



STATE OF HAWAII
Department of Agriculture

ACCEPTED

Prod. # XXXX - 0313A

XXXX

LICENSE NO. **9625.234**

Disc.

Weed Defeat III

Contains 41% Glyphosate with Surfactant

- Nonselective weed control
- Controls over 200 weed, grass, and brush species
- Kills the roots
- Aquatic sites included



ACTIVE INGREDIENT:

*Glyphosate (N-(phosphonomethyl)glycine) in the form of its isopropylamine salt:41.0%

INERT INGREDIENTS:59.0%

TOTAL:100.0%

THIS PRODUCT CONTAINS: 3.8 lbs. per U.S. gallon of the active ingredient glyphosate in the form of its isopropylamine salt.
Equivalent to 2.8 lbs. per U.S. gallon of the acid, glyphosate.

CAUTION

KEEP OUT OF REACH OF CHILDREN

NET CONTENTS: 1 GALLON (128 fl. oz./3.78 L)

EPA REG. NO. 2217-847-1270

EPA EST. NO. 1270-TX-1

See Back Panel For Additional Precautionary Statements.

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See below for additional Precautionary Statements, First Aid, and Use Directions.

MADE IN USA
Distributed by:
Zep Inc.
1310 Seaboard Ind. Blvd.
Atlanta, GA 30318



EPA REG. NO. 2217-847-1270
EPA EST. NO. 1270-TX-1



READ THE ENTIRE LABEL FIRST.
OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY

PRECAUTIONARY STATEMENTS:
HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

CAUTION: Causes moderate eye irritation. Harmful if absorbed through the skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistant category chart. Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical resistant gloves category A such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber ≥ 14 mils., and shoes plus socks.

ENGINEERING CONTROL STATEMENTS: When handlers use 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.

USER SAFETY RECOMMENDATIONS: - Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. - Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. - Users should 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 STATEMENTS:

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 a poison control center or doctor. Do not give anything by mouth to an unconscious person. **IF ON SKIN OR ON 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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. **IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment. For additional information in case of emergency, call toll free 1-877-800-5556.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.) If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

ENVIRONMENTAL HAZARDS: Do not contaminate water when disposing of equipment washwater. Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss can cause fish suffocation. In case of spill or leak, soak up with an absorbent and remove to a landfill.

PHYSICAL OR CHEMICAL HAZARDS: Combustible. Do not use or store near heat or open flame. Spray solutions of this product be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers. DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode causing serious personal injury, if ignited by an open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide registration.

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 4 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 category A such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber ≥ 14 mils., and shoes plus socks.

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 (40 CFR Part 170) for agricultural pesticides. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep people and pets off treated areas until spray solution has dried.

USE INFORMATION: This product mixes readily with water and is intended to be applied as a foliar spray for the control or destruction of many herbaceous or woody plants. It may be applied through most standard industrial or field-type sprayers after dilution and through mixing with water in accordance with label instructions. This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay visual effects of control. Visible effects are gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts. Unless otherwise specified on this label, delay application until vegetation has emerged and reached the growth stages described for control. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow. For this reason, best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Always use the higher rate of this product per acre within the specified range when weed growth is heavy or dense. Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust. Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment. Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required. This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance. For best results, spray coverage should be uniform and complete.

USE PRECAUTIONS: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS. Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants, or nontarget areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle types that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

SPRAY PREPARATION AND TANK MIXTURES: This product is a soluble concentrate that dissolves readily in clean water (free of mud or clay). Reduced results may occur if water containing soil is used, such as water from ponds or unlined ditches. In certain applications, liquid fertilizer may replace part of the water as a diluent. Additional surfactants are not required for this formulation.

ANNUAL MAXIMUM USE RATE: For non-crop uses, the combined total of all treatments must not exceed 10.6 quarts of this product per acre per year. The maximum rates stated on this product labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rates. For crop uses, the combined total of all treatments must not exceed 8 quarts of this product per acre. **This Product Alone With Water As Diluent:** (1) Determine spray volume needed for the treated area. Add one-half the required amount of clean water to the spray tank. (2) Measure the recommended amount of product and add this product slowly with agitation, and complete filling the tank with water. (3) Mix thoroughly and continue agitation while spraying.

Ammonium Sulfate: The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion. **NOTE:** When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

Colorants or Dyes: Colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's instructions.

Drift Control Additives: Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Liquid Fertilizers As Diluents: Use suitable sources and rates of fertilizer based upon local instructions. Refer to the mixing directions on the labels of the liquid fertilizers (eg. UAN or urea solutions). Always perform a jar compatibility test before large scale mixing.

Tank Mixtures of This Product: (1) Always predetermine the compatibility of labeled tank mixtures of this herbicide with water carrier by mixing small proportional quantities in advance. (2) Fill the sprayer tank one-half full with water and start agitation. (3) If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation. (4) If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation. (5) If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation. (6) Continue filling the sprayer tank with water and add the required amount of this product near the end of the filling process. (7) Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water-soluble liquid. (8) Maintain good agitation at all times, until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Sprayer Cleanup: CLEAN THE ENTIRE SPRAYER AFTER APPLICATION OF THIS PRODUCT. Failure to clean the sprayer thoroughly may result in injury to desirable crops which are subsequently sprayed.

APPLICATION EQUIPMENT AND TECHNIQUES: Do not apply this product through any type of irrigation system. This product may be applied with the following application equipment: Do not apply this product using aerial spray equipment (fixed wing or helicopter). **Ground equipment only** - Power sprayers fitted with a boom or spray wand/gun may be used for broadcast applications and spot treatments. For best spray distribution and coverage, select a spray volume and delivery system that will ensure accurate and uniform coverage. Boom sprayers equipped with appropriate flat fan nozzles, tips, and screens are suitable for broadcast applications. Spray volumes of 3 - 30 gallons per acre with spray pressures adjusted to 20 - 40 psi are appropriate. Use higher spray volumes within the recommended range for dense weed populations. **Controlled droplet applicator (CDA)** - The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre. **Do not apply as a fine mist.** **Use coarse sprays only.** Controlled droplet application equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result. **Selective equipment** - Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars. **Wiper applicators and sponge bars** - Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. **Rope or sponge wick applicators** - Mix 1.0 - 1.25 gallons of this product in 2 gallons of water to prepare a 33 - 38% solution. Apply this solution to weeds listed in this section. **Porous-Plastic Applicators** - Solutions ranging from 38 - 100% of this product in water may be used in porous-plastic wiper applicators. **Hand-held and high-volume spray equipment** - knapsack and backpack sprayers, pump-up pressure sprayers, sprayers, handwands, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage. Applications should be made on a spray-to-wet basis, spray coverage should be uniform and complete. Use only coarse sprays.

SPRAY PREPARATION FOR APPLICATIONS WITH HAND-HELD HIGH VOLUME EQUIPMENT: Specific use instructions for annuals, perennials, woody brush, and trees are presented in the section named WEEDS CONTROLLED. Identify the target weed species, note the weed growth stages and select the appropriate spray concentration presented in WEEDS CONTROLLED. Spray concentrations for application with high volume equipment made on a spray-to-wet basis range from 1.0 - 3.0% vol/vol. Use the lower spray concentrations in the range for annual weeds and the higher spray concentration for perennial and hard-to-control species. The spray preparation chart for applications on a spray-to-wet basis is shown below in Table 1.

Table 1. Amounts of This Product for Spray Concentrations, % vol/vol

Volume (gallons)	1.0%	1.25%	1.50%	1.75%	2.25%	3.0%
1 gallon	1.3 fl.oz.	1.6 fl.oz.	2.0 fl.oz.	2.7 fl.oz.	2.8 fl.oz.	3.8 fl.oz.
25 gallons	1.0 qt.	1.25 qt.	1.5 qt.	1.75 qt.	2.25 qt.	3.0 qt.
50 gallons	2.0 qt.	2.25 qt.	3.0 qt.	3.5 qt.	4.5 qt.	6.0 qt.
100 gallons	1.0 gal.	1.25 gal.	1.50 gal.	1.75 gal.	2.25 gal.	3.0 gal.

When using application methods that result in less than complete coverage, use a 7.0% spray concentration for annual and perennial weeds and a 7.0 - 11.0% spray concentration for woody brush and trees. If a straight-stream nozzle is used, start the application at the top of the target vegetation and spray from top to bottom in a "zig-zag" motion. Ensure

that at least 50% of the leaf surface is contacted by the spray. Small open-branched trees need only be treated from one side. If foliage is thick or there are multiple root sprouts, application must be made from several sides to ensure adequate coverage. The spray preparation chart for these applications is shown below in Table 2.

Table 2. Amounts of This Product for Spray Concentrations, % vol/vol

Volume (gallons)	7.0%	10.0%	11.0%
1 gallon	9 fl.oz.	12.8 fl.oz.	14.8 fl.oz.
25 gallons	7.0 qt.	10.0 qt.	11.0 qt.
50 gallons	3.5 gal.	5.0 gal.	5.5 gal.
100 gallons	7.0 gal.	10.0 gal.	11.0 gal.

SPRAY DRIFT MANAGEMENT

Use the appropriate rates of this herbicide in 3 to 40 gallons of water per acre unless otherwise specified on this label. Refer to the individual use area sections of this label of specified volumes and application rates.

AVOID DRIFT - DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Coarse sprays are less likely to drift; therefore do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label. **DRIFT MAY CAUSE DAMAGE TO ANY OTHER VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.** 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.

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).

Controlling Droplet Size:

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

• **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.

• **Application Height** - Applications should not be made at a height greater than 10 feet above the top of the largest plants.

• **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 must 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.

• **Sensitive Areas:** This pesticide must 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).

WEEDS CONTROLLED: ANNUAL WEEDS: Apply to actively growing grass and broadleaf weeds. Allow at least 3 days after treatment before disturbing vegetation. After this period, weeds may be mowed, tilled or burned. To prevent seed production, applications should be made prior to seedhead formation. This product may be used as a broadcast treatment or spot treatment for annual weeds with any of the application equipment listed on this label in noncropland sites.

Use Rates for Annual Weeds Only

Application	Spray Concentration, vol/vol%	Dosage rate, pints/A
Spot treatments, hand held high volume equipment	1.0%	_____
Broadcast treatments	_____	2.1 - 3.6

Broadcast Application: Generally, the lower application rates within the specified range will provide satisfactory control of sensitive weed species. The higher application rates within the specified range will be required for dense infestations, for adverse/extreme environmental conditions, or for weeds beyond the appropriate growth stages. Use 2.1 pints of this product per acre when weeds are less than 6 inches tall. If weeds are greater than 6 inches tall, use 3.6 pints of this product per acre per 100 gallons of spray solution. Spray volumes of 3 to 10 gallons per acre using ground applications are specified on the label. **Hand-Held High-Volume Application:** Use a 1.0% vol/vol solution of this product in water and apply to foliage of vegetation to be controlled. This product will provide full or partial control of the following annual weeds when applied as directed. Annual weeds will continue to germinate from seed throughout the growing season. Repeat treatments will be necessary to control later germinating seeds. **WEED SPECIES:** Anoda, *spurred*; Barnyardgrass *Echinochloa crus-galli*; Bassia, fivehook *Bassia hirsuta*; Bittercress; Black nightshade; Bluegrass, annual *Poa annua*; Bluegrass, bulbous *Poa bulbosa*; Bromo, downy; Bromo, Japanese; Buttercup, *Ranunculus* spp.; Carolina geranium; Carpetweed; Cheatgrass; Cheeseweed, *Malva parviflora*; Chervil; Chickweed; Chickweed, mouseear, *Cerastium vulgatum*; Cocklebur; Copperleaf hopbroom; Corn speedwell; Crabgrass, *Digitaria* spp.; Dwarf dandelion *Krigia cespitosa*; Eclipta; Falsedandelion; Falseflix, smallseed *Camelina microcarpa*; Fiddleneck, *Amsinckia* spp.; Flrigae; Flaxleaf fleabane *Coryza bonariensis*; Fleabane *Erigeron* spp.; Florida pusley; Foxtail, *Setaria* spp.; Foxtail, Carolina *Alonegus carolinianus*; Goosegrass; Groundsel, common *Senecio vulgaris*; Henbit; Horsetweed/marestail *Coryza Canadensis*; Itohgrass; Johnsongrass, seedling; Knotweed; Kochia, *Kochia scoparia*; Lambsquarters, common *Chenopodium album*; Mustard, prickly *Lactuca seriola*; Mayweed; Medusahead; Morningglory, *Ipomoea* spp.; Mustard, blue *Chorispora tenella*; Lettuce, tansy *Descurainia pinnata*; Mustard, tumble *Sisymbrium altissimum*; Mustard, wild *Brassica kaber*; Oats, wild *Avena fatua*; Panicum, *Panicum* spp.; Pennycress, field *Thlaspi arvensis*; Pigweed, redroot *Amaranthus retroflexus*; Pigweed, smooth *Amaranthus hybridus*; Plains/Tickseed coveopsis; Puncturevine; Purslane, common; Ragweed, common *Ambrosia artemisiifolia*; Ragweed, giant *Ambrosia trifida*; Rocket, London *Sisymbrium irio*; Sandbur, field *Cenchrus* spp.; Shattercane *Sorghum bicolor*; Shepherdspurse *Capsella bursa-pastoris*; Sicklepod; Signalgrass, broadleaf *Brachiaria platyphylla*; Smartweed, ladystumb; Smartweed, Pennsylvania *Polygonum pensylvanicum*; Southwistle, annual *Sonchus oleraceus*; Spanishneedles; Speedwell, purslane; Spurge, annual; Spurge, prostrate; Spurge, spotted; Spurry, umbrell *Holosteum umbellatum*; Starthistle, yellow; Stinkgrass, *Eragrostis cilianensis*; Sunflower, *Helianthus annuus*; Teaweed/prickly sida; Texas panicum; Thistle, Russian *Salsola kali*; Velvetleaf, *Abutilon theophrasti*; Virginia copperleaf; Virginia pepperweed; Witchgrass, *Panicum capillare*; Woolly cupgrass; Yellow rocket.

PERENNIAL WEEDS: This product may be used as a broadcast treatment or spot treatment for perennial weeds with any of the application equipment listed on this label in noncropland sites.

Use Rates for Perennial Weeds Only

Application	Spray Concentration, vol/vol%	Dosage rate, pints/A
Spot treatments, hand held high volume equipment	1.0 - 3.0%	_____
Broadcast treatments	_____	6.4 - 10.6

Generally, the lower application rates within the specified range will provide satisfactory control of sensitive weed species. The higher application rates within the specified range will be required for dense infestations, for adverse/extreme environmental conditions, or for weeds beyond the appropriate growth stages. Specific use instructions for certain perennial weeds are presented in the following section: Apply to actively growing perennial weeds. Best results are obtained when soil moisture is adequate for active weed growth; Unless otherwise directed, allow at least 7 days after application before disturbing vegetation; **NOTE:** If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages; Fall treatments must be applied before a killing frost; Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. When applied as recommended under the conditions described, **this product will provide full or partial control for the following perennial weeds:** Alligatorweed *Alternanthera philoxeroides*; Anise/Fennel *Foeniculum vulgare*; Artichoke, Jerusalem *Helianthus tuberosus*; Bahiagrass, *Paspalum notatum*; Bermudagrass, *Cynodon dactylon*; Bermudagrass, water (knotgrass) *Paspalum distichum*; Bindweed, field *Convolvulus arvensis*; Bluegrass, Kentucky *Poa pratensis*; Bluedweed, Texas *Helianthus ciliaris*; Brackenfern, *Pteridium aquilinum*; Bromegrass, smooth *Bromus inermis*; Bursage, woolly-leaf;

Canarygrass, reed *Phalaris arundinacea*; Cattail, *Typha* spp.; Clover, red *Trifolium pratense*; Clover, white *Trifolium repens*; Cogongrass, *Imperata cylindrica*; Cordgrass, *Spartina* spp.; Cutgrass, giant *Zizaniopsis millicaea*; Dallisgrass *Paspalum dilatatum*; Dandelion *Taraxacum officinale*; Dock, curly *Rumex crispus*; Dogbane, hemp *Apocynum cannabinum*; Fescue, *Festuca* spp.; Fescue, tall *Festuca arundinacea*; German ivy; Guineagrass, *Panicum maximum*; Hemlock, poison *Conium maculatum*; Horsenettle *Solanum carolinense*; Horseradish *Armoracia rusticana*; Ice-plant *Mesembryanthemum crystallinum*; Johnsongrass, *Sorghum halepense*; Kikuyugrass *Pennisetum clandestinum*; Knapweed, *Centaurea repens*; Lantana, *Lantana camara*; Lespedeza, common *Lespedeza striata*; Lespedeza, serices *Lespedeza cuneata*; Loosestrife, (purple) *Lythrum salicaria*; Lotus, American *Nelumbo lutea*; Maidencane, *Panicum hemtomon*; Milkweed *Asclepias* spp.; Muhly, wirestem *Muhlenbergia frondosa*; Mullein, common *Verbascum thapsus*; Napiergrass, *Pennisetum purpureum*; Nightshade, *silverleaf Solanum elaeagnifolium*; Nutsetage, purple, *Cyperus rotundus*, yellow, *Cyperus esculentus*; Orchardgrass *Dactylis glomerata*; Pampasgrass, *Cortaderia jubata*; Paragrass, *Brachiada mollis*; Pepperweed, perennial; Phragmites, *Phragmites* spp.; Quackgrass *Agropyron repens*; Redvine*; Reed, giant *Arundo donax*; Ryegrass, perennial *Lolium perenne*; Smartweed, swamp *Polygonum coccineum*; Spatterdock, *Nuphar luteum**; Spurge, leafy*; Starthistle, yellow *Centaurea stoeitialis*; Sweet potato, wild *Ipomoea pandurata**; Thistle, artichoke; Thistle, Canada; Timothy, *Phleum pratense*;Torpedograss *Panicum*; Trumpetcreeper*; Tules, common *Scirpus acutus*; Vaseygrass, *Paspalum urvillei*; Velvetgrass *Holcus* spp.; Waterhyacinth *Eichhornia crassipes*; Waterlettuce *Pistia stratiotes*; Waterprimrose *Ludwigia* spp.; Wheatgrass, western. (*Partial control). **Alligatorweed:** Apply 8.2 - 8.5 pints of this product per acre or apply a 1.75% solution with hand-held equipment to provide partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain such control. **Bermudagrass:** Apply 10.6 pints of this product per acre as a broadcast spray, or as a 2.0% solution with hand-held equipment. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control. **Bindweed, field, silverleaf nightshade; Texas bluedweed:** Apply 8.5 - 10.6 pints of this product per acre as a broadcast spray, west of the Mississippi River and 6.4 - 8.5 pints per acre, east of the Mississippi River. With hand-held equipment, use a 2.0% solution. Apply when target plants are actively growing and are at or beyond full bloom. For *silverleaf nightshade*, best results can be obtained when application is made after berries are formed. Do not treat when weeds are under drought stress. New leaf development indicates active growth. For best results apply in late summer or fall. **Brackenfern:** Apply 6.4 - 8.5 pints of this product per acre as a broadcast spray or as a 1.0 - 1.5% solution with hand-held equipment. Apply to fully expanded fronds which are at least 18 inches long. **Cattail:** Apply 6.4 - 8.5 pints of this product per acre as a broadcast spray or as a 1.0% solution with hand-held equipment. Apply when the plants are actively growing and are at or beyond the early to full bloom stage of growth. Best results are achieved when application is made during the summer or fall months. **Cutgrass, giant:** Apply 8.5 pints of this product per acre as a broadcast spray or as a 1.5% solution with hand-held equipment to provide partial control of giant cutgrass. Repeat applications will be required to maintain control, especially where vegetation is partially submerged. Allow regrowth to the 7 to 10 leaf stage before retreatment. **Dogbane, hemp; knapweed; horseradish:** Apply 8.5 pints of this product per acre as a broadcast spray or as a 2.0% solution with hand-held equipment. Apply when target plants are actively growing, and most have reached the late bud to flower stage of growth. For best results apply in late summer or fall. **Fescue, tall:** Apply 6.4 pints of this product per acre as a broadcast spray or as a 1.5% solution with hand-held equipment. Apply when the plants are actively growing, and most have reached the boot to head stage of growth. When applied prior to boot stage, control may be reduced. **Guineagrass:** Apply 6.4 pints of this product per acre as a broadcast spray or as 1.0% solution with hand-held equipment. Apply when plants are actively growing and most have reached at least the 7-leaf stage of growth. **Johnsongrass; Kentucky bluegrass; smooth bromegrass; reed canarygrass; orchardgrass; perennial ryegrass; timothy; western wheatgrass:** Apply 4.2 - 6.4 pints of this product per acre as a broadcast spray or as a 1.0% solution with hand-held equipment. Apply when target plants are actively growing, and most have reached the boot to head stage of growth. When applied prior to boot stage, control may be reduced. In fall, apply before plants have turned brown. **Lantana:** Apply this product as a 1.0 - 1.5% solution with hand-held equipment. Apply to actively growing lantana at or beyond the bloom stage of growth. Use the higher rate for plants that have reached the woody stage of growth. **Lotus, American:** Apply 5.7 pints of this product as a broadcast spray or as 1.0% solution with hand-held equipment. Best results are achieved when application is made during summer or fall months. Fall treatments must be applied before a killing frost. Repeat treatments may be required to control regrowth from seeds or underground parts of plants. **Maidencane; paragrass:** Apply 8.5 pints of this product as a broadcast spray or as 1.0% solution with hand-held equipment. Repeat treatments will be required, especially with plants that are partially submerged in water. Under these conditions, allow regrowth to the 7 to 10 leaf stage of growth before retreatment. **Milkweed, common:** Apply 6.4 pints of this product per acre as a broadcast spray or as a 2.0% solution with hand-held equipment. Apply when plants are actively growing and have reached the late bud to flower stage of growth. **Nutsedge, purple, yellow:** Apply 6.4 pints of this product per acre as a broadcast spray or as a 1.0% solution with hand-held equipment to control existing plants or rhizome outlets attached to treated plants. Apply when target plants are in flower or when new nutlets can be found at mature tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control. **Pampasgrass:** Apply a 2.0% solution of this product with hand-held equipment when plants are actively growing. **Phragmites:** For partial control of phragmites in Florida and the counties of other states bordering on the Gulf of Mexico, apply 10.6 pints per acre of this product as a broadcast spray, or as a 2.0% solution with hand-held equipment. In

Generally, the lower application rates within the specified range will provide satisfactory control of sensitive weed species. The higher application rates within the specified range will be required for dense infestations, for adverse/extreme environmental conditions, or for weeds beyond the appropriate growth stages. Specific use instructions for certain woody shrubs and trees are presented in the following section. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments. Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost. Applied as a 7.0 - 11.0% solution as a directed application as described in the HAND-HELD AND HIGH-VOLUME EQUIPMENT section, this product will control or partially control all the species listed in this section of this label. Use the higher rate for dense stands and larger woody brush and trees. Apply this product as follows to control or partially control the following woody brush and trees: **Alder**; **blackberry**; **dewberry**; **honeysuckle**; **post oak**; **raspberry**; For control, apply 6.4 - 8.5 pints per acre of this product as a broadcast spray or as a 1.0 - 1.75% solution with hand-held equipment. **Aspen**, **quaking hawthorn**; **trumpet creeper**: For control, apply 4.2 - 6.4 pints of this product per acre as a broadcast spray or as 1.0 - 1.5% solution with hand-held equipment. **Birch**; **elderberry**; **hazel**; **salmonberry**; **thimbleberry**: For control, apply 4.2 pints per acre of this product as a broadcast spray or as a 1.0% solution with hand-held equipment. **Broom, French, and Scotch**: For control, apply a 1.75 - 2.5% solution with hand-held equipment. **Buckwheat, California; hasardia; monkey flower, tobacco tree**: For partial control of these species, apply 1.0 - 2.0% solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results. **Catsclaw**: For partial control, apply as a 1.75 - 2.0% solution with hand-held equipment when at least 50% of the new leaves are fully developed. **Cherry, bitter, black, pin; oak, southern red; sweetgum; Prunus**: For control, apply 4.2 - 10.6 pints of this product per acre as a broadcast spray or as a 1.5 - 2.0% solution with hand-held equipment. **Coyotebrush**: For control, apply 1.75 - 2.0% solution with hand-held equipment when at least 50% of the new leaves are fully developed. **Dogwood; hickory; saltcedar**: For partial control, apply a 1.5 - 3.0% solution of this product with hand-held equipment or 8.5 - 10.6 pints per acre as a broadcast spray. **Eucalyptus, bluegum**: For control of eucalyptus resprouts, apply a 2.0 - 2.5% solution of this product with hand-held equipment when resprouts are 6 - 12 feet tall. Ensure complete coverage. Apply when plants are growing actively. Avoid application to drought-stressed plants. **Holly, Florida; waxmyrtle, southern**: For partial control, apply this product as a 2.0% solution with hand-held equipment. **Kudzu**: For control, apply 8.5 pints of this product per acre as a broadcast spray or as a 2.0 - 2.5% solution with hand-held equipment. Repeat applications will be required to maintain control. **Maple, red**: For control, apply as a 1.0 - 1.75% solution with hand-held equipment when at least 50% of the new leaves are fully developed. For partial control, apply 4.2 - 10.6 pints of this product per acre as a broadcast spray. **Maple, sugar; oak, northern pin, red**: For control, apply as a 1.0 - 1.75% solution with hand-held equipment when at least 50% of the new leaves are fully developed. **Poison ivy; poison oak**: For control, apply 8.5 - 10.6 pints of this product per acre as a broadcast spray or as a 1.75 - 2.0% solution with hand-held equipment. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color. **Rose, multiflora**: For control, apply 4.2 pints of this product per acre as a broadcast spray or as a 1.0% solution with hand-held equipment. Treatments should be made prior to leaf deterioration by leaf-feeding insects. **Sage, black; sagebrush, California; chamise; tallow tree, Chinese**: For control of these species, apply a 1.0% solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results. **Salbush, sea myrtle**: For control, apply this product as a 1.5% solution with hand-held equipment. **Tanaka resprouts**: For suppression or partial control, apply a 2.5% solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with fall applications. **Willow**: For control, apply 6.4 pints of this product per acre as a broadcast spray or as a 1.0% solution with hand-held equipment. **Other woody brush and trees listed**: For partial control, apply 4.2 - 10.6 pints of this product per acre as a broadcast spray or as a 1.0 - 2.5% solution with hand-held equipment.

AQUATIC AND NONCROP SITES: AQUATIC SITES: This product may be applied to emerged weeds in all bodies of fresh and brackish water which may be flowing, non-flowing, or transient. This includes lakes, rivers, streams, ponds, estuaries, rice levees, seeps, irrigation and drainage ditches, canals, reservoirs, wastewater treatment facilities, wildlife habitat restoration and management areas, and listed sites including the following: **Aquatic food crop:** Agricultural drainage systems, irrigation systems, lakes/ponds (with human or wildlife use) stream/rivers/channeled water, drainage ditches, canals, irrigation ditches, estuaries. **Aquatic non-food industrial:** aquatic areas/ water, drainage systems, waste water systems. **Aquatic non-food outdoor:** aquatic areas/water, ditches, ditch banks. If aquatic sites are present in the non-crop area and are part of the intended treatment, read and observe the following directions: **This product does not control plants which are completely submerged or have a majority of foliage under water.** There is no restriction on the use of treated water for irrigation, recreation, or domestic purposes. Consult local State fish and game agency and water control authorities before applying this product to public waters. Permits may be required to treat such water. NOTE: Do not apply this product within ½ mile upstream of an active potable water intake in flowing water (i.e. river, stream, etc.) or within ½ mile of an active potable water intake in a standing body of water such as lake, pond, or reservoir. To make aquatic applications around and within ½ mile of active potable water intakes the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made ONLY in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the applications. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites. For treatments after drawdown of water or in dry ditches, allow 7 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after drawdown to ensure application to actively growing weeds. Floating mats of vegetation may require retreatment. Avoid wash-off of sprayed foliage by spray boat or recreational boat backwash or by rainfall within 6 hours of application. Do not retreat within 24 hours following the initial treatment. Applications made to moving bodies of water must be made while traveling upstream to prevent concentration of this herbicide in water. When making any bankside applications, do not overlap more than 1 foot into open water. Do not spray in bodies of water where weeds do not exist. The maximum application rate of 10.6 pints per acre must not be exceeded in any single broadcast application that is being made over water. When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in fish kill.

NONCROP SITES: This product may be used to control the listed weeds in terrestrial noncrop sites and/or in aquatic sites within these areas: **Terrestrial Non-Food Crop:** ornamental and/or shade trees, ornamental woody shrubs and vines, Christmas tree plantings, ornamental plants, ornamental turf, agricultural fallow/idle land, agricultural rights-of-way/ fencerows/hedgerows, agricultural uncultivated areas, airports/landing fields, Christmas tree plantations, golf course turf, industrial areas, outdoor buildings/structures, rights-of-way/fence rows/hedgerows, nonagricultural uncultivated areas/soils, ornamental and/or shade trees, ornamental lawns and turf, cemeteries, vacant lots, paths/patios, paved areas (private roads/sidewalks), recreational areas, urban areas, golf courses, parks, schools, rights-of-way (highway, power lines, pipeline utility, railroads), roadsides, industrial sites, storage yards, lumber yards, petroleum tank farms, petroleum pumping station, parking areas, shelter belts, farm yards, nurseries (plants grown or maintained for commercial or research purposes and includes, but is not limited to trees, turfgrasses, flowers, shrubs, ornamentals, and seedlings), wildlife habitat restoration and management areas. **Outdoor Residential:** ornamental and/or shade trees, ornamental herbaceous plants, ornamental lawns and turf, ornamental woody shrubs and vines, household/domestic dwellings outdoor premises. This product may be used as a broadcast treatment or spot treatment with any of the application equipment listed in this label in noncropland sites. **For spot treatments:** Specific use instructions for annuals, perennials, woody brush, and trees are presented in the section named WEEDS CONTROLLED. See Tables 1 and 2. **For broadcast treatments:** Specific use instructions for noncropland sites including dosage rates, spray volumes, and restrictions are presented in Tables 3 - 5.

Table 3. Use Rates for Noncropland Use Patterns, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site	Amount of Product Pints/Acre	Spray Volume Gals./Acre	Amount of Product fl.oz./1000 sq.ft.	Spray Volume Gals./1000 sq.ft.
Lawn & turf seedbeds (Prior to establishment)	Annual weeds: 2.1 - 4.2	≤ 25	0.8 - 1.5	< 1.0
Turfgrasses for sod production	Perennial weeds: 4.2 - 10.6	≤ 25	1.5 - 3.9	< 1.0
Turfgrass renovations				

Major Weed Species: Many annual and perennial grasses and broadleaf weeds, including johnsongrass, bermudagrass, annual bluegrass, crabgrass, lambsquarters, ragweed, fescues, and quackgrass

Precautions, Restrictions & Comments: SITE PREPARATION (preplant, preemergence, renovation): This product may be applied before planting or renovation of turf. Applications must be made prior to the emergence of the crop to avoid crop injury. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall applications provide best control. Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts. This product does not provide residual control.

Table 4. Use Rates for Noncropland Use Patterns, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site	Amount of Product Pints/Acre	Spray Volume Gals./Acre	Amount of Product fl.oz./1000²	Spray Volume Gals./1000²
Shelterbelts, windbreaks, & landscape plantings.	Annual weeds: 2.1 - 4.2	≤ 25	0.8 - 1.5	< 1.0
	Perennial weeds: 4.2 - 10.6	≤ 25	1.5 - 3.9	< 1.0
Nurseries: Field grown nursery, stock for conifers, broadleaf evergreens, deciduous trees, shrubs & ground covers	Annual weeds: 2.1 - 4.2	≤ 25	0.8 - 1.5	< 1.0
	Perennial weeds: 4.2 - 10.6	≤ 25	1.5 - 3.9	< 1.0
Christmas trees	Annual weeds: 2.1 - 4.2	≤ 25	0.8 - 1.5	< 1.0
	Perennial weeds: 4.2 - 10.6	≤ 25	1.5 - 3.9	< 1.0
Flowers (annual, biennial & perennial)	2.1 - 4.2	≤ 25	0.8 - 1.5	< 1.0
	4.2 - 10.6	≤ 25	1.5 - 3.9	< 1.0

Major Weed Species: Most herbaceous & woody plants

Precautions, Restrictions & Comments: SITE PREPARATION: Apply to actively growing plants. For crops, desirable plants and trees, avoid contact with foliage, green stems or fruit because severe injury or destruction may result.

Major Weed Species: Most herbaceous & woody plants.

Precautions, Restrictions & Comments: SITE PREPARATION: This product may be used for site preparation prior to transplanting these crops. Allow a minimum of 3 days between application and transplanting. MIDDLES (between rows): This product will control or suppress annual and perennial weeds and ground covers growing between the rows. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application. Apply when weeds and grasses are succulent and new growth is from 1 - 6 inches high. For mature woody weeds, late germinating weeds and grasses, and for perennials - retreatment or spot treatment may be necessary. Do not allow spray to contact green stems, fruit or foliage as injury may result. Do not spray under windy conditions and use a shield for young trees.

Major Weed Species: Most herbaceous & woody plants.

Precautions, Restrictions & Comments: SITE PREPARATION: This product may be used prior to planting Christmas trees. Precautions should be taken to protect nontarget plants during site preparation applications.

Site: Flowers (annual, biennial & perennial). **Major Weed Species:** Annual broadleaf weeds and grasses such as chickweed, crabgrass, fall panicum, foxtails, Kochia, lambsquarters, mustard, pigweed, ragweed, smartweed, velvetleaf.

Major Weed Species: Annual broadleaf weeds and grasses such as chickweed, crabgrass, fall panicum, foxtails, Kochia, lambsquarters, mustard, pigweed, ragweed, smartweed, velvetleaf.

Precautions, Restrictions & Comments: SITE PREPARATION: Apply as a foliar spray to actively growing weeds. Avoid contact of spray drift, or mist with desirable species. This product will not provide residual control.

Tank Mixtures: Refer to container label of companion herbicide(s).

Table 5. Use Rates for Noncropland Use Patterns, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site	Amount of Product Pints/Acre	Spray Volume Gals./Acre	Amount of Product fl.oz./1000 sq.ft.	Spray Volume Gals./1000 sq.ft.
Farmsteads, farm roads, road-sides,fence rows, rights-of-way, farm buildings, golf courses, industrial sites, parks, cemeteries & listed noncropland sites.	Annual weeds: 1.0 - 4.2	3 - 40	0.4 - 1.5	≤ 1.0
	Perennial weeds: 4.2 - 10.6	3 - 40	1.5 - 3.9	≤ 1.0
	Woody brush & trees: 4.2 - 10.6	3 - 40	1.5 - 3.9	≤ 1.0

Major Weed Species: Annual and perennial weeds including crabgrass, foxtail, johnsongrass, Kochia, morningglory, multiflora rose, pigweed, trumpetcreeper, thistle, woody brush

Precautions, Restrictions & Comments: SITE PREPARATION(preplant, preemergence, renovation): TRIM AND EDGE: This product may be used to trim and edge around trees, buildings, sidewalks and roads in noncropland sites. BARE GROUND:Repeated applications of this product may be used on emerged weeds to maintain bare ground. NONSELECTIVE POSTEMERGENCE: Annuals and perennials:Apply to foliage of emerged weeds. Apply at early growth stages of annual weeds and when perennial weeds are approaching maturity. Woody brush and trees: Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation. In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering. Symptoms may not appear prior to frost or senescence with fall treatments. Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Reduced performance may result if fall treatments are made following a frost.

WILDLIFE HABITAT RESTORATION AND MANAGEMENT AREAS: This product may be used for the restoration and/or maintenance of native habitat and in wildlife management areas. **Habitat restoration and maintenance:** When applied as directed, exotic and other undesirable vegetation may be controlled in habitat management areas. Applications may be made to allow recovery of native plant species, to open up water to attract waterfowl, and for broad-spectrum vegetation control requirements in habitat management areas. Spot treatments may be made to selectively remove unwanted plants for habitat enhancement. For spot treatments, care should be exercised to keep spray off of desirable plants. **Wildlife food plots:** This product may be used as a site preparation treatment prior to planting wildlife food plots. Apply as directed to control vegetation in the plot area. Any wildlife food species may be planted after applying this product, or native species may be allowed to reinfest the area. If tillage is needed to prepare a seedbed, wait 7 days after applying this product before tilling to allow for maximum effectiveness.

CUT STUMP APPLICATION:Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface. Apply a 50 to 100% solution of this product to freshly cut surface immediately after cutting. Delay in applying this product may result in reduced performance. For best results, trees should be cut during periods of active growth and full leaf expansion. When used according to directions for cut stump application, this product will control, partially control or suppress most woody brush and tree species, some of which are listed below: *Alder* *Alnus spp.*; *Coyotebrush* *Baccharis consanguinea**; *Dogwood* *Cornus spp.* *; *Eucalyptus Eucalyptus spp.*, *Hickory* *Carya spp.* *; *Madrone* *Arbutus menziesii*; *Maple* *Acer spp.* *; *Oak* *Quercus spp.* *; *Poplar* *Populus spp.* *; *Reed*, *giant* *Arundo donax*; *Saltcedar* *Tamarix spp.* *; *Sweetgum* *Liquidambar styraciflua**; *Sycamore* *Platanus occidentalis* *; *Tanaka* *Lithocarpus densiflorus*; *Willow* *Salix spp.* (* This product is not approved for this use on these species in the State of California.)

INJECT AND FRILL APPLICATION: Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment which must penetrate into living tissue. Apply the equivalent of 1 - 1.5 ml of this product per 2 - 3 inches of trunk diameter. This is best achieved by applying 25 - 100% concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying dilute material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frill or cut areas in species that exude sap freely after frills or cutting. In species such as these, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, applications should be made during periods of active growth and full leaf expansion. **This treatment will CONTROL the following woody species:** Oak *Quercus spp.*; *Poplar* *Populus spp.*; *Sweet gum* *Liquidambar styraciflua*; *Sycamore* *Platanus occidentalis*. **This treatment will SUPPRESS the following woody species:** Black gum *Nyssa sylvatica**; *Dogwood* *Cornus spp.* *; *Hickory* *Carya spp.*; *Maple, red* *Acer rubrum*. (*This product is not approved for this use on this species in the State of California.)

RELEASE OF BERMUDAGRASS OR BAHIAGRASS ON NONCROP SITES: Release of dormant bermudagrass and bahiagrass - When applied as directed, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Make applications to dormant bermudagrass or bahiagrass. For best results on winter annuals, treat when weeds are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is in or beyond the 4 to 6-leaf stage.

WEEDS CONTROLLED: Rate instructions for control or suppression of winter annuals and tall fescue are listed below. Apply the recommended rates of this product with spray volumes of 3 - 25 gallons per acre.

WEEDS CONTROLLED OR SUPPRESSED* Note: C = Control; S = Suppression

WEED SPECIES	(Fluid Ounces This Product per Acre)					
	8.8	12.9	17.3	25.3	34.0	68.0
Barley, little <i>Hordeum pusillum</i>	S	C	C	C	C	C
Bedstraw, catchweed <i>Galium aparine</i>	S	C	C	C	C	C
Bluegrass, annual <i>Poa annua</i>	S	C	C	C	C	C
Cheruil <i>Chairophylum tainturieri</i>	S	C	C	C	C	C
Chickweed, common <i>Stellaria media</i>	S	C	C	C	C	C
Clover, crimson <i>Trifolium incarnatum</i>	—	S	S	C	C	C
Clover, large hop <i>Trifolium campestre</i>	—	S	S	C	C	C
Fescue, tall <i>Festuca arundinacea</i>	—	—	—	—	S	S
Geranium, Carolina <i>Geranium carolinianm</i>	—	—	S	S	C	C
Henbit <i>Lamium amplexicaule</i>	—	S	C	C	C	C
Ryegrass, Italian <i>Lolium multiflorum</i>	—	—	S	C	C	C
Speedwell, corn <i>Veronica arvensis</i>	S	C	C	C	C	C
Vetch, common <i>Vicia sativa</i>	—	—	S	C	C	C

*These rates apply only to sites where an established competitive turf is present.

RELEASE OF ACTIVELY GROWING BERMUDAGRASS: **NOTE: USE ONLY ON SITES WHERE BAHIAGRASS OR BERMUDAGRASS ARE DESIRED FOR GROUND COVER AND SOME TEMPORARY INJURY OR YELLOWING OF THE GRASSES CAN BE TOLERATED.** When applied as directed, this product will aid in the release of bermudagrass by providing control of annual species listed in the WEEDS CONTROLLED section of this label, and suppression or partial control of certain perennial weeds. For control or suppression of those annual species listed in this label, use 1.0 - 3.2 pints of this product as a broadcast spray in 10 - 25 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or length of runner in annual vines). Use higher rate as size of plants increases or as they approach seedhead formation. Use the higher rate for partial control or longer-term suppression of the following perennial species. Use lower rates for shorter-term suppression of growth. Bahiagrass; Dallisgrass; Fescue (tall), Johnsongrass**, Trumpetcreeper*, Vaseygrass. (* Suppression at the higher rate only. ** Johnsongrass is controlled at the higher rate.) Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment but regrowth will occur under most conditions. Repeat applications in the same season are not recommended, since severe injury may result. **BAHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION:** When applied as directed in the noncrop section in this label, this product will provide significant inhibition of seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with single applications and approximately 120 days with sequential applications. Apply this product 1 to 2 weeks after full greenup of bahiagrass or after the bahiagrass has been mowed to a uniform height of 3 to 4 inches. Applications must be made prior to seedhead emergence. Apply 7.0 fluid ounces of this product in 10 to 25 gallons of water per acre. Sequential applications of this product may be made at approximately 45 day intervals to extend the period of seedhead and vegetative growth suppression. For continued seedhead suppression, sequential applications must be made prior to seedhead emergence. Apply no more than 2 sequential applications per year. As a first sequential application, apply 4.0 fluid ounces of this product per acre. A second sequential application of 3.0 - 4.0 ounces of product per acre may be made approximately 45 days after the last application.

ANNUAL AND PERENNIAL GRASS SUPPRESSION: This product can be incorporated into highway vegetation management programs to reduce the mowing requirements. This product may be applied to annual and perennial grasses established in noncropland sites including highway rights-of-way, municipal, state, and federal lands, and industrial areas. This product suppresses the growth of tall fescue, smooth bromegrass, Kentucky bluegrass, and other established coarse-textured species on roadsides and other areas. Refer to Table 6 for the instructions for growth regulation of cool season grass.

TERRESTRIAL FOOD AND FEED CROP: This product may be used as a broadcast treatment or spot treatment with any of the application equipment listed on this label in orchard floors and agricultural fallow. This product may be used to control weeds within these areas: **ORCHARD FLOORS:** Almond, apple, cherry, filbert (hazelnut), peach, pear, pecan, pistachio, plum (fresh prunes), walnut (English and black). **For Spot Treatments** - Specific use instructions for annuals, perennials, woody brush, and trees are presented in the section named WEEDS CONTROLLED. See Tables 1 and 2. **For Broadcast Treatments** - Specific use instructions for orchard floors, including dosage rates, spray volumes, and restrictions are presented in Table 7. **FALLOW LAND:** Arable land idle between crops or arable land not under rotation that is set at rest for a period ranging from one to five years before it is cultivated again, or land under permanent crops, meadows, or rangeland, or pastures, which is not being used for that purpose for a period of at least one year. **For Spot Treatments** - Specific use instructions for annuals, perennials, woody brush, and trees are presented in the section named WEEDS CONTROLLED. See Tables 1 and 2. **For Broadcast Treatments** - Specific use instructions for fallow sites, including dosage rates, spray volumes, and restrictions are presented in Table 8 and Table 9.

Table 6. Use Rates for Cool Season Turf Growth Regulation, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site	Growth and Seedhead Suppression	Spray Volume Gal./Acre	Amount of Product Floz./Acre
Roadways, farmsteads, farm roads; Highway rights-of-way (principal, interstate, state, and county highways), interchange ramps, waysides, service areas, and unpaved roads; Municipal, state and federal lands such as airports, military installations, schools/universities, libraries, and hospitals; Commercial/industrial areas including industrial parks, tank yards, plant sites, storage areas, fencerows, and utility rights-of-way.	Annual ryegrass, wild barley, wild oats	≤ 40	Annual grasses: 3.0 - 4.0
	Tall fescue, smooth bromegrass, Kentucky bluegrass	≤ 40	Perennial grasses: 4.0 - 6.2

Precautions, Restrictions & Comments: This product may be used for management of coarse turf on roadside rights-of-way or other industrial areas. Do not use on high quality turf or other areas where some turf color changes cannot be tolerated. Slight turf discoloration may occur but turf will regreen and regrow under most conditions as effects of this product diminish. **ANNUAL GRASS GROWTH SUPPRESSION:** Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses. **PERENNIAL GRASS GROWTH SUPPRESSION:** This product can be used for growth and seedhead suppression of tall fescue, smooth brome. For best results, apply this product in a recommended tank mixture to actively growing turfgrasses after greenup in the spring of the year. For suppression of seedheads, applications must be made before boot-to-seedhead stage of development. Applications made from seedhead emergence and maturity may result in turf discoloration or injury. After mowing or removal of seedheads, this product in a recommended tank mixture may also be used to suppress the growth of certain turfgrasses. Allow turf to recover from stress caused by heat, drought, or mowing before making applications. Applications made to turf under stress may increase the potential for discoloration or injury. Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Table 7. Use Rates for Orchard Floors, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site	Amount of Product Pints/Acre	Spray Volume Gal./Acre	Preharvest Interval (Days)
Orchard Floors: Pome fruits (apple & pear)	Annual weeds: 1.0 - 4.2	3-40	1 day
Stone Fruits (sweet or tart cherry, peach, or plum/fresh prunes)	Perennial weeds: 4.2 - 10.6		17 days
Tree nuts (almond, filbert or hazelnut, pecan black & English walnut)			3 days
Pistachio			3 days

Major Weed Species: *Annual and Biennial Weeds:* lambsquarters, prickly lettuce, tall morningglory, ragweed, shepherdspurse, annual sowthistle, tansy ragwort, pepperweed, redroot pigweed, yellow starthistle. *Perennial Weeds:* bindweed, blue lettuce, Canada thistle, dandelion, docks, St. Johnswort, whitetop (hoary cress).

Precautions, Restrictions & Comments: SITE PREPARATION: This product may be used for site preparation prior to transplanting these crops. Allow a minimum of 3 days between application and transplanting. MIDDLES (between rows): This product will control or suppress annual and perennial weeds and ground covers growing between the rows. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application. **SELECTED EQUIPMENT:** Applications may be made with boom equipment, CDA, shielded sprayers, or with wiper applicator equipment, except as directed. For cherries, any application equipment listed in this section may be used in all states. Any application equipment listed in this section may be used in peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and

Washington, except for peaches grown in the states specified in the following paragraph. In all other states use wiper equipment only. For peaches, grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees which have been planted in the orchard for 2 or more years. **EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.** Apply when weeds and grasses are succulent and new growth is from 1 - 6 inches high. For mature woody weeds, late germinating weeds and grasses, and for perennials - retreatment or spot treatment may be necessary. Do not allow spray to contact green stems, fruit or foliage as injury may result. Do not spray under windy conditions and use a shield for young trees.

Table 8. Use Rates for Fallow Land, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site	Amount of Product Pints/Acre	Spray Volume Gal./Acre
Fallow Systems: Chemical fallow, preplant fallow, beds, & aid-to-tillage	0.55 - 1.0 pts./Acre	< 10
	8.8 - 16 fl.oz./Acre	< 10

Major Weed Species: Annual, biennial, and perennial weeds including Canada thistle field bindweed, downy brome, cheat, tansy mustard, foxtail.

Precautions, Restrictions & Comments: FALLOW LAND: Fallow land or land idle between crops may be subject to unwanted weed growth. Use in fallow and reduced tillage systems 30 days before planting. For emerged annual weed control, apply at maximum emergence of weeds, but before weeds are greater than 6 inches tall. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground application equipment may be used. The addition of 2,4-D may aid in the suppression of emerged perennial broadleaf weeds and large annual broadleaf weeds.

Table 9. Use Rates for Pasture, Dosage Rates, Spray Volumes, Restrictions, and Comments for Broadcast Applications Appropriate for Each Site.

Site:	Amount of Product Pints/Acre	Spray Volume Gal./Acre	Preharvest Interval (Days)
Pasture Reseeding:	2.1 - 10.6	3 - 40	8 weeks

Major Weed Species: For suppression/control of existing sod & undesirable emerged broadleaf weeds & grasses prior to, or at time of, planting of grasses or forage legumes or winter annuals.

Precautions, Restrictions & Comments: SITE PREPARATION: This product may be applied prior to planting or emergence of forage grasses and legumes. In addition, this product may be used to control perennial pasture species listed on this label prior to replanting. Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Site:	Amount of Product Pints/Acre	Spray Volume Gal./Acre	Preharvest Interval (Days)
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