



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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Daniel J. Erasmus, Ph.D.  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268-1054

OCT 13 2000

Dear Dr. Erasmus:

Subject: DMA\* 4

EPA Registration No. 62719-3

Application and Letter Dated September 22, 2000, Request To Amend Registration To: Revise the First Aid Statements To Comply with EPA PR Notice 2000-3, Revise the Environmental Hazards Statements by Adding the Phrase "For Terrestrial Uses..", Add the Phrase "Non-agricultural Use Requirements" Section Where Applicable, General Use Precautions (Edited and Reformatted for Clarity), Added New Crop Uses (Millet, Orchard Floors for Pome Fruit Including Apples, Pears, Stone Fruit, Nuts, and Pistachios, Forage Sorghum; and Use Rates, PHIs Where Appropriate, and Adjusted Use Rates in Accordance with Latest Residue Studies, Added CRP acres to Rangeland and Pastures, Added Forest Site Preparation, Conifer Release, Directed Spray and Cut Surface Treatments and Aquatic Uses. These Amendments Were More Fully Described in Your Letter.

The subject proposed labeling amendments for the pesticide product, DMA\* 4, have been reviewed and found to be acceptable under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended, provided that you:

1. Revise the table of dosages on page 26 by adding a fourth column with the heading "Gallons of DMA\* 4" and give fractions of gallons in units of one hundredth of a gallon, e.g., 1.42 gallons for the 5.4 lbs. of acid equivalent.
2. Revise the labeling to give accurate translations of lb./lbs. acid equivalent for doses of DMA\*. The expression should be in hundredths; e.g., 6.0 pts. of DMA\* 4 (2.85 lbs. acid equivalent). Use the plural of pts. and lbs. if more than one.
3. Submit one (1) copy of the final printed label prior to your shipment of the subject pesticide product under the enclosed stamped label.

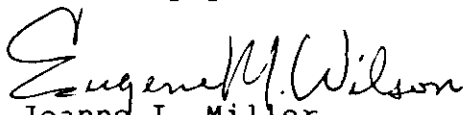
If these conditions are not complied with, this registration will be subject to cancellation in accordance with FIFRA, section

-2-

6(e). Your release for shipment of this product under the subject labeling constitutes acceptance of these conditions.

A stamped copy of the proposed labels is enclosed for your records.

Sincerely yours,

*for*   
Joanne I. Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

3 7 29

(Base Label):

00XXXXXX

[Insert 2-Point Black Line]

(Logo) Dow AgroSciences LLC

# DMA\* 4

Contains Dimethylamine Salt of 2,4-D†

For selective control of many broadleaf weeds in certain crops, orchard floors, fallow cropland, forests, grass pastures, rangeland, Conservation Reserve Program acres, ornamental turf (including turf grown for sod or seed), non-cropland and aquatic areas. Also for Control of Trees by Injection.

**Active Ingredient:**

2,4-Dichlorophenoxyacetic acid, dimethylamine salt †	46.3%
Inert Ingredients	53.7%
Total Ingredients	100.0%

2,4-dichlorophenoxyacetic acid †† - 38.4% - 3.8 lb/gal  
 †† Isomer Specific by AOAC Method No. 978.05 (15th Edition)

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated**

OCT 13 2000

**Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
62719-3**

† Salts are the least volatile forms of 2,4-D and do not release enough vapors from treated areas to reduce yield of adjacent susceptible crops.

**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 the label, find someone to explain it to you in detail.)

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Corrosive • Causes Irreversible Eye Damage • Harmful If Swallowed, Inhaled or Absorbed Through The Skin.**

**Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.**

#### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear
- **Note: For containers of over 1 gallon, but less than 5 gallons:** Mixer and loaders who do not use a mechanical system (such as probe and pump or spigot) to transfer the contents of this container must wear coveralls or chemical-resistant apron in addition to other required PPE.

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, 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

**For containers of 5 gallons or more:** A mechanical system (such as probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 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.

### First Aid

**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.

**If on skin or clothing:** 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 swallowed:** 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 inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

### Environmental Hazards

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. For terrestrial uses, do not apply directly to water, to areas where surface water is present, or to intertidal area below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

**Mixing and Loading:** 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 and transferring this pesticide will reduce the probability of spills. Placement of the

5 7 29

mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

**Agricultural Use Requirements**  
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

**Notice:** Read the entire label. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at [www.dowagro.com](http://www.dowagro.com).

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-3

XX XX

EPA Est. \_\_\_\_\_

Superscripts correspond to places 7 & 8 of lot number  
900-000000 / 00000000

\*Trademark of Dow AgroSciences LLC  
Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

[Insert 2-Point Black Line]

# Herbicide

Net Contents \_\_ gal

[Insert Bar Code FPO]

[Insert DOT shipping classification and diamond(s)]

Lot

6 7 29

(Label Booklet):

(Logo) Dow AgroSciences LLC

# DMA\* 4

**Contains Dimethylamine Salt of 2,4-D†**

**For selective control of many broadleaf weeds in certain crops, orchard floors, fallow cropland, forests, grass pastures, rangeland, Conservation Reserve Program acres, ornamental turf (including turf grown for sod or seed), non-cropland and aquatic areas. Also for Control of Trees by Injection.**

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### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for additional precautionary information including Personal Protective Equipment (PPE), User Safety Recommendations and Directions for Use, including Storage and Disposal.**

**Notice:** Read the entire label. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.**

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XX XX

EPA Est. \_\_\_\_\_

Superscripts correspond to places 7 & 8 of lot number

900-000000 / 00000000

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Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

## Herbicide

Net Contents \_\_ gal

(Page 1 through end):

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## Precautionary Statements

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- Shoes plus socks
- Protective eyewear
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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, 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

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Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

### **Environmental Hazards**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. For terrestrial uses, do not apply directly to water, to areas where surface water is present, or to intertidal area below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

**Mixing and Loading:** 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 and transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

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### **Directions for Use**

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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.

### **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
- Waterproof gloves
- Shoes plus socks
- 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.

**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, when applied by tree injection method only in forest sites, and when applied in aquatic areas, do not allow people (other than applicator) or pets on treatment area during application. Do not enter into treated areas until sprays have dried.

### Storage and Disposal

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

**Storage:** Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and mixed thoroughly before using.

**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 (Metal):** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Container Disposal (Plastic containers 5-gals or less):** Triple rinse (or equivalent). Then dispose of in a sanitary landfill, or by incineration, or, if allowed by local authorities, by burning. If burned stay out of smoke.

**General:** Consult federal, state, or local disposal authorities for approved alternative procedures.

### General Information

DMA\* 4 herbicide is intended for selective control of many broadleaf weeds in certain crops (cereal grains, corn, grain sorghum, soybeans and sugarcane), orchard floors (pome fruit, including apples and pears, stone fruit, nut orchards and pistachios), fallow cropland, forests, grass pastures, rangeland, Conservation Reserve Program acres, ornamental turf (including turf grown for sod or seed), non-cropland and aquatic areas.

Apply DMA 4 as a water or oil-water spray during warm weather when target weeds or woody plants are actively growing. Application under drought conditions will often give poor results. Use low spray pressure to minimize drift. Generally, the lower dosages recommended on this label will be satisfactory for young, succulent growth of susceptible weed species. For less susceptible species and under conditions where control is more difficult, use higher recommended rates. Deep-rooted perennial weeds such as Canada thistle and field bindweed and many woody plants usually require repeated applications for satisfactory control. Consult your State Agricultural Experiment stations or Extension Service Weed Specialists for recommendations from this label that best fit local conditions.

### General Use Precautions and Restrictions

Be sure that use of DMA 4 conforms to all application regulations.

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

Excessive amounts of 2,4-D in the soil may temporarily inhibit seed germination of plant growth.

## Avoiding Injury to Non-target Plants

Spray drift produced during application is the responsibility of the applicator and care should be taken to minimize off-target movement of spray during application. A drift control agent suitable for agricultural use may be used with this product to aid in reducing spray drift. If used, follow all use recommendations and precautions on the product label.

**Do not apply where drift may be a problem due to proximity to susceptible crops or other desirable broadleaf plants.** Do not apply DMA 4 Herbicide directly to, or otherwise permit contact with cotton, flowers, fruit trees, grapes, ornamentals, vegetables, or other desirable plants which are susceptible to 2,4-D herbicides. Do not permit spray mist containing 2,4-D to contact susceptible plants since even very small quantities of the spray, which may not be visible, can cause severe injury during both active growth or dormant periods. Do not use in greenhouses.

**Avoid Movement of Treated Soil:** Avoid conditions under which soil from treated areas may be moved or blown to areas containing susceptible plants. Wind-blown dust containing 2,4-D may produce visible symptoms when deposited on susceptible plants, however, serious plant injury is unlikely. To minimize potential movement of 2,4-D on wind-blown dust, avoid treatment of powdery dry or light sandy soils until soil is settled by rainfall or irrigation or irrigate soon after application.

Do not store or handle other agricultural chemicals with the same containers used for DMA 4. Do not apply other agricultural chemicals or pesticides with equipment used to apply DMA 4 unless equipment has been thoroughly cleaned to remove all traces of 2,4-D.

## Spray Drift Management (Aerial Application)

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

In certain states, additional regulations may be applicable to aerial application of this product.

The applicator should be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory Information section.

### Aerial Spray Drift Advisory Information

**Importance of Droplet Size:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion section of this label).

### Controlling Droplet Size:

- **Volume-**Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows product larger droplets.

- **Pressure**-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles**-Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation**-Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type**-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom Length**-For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application**-Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

**Temperature and Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Applications should not occur during a low level temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas:** The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

## Mixing

Mix DMA 4 Herbicide only with water, unless otherwise directed on this label. Add about half the water to the mixing tank, then add the DMA 4 with agitation, and finally the rest of the water with continuing agitation.

**Note:** Adding oil, wetting agent, or other surfactant to the spray mixture may increase effectiveness on weeds, but also may reduce selectivity to crops resulting in crop damage.

**Tank Mixing:** When tank mixing, read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, and geographic and other restrictions. Use in accordance with the most restrictive of label limitations and precautions. No label dosages should be exceeded. Do not tank mix this product with any product containing a label prohibition against tank mixing with 2,4-D.

**Tank Mix Compatibility Testing:** A jar test is recommended prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

#### **Mixing with Liquid Nitrogen Fertilizer**

This product may be combined with liquid nitrogen fertilizer suitable for foliar application to accomplish broadleaf weed control and fertilization of corn, small grains or pastures in a single operation. Use DMA 4 in accordance with recommendations for these crops provided in this label. Use liquid fertilizer at rates recommended by the supplier or Extension Service Specialist. Test for mixing compatibility as describe above before mixing in spray tank. A compatibility aid such as Unite or Compex may be needed in some situations. Compatibility is best with liquid fertilizer solutions containing only nitrogen. Mixing with N-P-K solutions may not be satisfactory, even with the addition of a compatibility aid. Pre-mixing 1 part DMA 4 with up to 4 parts water may help in situations when mixing difficulty occurs.

Fill the tank about half full with the liquid fertilizer, then add the required amount of DMA 4 with agitation.. Maintain agitation and complete filling the tank with liquid fertilizer. Apply immediately and continue agitation in spray tank during application. **Do not store the spray mixture.** Application during very cold weather (near freezing) is not advisable.

#### **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 qt of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 min). Let the solution 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 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.

#### **Application**

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, use a spray volume of 3 or more gallons per acre by air and 10 or more gallons per acre for ground equipment. Where states have regulations which specify minimum spray volumes, they should be observed. In general,

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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 3 gallons total spray volume per acre.**

**Rate Ranges and Application Timing**

Generally, the lower dosages given will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species and under conditions where control is more difficult, the higher dosages will be needed. Apply DMA 4 during warm weather when weeds are young and actively growing.

**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 DMA 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 DMA 4 (fl oz or ml) corresponding to the desired broadcast rate in 1 to 3 gallons of spray. To calculate the amount of DMA 4 IVM 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 DMA 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 fl oz = 29.6 (30) ml

**Band Application:** DMA 4 may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per treated acre.

Band width in inches

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

Band width in inches

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

**Weeds Controlled**

**Annual or Biennial Weeds**

- |                            |                                |
|----------------------------|--------------------------------|
| Beggarticks †              | mousetail                      |
| Bittercress, smallflowered | mustards (except blue mustard) |
| bitterweed                 |                                |
| broomweed, common †        | parsnip, wild                  |
| burdock, common            | Pennycress, field              |
| buttercup, smallflowered † | Pepperweed †                   |
| carpetweed                 | pigweeds (Amaranthus spp.) †   |
| cinquefoil, common         | poorjoe                        |
| cinquefoil, rough          | primrose, common               |
| cocklebur, common          | purslane, common               |

coffeeweed	pusley, Florida
copperleaf, Virginia	radish, wild
croton, Texas	ragweed, common
croton, woolly	ragweed, giant
flixweed	rape, wild
galinsoga	rocket, yellow
geranium, Carolina	salsify, common †
hemp, wild	salsify, western †
horseweed (marestail)	shepherdspurse
jewelweed	sicklepod
jimsonweed	smartweed (annual species) †
knotweed †	sneezeweed, bitter
kochia	sowthistle, annual
lambsquarters, common	sowthistle, spiny
lettuce, prickly †	spanishneedles
lettuce, wild	sunflower
lupines	sweetclover
mallow, little †	tansymustard
mallow, Venice †	thistle, bull
marshelder	thistle, musk †
morningglory, annual	thistle, Russian (tumbleweed) †
morningglory, ivy	velvetleaf
morningglory, woolly	vetches

#### Perennial Weeds

Alfaifa †	eveningprimrose, cutleaf
artichoke, Jerusalem †	garlic, wild †
aster, many-flower †	hawkweed, orange †
Austrian fieldcress †	healal
bindweed (hedge, field and European) †	ironweed, western
blue lettuce	ivy, ground †
blueweed, Texas	Jerusalem-artichoke
broomweed	loco, bigbend
bullnettle †	nettles (including stinging) †
carrot, wild †	onion, wild †
catnip	pennywort
chicory	plantains
clover, red †	ragwort, tansy †
coffeeweed	sowthistle, perennial
cress, hoary †	thistle, Canada †
dandelion †	vervains †
docks †	waterplantain
dogbanes †	wormwood
goldenrod	

† These weeds are only partially controlled and may require repeat applications and/or use of higher recommended rates of this product even under ideal conditions of application.

### Specific Use Directions

**Agricultural Use Requirements for Crops:** For the following crop uses, follow PPE and Re-entry instructions in the "Agricultural Use Requirements" section of this label.

#### Cereal Grains (Wheat, Barley Millet, Oats, and Rye)

Crop/Application Timing	DMA 4 (pt/acre)	Specific Use Directions
<b>Spring post-emergence</b> (wheat, barley, millet, rye) (oats)	2/3 - 1 1/3 1/2 - 1	<p><b>General:</b> Apply when weeds are small and actively growing. Use the lower rate in the rate range for small rapidly growing annual or biennial weeds and a higher rate for perennial weeds or for annual or biennial weeds in advanced growth stages or when growing conditions are less than ideal.</p> <p><b>Postemergence:</b> Apply after crop begins to tiller, but before boot stage of growth (usually 4 to 8 inches tall).</p> <p><b>Preharvest:</b> Apply using air or ground equipment when crop is in dough stage of grain development to control or suppress weeds that might interfere with harvest.</p>
<b>Pre-harvest (dough stage)</b> (all cereals)	1	

#### Precautions:

- Up to 2.5 pt/acre may be applied postemergence to wheat, barley, rye and millet. However, there is greater risk of crop injury at rates greater than 1 1/3 pt/acre and such rates should be used only when the need for weed control justifies additional risk to the crop.
- **Do not apply DMA 4 at the crop seedling stage of growth prior to tillering or from early boot through milk stage of grain development.** Consult state agricultural experiment station or extension service weed specialists for recommendations or suggestions to fit local conditions.
- Do not apply if crop is underseeded with legumes.

#### Restrictions:

- **Preharvest interval:** Do not harvest for grain for 14 days after application or allow grazing or harvest as forage within 7 days after application.
- Do not apply more than 3.5 pt/acre of DMA 4 (1.75 lb acid equivalent) per use season.

#### Corn (Field Corn, Popcorn and Sweet Corn)

Application Timing/ Stage of Growth	DMA 4 (pt/acre)	Specific Use Directions
<b>Preplant (Burndown)</b> <b>Preemergence</b> (Field corn, popcorn, and sweet corn)	1 to 2	<p><b>General:</b> Use high rate in rate range for less susceptible weeds or cover crops, weeds in advanced stages of development, or under less favorable growth conditions.</p> <p><b>Preplant:</b> Apply 7 to 14 days before planting corn to control emerged broadleaf weed seedlings or</p>



		exiting cover crops. <b>Preemergence:</b> Apply any time after planting, but before corn emerges to control broadleaf weed seedlings or existing cover crops.
<b>Postemergence</b> (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 crop canopy). If corn is more than 8 inches tall, use drop nozzles and directed sprays to keep spray off foliage. Treat perennial weeds when they are in bud to bloom stage. <b>Do not apply from tasseling to hard dough stage.</b>
<b>Preharvest</b> (Field corn and popcorn only)	up to 3	Apply after corn is in hard dough (or denting) stage. <b>Do not apply preharvest to sweet corn.</b>

**Precautions:**

- Preplant or preemergence applications to light sandy soils 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.

**Restrictions (Field Corn and Popcorn):**

- **Preharvest interval:** Do not harvest for grain or fodder within 7 days after application.
- Do not apply more than 6.0 pt/acre of DMA 4 (3 lb acid equivalent) per use season.

**Restrictions (Sweet Corn):**

- **Preharvest interval:** Do not harvest ears within 45 days after application.
- Do not make a postemergence application any less than 21 days after a prior application.
- Do not apply more than 3.0 pt/acre of DMA 4 (1.5 lb acid equivalent) per use season.

**Fallow Land and Crop Stubble**

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

Type of Weeds	DMA 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 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	4	Apply to new regrowth of wild garlic or onion which

crop stubble		occurs in the fall after harvest of small grains, corn or grain sorghum.
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**Precaution:** For best weed control results, do not cultivate for at least 2 weeks after application or until top growth is dead.

**Restrictions:**

- **Preharvest interval:** Do not cut forage for hay within 7 days of application.
- Do not apply within 30 days of a previous application.
- Do not apply more than 4.0 pt/acre of DMA 4 (2.0 lb acid equivalent) per use season.

**Planting in Treated Areas**

**Labeled Crops:** Within 29 days after an application of this product, plant only those crops listed on this or other registered 2,4-D labels. Follow more stringent limitations, if any, provided in directions for specific crops. Labeled crops may be at risk of crop injury or loss if planted soon after application, especially during the first 14 days. Degradation factors described below should be considered in weighing this risk.

**Other Crops:** All other crops may be planted 30 or more days after application without concern for illegal residues in the planted crop. However, under certain conditions, there may be a risk of injury to susceptible crops. Degradation factors described below should be considered in weighing this risk. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.

**Degradation Factors:** When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid breakdown of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application. Consult your local agricultural extension service or information about susceptible crops and typical conditions in your area.

**Orchard Floors**

**(Pome Fruit such as Apples and Pears, Stone Fruit, Nut Orchards and Pistachios)**

Application Timing	DMA 4 (pt/acre)	Specific Use Directions
Postemergence annual and biennial weeds perennial weeds	1 - 2 up to 4	For application to orchard floors, use coarse, low pressure sprays and sufficient water for thorough coverage of weeds. Apply to annual weeds when small and actively growing. Apply to perennial weeds from bud to bloom stage.

**Precautions**

- To avoid tree injury, do not allow spray drift to contact foliage, fruit, stems, trunks or trees or exposed roots.
- Do not apply when orchards are blooming.
- Do not make orchard floor applications in areas with light sandy soils.
- Avoid application immediately before irrigation and withhold irrigation for 2 days before and 3 days after application.
- Newly established trees or young orchards are more susceptible to 2,4-D injury. Apply only to orchards that have been established for at least one year and are in vigorous growth condition.

**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 cut forage or hay within 7 days after application.
- Do not make more than 2 applications per year and allow at least 75 days between applications.
- Do not apply more than 8.0 pt/acre of DMA 4 (4.0 lb acid equivalent) per use season.

**Rice (Not for Use in California)**

Application Timing	DMA 4 (pt/acre)	Specific Use Directions
Preplant	1 to 2	Apply 2 to 4 weeks before planting rice to control emerged broadleaf weeds.
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).

† Up to 3 pt/acre may be applied postemergence for difficult weed control situations. However, there is greater risk of crop injury at rates greater than 2 pt/acre and such rates should be used only when the need for weed control justifies additional risk to the crop.

**Precautions:**

- Do not apply at early seedling stage or after rice internodes exceed one-half inch or panicle initiation.
- Some rice varieties under certain conditions or stages of growth may be injured by 2,4-D. Before applying, consult local university or agricultural extension service specialists regarding for local treatment recommendations for various rice varieties.

**Restrictions:**

- **Preharvest interval:** Do not apply within 60 days of harvest.
- Do not apply more than 1.5 lb acid equivalent (3 pt of DMA 4) per use season.

**Sorghum [Grain Sorghum (Milo) and Forage Sorghum]**

Application Timing/ Stage of Growth	DMA 4 (pt/acre)	Specific Use Directions
Postemergence † Crop 6 - 8 inches tall Crop 8 - 15 inches tall (directed spray only)	1/2 to 1 3/4 to 1	Apply when sorghum is 6 to 15 inches tall. If sorghum more than 8 inches tall (to top of crop canopy), use drop nozzles and apply as a directed spray to keep spray off foliage.

**Precautions:**

- **Note:** Temporary crop injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply DMA 4 Herbicide under these conditions, use no more than 2/3 pint per acre.
- **Do not apply during boot, or later stages of growth.**
- 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.

**Restrictions:**

- **Preharvest Interval:** Do not harvest grain for 30 days after application.

- Do not permit meat or dairy animals to consume treated crop as fodder or forage within 30 days after application.
- Do not apply more than 2.0 pt/acre of DMA 4 (1.0 lb acid equivalent) per use season.

### Soybeans (Preplant Burndown Only)

Application Timing	DMA 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. Use the higher rate on larger weeds and when perennials are present. <b>See Use Precautions and Restrictions below.</b>
	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. <b>See Use Precautions and Restrictions below.</b>
Crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixtures of DMA 4 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. Refer to the "Mixing" section for instructions for tank mixing and compatibility testing.		

#### Use Precautions and Restrictions:

- **Important Notice:** Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of such injury will depend on weather (temperature and rainfall) from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.
- Do not disturb treated soil through tillage between application and planting of soybeans.
- Do not use on sandy soils with less than 1.0% organic matter.
- In treated fields, plant soybean seed as deep as practical, but not less than 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is adequately covered.
- Do not make more than one application per season regardless of the application rate used.
- Do not allow livestock grazing or harvest hay, forage, or fodder from treated fields. Livestock should be restricted from feeding/grazing of treated cover crops.
- **Do not apply DMA 4 as a preplant application in soybeans unless you are prepared to accept the results of soybean injury, including possible stand loss and/or yield reduction.**
- During the growing season following application, do not replant treated fields with crops other than those labeled for use with DMA 4.
- Do not apply more than 2 pt/acre of DMA 4 (1.0 lb acid equivalent) per use season.

## Sugarcane

Application Timing/ Stage of Growth	DMA 4 (pt/acre)	Specific Use Directions
Preemergence  Postemergence	2 to 4	<p><b>General:</b> Consult your agricultural experiment station or extension service weed specialist local recommendations.</p> <p><b>Preemergence:</b> Apply before cane emerges to actively growing weeds.</p> <p><b>Postemergence:</b> Apply after cane emerges through canopy closure. Use higher rate for perennial weeds and difficult-to-control species.</p>

**Restriction:** Do not apply more than 8.0 pt/acre of DMA 4 (4.0 lb acid equivalent) per use season.

## Forestry, Rangeland, Established Pasture, and Non-cropland, Uses

**Agricultural Use Requirements for Forest Use (Except Tree Injection Use):** For use in forests, follow PPE and Reentry instructions in the "Agricultural Use Requirements" section under the "Directions for Use" heading of this label.

**Agricultural Use Requirements for Rangeland, Pasture, Forest (Tree Injection Only) and Non-cropland Areas:** When this product is applied to rangeland and established pastures not harvested for hay or seed; non-cropland areas, and when applied by tree injection in forest sites, follow reentry requirements given in the "Non-Agricultural Use Requirements" section under the "Directions for Use" heading of this label.

## Forestry Uses

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

Treatment Site Method of Application	DMA 4	Specific Use Directions
Annual Weeds	2 to 4 pt/acre	<p>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, use up to 1 gallon DMA 4 Herbicide and 1 to 4 qt. Garlon* 3A herbicide per acre.</p> <p>For conifer release, make application in early spring before budbreak of conifers when weeds are small and actively growing.</p>
Biennial and perennial broadleaf weeds and susceptible woody plants	4 to 8 pt/acre	
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	<p><b>Note:</b> To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to 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".</p>

<b>Conifer Release:</b> Species such as white pine, ponderosa pine, jack pine, red pine, black spruce, white spruce, red spruce, and balsam fir	1 ½ to 3 qt/acre	To control competing hardwood species such as alder, aspen, birch, hazel, and willow, apply from mid 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.
<b>Directed Spray:</b> Conifer plantations including pine	4 qt/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.
<b>Basal Spray (May also be used in rangeland, pastures, and noncropland)</b>	8 qt/100 gal or	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.
<b>Surface of Cut Stumps (May also be used in rangeland, pastures, and noncropland)</b>	2.6 fl oz/gal of water	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.
<b>Frill and Girdle (May also be used in rangeland, pastures, and noncropland)</b>		Cut frills (overlapping V-shaped notches cut downward through the bark in a continuous ring around the base of the tree) using an axe or other suitable tool. Treat freshly cut frills with as much of the 2,4-D mixture as they will hold.
<b>Tree Injection Application (May also be used in rangeland, pastures, and noncropland)</b>	(1 to 2 ml per injection site)	To control 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 DMA 4 per inch of trunk diameter at breast height (DBH) as measured approximately 4 1/2 ft above the ground. For hard to control species such as ash, maple, and dogwood use 2 ml of undiluted DMA 4 per injection site or double the number of 1 ml injections. Make applications 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.  <b>Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.</b>

**Precautions and Restrictions:**

- Do not allow sprays to contact conifer shoot growth (current year's new growth) or injury may occur.
- Do not apply to nursery seed beds.
- For conifer release, do not use on plantations where pine or larch are among the desired species.
- For broadcast applications, do not apply more than 8.0 pt/acre of DMA 4 (4.0 lb acid equivalent) per 12 month period.

**Rangeland, Established Grass Pastures (Including Perennial Grasslands Not In Agricultural Production Such As Conservation Reserve Program Acres)**

Target Weeds or Woody Plants	DMA 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"	<b>Note:</b> 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 application in "Forestry Uses" section.
Wild garlic and wild onion	4	Make three applications (fall-spring-fall or spring-fall-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 Us Directions" for annual, biennial and perennial broadleaf weed control, above.
Sand shinnery oak Sand sagebrush	2	<b>Sand shinnery oak:</b> Apply by aircraft between May 15 and June 15. <b>Sand sagebrush:</b> 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.
Big sagebrush Rabbitbrush	4	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.
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	up to 4	<b>Broadcast:</b> 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	1 gal/100 gal of spray	<b>Spot treatment:</b> Apply when foliage is well developed. Thorough coverage is required. Use 1

		gallon of DMA 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 4 pt per acre per application.
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**Precautions and Restrictions:**

- 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.
- Do not apply within 30 days of a previous application.
- Do not harvest forage for hay within 7 days of application.
- For grazed areas, the maximum use rate is 4 pt/acre of DMA 4 (2.0 lb acid equivalent) per application.
- Do not apply more than 8 pt/acre of DMA 4 (4.0 lb acid equivalent) per use season.

**Non-cropland Areas**

Such as fencerows, hedgerows, roadsides, drainage ditches, rights-of way, utility power lines, railroads, airports, and other non-crop areas

Treatment Site Method of Application	DMA 4 (pt/acre)	Specific Use Directions
<b>Annual broadleaf weeds</b>	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 1 gallon DMA 4 plus 1 to 4 qt. Garlon* 3A herbicide per acre. <b>For ground application:</b> (High volume) apply a total of 100 to 400 gal per acre; (low volume) apply a total of 10 to 100 gal per acre. <b>For helicopter:</b> Apply a total of 5 to 30 gal per acre spray volume.
<b>Biennial and perennial broadleaf weeds and susceptible woody plants</b>	4 to 8	
<b>Spot Treatment to control broadleaf weeds</b>	See Instructions for "Spot Treatment"	<b>Note:</b> 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".
<b>Tree Injection Application</b>		See instructions for tree injection application in "Forestry Uses" section.
<b>Southern wild rose</b> Broadcast application	up to 4	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	1 gal/100 gal of spray	Apply when foliage is well developed. Thorough coverage is required. Use 1 gallon of DMA 4 plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two or more treatments may be required.



**Precautions and Restrictions:**

- 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.
- Do not apply more than 8 pt/acre of DMA 4 (4.0 lb acid equivalent) per use season.
- Do not reapply to a treated area within 30 days of a previous application.
- If grazing of meat or dairy animals or hay harvest is desired in non-crop areas, do not apply more than 4.0 pt/acre of DMA 4 (2 lb acid equivalent) and refer to the Rangeland and Established Grass Pastures section for applicable precautions and restrictions.

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**Turf Uses**


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**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 Requirements" section of this label.

Treatment Site (Application Timing)	DMA 4 (pt/acre)	Specific Use Directions
<b>Grasses Grown for Seed (Postemergence Use)</b> 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 1 pt/acre. Cool season grasses are tolerant of higher rates. <b>Do not apply to grass in the early boot through milk stage if seed production is desired.</b> When grass is well established, higher rates of up to 4 pints/acre may be applied for control of hard-to-kill annual or perennial weeds.
<b>Sod Farms (Postemergence)</b>	2 to 4	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 and Restrictions:**

- Do not use on creeping grasses such as bent 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.
- Do not reapply to a treated area within 21 days of a previous application.
- **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.
- Do not graze or cut forage for hay within 7 days after application.
- Do not apply more than 8 pt/acre of DMA 4 (4 lb acid equivalent) per use season.

**Ornamental Turf (Excluding Grasses Grown For Seed or Sod Farms)****(Includes lawns, golf courses, cemeteries and parks, airfields, roadsides, vacant lots, drainage ditch banks)**

<b>Use Requirements for Ornamental Turf Areas:</b> When this product is applied to ornamental turf areas, follow PPE and reentry instructions in the "Non-agricultural Use Requirements" section of this label.
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Treatment Site (Application Timing)	DMA 4 (pt/acre)	Specific Use Directions
<b>Ornamental Turf (Postemergence)</b>		
Seedling grass (five-leaf stage or later)	3/4 to 1	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.
Well-established grasses	2 to 4	Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 1 pt/acre. Cool season grasses are tolerant of higher rates.
Biennial and perennial broadleaf weeds	4	

**Precautions, Restrictions:**

- Do not use on creeping grasses such as bent 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.
- Do not reapply within 21 days of a previous application.
- **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.
- Do not apply more than 2 broadcast applications per year per treatment site (does not include spot treatments).

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**Aquatic Uses**


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**Control of Weeds and Brush on Banks of Irrigation Canals and Ditches**

Target Plants	DMA 4 (pt/acre)	Specific Use Directions
<b>Annual Weeds</b>	2 to 4	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 flower stalks appear. For hard-to-control
<b>Biennial and perennial broadleaf weeds and susceptible wood plants</b>	4	

		<p>weeds, a repeat application after 30 days at the same rate may be needed.                  For woody species and patches of perennial weeds, mix 1 gallon of DMA 4 per 64 to 150 gallons of total spray. Wet foliage by applying about 3 to 4 gallons of spray per 1000 sq ft (10.5 X 10.5 steps).</p>
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**Restrictions and Limitations:**

- Do not apply more than 2 treatments per season or reapply within 30 days.
- Do not use on small canals (less than 10 cfs) where water will be used for drinking purposes.
- Do not apply more than 8 pt/acre (4 lb acid equivalent) per use season.

**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**

**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:** 2 to 4 qt/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 4 qt/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 1 gallon of DMA 4 per acre using standard boom systems using a minimum spray volume of 5 gallons per acre. For Microfoi® drift control spray systems, apply DMA 4 in a total spray volume of 12 to 15 gallons per acre.

**Submerged Aquatic Weeds: Including Eurasian Water Milfoil (*Myriophyllum spicatum*)**

Treatment Site	Maximum Application Rate †	Specific Use Directions
<p><b>Aquatic Weed Control in Ponds, Lakes, Reservoirs, Marshes, Bayous, Drainage Ditches, Canals, Rivers and Streams that are Quiescent or Slow Moving,</b></p>	<p>10.8 lb acid equivalent per acre foot</p>	<p><b>Application Timing:</b> For best results, apply in spring or early summer when aquatic weeds appear. Check for 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 areas.  <b>Subsurface Application:</b> Apply DMA 4 undiluted directly to the water through a boat mounted distribution</p>

<p><b>Including Programs of the Tennessee Valley Authority</b></p>		<p>system. Shoreline areas should be treated by subsurface injection application by boat to avoid aerial drift.</p> <p><b>Surface Application:</b> 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 acre.</p> <p><b>Aerial Application:</b> Use drift control spray equipment or thickening 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 DMA 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).</p>
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† DMA 4 contains 3.8 lb acid equivalent per gallon of product.

Amount to Apply to Attain a Concentration of 2 to 4 ppm		
Surface Area	Average Depth (ft)	2,4-D Acid Equivalent to Apply (lb)
1 acre	1	5.4 to 10.8
	2	10.8 to 21.6
	3	16.2 to 32.4
	4	21.6 to 43.2
	5	27.0 to 54.0

#### Precautions and Restrictions for Aquatic Use:

- 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.
- **Dissolved Oxygen Ratio:** Fish require oxygen dissolved in water for life processes and a favorable water-oxygen ratio 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.
- **Irrigation:** Unless an approved assay indicates 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 indicates 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.

#### Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions,

subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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**Inherent Risks of Use**

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It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

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**Limitation of Remedies**

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The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

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

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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