



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

19 MAY 2008

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Morris Gaskins
Albaugh Inc.
P.O. Box 2127
Valdosta, GA 31603

Subject: EPA Reg. No. 42750-19/ 2, 4-D Amine 4 Herbicide Label Amendment Response to
Restricted Use Classification

Dear Mr. Gaskins:

Per conversations with Joanne Miller (Product Manager 23) it is acceptable to remove the Restrictive Use Classification and language from the label. However, since your product contains Ornamental Turf uses (including lawns, pg. 15 & 16) you need to add "Intended for use by applicators who are authorized/licensed by the state for this type of application" on pg. 15 & 16, in order to prevent the use of the product by homeowners.

If you have any questions please call Erik Kraft at 703-308-9358.

Sincerely,

A handwritten signature in cursive script that reads "Joanne I. Miller".

Joanne I. Miller
Product Manager 23
Herbicide Branch
Registration Division (7505P)

2,4-D AMINE 4 HERBICIDE

For selective control of many broadcast weeds in certain crops, including, cereal grains (wheat, barley, millet, oats and rye), corn (field corn, popcorn and sweet corn), fallow land and crop stubble, orchard floors (apple, pear, stone fruit and nut), rice, sorghum (grain and forage sorghum), soybeans (preplant burndown application only); forests; rangeland and established grass pastures, including Conservation Reserve Program (CRP) acres; non-cropland; grasses grown for seed or sod, ornamental turf; and aquatic areas.

ACTIVE INGREDIENT:

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid*.....	46.8%
OTHER INGREDIENTS:	53.2%
TOTAL:	100.0%

*Equivalent to 38.9% of 2,4-dichlorophenoxyacetic acid or 3.8 lb./gal. Isomer specific by AOAC Method.

KEEP OUT OF REACH OF CHILDREN

DANGER - PELIGRO

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

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> 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.
IF SWALLOWED	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

See inside booklet for additional precautionary statements.

EPA Reg. No. 42750-19

EPA Est. No. 42750-MO-001

NET CONTENTS: _____ Gals.

Manufactured By:
Albaugh, Inc.
Ankeny, Iowa 50021

ACCEPTED
with **COMMENTS**
In EPA Letter Dated:
19 MAY 2008

FOR CHEMICAL SPILL, LEAK, FIRE, OR EXPOSURE CALL CHEMTREC (800) 424-9300

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

42750-19

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are butyl rubber, natural rubber, neoprene or nitrile rubber. If you want more options, follow the instructions for Category A 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 (except for pilots)
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.
5. Wear protective eyewear (goggles or face shield).

See engineering controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
 - Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
 - Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide may be 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.

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. 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."

Protect from freezing. If stored below freezing, the product must be warmed to at least 70°F and agitated before using. This does not affect the efficiency of the product.

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 >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. 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.

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.

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 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants,
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks,
- protective eyewear, and
- Chemical-resistant headgear for overhead exposure.

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.

Entry Restrictions for Non-WPS Uses: When this product is applied to rangeland and established pastures not harvested for hay or seed; non-cropland areas, ornamental turf not grown for sod or seed, and when

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applied by tree injection method only in forest sites, do not allow people (other than applicator) or pets on treatment area during application.

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

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 his 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 if permitted by this label.

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. This product contains dimethylamine salt of 2,4-D, one of the least volatile forms of 2,4-D.

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.

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

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. In a separate clean container, mix the amount of product to be used with an equal amount of water. Add the product mixture to the

spray tank while agitating. 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: Pre-mixing the product with an equal amount of water is important.

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 2,4-D AMINE 4. 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 2,4-D AMINE 4 (fl oz or ml) corresponding to the desired broadcast rate in 1 to 3 gallons of spray. To calculate the amount of 2,4-D AMINE 4 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 x 10.5 yards (strides) in size.

Rate Conversion Table for Spot Treatment:

Label Broadcast Rate (pt/acre)							
1/2	2/3	3/4	1	2	3	4	8
Equivalent Amount of 2,4-D AMINE 4 per 1000 sq ft							
1/5 fl oz [†] (5.5 ml)	1/4 fl oz (7.3 ml)	1/3 fl oz (8.3 ml)	3/8 fl oz (11 ml)	3/4 fl oz (22 ml)	1 fl oz (33 ml)	1 1/2 fl oz (44 ml)	3 fl oz (88 ml)

[†]Conversion factors: 1 pt – 16 fl oz; 1 fl oz = 29.6 (30) ml

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

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Band rate per treated acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per acre} = \text{Band volume per treated acre}$$

SPRAY DRIFT MANAGEMENT

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

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.

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.

WEEDS CONTROLLED

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
- jimsonweed
- 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

- mousetail ⁽²⁾
- 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, western ⁽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
- vetches

PERENNIAL WEEDS

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

- eveningprimrose, cutleaf ⁽²⁾
- garlic, wild
- goldenrod
- hawkweed, orange ⁽¹⁾
- healal
- ironweed, western ⁽²⁾
- ivy, ground ⁽¹⁾
- nettles (including stinging) ⁽¹⁾
- onion, wild ⁽¹⁾
- pennywort
- plantains
- ragwort, tansy ⁽¹⁾

clover, red ⁽¹⁾⁽²⁾
 coffeeweed
 cress, hoary ⁽¹⁾
 dandelion
 docks ⁽¹⁾
 dogbanes ⁽¹⁾

sowthistle, perennial
 thistle, Canada ⁽¹⁾⁽²⁾
 vervains ⁽¹⁾
 wormwood

⁽¹⁾ Difficult-to-Control Weeds: These weeds are 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)

CROP/APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Wheat, Barley, Millet, Rye Annual and biennial broadleaf weeds Perennial broadleaf weeds	 1/2 to 2 † 1 to 2 †	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.
Oats (Spring Seeded) (Fall Seeded Southern)	 1/2 3/4 to 1-1/2 †	Apply after crop is fully tilled, but before boot stage or growth (usually 4 to 8 inches tall) and weeds are small. Do not apply before tillering or from early boot through the milk stage of growth. Do not apply during or immediately following cold weather.
Preharvest application (all cereals)	1	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 2,4-D AMINE 4 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 2 pints per acre per application.
- Preharvest:
 - Make no more than one application per crop cycle.
 - Do not apply more than 1 pint per acre per application.
- Pre-Harvest Interval is 14 days.

2,4-D AMINE 4 contains 0.5 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)

General use precautions: Corn hybrids vary in tolerance to 2,4-D. Apply this product only to varieties known to be 2,4-D tolerant. Consult your seed company representative or local Agricultural Experiment Station or Extension Service Weed Specialist for information on 2,4-D tolerance of corn varieties. Application of this product may cause temporary stem brittleness in corn. To avoid stem breakage, delay cultivation for 8 to 10 days following application.

APPLICATION TIMING/ STAGE OF GROWTH	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preplant (Burndown) Preemergence (Field corn, popcorn, and sweet corn)	1 to 2	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	1/2 to 1 1 1	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 3	Apply after corn is in hard dough (or denting) stage. Do not apply preharvest to sweet corn.

CORN RESTRICTIONS:

- Preplant or Pre-emergence:
 - Make no more than one application per crop cycle.
 - Do not apply more than 2 pints per acre per application.
- Postemergence:
 - Make no more than one application per crop cycle.
 - Do not apply more than 1 pint per acre per application.

- Minimum spray interval between applications for sweet corn is 21 days.
- Preharvest (Field and Pop only):
 - Make no more than one application per crop cycle.
 - Do not apply more than 3 pints per acre per application.
- Do not use treated crop as fodder for 7 days following application.
- Corn (Field and Pop) Pre-Harvest Interval is 7 days.
- Corn (Sweet) Pre-Harvest Interval is 45 days.

2,4-D AMINE 4 contains 0.5 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 not exceed a combined total of 1.5 pounds of a.e. per acre for Sweet Corn.

RICE (Not for Use in California)

General Precautions: Rice varieties vary in tolerance to 2,4-D, or may be susceptible to injury under certain conditions or stages of growth. Consult your seed company representative or local Agricultural Experiment Station or Extension Service Weed Specialist for information on 2,4-D tolerance of rice varieties, including optimum rates and timing.

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preplant	1/2 to 2	Apply 2 to 4 weeks before planting rice to control emerged broadleaf weeds. Do not use in California.
Postemergence	1 to 2 [†]	Apply when rice is in late tillering stage and at the time of first joint development (first to second green ring.) Do not apply after panicle initiation, after rice internodes exceed one-half inch, at early seedling, early panicle or boot and heading stages.

[†] Application rates of 2 pt/acre may be applied to handle difficult weed control problems. However, do not use the 2 pt/acre rate unless possible crop injury is acceptable.

RICE RESTRICTIONS:

- Preplant:
 - Make no more than one application per crop cycle.
 - Do not apply more than 2 pints per acre per application.
- Postemergence:
 - Make no more than one application per crop cycle.
 - Do not apply more than 3 pints per acre per application.
- Pre-Harvest Interval is 60 days.

2,4-D AMINE 4 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 1.5 pounds of a.e. per crop cycle.

SORGHUM
(Grain Sorghum (Milo) and Forage Sorghum)

General Use Precautions: Temporary crop injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply 2,4-D AMINE 4 under these conditions, use no more than 2/3 pint per acre. Sorghum hybrids vary in 2,4-D tolerance. Apply only to varieties known to be

tolerant to 2,4-D. Consult your seed company representative or local agricultural experiment station or Estension Service Weed Specialist for information on 2,4-D tolerance of sorghum varities.

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

SORGHUM RESTRICTIONS:

- Do not apply more than 1-1/2 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.

2,4-D AMINE 4 contains 0.5 pounds a.e. of 2,4-D per pint. When tank mixing with products that contain 2,4-D ester, do not exceed a combined total of 1.0 pounds of a.e. per acre per year.

SOYBEANS

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

Important Notice: Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of such injury will depend on weather (temperatures and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is more likely to occur under cool rainy conditions and where there is less weed vegetation and crop residue present.

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preplant (Burndown)	3/4 to 1	Apply not less than 15 days before planting soybeans. when weeds are small and actively growing. See Use Precautions and Restrictions below.
	1 to 2	Apply not less than 30 days before planting soybeans. when weeds are small and actively growing. Use the higher rate on larger weeds and when perennials are present. See Use Precautions and Restrictions below.
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.		

Precautions:

- Do not apply prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield.
- Do not mow or cultivate weeds prior to treating with this product as poor control may result.

SOYBEAN (Preplant) RESTRICTIONS

- Pre-plant (2 application option):
 - Do not apply more than 1 pint per acre per preplant application.

- Do not apply within 15 days of planting soybeans.
- Pre-plant (single application option):
 - Do not apply more than 2 pints per acre.
 - Do not apply within 30 days of planting soybeans.
- Do not feed treated hay, forage, or fodder or graze treated soybeans to livestock.
- Do not feed or graze treated cover crops to livestock.
- Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D preplant use.

2,4-D AMINE 4 contains 0.5 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.

SUGARCANE

APPLICATION TIMING/ STAGE OF GROWTH	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Preemergence	3	Preemergence: Apply before cane emerges.
Postemergence	3 to 4	Postemergence: Apply after cane emergence through layby. Use higher rate for perennial weeds and difficult-to-control weeds.

SUGARCANE RESTRICTIONS:

- Pre-emergent Application:
 - Do not make more than one pre-emergence application per crop cycle.
 - Do not apply more than 4 pints per acre per application.
- Post-emergent Application:
 - Do not make more than one post-emergence application per crop cycle.
 - Do not apply more than 4 pints per acre per application.
- Do not harvest cane prior to crop maturity.

2,4-D AMINE 4 contains 0.5 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 crop cycle.

ORCHARD FLOOR

(Apples, Pears, Stone Fruit, Nut Orchards and Pistachios)

APPLICATION TIMING	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Postemergence		For application to orchard floors, use coarse, low-pressure sprays and sufficient water for thorough coverage of weeds.
Annual and biennial weeds	1 to 2	Apply to annual weeds when small and actively growing.
Perennial weeds	Up to 4	Apply to perennial weeds from bud to bloom stage.

General Use Precautions (To Avoid Tree Injury):

- Do not apply immediately before irrigation and withhold irrigation for 2 days before and 3 days after application.
- Do not allow spray drift to contact foliage, fruit, stems, trunks or trees or exposed roots.
- Because newly established trees or young orchards are more susceptible to 2,4-D injury, apply only to orchards that are at least one year old and well-established as indicated by vigorous plant growth.

- Do not apply during bloom.

ORCHARD FLOOR RESTRICTIONS:

- Preharvest Intervals:
 - Apples and Pears: Do not harvest for 14 days after application
 - Stone Fruit: Do not harvest for 40 days after application
 - Nut Orchards and Pistachios: Do not harvest for 60 days after application.
- Do not use on light sandy soil.
- Do not cut orchard floor forage for hay within 7 days after application.
- Do not make more than 2 applications per year
- Minimum spray interval between applications is 75 days.
- Do not apply more than 4 pt/acre of 2,4-D AMINE 4 per application

2,4-D AMINE 4 contains 0.5 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.

FALLOWLAND AND CROP STUBBLE

Fallowland is idle land, postharvest to crops or between crops.

TYPE OF WEEDS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds	1 to 2	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	2 to 4	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	2 to 4	Apply when perennial weeds are in bud to early bloom stage or while in good vegetative growth.
Wild garlic and onion in crop stubble	4	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

- Preharvest Interval: Do not cut forage or hay within 7 days of application.
- Make no more than two applications per year.
- Do not apply more than 4 pints per acre per application.
- Minimum spray interval between applications is 30 days
- Plant only labeled crops within 29 days following application.

2,4-D AMINE 4 contains 0.5 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.

TURF USES

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)	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Grasses Grown for Seed (Postemergence Use) Seedling grass (five-leaf stage or later) Well-established grasses	3/4 to 1 1 to 4	Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weed growth. Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are tolerant of higher rates.
Sod Farms (Postemergence)	1/2 to 4	Do not apply to grass in the early boot through milk stage if seed production is desired. 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 as a spot treatment.
- Do not use on injury-sensitive southern grasses such as St. Augustinegrass.
- 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 application, reseed in the spring.
- Use sufficient spray solution for thorough and uniform coverage, and no less than 2 gallons per acre.

GRASSES GROWN FOR SEED OR SOD FARM RESTRICTIONS:

- Do not apply more than 4 pints product (2.0 lbs ae) per acre per application.
- Do not make more than 2 applications per year (excluding spot treatments).
- Minimum spray interval between broadcast applications is 21 days.

2,4-D AMINE 4 contains 0.5 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.

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

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)	2,4-D AMINE 4 (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. Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeat applications. Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 2/3 pt/acre. Cool season grasses are tolerant of higher rates.
Seedling grass (five-leaf stage or later)	3/4 to 1	
Well-established grasses	2 to 3	
Biennial and perennial broadleaf weeds	3	

Precautions:

- Do not use on creeping grasses such as bentgrass except as a spot treatment.
- Do not use on injury-sensitive southern grasses such as St. Augustinegrass.
- 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 application, reseed in the spring.

ORNAMENTAL TURFGRASS RESTRICTIONS:

- Do not apply more than 3 pints per acre per application.
- Do not make more than 2 applications per year (excluding spot treatments).
- Minimum spray interval between broadcast applications is 30 days.

2,4-D AMINE 4 contains 0.5 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 excluding spot treatments.

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

TARGET WEEDS OR WOODY PLANTS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds	2	For best results, apply when weeds are small and 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 appear. Refer to the "Weeds Controlled" section for 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.
Biennial and perennial broadleaf weeds	2 to 4	
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate 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

TARGET WEEDS OR WOODY PLANTS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
		Treatment" and use of hand-held sprayers under "Application".
Tree Injection Application		See instructions for tree injection application in "Forestry Uses" section.
Wild garlic and wild onion	4	Make three applications (fall-spring-fall or spring-all-spring) starting in late fall or early spring.
Broadleaf weed control in newly sprigged coastal bermudagrass	2 to 4	Applications may be made either preemergence or postemergence. Follow "Specific Use Directions" for annual, biennial and perennial broadleaf weed control, above.
Sand shinnery oak Sand sagebrush	2	Sand shinnery oak: Apply by aircraft between May 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.
Big sagebrush Rabbitbrush	6	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.	4	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 Spot Treatment	up to 4 8 pts/100 gal of spray	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 8 pints of 2,4-D AMINE 4 plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two or more treatments may be required. Do not exceed 2 2/3 pt 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:

- Postemergence:
 - For susceptible annual and biennial broadleaf weeds: Use 1.0 lbs ae/acre per application.
 - For moderately susceptible biennial and perennial broadleaf weeds: Use 1.0 to 2.0 lbs ae/acre per application.

- For difficult to control weeds and woody plants: Use 2.0 lbs ae/acre per application.
- Spot treatment: Use 2.0 lbs ae/acre.
- 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 treated grass for hay within 7 days after application.
 - For government program grasslands, follow program grazing restrictions if more restrictive than those given above.
 - For program lands, such as Conservation Reserve Program, 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.
- Do not apply more than 4 pints per acre per application.
- Do not make more than 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.

2,4-D AMINE 4 contains 0.5 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.

NON-CROPLAND AREAS

Such as fencerows, hedgerows, roadsides, right-of-way, utility power lines, railroads, airports.

TREATMENT SITE/ APPLICATION METHOD	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual broadleaf weeds	2 to 4	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 to control perennial broadleaf weeds and woody species, tank mix up to 8 pints of 2,4-D AMINE 4 plus 1 to 4 qt of Triclopyr 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.
Biennial and perennial broadleaf weeds and susceptible woody plants	4 to 8	
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate 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

TREATMENT SITE/ APPLICATION METHOD	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Broadcast application	up to 8	per acre by ground equipment.
Spot Treatment	8 pts/100 gal of spray	Apply when foliage is well developed. Thorough coverage is required. Use 8 pints of 2,4-D AMINE 4 plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two or more 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.
- Use 2 or more gallons of spray solution per acre.

NON-CROPLAND RESTRICTIONS:

- Do not harvest forage or hay from treated areas for 7 days after application.
- Postemergence (annual & perennial weeds):
 - Do not make more than 2 applications per year.
 - Do not apply more than 4 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 8 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.

2,4-D AMINE 4 contains 0.5 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 METHOD OF APPLICATION	2,4-D AMINE 4	SPECIFIC USE DIRECTIONS
Annual Weeds	2 to 4 pt/acre	Apply when weeds are small and growing actively before the bud stage. Apply when biennial and perennial species are in the seedling to rosette stage and before flower stalks appear. For difficult to control perennial broadleaf weeds and woody species,
Biennial and perennial broadleaf weeds and susceptible woody plants	4 to 8 pt/acre	use up to 8 pt of 2,4-D AMINE 4 and 1 to 4 qt of Triclopyr 3A herbicide per acre. For conifer release, make application in early spring before budbreak of conifers when weeds are small and actively growing.
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the recommended broadcast rate and spray to

TREATMENT SITE METHOD OF APPLICATION	2,4-D AMINE 4	SPECIFIC USE DIRECTIONS
		thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application".
Conifer Release: Species such as white pine, ponderosa pine, jack pine, red pine, black spruce, white spruce, red spruce, and balsam fir	3 to 8 pt/acre	To control competing hardwood species such as alder, aspen, birch, hazel, and willow, apply from mild to late summer when growth of conifer trees has hardened off and woody plants are still actively growing. Apply with ground or air equipment, using sufficient spray volume to ensure complete coverage. Because this treatment may cause occasional conifer injury. Do not apply if such injury cannot be tolerated.
Directed Spray: Conifer plantations including pine	8 pt/100 gal	Apply when brush or weeds are actively growing by 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 100 gallons per acre.
Basal Spray (May also be used in rangeland, pastures, and noncropland)	17 pt/100 gal or 2.6 fl oz/gal of water	Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root collar at the ground line. Wetting stems with the mixture may also aid in control.
Surface of Cut Stumps (May also be used in rangeland, pastures, and noncropland)		Apply as soon as possible after cutting trees. Thoroughly soak the entire stump with the 2,4-D mixture including cut surface, bark and exposed roots.
Frill and Girdle (May also be used in rangeland, pastures, and noncropland)		Cut frills (overlapping V-shaped notched cut downward through the bark in a continuous ring around the base of the tree) using an axe or other suitable tool. Saturate the freshly cut frills with the 2,4-D mixture.
Tree Injection Application (May also be used in rangeland, pastures, and noncropland)	(1 to 2 ml per injection site)	To control and prevent resprouting of unwanted hardwood trees such as elm, hickory, oak, and sweetgum in forests and other non-crop areas, apply by injecting at a rate of 1 ml of undiluted 2,4-D AMINE 4 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 2 ml of undiluted 2,4-D AMINE 4 per injection site or double the number of 1 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:

- **Grazing and Haying Restrictions:** If grazing or haying is anticipated, do not apply more than 4 pt/acre of 2,4-D AMINE 4 per application. Do not harvest forage or hay from treated areas for 7 days after application.
- Do not make more than one broadcast application per year.
- For broadcast applications, do not apply more than 8 pt/acre of 2,4-D AMINE 4 per 12-month period.
- **Basal spray, Cut Surface – Stumps, and Frill:**
 - Limit of one basal spray or cut surface application per year.
 - Maximum of 8.0 lbs ae per 100 gallons of spray solution.
- **Injection:**
 - Limit to one injection application per year.
 - Maximum of 2.0 ml of 4.0 lbs ae formulation per injection site.

AQUATIC WEED CONTROL

Use in Ponds, Lakes, Reservoirs, Marshes, Bayous, Drainage Ditches, Canals, Rivers and Streams that are Quiescent or Slow Moving, Including Programs of the Tennessee Valley Authority.

Notice to Applicators: Before application, coordination and approval of local and state authorities may be required, either by letter or agreement or issuance of special permits for such use.

**EMERGENT AND FLOATING AQUATIC WEEDS:
Including Water hyacinth (Eichornia crassipe)**

Application Rate: 4 to 8 pt/acre

Specific Use Directions:

Application Timing:

Spray weed mass only. Apply when water hyacinth plants are actively growing. Repeat application as necessary to kill regrowth and plants missed in previous operation. Use 8 pt/acre rate when plants are mature or when weed mass is dense.

Surface Application:

Use power operated sprayers with boom or spray gun mounted on boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Use 100 to 400 gallons of spray mixture per acre. Special precautions such as use of low pressure, large nozzles and spray thickening agents should be taken to avoid spray drift to susceptible crops. Follow label directions for use of any drift control agent.

Aerial Application:

Use drift control spray equipment or thickening agent mixed in the spray mixture. Apply 8 pt of 2,4-D AMINE 4 per acre using standard boom systems using a minimum spray volume of 5 gallons per acre. For Microfoil® drift control spray systems, apply 2,4-D AMINE 4 in a total spray volume of 12 to 15 gallons per acre.

FLOATING AND EMERGENT WEEDS USE RESTRICTIONS:

- Maximum of 8 pints (4.0 lbs ae)/surface acre per application.
- Limited to 2 applications per season.
- Minimum of 21 days between applications.
- Spot treatments are permitted.
- Apply to emergent aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers, and streams that are quiescent or slow moving.
- Coordination and approval of local and state authorities may be required, either by letter or agreement or issuance of special permits for aquatic applications.

Water Use

1. Water for irrigation or sprays:

A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf, or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites anytime after the 2,4-D aquatic application.

B. Due to potential phytotoxicity considerations, the following restrictions are applicable: If treated water is intended to be used to irrigate or mix sprays for plants grown in commercial nurseries and greenhouses: and other plants or crops that are not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:

- i. A setback distance from functional water intake(s) of greater than or equal to 600 ft. was used for the application, or,
- ii. A waiting period of 7 days from the time of application has elapsed, or,
- iii. An approved assay indicates that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. Wait at least 3 days after application before initial sampling at water intake.

2. Drinking water (potable water):

A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits. The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

B. for floating and emergent weed applications, the drinking water setback distance from functioning potable water intakes is greater than or equal to 600 ft.

C. If not setback distance of greater than or equal to 600 ft. is used for application, applicators or the authorizing organization must provide a drinking water notification prior to a 2,4-D application to the party responsible for public water supply or to individual private water uses. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of the water use restrictions when this product is applied to potable water.

The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

Example:

Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting must include the day and time of application. Posting may be removed if analysis of a sample collected at the intake 3 or more days following application shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 7 days following application, whichever occurs first.

Text of notification: Wait 7 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested at least 3 days after application and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays). Application Date: _____ Time: _____

D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

- i. A setback distance from functional water intake(s) of greater than or equal to 600 ft. was used for the application, or,
- ii. A waiting period of at least 7 days from the time of application has elapsed, or,
- iii. An approved assay indicated that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than 3 days after 2,4-D application. Analysis of samples must be completed by a laboratory that is certified under the Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515,555, other methods for 2,4-D as may be listed in Title 40 CFR, Part 141.24. or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

E. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

3. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

SUBMERGED AQUATIC WEEDS: Including Eurasian Water Milfoil (*Myriophyllum spicatum*)

TREATMENT SITE	SPECIFIC USE DIRECTIONS
Aquatic Weed Control in Ponds, Lakes, Reservoirs, Marshes, Bayous, Drainage Ditches, Canals, Rivers and Streams That are Quiescent or slow moving, Including Programs of The Tennessee Valley Authority	<p>Application Timing: For best results, apply in spring or weed growth in areas heavily infested the previous year. A second application may be needed when weeds show signs of recovery, but no later than mid August in most area.</p> <p>Subsurface Application: Apply 2,4-D AMINE 4 undiluted directly to water through a boat mounted distribution system. Shoreline areas should be treated by subsurface injection application by boat to avoid aerial drift.</p> <p>Surface Application: Use power operated boat mounted boom sprayer. If rate is less than 5 gallons per acre, dilute to a minimum spray volume of 5 gallons per surface area.</p> <p>Aerial Application: Use drift control spray equipment or thickening</p>

TREATMENT SITE	SPECIFIC USE DIRECTIONS
	agents mixed with sprays to reduce drift. Apply through standard boom systems in a minimum spray volume of 5 gallons per surface acre. For Microfoil® drift control spray systems, apply 2,4-D AMINE 4 in a total spray volume of 12 to 15 gallons per acre. Apply to attain a concentration of 2 to 4 ppm (see table below.)

Dissolved Oxygen Ratios: Fish require oxygen dissolved in water for life processes and a favorable water-oxygen ration must be maintained. Decaying weeds use up dissolved oxygen in water. Fish kill resulting from decaying plant material can be prevented by:

1. Treating the entire area when the weed mass is sparse and the rate of decomposition will not be sufficient to disturb the water-oxygen ratio: or
2. If application is delayed until there is a dense weed mass, treat no more than one-half of a lake or pond at one time. For large bodies of weed-infested water, apply product in lanes, leaving buffers strips at least 100 feet wide which can be treated in 4 to 5 weeks or when vegetation in treated lanes has decomposed. During the growing season, decomposition of treated strips will usually occur in 2 to 3 weeks.

SUBMERSED AQUATIC WEEDS USE RESTRICTIONS:

- Do not treat areas that are not infested with aquatic weeds.
- Do not exceed 10.8 lb of acid equivalent per acre foot of treated water.
- Do not apply within 1500 ft of an active potable or irrigation water intake.
- Wind speed: Do not apply when wind speed is at or above 10 mph when making ground or surface applications. Do not aerially apply when wind speed is greater than 5 mph. Wind speed restrictions do not apply for subsurface applications used in submerged aquatic weed control programs.
- Irrigation: Unless an approved assay indicated that the 2,4-D concentration is 100 ppb (0.1 ppm) acid or less, do not use water from treated areas for;
 - 1) irrigation other than non-crop areas or those crops or plants labeled for direct application of 2,4-D; or
 - 2) mixing sprays for agricultural or ornamental plants.
- Potable Water: Unless an approved assay indicated that the 2,4-D concentration is 70 ppb (0.07 ppm) acid or less, do not use water from treated areas for potable water (drinking water).
- Other Uses of Treated Water: Except as stated above, there are no restrictions on use of water from treated areas for fishing, watering of livestock, or other domestic purposes.
- Minimum of 21 days between applications.
- Apply only to emergent aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers, and streams that are quiescent or slow moving.
- Coordination and approval of local and state authorities may be required, either by letter or agreement or issuance of special permits for aquatic applications.

Submersed Weeds

- Maximum of 22.7 pints (10.8 lbs ae)/per acre-foot per application.
- Limited to 2 applications per season.
- Apply to aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers, and streams that are quiescent or slow moving.
- Do not apply within 21 days of previous application.
- When treating moving bodies of water, applications must be made while traveling upstream to prevent concentration of 2,4-D downstream fro the application.

- Coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.

Table 1. Amount of 2,4-D to Apply for a Target Subsurface Concentration

Surface Area	Average Depth	For typical conditions – 2 ppm 2,4-D ae/acre-foot	For difficult conditions* - 4 ppm 2,4-D ae/acre-foot
1 acre	1 ft	5.4 lbs. (11.3 pints product)	10.8 lbs. (22.7 pints product)
	2 ft	10.8 lbs. (22.7 pints product)	21.6 lbs. (45.4 pints product)
	3 ft	16.2 lbs. (34.1 pints product)	32.4 lbs. (68.2 pints product)
	4 ft	21.6 lbs. (45.4 pints product)	43.2 lbs. (90.0 pints product)
	5 ft	27.0 lbs. (56.8 pints product)	54.0 lbs. (113.6 pints product)
* Examples include spot treatment of pioneer colonies of Eurasian Water Milfoil and certain difficult to control aquatic species.			

Water Use:

1. Water for irrigation or sprays:

A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf, or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites at anytime after the 2,4-D aquatic application.

B. Due to potential phytotoxicity and/or residue considerations, the following restrictions are applicable:

If treated water is intended to be used to irrigate or mix sprays for unlabeled crops, noncrop areas or other plants not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:

- i. A setback distance described in the Drinking Water Setback Table was used for the application, or,
- ii. A waiting period of 21 days from the time of application has elapsed, or,
- iii. An approved assay indicated that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. See Table 3 for the waiting period after application but before taking the initial sampling at water intake.

2. Drinking water (potable water):

A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

B. For submersed weed applications, the drinking water setback distances from functioning potable water intakes are provided in Table 2. Drinking Water Setback Distance (below).

C. If not setback distance from the Drinking Water Setback Table (Table 2) is to be used for the application, applicators or the authorizing organization must provide a drinking water notification and an advisory to shut off all potable water intakes prior to a 2,4-D application. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of the water use restrictions when this product is applied to potable water. The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as condition of a permit.

Example:

Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting should include the day and time of application. Posting may be removed if analysis of a sample collected at the intake no sooner than stated in Table 3 (below) shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 21 days following application, whichever occurs first.

Text of notification: Wait 21 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested no sooner than (insert days from Table 3) and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays).

Application Date: _____ Time _____

D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

- i. A setback distance described in the Drinking Water Setback Distance Table was used for the application, or,
- ii. A waiting period of at least 21 days from the time of application has elapsed, or,
- iii. An approved assay indicates that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than stated in Table 3. Analysis of samples must be completed by a laboratory that is certified under the Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515,555, other methods for 2,4-D as may be listed in Title 40 CFR, Part 141.24, or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

E. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

3. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes."

Table 2. Drinking Water Setback Distance for Submersed Weed Application

Application Rate and Minimum Setback Distance (feet)
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From Functioning Potable Water Intake			
1 ppm*	2 ppm*	3 ppm*	4ppm*
600	1200	1800	2400
* ppm acid equivalent target water concentration			

Table 3. Sampling for Drinking Water Analysis After 2,4-D Application for Submersed Weed Applications

Minimum Days After Application Before Initial Water Sampling at the Functioning Potable Water Intake			
1 ppm*	2 ppm*	3 ppm*	4 ppm*
5	10	10	14
* ppm acid equivalent target water concentration			

BANKS OF IRRIGATION CANALS AND DITCHES

TARGET PANTS	2,4-D AMINE 4 (pt/acre)	SPECIFIC USE DIRECTIONS
Annual Weeds	2 to 4	<p>Apply using low pressure spray (10 to 40 psi) in a spray volume of 20 to 100 gallons per acre using power operated spray equipment. Apply when wind speed is low, 5 mph or less. Apply working upstream to avoid accidental concentration of spray into water. Cross-stream spraying to opposite banks is not permitted and avoid boom spraying over water surface. When spraying shoreline weeds, allow no more than 2 foot overspray onto water surface with an average of less than 1 foot of overspray to prevent significant water contamination. Apply when weeds are small and growing actively before the bud stage. Apply when biennial and perennial species are in the seedling to rosette stage and before flowering stalks appear. For hard-to-control weeds, a repeat application after 30 days at the same rate may be needed.</p> <p>For woody species and patches of perennial weeds, mix 2/3 gallon (5-1/3 pt) of 2,4-D AMINE 4 per 64 to 150 gallons of total spray. Wet foliage by apply about 3 to 4 gallons of spray per 1000 sq ft (10.5 x 10.5 steps).</p>
Biennial and perennial broadleaf weeds and susceptible wood plants	4	

DITCHBANK APPLICATION RESTRICTIONS

- Postemergence:
 - Limited to 2 applications per season.
 - Maximum of 4 pt/acre per application.
 - Minimum of 30 days between applications.
- Spot treatment permitted.
- Do not apply more than 8 pt/acre per year.
- Do not use on small canals with a flow rate less than 10 cubic feet per second (CFS) where water will be used for drinking purposes. CFS may be estimated by using the formula below. The approximate velocity needed for the calculation can be determined by observing the length of time that it takes a floating object to travel a defined distance. Divide the distance (ft.) by the time (sec.) to estimate velocity (ft. per sec.). Repeat 3 times and use the average to calculate CFS.

Average Width (ft.) x Average Depth (ft.) x Average Velocity (ft. per sec.) = CFS

- For ditchbank weeds:
 - Do not allow boom spray to be directed onto water surfaces.
 - Do not spray across stream to opposite bank.
- For shoreline weeds:
 - Allow no more than 2 foot overspray onto water.

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