

HERBICIDE

For selective control of many broadleaf weeds in certain crops, orchard floors, fallow cropland, forests, grass pastures, rangeland, Conservation Reserve Program acres, ornamental turfgrass (including turfgrass 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%
Other Ingredients.....	53.7%
Total.....	100.0%

2,4-dichlorophenoxyacetic acid - 38.4% -
3.8 lb/gal

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.)

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 Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

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

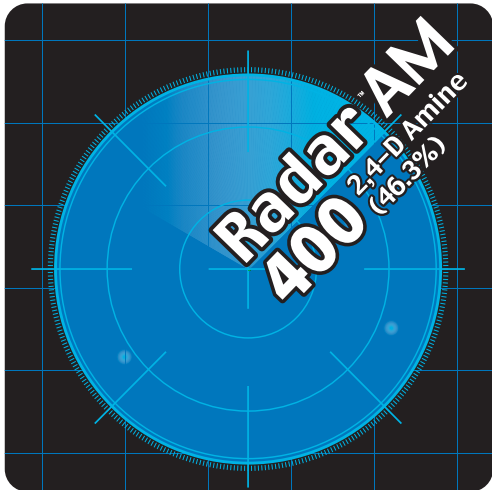
EPA Reg. No. 62719-3-534

EPA Est. 62719-MI-002

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Produced for
GROWMARK INC
1701 TOWANDA AVE
BLOOMINGTON, IL 61701

NET CONTENTS 2.5 GALLONS



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Precautionary Statements

Hazards to Humans and Domestic Animals

DANGER

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)

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical resistance category selections chart.

All pilots must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves
- Protective eyewear
- Chemical resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems or enclosed cabs 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.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)].

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.

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.

First Aid (Cont.)

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 fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. 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.

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.

Aquatic Weed Control: Fish breathe dissolved oxygen in the water and decaying weeds also use oxygen. When treating continuous, dense weed masses, it may be appropriate to treat only part of the infestation at a time. For example, apply the product in lanes separated by untreated strips that can be treated after vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Waters having limited and less dense weed infestations may not require partial treatments.

Directions for Use

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
- Chemical-resistant gloves made of any waterproof material
- 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: Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

Storage and Disposal

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

Pesticide Storage: 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 Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **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 1/4 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.

Storage and Disposal (Cont.)

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 or 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

RADAR™ AM 400 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 turfgrass (including turfgrass grown for sod or seed), non-cropland and aquatic areas. Also for control of trees by injection.

Apply RADAR™ AM 400 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. The lower dosages specified 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 specified rates. Deep-rooted perennial weeds, such as Canada thistle, 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 directions from this label that best fit local conditions.

Use Precautions and Restrictions

Be sure that use of RADAR™ AM 400 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 and plant growth.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in *Washington Toxics Coalition et al. v. EPA*, C01-0132C, (W.D. W.A.). For further information, please refer to EPA website: <http://www.epa.gov/espp/itstatus/wtc/index.htm>.

Spray Drift Management

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, aircraft) 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 (ASABE 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 finer spray, apply only as a medium or coarser spray (ASABE 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. Apply this product only if the wind direction favors on-target deposition and there are not sensitive areas (including residential areas, bodies of water, known habitat for beneficial nontarget plants) 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 cotton, okra, flowers, fruit trees, grapes (in growing stage), fruit trees (follage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that may 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 and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Aerial Application

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 with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

Ground Application

Groundboom: Do not apply with a nozzle height greater than 4 feet above the crop canopy.

Handguns and Boomless Nozzles: Applications for rights-of-way vegetation management are best applied with specialized nozzles delivering a coarse or very coarse spray volume.

Mixing Directions

Mix RADAR™ AM 400 with water only unless otherwise directed on this label. Add about half of the water to the mixing tank, then add the RADAR™ AM 400 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. Do not exceed any active ingredient's maximum use rates when tank mixing. 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 for broadleaf weed control and fertilization of corn, small grains or pastures in a single operation. Use RADAR™ AM 400 in accordance with directions for these crops provided in this label. Use liquid fertilizer at rates specified by the supplier or Extension Service Specialist. Test for mixing compatibility as described above before mixing in spray tank. A compatibility aid, such as Unite or Complex, 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 RADAR™ AM 400 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 RADAR™ AM 400 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, thoroughly clean equipment used to apply this product before re-use or applying other chemicals.

1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of all rinse water by application to treatment area or apply to non-cropland area away from water supplies.
2. During the second rinse, add 1 quart of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.

- Rinse the system twice with clean water, recirculating and draining each time.
- Remove nozzles and screens and clean separately.
- 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 Directions

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 gallons or more per acre by air and 10 gallons or more per acre for ground equipment. Where states have regulations which specify minimum spray volumes, they must be observed. Increase spray volume 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 Conversion Table for Spot Treatment:

Label Broadcast Rate (pint/acre)							
1/2	2/3	3/4	1	2	3	4	8
Equivalent Amount of RADAR™ AM 400 per 1000 sq ft							
1/5 fl oz ¹ (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)

¹Conversion factors: 1 fl oz = 29.6 (30) mL

Band Application

RADAR™ AM 400 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 X Broadcast rate = Band rate per
Row width in inches per acre treated acre

Band width in inches X Broadcast volume = Band volume per
Row width in inches per acre treated acre

Weeds Controlled

Annual or Biennial Weeds

beggarticks¹
bittercress, smallflowered
bitterweed
broomweed, common¹
burdock, common
buttercup, smallflowered¹
carpetweed
cinquefoil, common
cinquefoil, rough
cocklebur, common
coffeeweed
copperleaf, Virginia
croton, Texas
croton, woolly
flixweed

galinsoga
geranium, Carolina
hemp, wild
horseweed (marestail)
jewelweed
jimsonweed
knotweed¹
lambquarters, common
lettuce, prickly¹
lettuce, wild
lupines
mallow, little¹
mallow, Venice¹
marshelder
morningglory, annual

Rate Ranges and Application Timing

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 RADAR™ AM 400 during warm weather when weeds are young and actively growing.

Spot Treatments

To prevent misapplication, apply spot treatments with a calibrated boom or with hand sprayers using a fixed spray volume per 1000 sq ft as indicated below.

Hand-Held Sprayers: Hand-held sprayers may be used for spot applications of RADAR™ AM 400. Apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based upon the application rate for an area of 1000 sq ft. Mix the amount of RADAR™ AM 400 (fl oz or mL) corresponding to the desired broadcast rate in 1 to 3 gallons of spray. To calculate the amount of RADAR™ AM 400 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.

Annual or Biennial Weeds (Cont.)

morningglory, ivy
morningglory, woolly
mousetail
mustards (except
blue mustard)
parsnip, wild
penncress, field
pepperweed¹
pigweeds
(*Amaranthus* spp.)¹
poorjoe
primrose, common
purslane, common
pusley, Florida
radish, wild
ragweed, common
ragweed, giant
rape, wild
rocket, yellow
salsify, common¹
salsify, western¹
shepherd's-purse
sicklepod
smartweed (annual species)¹
sneezeweed, bitter
sowthistle, annual
sowthistle, spiny
spanishneedles
sunflower
sweetclover
tansymustard
thistle, bull
thistle, mussk¹
thistle, Russian (tumbleweed)¹
velvetleaf
vetches

Perennial Weeds

alfalfa¹
artichoke, Jerusalem¹
aster, many-flower¹
Austrian fieldcress¹
bindweed (hedge, field and
European)¹
blue lettuce
blueweed, Texas
broomweed
bullnettle¹
carrot, wild¹
catnip
chicory
clover, red¹

Perennial Weeds (Cont.)

coffeedweed	goldenrod
cross, hoary ¹	hawkweed, orange ¹
dandelion ¹	heal
docks ¹	ironweed, western
dogbanes ¹	ivy, ground ¹
eveningprimrose, cutleaf	Jerusalem artichoke
garlic, wild ¹	loco, bigbend

nettles (including stinging) ¹	sowthistle, perennial
onion, wild ¹	thistle, Canada ¹
pennywort	vervains ¹
plantains	waterplantain
ragwort, tansy ¹	wormwood

¹These weeds are only partially controlled and may require repeat applications and/or use of higher specified rates of this product even under ideal conditions of application.

Uses

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

Crop/Application Timing	RADAR™ AM 400 (pint/acre)	Specific Use Directions
spring post-emergence wheat, barley, millet, rye oats pre-harvest (dough stage) all cereals	2/3 - 1 1/3 1/2 - 1 1	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 in the rate range for perennial weeds or for annual or biennial weeds in advanced growth stages or when growing conditions are less than ideal. Postemergence: Apply after crop is fully tillered, (usually 4 to 8 inches tall) but not forming joints in the stems. Preharvest: 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.

Precautions:

- Up to 2.5 pints per 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 pints per acre. Use such rates only when the need for weed control justifies additional risk to the crop.

Restrictions:

- Preharvest Interval:** Do not apply within 14 days of grain harvest.
- Do not apply more than a total of 3.68 pints of RADAR™ AM 400 (1.75 lb of acid equivalent) per acre per use season.

- Limit use to no more than one post-emergence application and one pre-harvest application per crop season.
- Do not apply RADAR™ AM 400 at the crop seedling stage of growth prior to tillering or from early boot (forming joints in the stem) 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.

Corn (Field, Sweet, Popcorn)

Application Timing/ Stage of Growth	RADAR™ AM 400 (pint/acre)	Specific Use Directions
preplant (burndown) preemergence	1 - 2	Use a higher rate in the rate range for less susceptible weeds or cover crops, 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 seedlings or existing cover crops. Preemergence: Apply any time after planting, but before corn emerges to control broadleaf weed seedlings or existing cover crops.
postemergence annual broadleaf weeds crop up to 8 inches tall crop 8 inches tall to tasseling (directed spray only) perennial broadleaf weeds	1/2 - 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. Do not apply from tasseling to hard dough stage.
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.

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 to 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 apply within 7 days of grain or fodder harvest.
- Do not make more than one preplant or preemergence application, one postemergence application, and one preharvest application per use season.

Fallow Land and Crop Stubble

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

- Do not apply more than a total of 6.32 pints of RADAR™ AM 400 (3 lb of acid equivalent) per acre per use season.
- Do not use treated crop as fodder for 7 days following application.

Restrictions (Sweet Corn):

- **Preharvest Interval:** Do not apply within 45 days of ear harvest.
- Do not use treated crop as fodder for 7 days following application.
- Do not make a postemergence application any less than 21 days after a prior application.
- Do not make no more than one preplant or preemergence application, and one postemergence application per use season.
- Do not apply more than a total of 3.16 pints of RADAR™ AM 400 (1.5 lb of acid equivalent) per acre per use season.
- Do not use treated crop as fodder for 7 days following application.

Type of Weeds	RADAR™ AM 400 (pint/acre)	Specific Use Directions
annual broadleaf weeds	1 - 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 - 4	Apply when musk thistles or other biennial species are in the seeding to rosette stage and before development of flower stalks. The lower rate in the rate range can be used in the spring during the rosette stage. Use the highest rate in the rate range in the fall or after flower stalks have developed.
perennial broadleaf weeds	2 - 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 which occurs in the fall after harvest of small grains, corn or grain sorghum.

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 apply within 7 days of cutting forage for hay.
- Do not apply within 30 days of a previous application.
- Do not apply more than a total of 8.4 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per use season.
- Maximum of 2 lb acid equivalent 2,4-D (4 pints of RADAR™ AM 400) per acre per application.
- Do not apply more than two times per year.

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 days or more 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 of Pome Fruits¹, Stone Fruits², Tree Nuts³ (Excluding Filberts), and Pistachios

¹Pome fruits including apple, crabapple, loquat, mayhaw, oriental pear, quince

²Stone fruits including apricot, chickasaw plum, damson plum, fresh prune, Japanese plum, nectarine, peach, plum, plumcot, sweet cherry, tart cherry

³Tree nuts including almond, beech nut, black walnut, Brazil nut, butternut, cashew, chestnut, chinquapin, English walnut, hickory nut, macadamia nut (bush nut), pecan

Application Timing	RADAR™ AM 400 (pint/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.
- Avoid application immediately before irrigation and withhold irrigation for two days before and three 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 Interval:**
 - Pome Fruits:** Do not apply within 14 days of harvest.
 - Stone Fruits:** Do not apply within 40 days of harvest.
 - Tree Nuts and Pistachios:** Do not apply within 60 days of harvest.

- Do not cut orchard floor forage for hay within 7 days after application.
- Do not make more than two applications per year.
- Stone Fruits and Pome Fruits:** Allow at least 75 days between applications.
- Tree Nuts and Pistachios:** Allow at least 30 days between applications.
- Do not apply more than a total of 8.42 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per use season.
- Do not apply when orchards are blooming.
- Do not make orchard floor applications in areas with light sandy soils.

Rice

(Not for Use in California)

Application Timing	RADAR™ AM 400 (pint/acre)	Specific Use Directions
preplant	1 - 2	Apply 2 to 4 weeks before planting rice to control emerged broadleaf weeds.
postemergence	1 – 2 ¹	Apply when rice is in late tillering stage and at the time of first joint development (first to second green ring).

¹Up to 3 pints per acre may be applied postemergence for difficult weed control situations. However, there is greater risk of crop injury at rates greater than 2 pints per acre and such rates should be used only when the need for weed control justifies additional risk to the crop.

Precautions:

- 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 one preplant and one postemergence application per use season.
- Do not apply more than a total of 3.16 pints of RADAR™ AM 400 (1.5 lb of acid equivalent) per acre per use season.
- Do not apply at early seedling stage or after rice internodes exceed one-half inch or panicle initiation.

Sorghum [Grain Sorghum (Milo) and Forage Sorghum]

Application Timing/ Stage of Growth	RADAR™ AM 400 (pint/acre)	Specific Use Directions
postemergence crop 6 - 8 inches tall crop 8 - 15 inches tall (directed spray only)	1/2 - 1 3/4 - 1	Apply when sorghum is 6 to 15 inches tall. If sorghum is 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 RADAR™ AM 400 under these conditions, use no more than 2/3 pint per acre.
- Sorghum hybrids vary in tolerance to 2,4-D. Some are easily injured. Apply only to varieties known to be tolerant to 2,4-D. Consult the seed company or your agricultural experiment station or extension service weed specialist for this information.

Restrictions:

- **Preharvest Interval:** Do not apply within 30 days of grain harvest.
- 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 a total of 2.1 pints of RADAR™ AM 400 (1 lb of acid equivalent) per acre per use season.
- Do not apply more than one postemergence application per use season.
- **Do not apply during boot, or later stages of growth.**

Soybeans

(Preplant Burndown Only)

Application Timing	RADAR™ AM 400 (pint/acre)	Specific Use Directions
preplant (burndown)	3/4 - 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. See Precautions and Restrictions below.
	1 - 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 Precautions and Restrictions below.
Crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixtures of RADAR™ AM 400 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 Directions section for instructions for tank mixing and compatibility testing.		

Precautions:

- **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 upon 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.

Restrictions:

- Do not apply more than a total of 2.1 pints of RADAR™ AM 400 (1 lb of acid equivalent) per acre per use season.

- **Do not apply RADAR™ AM 400 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.**
- Do not make more than one application per season regardless of the application rate used.
- 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 inch deep. Adjust the planter, if necessary, to ensure that planted seed is adequately covered.
- During the growing season following application, do not replant treated fields with crops other than those labeled for use with RADAR™ AM 400.

Sugarcane

Application Timing	RADAR™ AM 400 (pint/acre)	Specific Use Directions
preemergence postemergence	2 - 4	Consult your agricultural experiment station or extension service weed specialist local recommendations. Preemergence: Apply before cane emerges to actively growing weeds. Postemergence: Apply after cane emerges through canopy closure. Use a higher rate in the rate range for perennial weeds and difficult to control species.

Restrictions:

- Do not apply more than a total of 8.42 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per use season.
- Do not harvest cane prior to maturity.
- Do not make more than one preemergence and one postemergence application per season.

Forestry, Rangeland, Established Pasture, and Non-Cropland Areas

Forestry

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

Treatment Site/ Method of Application	RADAR™ AM 400	Specific Use Directions
annual weeds biennial and perennial broadleaf weeds and susceptible woody plants	2 - 4 pt/acre 4 - 8 pt/acre	Apply when weeds are small and actively growing, 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 of RADAR™ AM 400 and 1 to 4 quarts of Garlon™ 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	1.28 fl oz/gal of spray solution (see instructions for Spot Treatment)	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the specified broadcast rate and spray to thoroughly wet all foliage. Mix 1.28 fl oz per gallon of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. See rate conversion table and instructions for Spot Treatment and use of hand-held sprayers under Application Directions.
conifer release: species such as: balsam fir black spruce jack pine ponderosa pine red pine red spruce white pine white spruce	1 1/2 - 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.
directed spray: 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.

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

Treatment Site/ Method of Application	RADAR™ AM 400	Specific Use Directions
basal spray	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.
surface of cut stumps	2.5 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.
frill and girdle		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.
tree injection	1 - 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 RADAR™ AM 400 per inch of trunk diameter at breast height (DBH) as measured approximately 4 1/2 ft above the ground. However, injection should occur 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. Do not treat maples during the spring sap flow. For hard to control species, such as ash, maple, and dogwood, use 2 mL of undiluted RADAR™ AM 400 per injection site or double the number of 1 mL injections. Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

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 a total of 8.42 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per 12-month period.
- Limited to one broadcast application, one basal spray or cut surface application, or one injection application per year.
- For basal spray, cut surface stumps, and frill applications, do not apply more than 16.84 pints of RADAR™ AM 400 (8 lb of acid equivalent) per 100 gallons of spray solution.

Rangeland and Established Grass Pastures**Included Perennial Grasslands not in Agricultural Production, Such as Conservation Reserve Program Acres**

Target Weeds or Woody Plants	RADAR™ AM 400 (pint/acre)	Specific Use Directions
annual broadleaf weeds biennial and perennial broadleaf weeds	2 2 - 4	For best results, apply when weeds are small and actively growing, 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 specified rates, even under ideal conditions of application

Rangeland and Established Grass Pastures (Cont.)
Included Perennial Grasslands not in Agricultural Production, Such as Conservation Reserve Program Acres

Target Weeds or Woody Plants	RADAR™ AM 400 (pint/acre)	Specific Use Directions
spot treatment to control broadleaf weeds	1.28 fl oz/gal of spray solution (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 specified for this treatment site and spray to thoroughly wet all foliage. Mix 1.28 fl oz per gallon of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. See rate conversion table and instructions for Spot Treatment and use of hand-held sprayers under Application Directions.
tree injection	1 - 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 RADAR™ AM 400 per inch of trunk diameter at breast height (DBH) as measured approximately 4 1/2 ft above the ground. However, injection should occur 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. Do not treat maples during the spring sap flow. For hard to control species, such as ash, maple, and dogwood, use 2 mL of undiluted RADAR™ AM 400 per injection site or double the number of 1 mL injections. Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.
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 - 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.
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. Re-treatment may be needed.
chamise, manzanita, buckbrush, coastal sage, coyotebrush, and chaparral species.		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. Re-treatment may be needed.
southern wild rose broadcast application spot treatment	up to 4 1.28 fl oz/gal of spray solution	Broadcast: Apply in a spray volume of 5 gallons or more per acre by aircraft or 10 gallons or more per acre by ground equipment. Spot treatment: Apply when foliage is well developed. Thorough coverage is required. Mix 1.28 fl oz per gallon of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. Two or more treatments may be required. Do not exceed 4 pints per acre per application.

Rangeland and Established Grass Pastures (Cont.)**Included Perennial Grasslands not in Agricultural Production, Such as Conservation Reserve Program Acres**

Target Weeds or Woody Plants	RADAR™ AM 400 (pint/acre)	Specific Use Directions
basal spray	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.
surface of cut stumps	2.5 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.
frill and girdle		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.

Precautions:

- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.
- 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.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of hay forage harvest. 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.
- 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.
- For grazed areas, the maximum use rate is 4.21 pints of RADAR™ AM 400 (2 lb of acid equivalent) per acre per application.
- Do not apply more than a total of 8.42 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per use season.
- Do not make more than two applications per season.
- For susceptible annual and biennial broadleaf weeds: Do not apply more than 2 pints (1 lb of acid equivalent) per acre per application.
- For moderately susceptible biennial, perennial broadleaf weeds and difficult to control weeds and woody plants: Do not apply more than 4 pints (2 lb of acid equivalent) per acre per application.
- Spot treatment: Do not apply more than 4 pints (2 lb of acid equivalent) per acre.

Non-Cropland Areas**Fence rows, hedgerows, roadsides, drainage ditches, rights-of way, utility power lines, railroads, airports, and other non-cropland areas**

Treatment Site/ Method of Application	RADAR™ AM 400 (pint/acre)	Specific Use Directions
annual broadleaf weeds biennial and perennial broadleaf weeds susceptible woody plants on rights-of-way	2 - 4 4 4 - 8	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 of RADAR™ AM 400 plus 1 to 4 quarts of Garlon 3A per acre. For ground application: High volume - apply a total of 100 to 400 gallons per acre; low volume - apply a total of 10 to 100 gallons per acre. For helicopter: Apply a total of 5 to 30 gallons per acre spray volume.

Non-Cropland Areas (Cont.)

Fence rows, hedgerows, roadsides, drainage ditches, rights-of way, utility power lines, railroads, airports, and other non-cropland areas

Treatment Site/ Method of Application	RADAR™ AM 400 (pint/acre)	Specific Use Directions
spot treatment to control broadleaf weeds	1.28 fl oz/gal of spray solution (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 specified for this treatment site and spray to thoroughly wet all foliage. Mix 1.28 fl oz per gallon of spray solution and apply through pump up sprayer or backpack sprayer. For best results, add a non-ionic surfactant to improve coverage. See rate conversion table and instructions for Spot Treatment and use of hand-held sprayers under Application Directions.
tree injection application		See instructions for tree injection application in Forestry section.
southern wild rose broadcast application spot treatment	up to 4 1.28 fl oz/gal of spray solution	Broadcast: Apply in a spray volume of 5 gallons or more per acre by aircraft or 10 gallons or more per acre by ground equipment. Apply when foliage is well developed. Thorough coverage is required. Mix 1.28 fl oz per gallon of spray solution and apply through pump up sprayer or backpack sprayer. For best results, add a non-ionic surfactant to improve coverage. Two or more treatments may be required.

Precautions

- Bentgrass, St. Augustine, clover, legumes and dichondra may be severely injured or killed by this treatment.
- Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial uses, or for commercial seed production, or for research purposes.

Restrictions:

- Do not apply to newly seeded areas until grass is well established.

- **Annual and perennial weeds:** Do not apply more than 4.21 pints of RADAR™ AM 400 (2 lb of acid equivalent) per acre per application. Do not make more than two applications per season. Do not reapply to a treated area within 30 days of a previous application.
- **Woody plants:** Do not apply more than a total of 8.42 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per use season. Do not make more than one application per season.

Turfgrass

Turfgrass Grown for Seed or Sod Farms

Treatment Site/ Application Timing	RADAR™ AM 400 (pint/acre)	Specific Use Directions
grasses grown for seed (postemergence use) seedling grass (five-leaf stage or later) well-established grasses	3/4 - 1 1 - 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 pint per acre. Cool season grasses are tolerant of higher rates. 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 4 pints per acre may be applied for control of hard to kill annual or perennial weeds.
sod farms (postemergence)	2 - 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:

- **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.

Restrictions:

- **Preharvest Interval:** Do not apply within 7 days of cutting forage for hay.
- Do not apply more than a total of 8.42 pints of RADAR™ AM 400 (4 lb of acid equivalent) per acre per use season.
- Do not make more than two applications of RADAR™ AM 400 per use season.

- Maximum of 2 lb acid equivalent (4.2 pints of RADAR™ AM 400) per acre per application.
- 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 groundcovers. Legumes may be damaged or killed.
- Do not reapply to a treated area within 21 days of a previous application.

Ornamental Turfgrass (Excluding Grasses Grown for Seed or Sod Farms)

Includes lawns, golf courses, cemeteries and parks, airfields, roadsides, vacant lots, drainage ditch banks

Treatment Site/ Application Timing	RADAR™ AM 400 (pint/acre)	Specific Use Directions
ornamental turfgrass (postemergence) seedling grass (five-leaf stage or later) well-established grasses biennial and perennial broadleaf weeds	3/4 - 1 2 - 3 3	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 1 pint per acre. Cool season grasses are tolerant of higher rates.

Precautions:

- **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.

Restrictions:

- Do not make more than two broadcast applications per year per treatment site (does not include spot treatments).
- Do not apply more than a total of 6.32 pints of RADAR™ AM 400 (3 lb of acid equivalent) per acre per year.

- 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 groundcovers. Legumes may be damaged or killed.
- Do not reapply within 21 days of a previous application.

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

Target Plants	RADAR™ AM 400 (pint/acre)	Specific Use Directions
annual weeds biennial and perennial broadleaf weeds and susceptible wood plants	2 - 4 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 a 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 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 RADAR™ AM 400 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).

Restrictions:

- Do not make more than two treatments per season or reapply within 30 days.
- Use 2 gallons or more of spray solution per acre.
- Do not apply more than 4.21 pints (2 lb of acid equivalent) per acre per application or more than a total of 8.42 pints (4 lb of acid equivalent) per acre per use season.

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 spray cross-stream to opposite bank. Do not allow boom spray to be directed onto water.

For shoreline weeds: Boom spraying onto water surface must be held to a minimum and allow no more than a 2-foot overspray onto water with an average of less than 1 foot overspray to prevent introduction of greater than negligible amounts of chemical into the water.

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 aquatic applications.

Emergent and Floating Aquatic Weeds, Including Water Hyacinth (*Eichornia crassipe*)

Application Rate: 2 to 4 quarts per acre.

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 the 4 quart per 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 RADAR™ AM 400 per acre using standard boom systems using a minimum spray volume of 5 gallons per acre. For Microfoil drift control spray systems, apply RADAR™ AM 400 in a total spray volume of 12 to 15 gallons per acre.

Restrictions for Surface Applications to Emergent Aquatic Weeds:

- Do not exceed 8.42 pints (4 lb of acid equivalent) per surface acre per application.
- Spot treatments are permitted.
- Limited to two applications per season.
- Minimum of 21 days between applications.

Fish breathe dissolved oxygen in the water and decaying weeds also use oxygen. When treating continuous, dense weed masses, it may be appropriate to treat only part of the infestation at a time. For example, apply the product in lanes separated by untreated strips that can be treated after vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. Waters having limited and less dense weed infestations may not require partial treatments. Other local factors such as water exchange and sediment load can also influence the dissolved oxygen level. Coordination and approval of local and state authorities may be required, either by letter of 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, turfgrass 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 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 ≥ 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 ≥ 600 ft.

- C. If no setback distance of ≥ 600 ft. is used for the application, applicators or the authorizing organization must provide a drinking water notification prior to a 2,4-D application to the party responsible for a public water supply or to individual private water users. 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 a water use restrictions when this product is applied to potable water.

The following is an example of an example of 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 days or more 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 ≥ 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 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 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.

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

Treatment Site	Maximum Application Rate ¹	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	2.84 gallons (10.8 lb of acid equivalent) per acre foot	<p>Application Timing: 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.</p> <p>Subsurface Application: Apply RADAR™ AM 400 undiluted directly to the 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 acre.</p> <p>Aerial Application: 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 RADAR™ AM 400 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>

¹RADAR™ AM 400 contains 3.8 lb of acid equivalent per gallon of product.

Table 1: Amount to Apply for a Target Subsurface Concentration

Surface Area	Average Depth (ft)	For typical conditions – 2 ppm (2,4-D a.e./acre)	For typical conditions – 2 ppm (RADAR™ AM 400 gal/acre)	For difficult conditions – 4 ppm* (2,4-D a.e./acre)	For difficult conditions – 4 ppm* (RADAR™ AM 400 gal/acre)
1 acre	1	5.4	1.42	10.8	2.84
	2	10.8	2.84	21.6	5.68
	3	16.2	4.26	32.4	8.53
	4	21.6	5.68	43.2	11.37
	5	27.0	7.10	54.0	14.21

*Examples include spot treatments of pioneer colonies of Eurasian water milfoil and certain difficult to control aquatic species.

Restrictions for Aquatic Sites With Submersed Weeds:

- Do not exceed 10.8 lb acid equivalent per acre foot.
- Do not apply within 21 days of previous application. Limited to two applications per season.
- When treating moving bodies of water, applications must be made while traveling upstream to prevent concentration of 2,4-D downstream from 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.

Fish breathe oxygen in the water and a water-oxygen ratio must be maintained. Decaying weeds use up oxygen, but during the period when applications should be made, the weed mass is fairly sparse and the weed decomposition rate is slow enough that the water-oxygen ratio is not disturbed by treating the entire area at one time. If treatments must be applied later in the season when the weed mass is dense and repeat treatments are needed, apply product in lanes, leaving buffer strips which can then be treated when vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2- to 3-week period following treatment.

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, turfgrass 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, non-crop 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 indicates 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).
 - i. If no 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 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 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: _____.

- C. 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 for 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.

purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

GROWMARK INC 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. TO THE EXTENT PERMITTED BY LAW, GROWMARK INC 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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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 GROWMARK INC or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, 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 GROWMARK INC 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.

To the extent permitted by law, GROWMARK INC shall not be liable for losses or damages resulting from handling or use of this product unless GROWMARK INC is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall GROWMARK INC be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of GROWMARK INC or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

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Table 2: Drinking Water Setback Distance for Submersed Weed Applications

Application Rate and Minimum Setback Distance (feet) From Functioning Potable Water Intake			
1 ppm*	2 ppm*	3 ppm*	4 ppm*
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

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of