted en detaile. (If you do not understand the label, find someone to explain it to you in detail.)

	FIRST AID			
IF	Immediately call a poison control center or doctor.			
SWALLOWED:	Do not induce vomiting unless told to do so by a poison control center or doctor.			
	Have a person sip a glass of water if able to swallow.			
	Do not give anything by mouth to an unconscious person.			
IF ON SKIN OR	Take off contaminated clothing.			
CLOTHING:	Rinse skin immediately with plenty of water for 15-20 minutes.			
	Call a poison control center or doctor for treatment advice.			
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.			
	• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing			
	eye.			
	Call a poison control center or doctor for treatment advice.			
HOT LINE NUMB	HOT LINE NUMBER - Have the product container or label with you when calling a poison control center or			
	for treatment. You may also contact 1-800-424-9300 for emergency medical treatment			

See inside booklet for additional precautionary statements.

EPA Reg. No. 42750-EGE

EPA Est. No. 42750-MO-001

**NET CONTENTS** 

MANUFACTURED BY: Albaugh, Inc. Ankeny, Iowa 50021

For chemical spill, leak, fire, or exposure, call CHEMTREC (800) 424-9300.

#### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are neoprene or nitrile rubber. If you want more options, follow the instructions for Category E on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators, flaggers, and other handlers must wear:

- 1. Long-sleeved shirt and long pants.
- 2. Shoes and socks.
- 3. Chemical resistant gloves (barrier, laminate, nitrate rubber, neoprene rubber or viton).
- 4. Chemical resistant apron when applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

See engineering controls for additional requirements.

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

#### **ENGINEERING CONTROLS STATEMENTS**

Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]

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

#### USER SAFETY RECOMMENDATIONS

#### Users should:

- 1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- 2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- 3. 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.

#### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. Apply this product only as directed on label.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

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

#### PHYSICAL AND CHEMICAL HAZARDS

Combustible. 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 in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et. Al. v. EP, C01—132C, (W.D. WA) For further information, please refer to <a href="http://www.epa.gov/espp/wtc">http://www.epa.gov/espp/wtc</a>.

# AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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
- 2. Chemical-resistant gloves made of any waterproof material.
- 3. Shoes plus socks, and
- 4. Protective eyewear.

# NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not allow people (or pets) to enter the treated area until sprays have dried.

#### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: 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 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: Non-refillable containers (1, 2.5, 30 & 55 gallon): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

(non-refillable <5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

(non-refillable  $\geq$ 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use for disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds

after the flow begins to drip.

Refillable container (250 gallon & bulk): Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

#### **INFORMATION**

Performance of this product may be affected by local conditions, crop varieties, and application method. User should consult local Extension Service, Agricultural Experiment Station 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.

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.

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.

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.

# TANK MIXING PRECAUTIONS:

• Read carefully and follow all applicable use directions, precautions and limitations on the respective

product labels.

• Do not exceed recommended application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosage that may be used.

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  $SOLVE^{TM}$  2,4-D which is specially designed and formulated for such use.

#### SPRAYER CLEAN OUT

To avoid injury to desirable plants, equipment used to apply this product should be thoroughly cleaned before re-use or applying other chemicals

- 1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of all rinse water by application to treatment area or apply to non-cropland area away from water supplies.
- 2. During the second rinse, add 1 quart of household ammonia for every 25 gallons of water. Circulate the solution through entire system so that all internal surfaces are contacted (15-20 minutes). Let the solutions stand for several hours, preferably overnight.
- 3. Flush the solution out of the spray tank through the boom.
- 4. Rinse the system twice with clean water, recirculating and draining each time.
- 5. Remove the nozzles and screens and clean separately.
- 6. If equipment is to be used to apply another pesticide or agricultural chemical to a 2,4-D susceptible crop, additional steps may be required to remove all traces of 2,4-D including cleaning of disassembled parts and replacement of hoses or other fittings that may contain absorbed 2,4-D.

# SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

**Droplet Size** 

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

## Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

#### Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

2,4-D esters may volatize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures

# Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

#### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

## Equipment

All aerial equipment and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

For aerial equipment, the boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made in a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

For ground boom application, do not apply with a nozzle height greater than 4 feet above the crop canopy.

Use low-pressure sprays to minimize drift. Where states have regulations, that specify minimum spray volumes, they should be observed.

#### APPLICATION INSTRUCTIONS

Spray volume: Apply with calibrated air or ground equipment using sufficient spray volume to provide adequate coverage of target weeds or as otherwise directed in specific use directions. For broadcast application, apply the recommended rate of this product in a spray volume of 2 or more gallons per acre by air and 10 or more gallons per acre for ground equipment. In general, spray volume should be increased as crop canopy, height and weed density increase in order to obtain adequate spray coverage. Do not apply less than 2 gallons total spray volume per acre.

Application Rates: Generally, lower rates in recommended rate ranges will be satisfactory for more sensitive weeds species, when weeds are small, and when environmental conditions are favorable for rapid growth. Use higher rates in the recommended rate range for less sensitive species and under less favorable growing conditions. For crop uses, do not mix with emulsifiable oil or other adjuvants unless specifically recommended on this label. Deep-rooted perennial weeds such as Canada thistle and field bindweed and many woody plants usually require repeated applications for effective control.

Spot Treatments: To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand sprayers using a fixed spray volume per 1,000 sq ft as indicated below.

Hand-Held Sprayers: Hand-held sprayers may be used for spot applications of 88.8% 2,4-D ESTER. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on the application rate for an area of 1,000 sq ft. Mix the amount of 88.8% 2,4-D ESTER (fl oz or ml) corresponding to the desired broadcast rate in 1 to 3 gallons of spray. To calculate the amount of 88.8% 2,4-D ESTER required for larger areas, multiply the table value (fl oz or ml) by the thousands of sq ft to be treated. An area of 1000 sq ft is approximately  $10.5 \times 10.5$  yards (strides) in size.

Rate Conversion Table for Spot Treatment:

	Label Broadcast Rate (pt/acre)						
1/3	1/2	2/3	1	1 1/3	2	2 2/3	5 1/3
	Equivalent Amount of 88.8% 2,4-D ESTER per 1000 sq ft						
1/8 fl oz							
(3.7 ml)	(5.9 ml)	(7.4 ml)	(11 ml)	(15 ml)	(22 ml)	(30 ml)	(60 ml)

<sup>&</sup>lt;sup>†</sup>Conversion factors: 1 pt - 16 fl oz; 1 fl oz = 29.6 (30) ml

Band Application: 88.8% 2,4-D ESTER may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per treated area.

Band width in inches
----- x Broadcast rate = Brand rate per
Row width in inches per acre treated acre

Band width in inches
------ x Broadcast volume = Band volume
Row width in inches per acre per treated acre

#### 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 non-crop uses.

#### WEEDS CONTROLLED

mousetail (2)

#### Annual or Biennial Weeds

beggarticks (1) bittercress, smallflowered (2) bitterweed broomweed, common (1) burdock, common buttercup, smallflowered (1)(2) carpetweed cinquefoil, common (2) cinquefoil, rough (2) cocklebur, common coffeeweed copperleaf, Virginia (2) croton, Texas croton, wooly fixweed galinsoga geranium, Carolina (2) hemp, wild horseweed (marestail) (2) jewelweed iimsonweed knotweed (1) kochia lamsquarter, common lettuce, prickly (1)(2) lettuce, wild **lupines** mallow, little (1) mallow, Venice (1) marshelder morningglory, annual morningglory, ivy morningglory, woolly

mustards (except blue mustard) parsnip, wild pennycress (fanweed) pepperweeds (Lepidium spp.) (1)(2) pigweeds (Amaranthus spp.) (1) poorjoe primrose, common purslane, common (2) pusley, Florida radish, wild ragweed, common ragweed, giant rape, wild rocket, yellow salsify, common (1) salsify, westerm (1) shepherdspurse sicklepod smartweed (annual species) (1)(2) sneezeweed, bitter sowthistle, annual sowthistle, spiny spanishneedles sunflower sweetclover tansymustard thistle, bull thistle, musk (1) thistle, Russian (tumbleweed) (1) velvetleaf

# Perennial Weeds

coffeeweed

Alfalfa <sup>(1) (2)</sup> artichoke, Jerusalem <sup>(1)</sup> aster, many-flower <sup>(1)</sup> Austrian fieldcress <sup>(1)</sup> bindweed (hedge, field and European) <sup>(1) (2)</sup> blue lettuce blueweed, Texas broomweed bullnettle <sup>(1) (2)</sup> carrot, wild <sup>(1)</sup> catnip chicory clover, red <sup>(1) (2)</sup>

eveningprimrose, cutleaf <sup>(2)</sup>
garlic, wild
goldenrod
hawkweed, orange <sup>(1)</sup>
healal
ironweed, western <sup>(2)</sup>
ivy, ground <sup>(1)</sup>
nettles (including stinging) <sup>(1)</sup>
onion, wild <sup>(1)</sup>
pennywort
plantains
ragwort, tansy <sup>(1)</sup>
sowthistle, perennial
thistle, Canada <sup>(1)</sup> <sup>(2)</sup>

vetches

cress, hoary <sup>(1)</sup> dandelion docks <sup>(1)</sup> dogbanes <sup>(1)</sup>

vervains (1) wormwood

<sup>(1)</sup> Difficult-to-Control Weeds: These weedsare only partially controlled and may require repeat applications and/or use of the higher recommended rate of this product even under ideal conditions of application.

(2) This product may not be used to control this weed species in the state of California.

#### **CROPS**

CEREAL GRAINS (Wheat, Barley, Millet, Oats, Rye)
(Not Underseeded with Legumes)

	(1100 011000	ded with Legames)
CROP/APPLICATION TIMING	88.8% 2,4-D	SPECIFIC USE DIRECTIONS
	ESTER	
·	(PT/ACRE)	
Wheat, Barley, Millet, Rye Annual and biennial Broadleaf weeds	1/3 to 1 1/3 <sup>†</sup>	Apply after crop is fully tilled, but before boot stage of growth (usually 4 to 8 inches tall) but not forming joints in the stem. Do not apply before tillering or
	,	from early boot through the milk stage of growth.
Perennial broadleaf weeds	$2/3$ to $1~2/3$ $^{\dagger}$	
Oats		Apply after crop is fully tillered, but before boot stage or growth (usually 4 to 8 inches tall) and
(Spring Seeded)	1/3	weeds are small. Do not apply before tillering or from early boot through the milk stage of growth.
(Fall Seeded Southern)	1/2 to 1 <sup>†</sup>	Do not apply during or immediately following cold weather.
Preharvest application (all cereals)	2/3	Apply using air or ground equipment to control weeds that could interfere with harvest, or to suppress perennial weeds. Apply when grain is in dough stage. Do not apply from early boot through the milk stage of growth.

Use the lower rate in the rate range if small annual or biennial weeds are the major problem. Use the higher rate if perennial weeds or annual or biennial weeds are present which are considered to be hard-to-kill as determined by local experience. Higher rates increase the risk of crop injury and should be used only where weed control justifies such risk. Do not apply 88.8% 2,4-D ESTER at the crop seedling stage of growth. Consult state agricultural experiment station or extension service weed specialists for recommendations or suggestions to fit local conditions.

# **CEREAL GRAIN RESTRICTIONS:**

- Postemergence:
  - Make no more than one application per crop cycle.
  - Do not apply more than 1 2/3 pints per acre per application.
- Preharvest:
  - Make no more than one application per crop cycle.
  - Do not apply more than 2/3 pint per acre per application.
- Pre-Harvest Interval is 14 days.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.75 pounds of a.e. per acre per year.

CORN
(Field Corn, Popcorn and Sweet Corn)

APPLICATION TIMING/ STAGE OF GROWTH	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Preplant (Burndown)  Preemergence (Field corn, popcorn, and sweet corn)	2/3 to 1 1/3	General: For best results, growth conditions should be favorable for active weed growth. Use high rate in rate range for less susceptible weeds, cover crops such as alfalfa, weeds in advanced stages of development, or under less favorable growth conditions.  Preplant: Apply 7 to 14 days before planting corn to control emerged broadleaf weed seedling or existing cover crops.  Preemergence: Apply any time after planting, but before corn emerges to control broadleaf weed seedlings or existing cover crops. Do not use on light sandy soils.
Postemergence (Field corn, popcorn, and Sweet corn)  Annual broadleaf weeds Crop up to 8 inches tall  Crop 8 inches tall to tasseling (directed spray only)  Perennial broadleaf weeds	1/3 to 2/3 2/3 2/3	Apply when weeds are small and corn is less than 8 inches tall (to top of canopy). If corn is more than 8 inches tall, use drop nozzles to keep spray off foliage.  Treat perennial weeds when they are in bud to bloom stage.  Do not tank mix with atrazine, oil or other adjuvants.  Do not apply from tasseling to hard dough stage.  Note: Corn treated with 2,4-D may become temporarily brittle. Wind or cultivation may cause stem breakage during the period of time that corn is brittle.  Sweet Corn: To minimize potential for crop injury, use only lowest rate in rate range.
Preharvest (Field corn and popcorn only)	up to 2	Apply after corn is in hard dough (or denting) stage. Do not apply to sweet corn.

# Precautions:

- Preplant or preemergence applications to light sandy soil is not recommended.
- Corn hybrids vary in tolerance to 2,4-D. Some are easily injured. Apply only to varieties known to be tolerant to 2,4-D. Consult the seed company or your Agricultural Experiment Station or Extension Service Weed Specialist for this information.
- Note: Corn treated with 2,4-D may exhibit stem brittleness for 8 10 days following application. During this period, the crop is more susceptible to stem breakage from cultivation or wind.

#### CORN RESTRICTIONS:

- Preplant or Pre-emergence:
  - Make no more than one application per crop cycle.
  - Do not apply more than 1 1/3 pints per acre per application.
- Postemergence:
  - Make no more than one application per crop cycle.
  - Do not apply more than 2/3 pint per acre per application.
- Minimum spray interval between applications for sweet corn is 21 days.

- Do not use treated crop as fodder for 7 days following application.
- Preharvest (Field and Pop Corn Only):
  - Make no more than one application per crop cycle.
  - Do not apply more than 2 pints per acre per application.
  - Corn (Field and Pop) Pre-Harvest Interval is 7 days.
  - Corn (Sweet) Pre-Harvest Interval is 45 days.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 3.0 pounds of a.e. per acre per year for Field and Pop Corn.

Do no exceed a combined total of 1.5 pounds of a.e. per acre for Sweet Corn.

SORGHUM (Grain Sorghum (Milo) and Forage Sorghum)

APPLICATION TIMING/ STAGE OF GROWTH	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Postemergence <sup>†</sup>		Apply when sorghum is 6 to 15 inches tall. If sorghum is more than 8 inches tall (top of canopy),
Crop 6 – 8 inches tall	1/3 to 2/3	use drop nozzles to keep spray off foliage.  Do not use with oil or other adjuvants.
Crop 8 – 15 inches tall (directed spray only)	1/2 to 2/3	Do not treat during boot, flowering or dough stage.

#### Precautions:

- Note: Temporary crop injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply 88.8% 2,4-D ESTER under these conditions, use no more than 1/2 pint per acre.
- Sorghum hybrids vary in tolerance to 2,4-D. Some are easily injured. Apply only to varieties known to be tolerant to 2,4-D. Consult the seed company or your agricultural experiment station or extension service weed specialist for this information.

# SORGHUM RESTRICTIONS:

- Do not apply more than 2/3 pint per acre per application.
- Do not make more than 1 post-emergence application per year.
- Pre-Harvest interval is 30 days
- Do not permit meat or diary animals to consume treated crop as fodder or forage for 30 days following application.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 0.5 pounds of a.e. per acre per year for sorghum.

# SOYBEANS – For Use in Crop Residue Management Systems (Pre-plant Burndown Application Only)

APPILCATION TIMING	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Preplant (Burndown)	1/2 to 2/3	Apply not less than 7 days before planting soybeans. See Use Restrictions below.
	2/3 to 1 1/3	Apply not less than 15 days before planting soybeans. See Use Precautions and Restrictions below.

General Use Directions: Use 88.8% 2,4-D ESTER to control emerged broadleaf weeds or existing cover crops. For best results, apply when weeds are small and actively growing. Use the higher rate in the respective rate range for larger weeds and when perennials are present. Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixtures to increase the herbicidal effectiveness 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.

#### SOYBEAN RESTRICTIONS

- Pre-plant (2 application option):
  - Do not apply more than 2/3 pint per acre per preplant application.
  - Do not apply within 7 days of planting soybeans.
- Pre-plant (single application option):
  - Do not apply more than 1 1/3 pint per acre.
  - Do not apply within 15 days of planting soybeans.
- Do not use on sandy soils with less than 1% organic matter.
- Do not replant fields treated with 88.8% 2,4-D ESTER in the same growing season with crops other than those labeled for use with 88.8% 2,4-D ESTER.
- Livestock Feeding Restrictions: Do not feed hay, forage or fodder. Restrict livestock from grazing treated fields. Livestock should be restricted from feeding/grazing of treated cover crops.
- In fields previously treated with 88.8% 2,4-D ESTER, plant soybean seed as deep as practical or at least 1 inch deep. Adjust the planter, if necessary, to ensure that planted seed is completely covered.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 1.0 pounds of a.e. per acre per crop cycle.

ORNAMENTAL TURF (Excluding Grasses Grown For Seed or Sod Farms)
(Includes lawns, golf courses, cemeteries and parks, airfields, roadsides, and vacant lots)

Use Requirements for Ornamental Turf Areas: When this product is applied to ornamental turn areas, follow PPE and reentry instructions in the "Non-agricultural Use Requirements" section of this label.

TREATMENT SITE (APPLICATION TIMING)	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Ornamental Turf (Postemergence)		Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth.
Seedling grass (five-leaf stage or later)	1/2 to 2/3	Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeat applications.  Do not apply to newly seeded grasses until well
Well-established grasses	1 1/3 to 2	established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are
Biennial and perennial broadleaf weeds	2	tolerant of higher rates.

#### PRECAUTIONS:

- Do not use on creeping grasses such as bentgrass except for spot treatment
- Do not use on susceptible southern grasses such as St. Augustine.
- Do not use on dichondra or other herbaceous ground covers; legumes may be damaged or killed.
- Reseeding: Delay reseeding at least 30 days following application. Preferably, with spring application reseed in the fall and with fall applications, reseed in the spring.

# ORNAMENTAL TURFGRASS RESTRICTIONS:

- Do not apply more than 2 pints per acre per application.
- Do not make more than 2 applications per year.
- Minimum spray interval between broadcast applications is 30 days.
- If grazing or having is anticipated, do not apply more than 2 pint per acre per application. Do not harvest grass for hav from treated areas for 7 days after application.

#### GRASSES GROWN FOR SEED OR SOD FARMS

Agricultural Use Requirements: When used in grass grown for seed or sod farms, follow PPE and reentry instructions in the "Agricultural Use Requirement" section of this label.

TREATMENT SITE (APPLICATION TIMING)	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Grasses Grown for Seed (Postemergence Use) Seedling grass		Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth.
(five-leaf stage or later)	1/2 to 2/3	Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a
Well-established grasses	2/3 to 2 2/3	maximum of 2/3 pt/acre. Cool season grasses are
Sod Farms (Postemergence)	1/3 to 2 2/3	tolerant of higher rates.  Do not apply to grass in the early boot through milk stage if seed production is desired.

TREATMENT SITE (APPLICATION TIMING)	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
		When grass is well established, higher rates of up to 2 2/3 pint/acre may be applied for control of hard-to-kill annual or perennial weeds.  Deep-rooted perennials such as bindweed and Canada thistle may require repeat applications.  Avoid mowing sod farms for 1 to 2 days before or after application.  Delay irrigation until the day following application.

#### PRECAUTIONS:

- Do not use on creeping grasses such as bentgrass except for spot treatment
- Do not use on susceptible southern grasses such as St. Augustine.
- Do not use on dichondra or other herbaceous ground covers; legumes may be damaged or killed.
- Reseeding: Delay reseeding at least 30 days following application. Preferably, with spring application reseed in the fall and with fall applications, reseed in the spring.

#### Grasses Grown for Seed or Sod Restrictions:

- Do not make more than 2 applications per year.
- Do not apply more than 2 2/3 pints per acre per application.
- Minimum of 21 days between applications.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year (excluding spot treatments).

FALLOWLAND AND CROP STUBBLE Fallowland is idle land, postharvest to crops or between crops.

TYPE OF WEEDS	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds	2/3 to 1 1/3	Use a lower rate in the rate range when weeds are small (2 to 3 inches tall) and actively growing. Use a higher rate in the rate range when weeds are larger and under less favorable growth conditions.
Biennial broadleaf weeds	1 1/3 to 2 2/3	Apply when musk thistles or other biennial species are in the seedling to rosette stage and before development of flower stalks.  The lower rate can be used in the spring during the rosette stage. Use the highest rate in the fall or after flower stalks have developed.
Perennial broadleaf weeds	1 1/3 to 2 2/3	Apply when perennial weeds are in bud to early bloom stage or while in good vegetative growth.
Wild garlic and onion in crop stubble	2 2/3	Apply to new regrowth of wild garlic or onion that occurs in the fall after harvest of other crops.

Precaution: For best weed control results, do not cultivate for at least 2 weeks after application or until top growth is dead.

#### **FALLOW LAND RESTRICTIONS:**

- Make no more than two applications per year.
- Do not apply more than 2-2/3 pints per acre per application.
- Minimum spray interval between applications is 30 days
- Plant only labeled crops within 29 days following last application
- If grass is to be cut for hay, Agricultural Use requirements for the Worker Protection Standard are applicable.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

# RANGELAND, ESTABLISHED GRASS PASTURES (Including Perennial Grasslands Not In Agricultural Production Such As Conservation Reserve Program Acres)

TARGET WEEDS OR	88.8% 2,4-D	SPECIFIC USE DIRECTIONS
WOODY PLANTS	ESTER	SI LON 10 03L DINLOTTONS
WOODITISHIS	(PT/ACRE)	
	(1.1/1.01.12)	For best results, apply when weeds are small and
Annual broadleaf weeds	1 1/3	growing actively before the bud stage. Apply when
		musk thistles or other biennial species are in the
·		seedling to rosette stage and before flower stalks
Biennial and perennial	1 1/3 – 2 2/3	appear. Refer to the "Weeds Controlled" section for
broadleaf weeds		a listing of susceptible weed species and weeds that
		may be only partially controlled and require repeat
		applications and/or use of higher recommended
		rates, even under ideal conditions of application.
Spot Treatment to control	See Instructions	Note: To control broadleaf weeds in small areas
broadleaf weeds	for "Spot	with a hand sprayer, use an application rate
	Treatment"	equivalent to the broadcast rate recommended for
		this treatment site and spray to thoroughly wet all
•		foliage. See rate conversion table and instructions
		for "Spot Treatment" and use of hand-held sprayers
Trac Injection Application		under "Application".  See instructions for tree injection application in
Tree Injection Application		"Forestry Uses" section.
Wild garlic and wild onion	2 2/3	Make three applications (fall-spring-fall or spring-all-
Wild garlic and wild official	2 2/3	spring) starting in late fall or early spring.
Broadleaf weed control in		Applications may be made either preemergence or
newly sprigged coastal	1 1/3 - 2 2/3	postemergence. Follow "Specific Use Directions" for
bermudagrass	1 1/3 2 2/3	annual, biennial and perennial broadleaf weed
56aag.a55		control, above.
Sand shinnery oak		Sand shinnery oak: Apply by aircraft between May
Sand sagebrush	1 1/3	15 and June 15.
		Sand sagebrush: Apply by ground or aircraft when
		foliage is fully expanded and plants are actively
		growing.
		Use a 1:4 oil-water emulsion as carrier and a spray
		volume of 3 to 5 gallons per acre. Retreatment may
		be needed.

TARGET WEEDS OR WOODY PLANTS	88.8% 2,4-D ESTER (PT/ACRE)	SPECIFIC USE DIRECTIONS
Big sagebrush Rabbitbrush		Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use water or 1:4 oil-water emulsion as carrier and a spray volume of 5 to 10 gallons per acre. Retreatment may be needed.
Chamise, manzanita, buckbrush, coastal sage, coyotebrush, and chaparral species.	Up to 2 2/3	Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use water or 1:4 oil-water emulsion as carrier and a spray volume of 5 to 10 gallons per acre.  Retreatment may be needed.
Southern wild rose  Broadcast application	Up to 2 2/3	Broadcast: Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment.  Spot Treatment: Apply when foliage is well developed. Thorough coverage is required. Use 2/3 gallon of 88.8% 2,4-D ESTER plus 4 to 8 fluid
Spot Treatment	2/3 gal/100 gal of spray	ounces of an agricultural surfactant per 100 gallons of water.  Two or more treatments may be required.  Do not exceed 2/3 gal. per acre per applications.
CRP Acres	For program lands such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.	

# Precautions:

- Do not use on bentgrass, alfalfa, clover, or other legumes.
- Do not use on newly seeded areas until grass is well established.
- Do not use from early boot to milk stage where grass seed production is desired.

#### RANGELAND & PASTURE RESTRICTIONS:

- Livestock Feeding Restrictions:
  - Do not graze dairy animals on treated areas within 7 days after application.
  - Do not graze meat animals on treated areas within 3 days before slaughter.
  - Do not cut forage for hay within 7 days of application.
  - For government program grasslands, follow program grazing restrictions if more restrictive than those given above.
- For susceptible annual and biennial broadleaf weeds do not exceed 1 1/3 pints per acre per application.
- For moderately susceptible biennial and perennial broadleaf weeds and woody plants, do not exceed 2 2/3 pints per acre per application.
- For spot treatment do not exceed 2 2/3 pints per acre.
- Maximum of 2 applications per year.
- Minimum spray interval between applications is 30 days.
- If grass is to be cut for hay, Agricultural Use requirements for the Worker Protection Standard are applicable.

88.8% 2,4-D ESTER contains 0.7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

# POTATOES (Fresh Market Only)

APPLICATION TIMING/	88.8% 2,4-D	SPECIFIC USE DIRECTIONS
STAGE OF GROWTH	ESTER	
Postemergence	1/10 pt	Make first application when potatoes are in the pre-
	(1.6 oz)/acre	bud stage (about 7 to 10 inches high) and make a
		second application about 10 to 14 days later.

# POTATO RESTRICTIONS:

- Preharvest Interval: Do not harvest within 45 days of application.
- Do not apply more than 0.07 lbs a.e. (1/10 pt/acre) of 88.8% 2,4-D ESTER per application.
- Do not exceed two applications per crop.
- A minimum of 10 days between applications is required.
- Do not apply more than 0.14 lbs a.e. (1/5 pt/acre) of 88.8% 2,4-D ESTER per growing season.

NON-CROPLAND AREAS (Fencerows, Hedgerows, Roadsides, Right-Of-Way, Utility Power Lines, Railroads, and Airports)

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TREATMENT SITE	88.8% 2,4-D	SPECIFIC USE DIRECTIONS
METHOD OF APPLICATION	ESTER	
	(PT/ACRE)	
Annual broadleaf weeds	1 1/3 - 2 2/3	Apply when annual weeds are small and growing
		actively before the bud stage. Biennial and
		perennial weeds should be rosette to bud stage, but
		not flowering at the time of application. For difficult
Biennial and perennial	Up to 2 2/3	to control perennial broadleaf weeds and woody
broadleaf weeds and		species, tank mix up to 1 1/3 pints of 88.8% 2,4-D
susceptible woody plants		ESTER plus 1 to 4 qt of Garlon 3A herbicide per
		acre. Oil or wetting agent may be added to the
		spray, if needed for increased effectiveness.
		For ground application: (high volume) apply a
		total spray volume of 100 to 400 gallons per acre;
		(low volume) apply a total spray volume of 10 to
		100 gallons per acre.
		For helicopter: Apply a total spray volume of 5 to 30
		gallons per acre.
Spot Treatment to control	See Instructions	Note: To control broadleaf weeds in small areas
broadleaf weeds	for "Spot	with a hand sprayer, use an application rate
	Treatment"	equivalent to the broadcast rate recommended for
		this treatment site and spray to thoroughly wet all
		foliage. See rate conversion table and instructions
		for "Spot Treatment" and use of hand-held sprayers
		under "Application"
Tree Injection Application		See instructions for tree injection in "Forestry Uses" section.
Southern wild rose		Broadcast: Apply in a spray volume of 5 or more
		gallons per acre by aircraft or 10 or more gallons
Broadcast application	up to 2 2/3	per acre by ground equipment.
		Apply when foliage is well developed. Thorough
		coverage is required. Use 2/3 gal of 88.8% 2,4-D
		ESTER plus 4 to 8 fluid ounces of an agricultural
Spot Treatment	2/3 gal/100	surfactant per 100 gallons of water. Two or more
·	gal of spray	treatments may be required.

#### Precautions:

- Do not apply to newly seeded areas until grass is well established.
- Bentgrass, St. Augustine, clover, legumes and dichondra may be severely injured or killed by this treatment.

#### NON-CROPLAND RESTRICTIONS:

- Postemergence (annual & perennial weeds):
  - Do not make more than 2 applications per year.
  - Do not apply more than 2 2/3 pints per acre per application.
  - Minimum spray interval between applications is 30 days.
- Postemergence (woody plants):
  - Do not make more than 1 application per year.
  - Do not apply more than 5 2/3 pints per acre per application.
- Applications to non-cropland areas are not applicable to treatment of commercial timber or other
  plants being grown for sale or other commercial use, or for commercial seed production, or for
  research purposes.

88.8% 2,4-D ESTER contains 0. 7 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

# FORESTRY USES Forest site preparation, forest roadsides, brush control, established conifer release (including Christmas trees and reforestation areas)

TREATMENT SITE	88.8% 2,4-D	SPECIFIC USE DIRECTIONS
METHOD OF	ESTER	SPECIFIC OSL DIRECTIONS
APPLICATION	ESIER	
7		
Broadcast:		Apply when weeds are small and growing actively
		before the bud stage. Apply when biennial and
Annual Weeds	1-1/3 to 2-2/3	perennial species are in the seedling to rosette stage
	pt/acre	and before flower stalks appear. For difficult to
		control perennial broadleaf weeds and woody species,
Biennial and perennial	2-2/3 to 5-2/3	use up to 5 2/3 pints of 88.8% 2,4-D ESTER and 1 to
broadleaf weeds and	pt/acre	4 qt of Garlon* 3A herbicide per acre.
susceptible woody plants		For conifer release, make application in early spring
,		before budbreak of conifers when weeds are small
		and actively growing.
Spot Treatment to control	See Instructions	Note: To control broadleaf weeds in small areas with
broadleaf weeds	for "Spot	a hand sprayer, use an application rate equivalent to
	Treatment"	the recommended broadcast rate and spray to
		thoroughly wet all foliage. See rate conversion table
		and instructions for "Spot Treatment" and use of
		hand-held sprayers under "Application".
Conifer Release: Species	2 to 4 pints/acre	To control competing hardwood species such as alder,
· ·	2 to 4 pints/acre	aspen, birch, hazel, and willow, apply from mild to
such as white pine,		
ponderosa pine, jack pine,		late summer when growth of conifer trees has
red pine, black spruce,		hardened off and woody plants are still actively
white spruce, red spruce,		growing. Apply with ground or air equipment, using
and balsam fir		sufficient spray volume to ensure complete coverage.
		Because this treatment may cause occasional conifer

TREATMENT SITE	88.8% 2,4-D	SPECIFIC USE DIRECTIONS
METHOD OF APPLICATION	ESTER	
		injury. Do not apply if such injury cannot be tolerated.
Directed Spray: Conifer	5-2/3 pints/100	Apply when brush or weeds are actively growing by
plantations including pine	gal	directing the spray so as to avoid contact with conifer
		foliage and injurious amounts of spray. Apply in oil,
		oil-water, or water carrier in a spray volume of 10 to
Book Chroy (May place	11 1/2 pints/100	100 gallons per acre.
Basal Spray (May also be used in rangeland,	11-1/3 pints/100 gal	Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root
pastures, and	yai	collar at the ground line. Wetting stems with the
noncropland)	or	mixture may also aid in control.
Surface of Cut Stumps	1	Apply as soon as possible after cutting trees.
(May also be used in	1.75 fl oz/gal	Thoroughly soak the entire stump with the 2,4-D
rangeland, pastures,	of water	mixture including cut surface, bark and exposed
and noncropland)		roots.
Frill and Girdle		Cut frills (overlapping V-shaped notched cut
(May also be used in		downward through the bark in a continuous ring
rangeland, pastures,		around the base of the tree) using and axe or other suitable tool. Saturate the freshly cut frills with the
and noncropland)		2,4-D mixture.
Tree Injection	(1 to 1.4 ml per	To control and prevent resprouting of unwanted
Application	injection site)	hardwood trees such as elm, hickory, oak, and
(May also be used in		sweetgum in forests and other non-crop areas, apply
rangeland, pastures, and		by injecting at a rate of 1 ml of undiluted 88.8% 2,4-
noncropland)		D ESTER per inch of trunk diameter as measured at
		breast height (DBH), approximately 4 1/2 ft. above
		the ground. Injection sites, however, should be as
		close to the root collar as possible and the injection bit must penetrate the inner bark. Applications may
		be made throughout the year, but for best results
		apply between May 15 and October 15. Maples should
		not be treated during the spring sap flow.
		For hard to control species such as ash, maple, and
		dogwood use 1.4 ml of undiluted 88.8% 2,4-D ESTER
		per injection site or double the number of 0.7 ml
		injections.
		Note: No Worker Protection Standard workers
		entry restrictions or worker notification
	,	requirements apply when this product is directly
		injected into agricultural plants.

# Precautions:

- Do not allow sprays to contact conifer shoot growth (current year's new growth) or injury may occur.
- Do not apply to nursery seedbeds.
- For conifer release, do not use on plantations where pine or larch are among the desired species.

# FORESTRY RESTRICTIONS:

- Do not make more than one broadcast application per year.
- Do not apply more than 5-2/3 pints per acre per broadcast application.

Basal Spray Cut Surface – Stumps and Frill:

- Limited to one basal spray or cut surface application per year.
- Maximum of 8 lbs ae per 100 gallons of spray solution. Injection:
- Limited to one injection application per year.
- Maximum of 1.4 ml formulation per injection site.

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The DIRECTIONS FOR USE of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ALBAUGH, INC., its Supplemental Distributors, or the Seller. All such risks shall be assumed by the Buyer.

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