UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

August 11, 2016

Bert Volger, Ph.D.
Agent for Helm Agro US, Inc.
c/o Ceres International LLC
1087 Heartsease Drive
West Chester, PA 19382

Subject: Label Amendment – update to match other glyphosate product labels
Product Name: Helosate 5 Herbicide
EPA Registration Number: 74530-56
Application Date: March 28, 2016
Decision Number: 516068

Dear Dr. Volger:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

Continued on page 2 of 2

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Beth Benbow by phone at 703-347-8072, or via email at Benbow.bethany@epa.gov.

Sincerely,

Mindy Ondish for

Reuben Baris
Product Manager 25
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

ACCEPTED
08/11/2016
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 74530-56

Master label
Revised 8-10-2016

(MASTER)
HELOSATE 5
HERBICIDE

NON-SELECTIVE, BROAD-SPECTRUM WEED CONTROL FOR MANY CROPPING SYSTEMS, INCLUDING ROUNDUP READY CROPS, FARMSTEADS, AND CONSERVATION RESERVE PROGRAM ACRES

GROUP	9	HERBICIDE

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NONWOODY ROOTS OR FRUIT CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate (n-(phosphonomethyl) glycine), in the form of its isopropylamine salt 50.2%

OTHER INGREDIENTS: 49.8%

TOTAL 100.0%

*Contains 600 grams per liter or 5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 450 grams per liter or 3.75 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its acid. Read the entire label before using this product. Use only according to label instructions.

EPA Reg. No. 74530-56 EPA Est. No. xxx-xx-xxx

Net Contents:-------

KEEP OUT OF REACH OF CHILDREN
CAUTION

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.)

FIRST AID	
If Swallowed:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or a doctor. • Have person sip a glass of water, if able to swallow. • Do not give anything by mouth to an unconscious person.
If on Skin or Clothing:	• Take off contaminated clothing. • Immediately rinse skin with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in Eyes:	• Hold eye open and rinse slowly and gently with water for 15–20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IMPORTANT PHONE NUMBER	
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	

Manufactured by: HELM AGRO US, Inc.,
401 E. Jackson St., Suite 1400
Tampa, FL 33602

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes moderate eye irritation. Harmful if swallowed, or absorbed through the skin. Avoid contact with eyes, skin or clothing.

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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Applicators and other handlers must wear:
· long sleeved shirt and long pants
· shoes plus socks
· gloves
· protective eyewear
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 statement: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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

Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate.

PHYSICAL OR CHEMICAL HAZARDS
Spray solutions of this product must 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. The gas mixture could flash or explode, causing serious personal injury, if ignited by 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 any manner inconsistent with its labeling. This product may only be used in accordance with the Directions for Use on this label. 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 regulations.

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 had 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.
Keep people and pets off treated areas until spray solution had dried to prevent transfer of this product onto desirable vegetation.

STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Keep container closed to prevent spills and contamination.
Storage: Store above 28°F or agitate before use. Below 28°F crystals may start to form and settle to the bottom. If crystals form, allow product to warm above 50º F (10º C) and mix well or recirculate to redissolve.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate water that cannot be used according to label instructions must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL STATEMENTS
Nonrefillable containers 5 gallons or less:
Container disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. 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 and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use of disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use of disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers 5 gallons or less:
Container disposal: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.
Cleaning the container before final disposal is the responsibility of the person disposing of this container.
Cleaning before refilling is the responsibility of the refiller.
To clean the container before final disposal, empty the remaining contents from this container into application

equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Nonrefillable containers of 5 gallons or larger:
Container Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. 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. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over on its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use 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.

PRODUCT INFORMATION

(How this product works)

Product Description: This product is a post emergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad spectrum control of many annual weeds and perennial weeds. It is formulated as a water-soluble liquid. The addition of surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution must only be done based upon field experience or further recommendation of your local extension service, crop consultant or field representative. Ammonium sulfate, drift control additives, or dyes and colorant may be used.

Time to Symptoms: 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 development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Refer to the "ANNUAL AND PERENNIAL WEED RATE TABLES" for directions for specific weeds. Always use the higher rate of this product per acre within the suggested range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

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.

Cultural Considerations: 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 suggested stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, make spray coverage uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

When this product comes in contact with soil, it is bound to soil particles. Under directed use situations, once this product is bound to soil particles, it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treated area or if the soil is transported off-site. The strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entering ground water.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Volatility: This product is non-volatile. Therefore, it cannot move as a vapor after application to affect nearby vegetation.

Toxicology Testing: Exposure to workers and other applicators generally is expected to pose minimal risks based on results of short-term toxicity studies. Glyphosate has been thoroughly tested and determined not to cause cancer or other adverse long-term health effects.

Tank Mixing: 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. Use according to the most restrictive label directions for each product in the mixture. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow restrictions, limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 6.5 quarts of this product per acre per year.
For non-crop uses, the combined total of all treatments must not exceed 8.5 quarts of this product per acre per year.

WEED RESISTANCE MANAGEMENT

Glyphosate, the active ingredient in this product, is a Group 9 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 9 Herbicides. Weed species resistant to Group 9 herbicides can be effectively managed by using another herbicide from a different Group, or by other cultural or mechanical methods.

Since the occurrence of new glyphosate-resistant weeds cannot be determined until after product use and scientific identification, Helm Agro US, Inc. is not responsible for any losses that result from the failure of this product to control glyphosate-resistant weed bio-types.

Weed Management Practices: Resistant populations arise when rare individual plants are uncontrolled by a normal dose of a given herbicide under normal environmental conditions. In the absence of other control measures, these individuals survive, produce seed, and eventually become the dominant biotype in the field through continuous selection. The best means of reducing this selection is to use diverse weed control practices such as multiple herbicides with different mechanisms of action, and often in combination with various mechanical and cultural practices.

To minimize the occurrence of herbicide-resistant biotypes, including those resistant to glyphosate, implement the following weed management practice options that are practical to your situation. These management practices are applicable to reduce the spread of confirmed resistant biotypes (managing existing resistant biotypes) and to reduce the potential for selecting for resistance in new species (proactive resistance management).

- Use a diversified approach toward weed management focused on preventing weed seed production and reducing the number of weed seeds in the soil.
- Plant crops into fields that are as weed-free as possible and then keep them as weed-free as possible.
- Plant crop seed that is as weed-free as possible.
- Scout fields routinely, before and after herbicide application.
- Use multiple herbicide mechanisms of action that are effective against the most troublesome weeds in your field and against those with known resistance.
- Apply herbicides at application rates listed on the label when weeds are within the size range indicated on the label.
- Emphasize cultural practices that suppress weeds by using crop competitiveness.
- Use mechanical and biological weed management practices, where appropriate.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- Manage weed seed at harvest and after harvest to prevent a buildup of the weed seedbank."

MIXING INSTRUCTIONS

Clean sprayer parts immediately after using this product by thoroughly flushing with water.
NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLE MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the directed amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state

or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitator, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved antifoam or defoaming agent.
NOTE: Reduced results may occur if water containing soil is used, such as visibly muddy water or water that is not clean from ponds and ditches.

Surfactant

Surfactant may be included in the tank mixture if desired and must only be done so based on field experience or further recommendation of your local extension service, crop consultant or field representative.

Tank Mixture Instructions

Mix labeled tank mixtures of this product with water as follows:
1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If a wettable powder is used, make 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 mixtures 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 spray tank with water and add the required amount of this product near the end of the filling process.
7. When using a nonionic surfactant add it to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.
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.
Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers must be no finer than 50 mesh.
Always predetermine- the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.
Refer to the "MIXING INSTRUCTIONS" section of "PRODUCT INFORMATION" for additional precautions.

Mixing for Hand-Held Sprayers
Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Amount of HELOSATE 5 HERBICIDE						
Desired Volume	1/2%	1%	1-1/2%	2%	5%	8%
1 Gal	3/4 oz	1.5 oz	2.2 oz	2.9 oz	7 oz	11.3 oz
25 Gal	1.1 pt	1.1 qt	1.62 qt	2.2 qt	5.4 qt	8.6 qt
100 Gal	2.2 qt	1.1 gal	1.62 gal	2.2 gal	5.4 gal	8.6 gal

2 tablespoons = 1 fluid ounce
For use in knapsack sprayers, it is suggested that the directed amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

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 directed in this label. Lower rates will result in reduced performance.

Colorants or Dyes

Agriculturally approved 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 manufacture's suggestions.

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.

SPRAY DRIFT

SPRAY DRIFT MANAGEMENT

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NONWOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

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 other areas on which treatment was not intended.

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.

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:
Aerial - Fixed Wing and Helicopter
Ground Broadcast Spray - Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.
Hand-Held and High-Volume Spray Equipment - Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers, lances and other handheld and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment - Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.
Injection Systems - Aerial or ground injection sprayers.
Controlled Droplet Applicator (CDA) - Handheld or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.
Apply these spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.
Use the directed rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 26 fluid ounces per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for directed volumes and application rates.
NOTE: Consult with State or local authorities regarding any additional requirements for aerial treatments.

AVOID DRIFT - DO NOT APPLY DURING LOW LEVEL 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. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

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.

Ensure uniform application – To avoid streaked, uneven or overlapped application, use appropriate marking devices. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE THE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

Aerial Spray Drift Management

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be observed

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 the **"Wind"**, **"Temperature and Humidity"**, and **"Temperature Inversions"** sections of this label).

Controlling droplet size

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

• **Pressure:** Use the lower spray pressures directed for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

• **Number of Nozzles:** Use the minimum number of nozzles that provide uniform coverage.

• **Nozzle Orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

• **Nozzle Type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

• **Boom Length:** For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

• **Application Height:** Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

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

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Do not make applications when wind speed is below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

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

Temperature inversions

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

Sensitive areas

The product 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).

Avoid direct application to any body of water.

Ensure uniform application - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Ground Broadcast Equipment

Use the directed rates of this product in 3 to 30 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, also increase the spray volume within the suggested range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

Controlled Droplet Application (CDA)

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount directed in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of perennial weeds, apply a 20-40 percent solution of this product at a rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 4 quarts per acre).

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.

Hand-Held and High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage must be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.5 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formations in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1 percent solution.

For best results use a 2 percent solution on harder-to-control perennials, such as Bermuda grass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods which result in less than complete coverage, use a 5 percent solution for annual and perennial weeds.

Selective Equipment

This product may be applied through recirculation spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any non-crop site specified on this label and only when specifically directed in cropping systems.

A recirculation spray system directs the spray solution onto weeds growing above desired vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desired vegetation from the herbicide.

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.
Contact of the herbicide solution with desirable vegetation may result may result in damage or destruction. Adjust applicators used above desirable vegetation so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam, or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Make over-the-top applications to crops when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Shielded Applicators/Hooded Sprayers

A hooded sprayer is a type of shield applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting the crop. CONTACT OF THIS PRODUCT IN ANY MANNER TO ANY VEGETATION TO WHICH TREATMENT IS NOT INTENDED MAY CAUSE DAMAGE. Such damage shall be the sole responsibility of the applicator.

Wiper Applicators

Wiper applicators and devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Surfactant may be included in the tank mixture if desired and must only be done so based on field experience or further recommendations of your local extension service, crop consultant, or field representative.

For Rope or Sponge Wick Applicators – Mix 1 gallon of this product with 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed in this section.
For Porous-Plastic Applicators – Solutions ranging from 33 to 100 percent of this product in water may be used in porous-plastic wiper applicators.

When applied as directed under the conditions described for Wiper Applicators, this product CONTROLS the following weeds:	
Annual Grasses	
Corn, Volunteer	*Zea mays*
Panicum, Texas	*Panicum texanum*
Rye, common	*Secale cereale*
Shattercane	*Sorghum bicolor*
Annual Broadleaves	
Sicklepod	*Cassia obtusifolia*
Spanishneedles	*Bidens bipinnata*
Starbur, bristly	*Acanthospermum hispidum*
When applied as directed under the conditions described for Wiper Applicators, this product SUPPRESSES the following weeds:	
Annual Broadleaves	
Beggarweed, Florida	*Desmodium tortuosum*
Dogfennel	*Eupatorium capilliflorium*
Pigweed, redroot	*Amaranthus retroflexus*
Ragweed, common	*Ambrosia artemisiifolia*
Ragweed, giant	*Ambrosia trifida*
Sunflower	*Helianthus annuus*
Thistle, musk	*Carduus nutans*
Velvetleaf	*Abutilon theophrasti*
Perennial Grasses	
Bermuda grass	*Cynodon dactylon*
Guineagrass	*Panicum maximum*
Johnsongrass	*Sorghum halepense*
Smutgrass	*Sporobolus poiretii*
Vaseygrass	*Paspalum urvillei*
Perennial Broadleaves	
Dogbane, hemp	*Apocynum cannabinum*
Milkweed	*Asclepias syriaca*
Nightshade, silverleaf	*Solanum elaeagnifolium*
Thistle, Canada	*Cirsium arvense*

Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

CROPPING SYSTEMS

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category. Unless otherwise specified, applications may be made to control any weeds listed in the "ANNUAL AND PERENNIAL WEED RATE TABLES". Also refer to the "Selective Equipment" section.

The maximum use rates stated throughout this product‘s labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

For any crop not listed in this "CROPPING SYSTEMS" section, applications must be made at least 30 days prior to planting.

For broadcast post emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

ALFALFA, CLOVER, AND OTHER FORAGE LEGUMES

LABELED CROPS: Alfalfa, clover, kudzu, lespedeza, lupin, sainfoin, trefoil, velvet bean, vetch, crown vetch, milk vetch.
TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, preharvest (alfalfa only), spot treatment (alfalfa and clover only), wiper applicators (alfalfa and clover only), renovation

Preplant, Preemergence and At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.
RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quack grass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between applications and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quack grass, apply in the spring, late summer or fall when quack grass is actively growing. Treatments for quack grass must be followed by deep tillage for complete control.
RESTRICTIONS: Do not apply more than 52 fluid ounces of this product per acre as a preharvest treatment. Do not use for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot treatment or Wiper applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "Selective Equipment" section of this label. Applications may be made in the same area at 30-day intervals.
RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. Do not treat more than one-tenth of any acre at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to existing stands of alfalfa, clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.
RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

ASPARAGUS

TYPES OF APPLICATIONS: Preplant, preemergence, spot treatment, postharvest.

Preplant, Preemergence

USE INSTRUCTIONS: This product may be applied prior to emergence of asparagus

RESTRICTIONS: Do not apply within a week before the first spears emerge.

Spot treatment

USE INSTRUCTIONS: This product may be applied immediately after cutting, but prior to the emergence of new spears.

RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

Postharvest

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Apply delayed treatments as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select and use as directed types of spray equipment for post-emergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

CANOLA

TYPES OF APPLICATIONS: Preplant, preemergence.

USE INSTRUCTIONS: This product may be applied before, during or after planting canola. Applications must be made prior to emergence of the crop.

RESTRICTIONS: Do not apply more than 1.6 quarts of this product per acre by ground.

CEREAL CROPS

LABELED CROPS: Barley, Buckwheat, Millet (Pearl, Proso), Oats, Rye, Teosinte, Triticale, Rice, Wheat (All), Wild Rice.

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, spot treatment, postharvest, preharvest (wheat only), wiper applicators (wheat only).

Do not treat rice fields or levees when the field contains floodwater.

Preplant, preemergence and At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

Spot treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed.

PRECAUTIONS: Take care to avoid drift or spray outside target area for the same reason.

Postharvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Do not harvest or feed treated vegetation for 8 weeks following application.

Preharvest (wheat only)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30 percent or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest.

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

RESTRICTIONS: Do not apply more than 26 fluid ounces of this product per acre. Do not apply to wheat grown for seed, as a reduction in germination or vigor may occur.

Wiper applications (wheat only)
USE INSTRUCTIONS: Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.
RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applicators.

RED RICE CONTROL PRIOR TO PLANTING RICE: Apply 26 ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled. Avoid spraying during low humidity conditions, as reduced control may result. DO NOT TREAT RICE FIELDS OR LEVEES WHEN THE FIELDS CONTAIN WATER. DO NOT RE-FLOOD TREATED FIELDS FOR 8 DAYS FOLLOWING APPLICATION.

CITRUS CROPS

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefiuit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (All), Pummelo, Tangelo, Tangor.
TYPES OF APPLICATIONS: Weed control, middles (between rows of trees), strips (in row of trees), selective equipment.
NOTE: FOR USE DIRECTIONS, SEE THE "TREE, NUT AND VINE " SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO CITRUS CROPS.
Florida and Texas only: For burndown or control of the weeds listed below, apply the specified rates of this product in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.
For goatweed, apply 1.75 to 2.5 quarts of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 1.75 quarts per acre when plants are less than 8 inches tall and 2.5 quarts per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of:

Common Name	Brand Name(s)
Bromacil + Diuron	Krovar® I DF Herbicide, Sweep® Herbicide
Diuron	Determine™ 4L, Direx® 4L, Diuron 4L, Diuron 80, Diuron 80 WDG Weed Killer, Karmex® DF, Parrot™ 4L, Parrot™ DF, Sekor™ 4L, SuperDi™ 4L

may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial weeds:
S= Suppression, B=Burndown, PC= Partial control, C= control

WEED SPECIES	HELOSATE 5 HERBICIDE Rate Per Acre 1 QT	1.75 QT	2.5 QT	4 QT
Bermudagrass	B	--	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	--	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	--	PC	C

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest.

CONSERVATION RESERVE PROGRAM (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), site preparation, post-emergence weed control in dormant CRP grasses, wiper
Rotating out of CRP, Site preparation
USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, State or local use guides for CRP renovation information.

ROTATIONAL RESTRICTIONS: Crops listed on this label may be planted into the treated area at any time. All other crops may be planted 30 days after the last application.

Postemergence Weed Control in dormant CRP grasses, Wiper

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 10 to 13 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

RESTRICTIONS: Do not apply more than 4.75 pints of this product per acre per year onto CRP land. No waiting period is required between application and grazing or harvesting for feed.

CORN

TYPES OF CORN: Field corn, seed corn, sweet corn and popcorn.

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, hooded sprayers, spot treatment, hooded sprayers, preharvest, postharvest.

Preplant, Preemergence and At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop.

The following active ingredients – both branded or generic equivalents of these product - may be applied before, during or after planting in conventional tillage systems, into a clover crop, established sod or in previous crop residue as tank-mixes. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

Common Name	Brand Name(s)
Acetochlor	Breakfree®, Breakfree® NXT, Breakfree® NXT Herbicide, Cadence®, Cadence® NXT, Confidence®, Degree® Herbicide, Harness® Herbicide, Overtime™, Overtime™ NXT, Surpass® EC Herbicide, Surpass® NXT, Topnotch® Herbicide, Volley® Corn Herbicide, Volley® NXT, Warrant®
Acetochlor + Atrazine	Breakfree® ATZ, Breakfree® ATZ Lite, Breakfree® NXT ATZ Herbicide, Cadence® ATZ, Cadence® ATZ NXT, Cadence® LA NXT, Cadence® Lite ATZ, Confidence® Xtra, Confidence® Xtra 5.6L, Degree® Xtra Herbicide, Fultime® Herbicide, Fultime® NXT, Harness® Xtra, Harness® Xtra 5.6L, Keystone®, Keystone® LA, Keystone® LA NXT, Keystone® NXT, Overtime™ ATZ, Overtime™ ATZ Lite, Overtime™ ATZ Lite NXT, Overtime™ ATZ NXT, Volley® ATZ, Volley® ATZ Lite, Volley® ATZ Lite NXT, Volley® ATZ NXT
Alachlor	INTRRO®, Micro-Tech®
Alachlor + Atrazine	Bullet® Herbicide, Lariat®
Atrazine	AAtrex® 4L Herbicide, AAtrex® Nine-O, Atra-5™ Herbicide, Atrazine 4L, Atrazine 4L Herbicide, Atrazine 90DF, Atrazine 90DF Herbicide, others
Dicamba	Banvel® Herbicide, Clarity® Herbicide, Clash™, Detonate®, Diablo® Herbicide, Dicamba DMA Salt, Dicamba HD, Diflexx®, Rifle®, Sterling Blue®, Sterling® Blue Herbicide, Strut®, Vision™ Herbicide
Dicamba + Atrazine	Marksman® Herbicide, Rifle Plus® Herbicide
Dimethenamid-P	Commit®, Establish™, Outlook® Herbicide, Slider®, Sortie® Herbicide
Dimethenamid-P + Atrazine	Commit® ATZ, Commit® ATZ Lite, Establish™ ATZ, Establish Lite™, G-Max Lite™, Guardsman Max® Herbicxide, Slider® ATZ Lite, Sortie™ ATZ, Sortie™ ATZ Lite
Linuron	Linex® 4L Herbicide, Lorox® DF Herbicide
Metolachlor	Me-Too-Lachlor™ II, Parallel® Herbicide, Phenomenon™, Stalwart® C Herbicide

Pendimethalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide
Simazine	Princep® 4L, Princep® Caliber 90® Herbicide, Sim-Trol® 4L Simazine Flowable Herbicide, Sim-Trol® 90DF Simazine Dry Flowable Herbicide, Simazine 4L, Simazine 4L Flowable, Simazine 90DF, Simazine 90 WDG
s-Metolachlor	Brawl™, Brawl™ II, Charger Basic® Herbicide, Charger® Max Herbicide, Cinch®, Dual II Magnum®, Dual Magnum®, Medal®, Medal® II, Medal® II EC
s-Metolachlor + Atrazine	Bicep II Magnum®, Bicep Lite II Magnum®, Brawl II ATZ™, Charger MAX® ATZ, Charger MAX® ATZ Lite, Cinch® ATZ, Cinch® ATZ Lite, Medal® II AT

For improved burndown, this product may be tank mixed with 2,4-D or dicamba.
Annual weeds - For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 26 fluid ounces per acre in these thank mixtures. For other labeled annual weeds, apply 20 to 26 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 26 to 40 fluid ounces when weeds are over 6 inches tall.
RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.
The tank mix recommendations in this section are not registered in California.
In southern States, do not mix this product in nitrogen solutions for application to hard-to-control grasses such as barnyard grass, fall panicum, broadleaf signal grass, annual ryegrass, and any perennial weeds. This area includes IL, KY, LA, MD, MS, NJ, NC, OK, SC, TN, TX, VA, and WV.
Hooded Sprayers
USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used.
When applying to corn that is grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows.
Follow these requirements:
The spray hoods must be operated on the ground or skimming across the ground. Do not apply more than 26 fluid ounces of this product per acre per application. Corn must be at least 12 inches tall, measured without extending leaves.
Leave at least 8-inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood must be 30 inches.
Maximum tractor speed: 5 mph.
Maximum wind speed: 10 mph.
Use low-drift nozzles.
Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.
PRECAUTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator.
RESTRICTIONS: Do not graze or feed corn forage or fodder following applications of this product through hooded sprayers. Do not apply more than 2.4 quarts of this product per acre per year for hooded sprayer applications.
Spot treatment
USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.
RESTRICTIONS: Do not treat more than 10 percent of the total field acre to be harvested. The crop receiving spray in the treated area will be killed.
PRECAUTIONS: Take care to avoid drift or spray outside target area for the same reason.
Preharvest
USE INSTRUCTIONS: Make applications at 35 percent grain moisture or less. Ensure that a maximum kernel fill is complete and the com is physiologically mature (black layer formed). For ground applications, apply up to 2.4 quarts of this product per acre. For aerial applications, apply up to 26 fluid ounces of this product per acre.
RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Do not make preharvest applications to corn grown for seed because a reduction in germination or vigor may result.
Postharvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the tank mix product used is labeled for post-harvest application to corn. Follow the most restrictive label directions for all products in tank mixture.
RESTRICTIONS: Do not harvest or feed treated vegetation for 8 weeks following application.

COTTON

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, hooded sprayer, selective equipment, spot treatment, preharvest.

Preplant, Preemergence, and At-planting

USE INSTRUCTIONS**:** This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

Hooded sprayer, Selective equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.
RESTRICTIONS: See the SELECTIVE EQUIPMENT part of the APPLICATION EQUIPMENT AND TECHNIQUES section of this label for information on proper use and calibration of this equipment.

Spot treatment

USE INSTRUCTIONS**:** For spot treatments, apply this product prior to boll opening of cotton.
RESTRICTIONS**:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed.
PRECAUTIONS: Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS**:** This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the annual, perennial and woody brush tables. Apply 19 fluid ounces to 52 fluid ounces of this product per acre for cotton regrowth inhibition.
This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.
Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.
To provide additional enhancement of cotton leaf drop, HELOSATE 5 HERBICIDE may be tank mixed with:

Common Name	Brand Name(s)
Ethephon	Boll Buster®, Boll'd®, Boll'd® 6, Ethephon-6, Flash® Plant Regulator, Helena® Flash® Cotton Harvest Aid, Setup® 6SL, Super Boll® Plant Regualtor
Tribufos	DFT 6 Cotton Defoliant, Folex® 6 EC

RESTRICTIONS**:** Do not feed or graze treated cotton forage or hay following preharvest applications. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of cotton.
DO NOT APPLY MORE THAN 26 FLUID OUNCES OF THIS PRODUCT PER ACRE BY AIR. Do not apply more than 52 fluid ounces of this product per acre by ground. Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur.

FALLOW SYSTEMS

TYPES OF APPLICATIONS**:** Chemical fallow, preplant fallow beds, aid-to-tillage.

Chemical fallow

USE INSTRUCTIONS**:** This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. 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 or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used.
RESTRICTIONS: DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Dicamba is applied within 45 days of planting.

Preplant fallow beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product will control weeds listed in the annual, perennial and woody brush tables.

In addition, 9.75 fluid ounces of this product plus 2 to 4 oz. of Oxyfluorfen 2L per acre will control the following weeds with the maximum height or length indicated: 3 inches – common cheeseweed, chickweed, groundsel; 6 inches – London rocket, shepherd‘s purse. 13 fluid ounces of this product plus 2 to 4 oz. of Oxyfluorfen 2L per acre will control the following weeds with the maximum height or length indicated: 6 inches– common cheeseweed, groundsel, marestail *(Conyza canadensis)*, 12 inches – chickweed, London rocket, shepherd‘s purse.

The following active ingredient – both branded or generic equivalents of these product - may be applied as tank-mixes.

Common Name	Brand Name(s)
Oxyfluorfen	Collide™ Herbicide, Galigan® 2E, Galigan® H2O Herbicide, Goal® 2XL Herbicide, GoalTender® Herbicide, Oxyfluorfen 2E Herbicide, Agri Star® Oxystar™ 2E, Agri Star® Oxystar® 4L, Willowood OxyFlo 2EC

Aid-to-tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 6.5 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS: Tank mixtures with residual herbicides may result in reduced performance.

RESTRICTIONS: Application to fallow systems must be made at least 30 days prior to planting any crop not listed on this label.

GRAIN SORGHUM (MILO)

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, spot treatment, wiper applicators, hooded sprayers, preharvest, postharvest.

Preplant, Preemergence, At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

Spot treatment and Wiper applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "Selective Equipment" section of this label.

PRECAUTIONS: The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

RESTRICTIONS: For spot treatment, do not treat more than 10 percent of the total field area to be harvested.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used.

When applying to milo that is grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows.

Follow these requirements:

The spray hoods must be operated on the ground or skimming across the ground. Do not apply more than 26 fluid ounces of this product per acre per application. Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed.

Leave at least an 8-inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
Maximum tractor speed: 5 mph.
Maximum wind speed: 10 mph.
Use low-drift nozzles.
Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.
PRECAUTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator.
RESTRICTIONS: Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 2.4 quarts of this product per acre per year for hooded sprayer applications.

Preharvest

USE INSTRUCTIONS: Make applications at 30 percent grain moisture or less.
PRECAUTIONS: Avoid preharvest application of this product on grain sorghum infected with charcoal rot as lodging can occur.
RESTRICTIONS: Do not apply more than 1.6 quarts of this product per acre. Allow a minimum of 7 days between application and harvest of sorghum. Do not apply to sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

Postharvest

USE INSTRUCTIONS: This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for post-harvest applications to grain sorghum (milo). Read and follow the most restrictive label directions for all products in tank mixture.
This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 26 fluid ounces of this product per acre for control, or 21 fluid ounces of this product per acre for suppression.
RESTRICTIONS: Do not harvest or feed treated vegetation for 7 days following application. Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

GRASS SEED PRODUCTION

TYPES OF APPLICATIONS: Preplant, preemergence, renovation, site preparation, shielded sprayers, wiper applicators, spot treatments, creating rows in annual ryegrass

Preplant, Preemergence, renovation, site preparation

USE INSTRUCTIONS: This product may be applied before, during, or after planting or renovation of turf or forage grass areas grown for seed production.
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.
PRECAUTIONS: Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow proper translocation into underground plant parts.
RESTRICTIONS: Do not feed or graze treated areas for 8 weeks following application.

Shielded sprayers

USE INSTRUCTIONS: Apply 1 to 2.5 quarts of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.
PRECAUTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications

PRECAUTIONS: Contact of the herbicide solution with desirable vegetation may result in damage of destruction. Adjust applicators so that the wiper contact point is at least two (2) inches above the desirable vegetation. Weeds should be a minimum of six (6) inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in

dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

Spot Treatments

USE INSTRUCTIONS: Use a 1-5 percent solution.

RESTRICTIONS: Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field to be harvested.

PRECAUTIONS: The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 13 to 26 fluid ounces of this product per acre mixed with water. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use of low pressure nozzles, or drop nozzles designed to target the application over a narrow band are suggested.

To the extent consistent with applicable law, grower assumes all responsibility for crop losses from misapplication.

HERBS

TYPES OF HERBS: Peppermint, spearmint.

USE INSTRUCTIONS: This product may be used as a spot treatment in spearmint and peppermint. Apply spray-to-wet with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution onto a limited area.

RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. Do not treat more than one-tenth of any acre at one time.

PRECAUTIONS: The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason.

PASTURES

TYPES OF PASTURES**:** Bahiagrass, bermudagrass, bluegrass, brome, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa and clover

TYPES OF APPLICATIONS**:** Spot treatment, wiper application, preplant, preemergence, pasture renovation

Spot treatment and Wiper Application

USE INSTRUCTIONS**:** This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

RESTRICTIONS**:** For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. Do not treat more than one-tenth of any acre at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Preplant, Preemergence and Pasture renovation

USE INSTRUCTIONS**:** 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 re-planting.

RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Do not apply more than 8.5 quarts per acre per year.

PEANUTS

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting.

USE INSTRUCTIONS**:** This product may be applied before, during or after planting peanuts. Applications must be made prior to the emergence of the crop.

SMALL FRUITS AND BERRIES

LABELED CROPS**:** Blackberry, Blueberry, Boysenberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Huckleberry, Loganberry, Olallieberry, Raspberry (Black, Red), Strawberry, Youngberry

TYPES OF APPLICATIONS**:** Preplant, preemergence, directed spray (except cranberry), wiper application

USE INSTRUCTIONS**:** This product may be applied as a preplant or preemergence broadcast application or as a wiper application for crops listed in this section. Directed sprays may be applied to any crop except cranberries. For wick or

wiper applicators, mix 3.25 quarts of this product in 4 gallons of water per acre of treated area. In severe infestations, reduce equipment ground speed to ensure that adequate amounts of this product are wiped on the weeds. A second treatment in the opposite direction may be beneficial.
RESTRICTIONS**:** Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes or foliage. Allow a minimum of 30 days between last application and harvest of cranberries. For other small fruits and berries, allow a minimum of 14 days between last application and harvest. Do not apply more than 6.5 quarts of this product per acre per year.

SOYBEANS

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, spot treatment, preharvest, selective equipment, hooded sprayers.

Preplant, Preemergence and At-planting

USE INSTRUCTIONS: This product may be applied before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

The following active ingredients – both branded or generic equivalents of these product - may be applied before, during or after planting in conventional tillage systems, into a clover crop, established sod or in previous crop residue.

Common Name	Brand Name(s)
Alachlor	INTRRO®, Micro-Tech®
Chlorimuron ethyl + Metribuzin	Canopy® Herbicide, Cloak®, Resist™
Clomazone	Command® 3ME
Dimethenamid-P	Commit®, Establish™, Optill Pro®, Outlook® Herbicide, Slider®, Sortie® Herbicide
Fenoxaprop-p-ethyl + Fluazifop-p-butyl	Fusion®
Imazaquin	Scepter® 70DG, Scepter® 70DG Herbicide
Imazethapyr	Pursuit® Herbicide, Thunder™
Linuron	Linex® 4L Herbicide, Lorox® DF Herbicide
Metolachlor	Me-Too-Lachlor™, Parallel® Herbicide, Parallel® PCS Herbicide, Phenomenon™, Stalwart® Herbicide
Metribuzin	Dimetric® DF 75%, Glory™, Glory™ 4L, Metribuzin 75, Metribuzin 75DF, Tricor® 4F, Tricor® DF
Pendimethalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide
s-Metolachlor	Brawl™, Brawl™ II, Charger Basic® Herbicide, Charger® Max Herbicide, Cinch®, Dual II Magnum®, Dual Magnum®, Medal®, Medal® II, Medal® II EC

For improved burndown, this product may be tank-mixed with 2,4-D or 2.4-DB. See the 2,4-D label for intervals between application and planting.
Annual weeds: For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 26 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 20 to 26 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 26 to 40 fluid ounces when weeds are over 6 inches tall.
RESTRICTIONS**:** The tank mix recommendations in this section are not registered in California.

Spot treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.
RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested.

PRECAUTIONS: The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the annual and perennial weeds rate tables. This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications apply this product in 3 to 10 gallons of water per acre.

Apply after pods have set and lost all green color. Take precautions to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS: Do not graze or harvest treated crop for livestock feed within 25 days of last preharvest application. DO NOT APPLY MORE THAN 4.3 QUARTS PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS. DO NOT APPLY MORE THAN 26 FLUID OUNCES PER ACRE OF THIS PRODUCT BY AIR.

Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.

Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of soybeans.

Selective equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

SUGARCANE

TYPES OF APPLICATIONS: Preplant, preemergence, spot treatment, fallow, hooded sprayers

Preplant, Preemergence

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.

RESTRICTIONS**:** Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Spot Treatment

USE INSTRUCTIONS**:** This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 3/4 percent solution of this product in water and spray to wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

PRECAUTIONS: Avoid spray contact with healthy cane plants, since severe damage or destruction may result.

RESTRICTIONS**:** Do not feed or graze treated sugarcane foliage following application.

Fallow treatments

USE INSTRUCTIONS**:** This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 3.25 to ¾ 4 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves.

RESTRICTIONS: Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label. Allow 7 or more days after application before tillage.

Hooded sprayers

USE INSTRUCTIONS**:** This product may be used through hooded sprayers for weed control between the rows of sugarcane. A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution.

Minimize the potential for spray particles to escape from under the hood by operating the sprayer at appropriate ground speeds, nozzle pressures and wind speeds. Operation on rough or sloping ground may result in spray particles escaping from the hood.

When applying to sugarcane that is grown on raised beds, ensure that the hood is designed to completely enclose the spray. If necessary, extend the front and rear flaps of the hoods to reach the ground in furrows between the rows.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting the crop. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

PRECAUTIONS: Do not allow treated weeds to come in contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction.

SUNFLOWERS

TYPES OF APPLICATIONS: Preplant, preemergence.
USE INSTRUCTIONS: This product may be applied before, during or after planting sunflowers. Applications must be made prior to emergence of the crop.
A tank mixture with pendimethalin- – both branded or generic equivalent - may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

Common Name	Brand Name(s)
Pendimethalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide

RESTRICTIONS: Do not apply more than 26 fluid ounces of this product per acre for sunflowers. Make only one preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

TREE AND VINE CROPS

TYPES OF APPLICATIONS: Weed control, middles (between rows of trees), strips (in row of trees), perennial grass suppression, selective equipment (except kiwi)
NOTE**:** THIS SECTION GIVES PRODUCT INFORMATION THAT APPLY TO TREE FRUITS AND VINE CROPS. SEE THE INDIVIDUAL CROP SECTIONS FOR INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS.
This product may be applied in middles, strips and for weed control in established citrus groves, tree fruit, and tree nut orchards and vineyards. Apply at 13 fluid ounces to 4 quarts per acre. Repeat applications may be made up to a maximum of 8.64 quarts per acre per year. This product may also be used for site preparation prior to transplanting these crops. Allow a minimum of 3 days between application and transplanting. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.
A tank mixture of this product plus Oxyfluorfen 2L may be used for annual weeds in middles between rows of tree fruits and vine crops. This mixture is directed when weeds are stressed or growing in dense populations. 13 to 26 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Oxyfluorfen 2L will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, hairy fleabane (Conyza bonariensis), common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, common cheeseweed (malva), filaree (suppression), horseweed/marestail (Conyza canadensis), stinging nettle and common purslane (suppression). 10 to 26 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Oxyfluorfen 2L will control common cheeseweed (malva) with a maximum height or diameter of 3 inches.

Strips (in rows)

USE INSTRUCTIONS: HELOSATE 5 HERBICIDE may be applied in rows of tree or vine crops and may also be tank mixed with the following active ingredients both branded or generic equivalents of these product:

Common Name	Brand Name(s)
Bromacil + Diuron	Krovar® I DF Herbicide, Sweep® Herbicide
Diuron	Determine™ 4L, Direx® 4L, Diuron 4L, Diuron 80, Diuron 80 WDG Weed Killer, Karmex® DF, Parrot™ 4L, Parrot™ DF, Sekor™ 4L, SuperDi™ 4L
Napropamide	Devrinol® 2-XT, Devrinol® 50-DF, Devrinol® DF-XT
Norflurazon	Solicam® DF Herbicide, Solicam® DF Herbicide

Oryzalin	Fugitive®, Oryzalin 4 A.S. Herbicide, Phoenix Harrier® 4L, Surflan® A.S. Agricultural, Surflan® AS Specialty, Surflan® Flex, Surflan® Flex T&O
Oxyfluorfen	Collide™ Herbicide, Galigan® 2E, Galigan® H2O Herbicide, Goal® 2XL Herbicide, GoalTender® Herbicide, Oxyfluorfen 2E Herbicide, Agri Star® Oxystar™ 2E, Agri Star® Oxystar® 4L, Willowood OxyFlo 2EC
Pendimethalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide
Simazine	Princep® 4L, Princep® Caliber 90® Herbicide, Sim-Trol® 4L Simazine Flowable Herbicide, Sim-Trol® 90DF Simazine Dry Flowable Herbicide, Simazine 4L, Simazine 4L Flowable, Simazine 90DF, Simazine 90 WDG

Do not apply these tank mixtures in Puerto Rico.
Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.
Apply 13 fluid ounces to 4 quarts of this product per acre in these tank mixtures. Use rates at the higher end of the directed rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall.

Perennial grass suppression

This product will suppress perennial grasses such as bahiagrass, bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.
For suppression of tall fescue, fine fescue, orchard grass and quackgrass, apply 6.5 fluid ounces of this product in 10 to 20 gallons of water per acre.
For suppression of Kentucky bluegrass covers, apply 5 fluid ounces of this product per acre. Do not add ammonium sulfate.
For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.
For suppression of vegetative growth and seedhead inhibition of Bahia grass for approximately 45 days, apply 5 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.
For suppression up to 120 days, apply 3.25 fluid ounces of this product per acre, followed by an application of 1.6 to 3.25 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.
For burndown of bermudagrass, apply 26 to 52 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.
For suppression of bermudagrass, apply 5.0 to 13 fluid ounces of this product per acre east of the Rocky Mountains an 13 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, use rates of 5.0 to 8 fluid ounces per acre in shaded conditions or where a lesser degree of suppression is desired.

Selective equipment

Shielded and wiper applicators may be used in tree crops and grapes. Refer to the individual crop sections for time interval between application and harvest.
RESTRICTIONS: For citron and olives, apply as a post-directed spray only.
PRECAUTIONS: EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE SOLUTION, SPRAY, DRIFT OR MIST WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, SUCKERS, FRUIT OR OTHER PARTS OF TREES AND VINES. CONTACT OF THIS PRODUCT WITH OTHER THAN MATURED BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.
AVOID PAINTING CUT STUMPS WITH THIS PRODUCT AS INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES.

TREE FRUITS

LABELED CROPS: Apple, Apricot, Cherry (Sweet, Sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (All), Quince.

TYPES OF APPLICATIONS: Weed control, middles (between rows of trees), strips (in row of trees), selective equipment
NOTE: FOR USE DIRECTIONS, SEE THE "TREE AND VINE CROPS" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO TREE FRUITS.

Restrictions on application equipment

For cherries, any application equipment listed in this section may be used in all states listed on this label. Any application equipment listed in this section may be used in apricots, nectarines, 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 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.
RESTRICTIONS: Allow a minimum of 1 day between last application and harvest for apple, crabapple, loquat, mayhaw, pear, quince. Allow a minimum of 17 days between last application and harvest for apricot, cherry, nectarine, olive, peach, plum/prune.

TREE NUTS

LABELED CROPS: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory nut, Macadamia, Pecan, Pistachio, Walnut (Black, English)
TYPES OF APPLICATIONS**:** Weed control, middles (between rows of trees), strips (in row of trees), selective equipment.
NOTE**:** FOR USE DIRECTIONS, SEE THE "TREE, NUT AND VINE" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO TREE NUTS.
RESTRICTIONS**:** Allow a minimum of 3 days between last application and harvest of tree nuts.

TROPICAL AND SUBTROPICAL TREE FRUIT CROPS

LABELED CROPS: Atemoya, Avocado, Barbados Cherry (acerola), Banana, Breadfruit, Canistel, Carambola, Cherimoya, Cocoa beans, Coconuts, Coffee, Dates, Durian, Figs, Guava, Jaboticaba, Jackfruit, Longan, Lychee, Mango, Mangosteen, Marmaladebox (genip), Papaya, Passion fruit, Persimmon, Pineapple, Plantain, Pomegranate, Rambutan, Sapodilla, Sapote (black, mamey, white), Soursop, Sugar apple, Tamarind, Tea.
USE INSTRUCTIONS**:** This product may be applied for weed control or for site preparation prior to transplanting crops listed in this section. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.
RESTRICTIONS**:** Allow a minimum of 14 days between last application and harvest of acerola, atemoya, avocado, banana, breadfruit, canistel, carambola, cherimoya, cocoa beans, coconuts, dates, figs, genip, jaboticaba, jackfruit, longan, lychee, mango, mayhaw, passion fruit, persimmon, pomegranate, sapodilla, sapote, soursop, sugar apple, tamarind, and tea. Allow a minimum of 28 days between last application and harvest of coffee. Allow a minimum of 1 day between last application and harvest of banana, guava, papaya and plantain.
Do not feed or graze treated pineapple forage following application.

VINE CROPS

LABELED CROPS: Grapes (raisin, table, wine), Kiwi fruit
TYPES OF APPLICATIONS: Weed control, middles (between rows), strips (in row), selective equipment
NOTE**:** FOR USE DIRECTIONS, SEE THE "TREE AND VINE CROPS" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO VINE CROPS.
RESTRICTIONS: Do not make applications when green shoots, canes or foliage are in the spray zone. In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

Pre-harvest Interval (PHI): Allow a minimum of 14 days between last application and harvest. Do not apply this product using selective equipment in kiwi fruit.

VEGETABLE CROPS

LABELED CROPS: Amaranth, Arrugula, Artichoke (Jerusalem), Beans (All), Beet greens, Garden beets, Broccoli (All), Brussels sprouts, Cabbage (All), Cabbage (Chinese), Cantaloupe, Cardoon, Cavalo Broccolo, Carrot, Cauliflower, Casaba melon, Celery, Celery (Chinese), Celeriac, Celtuce, Chard (Swiss), Chayote, Chervil, Chick peas, Chicory, Chrysanthemum, Collards, Corn salad, Crenshaw melon, Cress, Cucumber, Dandelion, Dock (sorrel), Eggplant, Endive, Fennel (florence), Garlic, Gherkin, Ginseng, Gourds, Ground cherry, Guar, Honeydew melon, Honey ball melon, Horseradish, Kale, Kohlrabi, Leek, Lentils, Lettuce, Mango melon, Melons (All), Mizuna, Muskmelon, Mustard greens, Okra, Onion, Oriental radish, Parsley, Parsnips, Peas (All), Pepinos, Pepper (All), Persian melon, Potato (Irish), Pumpkin, Purslane, Radish, Rape greens, Rhubarb, Rutabaga, Salsify, Shallot, Spinach (All), Mustard Spinach, Squash (Summer, Winter), Sugar beets, Sweet potato, Tomatillo, Tomato, Turnip, Watercress, Watermelon, Yams

USE INSTRUCTIONS: This product may be applied prior to the emergence of direct seeded vegetables or prior to transplanting vegetables.

PRECAUTIONS: When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to transplanting. Residues can be removed by a single 0.5 inch application of water, either by natural rainfall or via a sprinkler system. Applications made at emergence will result in injury or death to emerged seedlings.

RESTRICTIONS: For the following crops, apply only prior to planting. Allow at least 3 days between application and planting of cantaloupe, casaba melon, Crenshaw melon, cucumber, eggplant, gherkin, gourds, ground cherry, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, pepper (all), persian melon, pumpkin, squash (summer, winter), tomatillo, watercress and watermelon.

Wiper applicators may be used in rutabagas, carrots and sweet potatoes only. Allow at least 14 days between application and harvest of rutabagas. For carrots, a maximum of 2 wiper applications may be made. The first application must be made a minimum of 60 days prior to harvest, and the second application must be made at least 7 days prior to harvest. For sweet potato, a maximum of 5 wiper applications may be made at 14 day intervals. The last application must be made at least 7 days prior to harvest.

ROUNDUP READY© CROPS

The following instructions include applications which can be made onto Roundup Ready® crops during the complete cropping season. Do NOT combine these instructions with other directions made for crop varieties which do not contain the Roundup Ready® gene, in the CROPS (ALPHABETICAL) section of this label.

HELM AGRO INTENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY® GENE.

Applying this product to crop varieties which are not designated as Roundup Ready® will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready® gene, since severe injury or destruction will result.

The Roundup Ready® designation indicates that the crop variety contains a patented gene which provides resistance to glyphosate herbicides. Information on Roundup Ready® crop varieties may be obtained from your seed supplier.

Spray Drift Management

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

See the MIXING and APPLICATION EQUIPMENT AND TECHNIQUES sections of this labeling for additional directions and restrictions on the application of this product.

DO NOT exceed a maximum rate of 26 fluid ounces per acre of this product when making applications by air unless otherwise directed. For aerial application in California or Arkansas, refer to the federal label for aerial applications in that state for specific instructions, restrictions and requirements.

Tank mixtures with other herbicides, insecticides, or fungicides may result in reduced weed control or crop injury and are NOT for over-the-top applications of this product.

Sprayer Preparation: It is important that sprayer, lines, filters, and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready® crops. Follow the cleaning procedures specified on the label of the product(s) previously used. Many crops can be very sensitive to herbicides at extremely low concentrations, so it is important to thoroughly clean all equipment prior to use.
NOTE: The following directions are based on a clean start at planting by using a burn down application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of 20 to 52 fluid ounces per acre of this product to control existing weeds prior to crop emergence. There are no rotational crop restrictions following the application of this product.

For over the top uses on Roundup Ready® crop varieties, crop safety and weed control performance are not warranted by Helm Agro when this product is used in conjunction with ―brown bag or ―bin run seed saved from previous year‘s production and replanted.

ALFALFA WITH THE ROUNDUP READY® GENE

The Roundup Ready designation indicates that the alfalfa contains a patented gene, which provides resistance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Helm Agro representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

APPLICATION INSTRUCTIONS

This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa. Allow a minimum of 5 days between the last application and grazing, or cutting and feeding of alfalfa forage and hay.
For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.
For aerial application: Use the specified rates of this product in 3 to 15 gallons of spray solution per acre.
DO NOT EXCEED 1.6 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL LABEL FOR AERIAL APPLICATION IN THAT STATE. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT. INJURY TO DESIREABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A ROUNDUP READY® GENE.
Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor 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. See the “APPLICATION EQUIPMENT AND TECHNIQUES” section of the label booklet for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment.
Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready® alfalfa. Follow the cleaning procedures specified on the label of the product(s) used. Alfalfa can be very sensitive to many herbicides at extremely low concentrations, so it is important to thoroughly clean all equipment prior to use.
Types of Applications: Pre-plant, At-planting, Preemergence and Postemergence.

MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all applications, including preplant during year of establishment	6.2 quarts per acre
Combined total per year for in-crop applications for newly established and established stands	4.8 quarts per acre
Pre-plant, At-planting and Preemergence single applications	1.6 quarts per acre

A. New Stand Establishment (seeding year)
Prior to First Cutting During New Stand Establishment:

From emergence up to 4 trifoliate leaves	1.6 quarts per acre
From 5 trifoliate leaves up to 5 days before first cutting	1.6 quarts per acre

After First Cutting in Newly Established Stands:

In-crop application, per cutting, up to 5 days before	1.6 quarts per acre

cutting	

B. Established Stands (non-seeding year)

In-crop applications, per cutting, up to 5 days before cutting	1.6 quarts per acre

There are no rotational crop restrictions following applications of this product. For any crop NOT listed in the label booklet, applications must be made at least 30 days prior to planting.

Over-The-Top Applications: This product may be applied postemergence to Roundup Ready® alfalfa from emergence until 5 days prior to cutting. Any single over-the-top applications of this product must not exceed 1.6 quarts per acre. Sequential applications of this production must be at least 7 days apart.

ATTENTION: Where Roundup Ready® alfalfa is grown with a companion or cover crop, or is over seeded with a second species, over-the-top applications of this product will eliminate the non-Roundup Ready® species.

During stand establishment, due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain the Roundup Ready® gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready® gene, make a single application of at least 0.8 quart per acre at or before the 3 to 4 trifoliate growth stage.

In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, make applications of this product after weeds have emerged but before alfalfa growth or regrowth interferes with application spray coverage of the target weeds.

Weeds Controlled: For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERINNIAL WEEDS RATE TABLE" in this label booklet. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make a second application after some re-growth of weeds has occurred.

In addition to those weeds listed in this label booklet, this product will suppress or control the parasitic weed, Dodder (Cuscuta spp.) in Roundup Ready® alfalfa. Repeat applications may be necessary for complete control.

Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and are NOT recommended for over-the-top applications of this product.

RESTRICTIONS:

• Any single over-the-top application of this product must not exceed 1.6 quarts (51 fluid ounces) per acre.
• Sequential applications of this production must be at least 7 days apart.
• The combined total per year for all in-crop applications in newly established and established stands must not exceed 4.8 quarts (154 fluid ounces) per acre.
• Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready® alfalfa forage and hay.

CANOLA WITH THE ROUNDUP READY® GENE

TYPES OF APPLICATIONS**:** Preplant, preemergence, postemergence

USE INSTRUCTIONS**:**

Maximum Allowable Combined Application Quantities per Season

1. Preplant and preemergence applications	52 fluid ounces per acre
2. Total in-crop application from emergence to 6-leaf	26 fluid ounces per acre

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat fan nozzles. Check for even distribution of spray droplets.

For aerial applications apply this product in 3 to 15 gallons of water per acre.

Preplant or Preemergent applications: This product may be applied by aerial or ground application equipment prior to planting or emergence of canola.

Over-the-top applications: This product may be applied by aerial or ground application equipment postemergence to Roundup Ready® canola from emergence through the six leaf stage of development. To maximize yield potential spray canola early to eliminate competing weeds. Any single over-the-top broadcast application must not exceed 11 fluid ounces per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the six leaf stage of development. Sequential over-the-top applications of this product must be at least 10 days apart.

Weeds controlled. For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL" and "PERENNIAL" weed rate tables of this labeling.
Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control. Make the second application after some regrowth has occurred and at least 10 days after a previous application of this product.
This product will control or suppress, most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.
RESTRICTIONS**:** Allow a minimum of 60 days between last application and canola harvest. Do not make more than 2 in-crop (over the top) broadcast applications from emergence through the 6-leaf stage.

CORN WITH THE ROUNDUP READY® GENE

TYPES OF APPLICATIONS**:** Preplant, preemergence, at-planting, postemergence, spot treatment, post-harvest
When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready® corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product. Make applications to actively growing weeds before they reach the maximum size listed in the "ANNUAL" and "PERENNIAL" weed rate tables. Refer to the "MIXING" section of this labeling for proper use instructions.
This product may be applied postemergence to Roundup Ready® corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first. Single in-crop applications of this product are not to exceed 26 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 1.6 quarts per acre per growing season.

Maximum Allowable Application Rates

1.	Combined total per year for all applications	6.5 quarts per acre
2.	Preplant, Preemergence applications	4 quarts per acre
3.	Total in-crop applications from emergence through V8 or 30 inches	1.6 quarts per acre
4.	Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7days before harvest.	26 fluid ounces per acre

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 under hard water conditions, drought conditions or when tank mixed with Alachlor herbicides. 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. The addition of other additives, including fertilizers and micronutrients are not specified with this product since this may result in increased potential for crop injury.
For ground applications: Use the specified rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. Carefully select correct nozzles and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.
For aerial applications: Use the specified rates of this product in 3 to 15 gallons of spray solution per acre.
RESTRICTIONS: Allow a minimum of 50 days between application of this product and harvest of corn forage and 7 days between application and harvest of corn grain. Allow a minimum of 10 days between in-crop applications of this product.
Weed Control Directions
Apply 20 to 26 fluid ounces of HELOSATE 5 HERBICIDE per acre for control of labeled grasses and broadleaf weeds in conventional and no-till corn production systems. Refer to the "ANNUAL WEED RATE TABLE" of this labeling for rates for specific annual weeds. HELOSATE 5 HERBICIDE applied at up to 26 fluid ounces per acre will control or suppress the growth of perennial weeds such as: bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, Horsenettle, nutsedge, quackgrass, rhizome Johnsongrass, redvine, Trumpet creeper, swamp smartweed, and wirestem muhly. For additional information on perennial weeds, see the "PERENNIAL WEED RATE TABLE" in this labeling.
Preemergence followed by Postemergence Weed Control Program
This product may be applied postemergence in-crop following any labeled preemergence herbicide application. Make postemergent application of this product before the weeds reach a height and/or density that the weeds become competitive with the crop. A single in-crop application of this product at the specified rate will provide control of emerged weeds listed

on this label. This product may be applied postemergence to Roundup Ready® corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches (free standing), whichever comes first.

Postemergence Only Weed Control Program

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. Make the postemergence application of this product before the weeds reach a height and/or density that the weeds become competitive with the crop. If new flushes of weeds occur, a sequential application of this product at 20 to 26 fluid ounces per acre will control the labeled grasses and broadleaf weeds. This product may be applied postemergence to Roundup Ready® corn from emergence through the V8 stage or until corn height reaches 30 inches (free standing), whichever comes first.

This product may be applied in tank mixture with a labeled rate of the following active ingredients - – both branded or generic equivalents of these product:

Common Name	Brand Name(s)
Acetochlor	Breakfree®, Breakfree® NXT, Breakfree® NXT Herbicide, Cadence®, Cadence® NXT, Confidence®, Degree® Herbicide, Harness® Herbicide, Overtime™, Overtime™ NXT, Surpass® EC Herbicide, Surpass® NXT, Topnotch® Herbicide, Volley® Corn Herbicide, Volley® NXT, Warrant®
Acetochlor + Atrazine	Breakfree® ATZ, Breakfree® ATZ Lite, Breakfree® NXT ATZ Herbicide, Cadence® ATZ, Cadence® ATZ NXT, Cadence® LA NXT, Cadence® Lite ATZ, Confidence® Xtra, Confidence® Xtra 5.6L, Degree® Xtra Herbicide , Fultime® Herbicide, Fultime® NXT, Harness® Xtra, Harness® Xtra 5.6L, Keystone®, Keystone® LA, Keystone® LA NXT, Keystone® NXT, Overtime™ ATZ, Overtime™ ATZ Lite, Overtime™ ATZ Lite NXT, Overtime™ ATZ NXT, Volley® ATZ, Volley® ATZ Lite, Volley® ATZ Lite NXT, Volley® ATZ NXT
Alachlor*	INTRRO®, Micro-Tech®
Alachlor + Atrazine*	Bullet® Herbicide, Lariat®
Atrazine	AAtrex® 4L Herbicide, AAtrex® Nine-O, Atra-5™ Herbicide, Atrazine 4L, Atrazine 4L Herbicide, Atrazine 90DF, Atrazine 90DF Herbicide, others
Halosulfuron	Halomax™ 75, Herbivore™ Herbicide, Permit® Herbicide, Profine™ 75, Sandea®

Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines – the more restrictive requirements apply.

* Alachlor and Alachlor + Atrazine are not registered for use as a postemergence application in Texas.

Tank Mix Partner	Maximum Height of Corn for Application
Acetochlor, Acetochlor + Atrazine	11 inches
Alachlor*, Alachlor + Atrazine*	5 inches
Halosulfuron	24 inches
Atrazine	12 inches

* Alachlor and Alachlor + Atrazine are not registered for use as a postemergence application in Texas.

CORN 2 WITH THE ROUNDUP READY® GENE

• Applying this product to corn varieties which are not designated as Roundup Ready® will result in severe crop injury and yield loss.
• The Roundup Ready® designation indicates that the corn contains a patented gene which provides resistance to this product. Information on Roundup Ready® corn may be obtained from your seed supplier.
Note: The instructions provided here are specific to, and must only be used with Roundup Ready Corn 2 hybrids. DO NOT combine the instructions in this section with those in the Corn with the Roundup Ready Gene‖ section of this label booklet, or with any other Roundup Ready corn instructions on labeling for this or other glyphosate-containing product. See "Annual Maximum Use Rate" in the "INFORMATION" section of this label booklet, for additional information.
The use of the higher in-crop over the top rates described in this label on other than Roundup Ready Corn 2 may cause crop injury and reduce yields.
For Roundup Ready Corn 2 from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first, this product may be applied over-the-top broadcast or with drop nozzles. When corn height is 24 to 30 inches (free standing), for optimum spray coverage and weed control, drop nozzles are recommended. For corn heights 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles adjusted to avoid spraying into the whorls of the corn plants.
Single in-crop applications of this product must not exceed 40 fluid ounces per acre.
MAXIMUM ALLOWED COMBINED APPLICATION QUANTITIES PER SEASON
Preplant, At-Planting, Pre-emergence: Maximum amount of this product which can be applied prior to crop emergence is 4 quarts per acre.
In-crop: Maximum combined total of multiple in-crop applications from emergence through the 48 inch stage is 2.4 quarts per acre.
Preharvest: Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) with 35 percent grain moisture or less until 7 days before harvest is 0.8 quarts per acre. See Precautions and Restrictions on preharvest applications.
Cropping Season: Combined total per year for all applications may not exceed 6.5 quarts per acre.
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 under hard water conditions, drought conditions or when tank mixed with Alachlor herbicides. 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. The addition of other additives, including fertilizers and micro-nutrients are not recommended with this product since this may result in increased potential for crop injury.
ATTENTION: AVOID DRIFT, EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.
THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.
For ground applications: Use the specified rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. Carefully select correct nozzles and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.
For aerial applications: Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 0.8 quarts per acre. See "WEEDS CONTROLLED" section below.
AVOID DRIFT: DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

WEED CONTROL DIRECTIONS

Apply 20 to 26 fluid ounces of this product per acre for control of labeled grasses and broadleaf weeds in conventional and no-till corn production systems. Refer to the label booklet for HELOSATE 5 HERBICIDE for rates for specific annual weeds. HELOSATE 5 HERBICIDE applied at up to 58 fluid ounces per acre will control or suppress the growth of perennial weeds such as: Berrnudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, nutsedge, quickgrass, rhizome Johnsongrass, redvine, trumpet creeper, swamp smartweed, and wirestem muhly. For additional information on perennial weeds, see the PERENNIAL WEED RATE TABLE of this label booklet.
Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn.
TANK MIXTURES: This product may be tank mixed with Acetochlor, Acetochlor + Atrazine, Alachlor or Alachlor + Atrazine herbicides at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

Preemergence followed by Postemergence Weed Control Program

USE INSTRUCTIONS**:** This product may be applied post-emergence in-crop following any labeled preemergence herbicide application. Make the postemergence application before the weeds reach a height and/or density that the weeds become competitive with the crop.
An in-crop application of this product at the specified rate will provide control of emerged weeds listed on the label. This product may be applied over-the-top broadcast or with drop nozzles post-emergence to stage (8 leaves with collars) or until corn height reaches 30 inches (free standing), whichever comes first. When corn height is 24 to 30 inches drop nozzles are recommended for optimum spray coverage and weed control. For corn heights 30 to 48 inches (free standing) apply this product only using ground application equipment with drop nozzles and avoid spraying into the whorls of the corn plants.

Postemergence (in-crop) Only Weed Control Program

USE INSTRUCTIONS: This product may be applied alone as a post-emergence in-crop application to provide control of emerged weeds listed on the label. Make the post-emergence application of this product before the weeds reach a height and/or density that the weeds become competitive with the crop. If new flushes of weeds occur, a sequential application of this product at 20 to 26 fluid ounces per acre will control the labeled grasses and broadleaf weeds. This product may be applied over-the-top broadcast or with drop nozzles post-emergence to Roundup Ready Corn 2 from emergence through the V8 stage or until corn height reaches 30 inches (free standing), whichever comes first. For corn height 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles and avoid spraying into the whorls of the corn plants. When corn height is 24 to 48 inches (free standing), for optimum spray coverage and weed control, drop nozzles are recommended.

TANK MIXTURES: This product may be applied in tank mixtures of the following active ingredients - – both branded or generic equivalents - at 50 to 100 percent of the labeled rate

Common Name	Brand Name(s)
Acetochlor	Breakfree®, Breakfree® NXT, Breakfree® NXT Herbicide, Cadence®, Cadence® NXT, Confidence®, Degree® Herbicide, Harness® Herbicide, Overtime™, Overtime™ NXT, Surpass® EC Herbicide, Surpass® NXT, Topnotch® Herbicide, Volley® Corn Herbicide, Volley® NXT, Warrant®
Acetochlor + Atrazine	Breakfree® ATZ, Breakfree® ATZ Lite, Breakfree® NXT ATZ Herbicide, Cadence® ATZ, Cadence® ATZ NXT, Cadence® LA NXT, Cadence® Lite ATZ, Confidence® Xtra, Confidence® Xtra 5.6L, Degree® Xtra Herbicide, Fultime® Herbicide, Fultime® NXT, Harness® Xtra, Harness® Xtra 5.6L, Keystone®, Keystone® LA, Keystone® LA NXT, Keystone® NXT, Overtime™ ATZ, Overtime™ ATZ Lite, Overtime™ ATZ Lite NXT, Overtime™ ATZ NXT, Volley® ATZ, Volley® ATZ Lite, Volley® ATZ Lite NXT, Volley® ATZ NXT
Alachlor*	INTRRO®, Micro-Tech®
Alachlor + Atrazine*	Bullet® Herbicide, Lariat®

*Alachlor and Alachlor + Atrazine are not registered for use as a post emergence application in Texas.

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This product may be applied in tank mixture with Halosulfuron, and Atrazine – both branded or generic equivalent at labeled rates.

Common Name	Brand Name(s)
Atrazine	AAtrex® 4L Herbicide, AAtrex® Nine-O, Atra-5™ Herbicide, Atrazine 4L, Atrazine 4L Herbicide, Atrazine 90DF, Atrazine 90DF Herbicide, others
Halosulfuron	Halomax™ 75, Herbivore™ Herbicide, Permit® Herbicide, Profine™ 75, Sandea®

Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines-the more restrictive requirements apply. Tank mixtures with other products may result in increased potential for crop injury and/or weed antagonism. Refer to the table below for height limitation for tank mix partner.

Tank Mix Partner	**Maximum Height of Corn for Application**
Acetochlor, Acetochlor + Atrazine	11 inches
Alachlor*, Alachlor + Atrazine*	5 inches
Halosulfuron	30 inches
Atrazine	12 inches

*Alachlor and Alachlor + Atrazine are not registered for use as a post emergence application in Texas.

RESTRICTIONS: See the ROUNDUP READY® CROPS section of this label booklet for precautionary instructions for use in Roundup Ready® Crops. Single in-crop applications of this product must not exceed 40 fluid ounces per acre. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage or grain. For applications at a pre-harvest timing, allow a minimum of 7 days between application and harvest or feeding of corn stover or corn grain. There are no rotational crop restrictions following applications of this product.

PREHARVEST
USE INSTRUCTIONS: A single pre-harvest application of up to 26 fluid ounces per acre of this product may be made, if no more than a total of 52 fluid ounces of this product has been previously applied in over-the-top or drop nozzles applications. Make a pre-harvest application at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).
RESTRICTIONS**:** Do not make a pre-harvest application of this product if more than a combined total of 52 fluid ounces of this product has been previously applied in over-the- top or drop nozzles applications. Allow a minimum of 7 days between a pre-harvest application and harvest or feeding of corn stover or grain.
POSTHARVEST
USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.
RESTRICTIONS**:** Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

COTTON WITH THE ROUNDUP READY© GENE

TYPES OF APPLICATIONS**:** Preplant, preemergence, at-planting, over-the-top, post-directed, hooded sprayer, preharvest
ATTENTION: Helm Agro intends this product for use only over-the-top of or directed onto improved cotton varieties that are designated as cotton with the Roundup Ready® gene. SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY® GENE ARE SPRAYED WITH THIS PRODUCT.
ROUNDUP READY® COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, ROUNDUP READY, INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT.
USE INSTRUCTIONS:

Maximum Allowable Yearly Rates

1. Combined total per year for all applications — 6.5 quarts per acre
2. Preplant, Preemergence applications — 4 quarts per acre
3. Total in-crop applications from cracking to layby — 3.25 quarts per acre
4. Maximum preharvest application — 1.6 quarts per acre

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.
For aerial applications, apply this product in 3 to 15 gallons of water per acre.
RESTRICTIONS: The combined total application from crop emergence until harvest must not exceed 4.8 quarts per acre.
Over-the-top applications: This product may be applied by aerial or ground application equipment postemergence to Roundup Ready® cotton from the ground cracking stage until the four leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the four leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. Any single over-the-top broadcast application must not exceed 26 fluid ounces per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the four leaf (node) stage of development. Sequential over-the-top applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.
Post-directed or hooded applications: This product may be applied using precision post-directed or hooded sprayers to Roundup Ready® cotton through layby. At this stage, use post-directed equipment which directs the spray to the base of the cotton plants. Avoid contact of the spray with cotton leaves to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 PSI). For best results, make applications while weeds are small (less than 3 inches). Do not exceed 26 fluid ounces per acre of this product for any single post-directed application. Do not make more than two applications from the fifth leaf through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.
ATTENTION: USE OF HELOSATE 5 HERBICIDE IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY® COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.
Salvage Treatment: This treatment may be used after the four leaf stage of development and must only be used where weeds threaten to cause the loss of the crop 26 fluid ounces per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds.
NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. DO NOT MAKE MORE THAN ONE SALVAGE TREATMENT PER GROWING SEASON.
Weeds controlled: For specific rates of application and instructions for control of specific weed species, refer to the "ANNUAL" and "PERENNIAL" weed rate tables of this label. HELOSATE 5 HERBICIDE applied at 26 fluid ounces per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: yellow and purple nutsedge, rhizome Johnsongrass, common bermudagrass, silverleaf nightshade, trumpet creeper, and redvine. Fall preharvest applications may be required for control of these perennial weeds.
Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control.
Preharvest applications: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready® Cotton after 20% boll crack. Allow a minimum of 7 days between final application and harvest of cotton or feeding of cotton forage or hay.
NOTE: HELOSATE 5 HERBICIDE will not enhance the performance of harvest aids when applied to Roundup Ready® cotton. DO NOT apply HELOSATE 5 HERBICIDE preharvest to crops grown for seed.

FLEX COTTON WITH THE ROUNDUP READY® GENE

The use of the over-the-top applications described in this section on cotton varieties other than Roundup Ready® Flex cotton will cause crop injury and reduced yields. Drift of this product from applications made to Roundup Ready® Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready® cotton may cause extensive injury including boll loss, delayed maturity and/or yield loss.
TYPES OF APPLICATIONS: Pre-plant, At-Planting, Pre-emergence, Post-emergence(In-crop), Preharvest.
USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready® Flex Cotton.

Maximum Application Rates	
Combined total per year for all applications	6.5 quarts per acre
Total of all Preplant, At-planting, Preemergence applications	4 quarts per acre
Total of all in-crop applications from gound cracking to 60 percent open bolls	4.8 quarts per acre
Total of all in-crop applications between layby and 60 percent open bolls	1.6 quarts per acre
Total of all in-crop applications from 60 percent bolls open to 7 days prior to harvest	1.6 quarts per acre
Total of all in-crop applications from emergence through harvest	4.8 quarts per acre

PRECAUTIONS: See the "ROUNDUP READY® CROPS" section of the label booklet provided with the product container for precautionary instructions for use in Roundup Ready® crops.

Pre-plant, Pre-emergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting Roundup Ready® Flex cotton. Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges.

Post-emergence (In-crop)

USE INSTRUCTIONS: When applied in accordance with this label, HELOSATE 5 HERBICIDE will control labeled annual grasses and broadleaf weeds in Roundup Ready® Flex cotton. To maximize yield potential spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with one or more applications of this product. Apply an initial application of 0.8 quarts per acre on 1 to 3 inches tall annual grass and broadleaf weeds. This product may be applied by ground application equipment at rates up to 1.2 quarts per acre per application postemergence to Roundup Ready® Flex cotton. In addition to broadcast applications, post-directed equipment may be used to achieve weed coverage. Do not add surfactant to this product for over-the-top application to Roundup Ready® Flex Cotton.

Salvage Treatment: This treatment may be used after the four leaf stage of development and must only be used where weeds threaten to cause the loss of the crop 26 fluid ounces per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds.

NOTE: Salvage treatments may result in significant boll loss, delayed maturity and/or yield loss. Do not make more than one salvage treatment per growing season.

RESTRICTIONS: The maximum rate for any single in-crop application of this product is 1.2 quarts per acre made using ground application equipment. In-crop application rates above 0.8 quarts per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis. Except for pre-harvest use, do not exceed a maximum rate of 0.8 quarts per acre of this product when making applications by air. Between layby and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 1.6 quarts per acre. The maximum combined total of all applications made from crop emergence through 60 percent open bolls must not exceed 4.8 quarts per acre.

NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTION" in the label booklet for HELOSATE 5 HERBICIDE.

Pre-harvest

USE INSTRUCTIONS: This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready® Flex cotton after 60 percent boll crack. Up to 1.6 quarts of this product may be applied using either aerial or ground spray equipment.

NOTE: This product will not enhance the performance of harvest aids when applied to Roundup Ready® Flex cotton.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest of Roundup Ready® Flex cotton.

PRECAUTIONS: Do not apply this product as a preharvest application to cotton grown for seed, as a reduction in germination or vigor may occur.

Ground Broadcast Equipment

Use the specified rates of HELOSATE 5 HERBICIDE in 5 to 20 gallons of spray solution per acre. As density of weeds increases, also increase spray volume within the specified range to ensure complete and uniform coverage of the target. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.

Aerial Equipment

Apply this product in 3 to 15 gallons of water per acre. Except for pre-harvest use do not exceed a maximum rate of 0.8 quarts per acre of this product when making applications by air. Extreme care must be used when applying this product to prevent injury to desirable plants and crops which do not contain a Roundup Ready® gene. Drift may cause damage to any

vegetation contacted to which treatment is not intended including boll loss, delayed maturity and/or yield loss on Roundup Ready® cotton exceeding the 4 leaf (node) stage of development.
PRECAUTIONS: See the "Aerial Equipment" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the HELOSATE 5 HERBICIDE label booklet for information on proper use and calibration of this equipment.

Sprayer Preparation

Cotton is very sensitive to many herbicides at extremely low concentrations, so it is important to thoroughly clean all equipment prior to use. It is important that the sprayer, including tank and hoses, and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready® Flex cotton. Follow the cleaning procedures specified on the label of the product(s) previously used.
ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY FLEX COTTON, HOWEVER, DUE TO THE SENSITIVITY OF COTTON FRUITING TO VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS

SOYBEANS WITH THE ROUNDUP READY® GENE

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, postemergence, preharvest, postharvest
USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready® soybeans. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product.

Maximum Allowable Yearly Rates

1.	Combined total per year for all applications	6.5 quarts per acre
2.	Preplant, Preemergence applications	4 quarts per acre
3.	Total in-crop applications from emergence from cracking throughout flowering	2.4 quarts per acre
4.	Maximum preharvest application rat	26 fluid ounces per acre

RESTRICTIONS**:** The combined total application from crop emergence through harvest must not exceed 2.4 quarts per acre. The maximum rate for any single in crop application is 52 fluid ounces per acre. The maximum combined total of this product which can be applied during flowering is 52 fluid ounces per acre. Allow a minimum of 14 days between final application and harvest or feeding of soybean grain, forage or hay.
NOTE: The use of this product for in-crop applications over Roundup Ready® soybeans is not registered in California.

Annual Weed Rate Tables

The following rate specifications will provide control of labeled grasses and broadleaf weeds in conventional and no-till Roundup Ready® soybean production systems. Refer to the “ANNUAL WEED RATE TABLES” of this label for rates used for specific annual weeds.
To the extent consistent with applicable law, Helm Agro will not warrant crop safety or weed control when Roundup Ready® soybeans are treated with herbicides not specified on this label. Because of the potential for: 1) crop injury, 2) poor weed control from antagonism, and/or 3) rotational crop restrictions, herbicides not specified on this label must not be used, whether applied preemergence or applied postemergence as a tank mixture with HELOSATE 5 HERBICIDE. This product may be used up to 52 fluid ounces per acre in any single in-crop application for control of annual weeds, where heavy weed densities exist.

Midwest/Mid-Atlantic Directions

Narrow row or drilled soybeans: A single in-crop application of this product will provide effective control of labeled weeds. For best results, make an initial application of 26 fluid ounces per acre, on 4-8” weeds. Weeds will generally be 4-8” tall 3 to 5 weeks after planting. If the initial application is delayed and weeds are 8-18”tall, use 40 fluid ounces per acre for best results.
Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 20 to 26 fluid ounces per acre may be necessary to control late flushes of weeds.
Wide row soybeans: An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, make an initial application of 26 fluid ounces per acre, on 4-8” weeds. Weeds will generally be 4-

8" tall 3 to 5 weeks after planting. If new flushes of weeds occur, they can be controlled by sequential applications of this product.

Initial and Sequential (if needed) Applications	
Weed Height (inches	Rate (fl oz/A)
1-3	20
4-8	26
8-18	40

Giant ragweed: Apply 26 fluid ounces per acre when the weed is 8-12 inches tall to avoid the need for sequential application.
Black nightshade, Pennsylvania smartweed, ladysthumb smartweed, velvetleaf and waterhemp: Apply 26 fluid ounces per acre to weeds 3-6 inches tall and 40 fluid ounces per acre when weeds are up to 12 inches tall.
For Morningglory species: Apply 26 fluid ounces per acre when weeds are up to 4 inches tall, and 40 fluid ounces per acre when weeds are up to 6 inches tall.
Some weeds, such as black nightshade, woolly cupgrass, shattercane, wild proso millet, burcumber, and giant ragweed, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Only make sequential applications after some regrowth has occurred. Use a minimum of 20 fluid ounces of this product per acre for sequential applications.
Southeast Directions
Narrow row, drilled, or wide-row soybeans: An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 26 fluid ounces per acre, on 3-6 inches weeds is recommended. Weeds will generally be 3-6 inches tall 2 to 3 weeks after planting.

Initial Treatment	
Weed Height (inches)	Rate (fl oz/A)
3-6	26
6-12	40

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 13 to 26 fluid ounces per acre may be necessary to control late flushes of weeds.

Sequential Application (if needed)	
Weed Height (inches)	Rate (fl oz/A)
2-3	13
3-6	20
6-12	26

Florida pusley, hemp sesbania and spurred anoda: Apply 26 fluid ounces per acre to weeds 2-4" for the initial application. Apply 26 fluid ounces per acre when these weeds are 3-6" tall if a sequential application is necessary.
Morningglory, black nightshade, groundcherry, and Pennsylvania smartweed: Apply 20 fl ounces per acre on 1-3" weeds, 26 fluid ounces per acre on 3-6" weeds, or 40 fluid ounces per acre on 6-12" weeds for the initial application.
Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Only make sequential applications of this product after some regrowth has occurred. Use a minimum of 13 fluid ounces of this product per acre for sequential applications.

Delta/Mid-South Directions
Narrow row, drilled, or wide row soybeans: An in-crop application of this product will provide effective control of the initial stand of labeled weeds. A sequential application will be required to control new flushes of weeds. For best results, make an initial application of 26 fluid ounces per acre, on 2-4" weeds. Weeds will generally be 2-4" tall 2 to 3 weeks after planting.

Initial Treatment	
Weed Height (inches)	Rate (fl oz/A)
2-4	26
5-12	40
Sequential Application (if needed)	
Weed Height (inches)	Rate (fl oz/A)
2-3	13
3-6	20
6-12	26

Hemp sesbania and spurred anoda: Apply a sequential treatment of 26 fl ounces per acre on 3-6" weeds if necessary. Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Only make sequential applications after some regrowth has occurred. Use a minimum of 13 fluid ounces of this product per acre for sequential applications.

Perennial Weeds Rate Directions

A 26 to 52 fluid ounces per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpet creeper, swamp smartweed, and wirestem muhly. For best results, allow perennial weed species to achieve at least 6" of growth before spraying with HELOSATE 5 HERBICIDE.

ROUNDUP READY® 2 YIELD SOYBEANS

HELM AGRO INTENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON SOYBEAN VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the soybean contains a patented gene, which provides resistance to this product. Information on Roundup Ready® soybean varieties may be obtained from your seed supplier or Helm Agro representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

TYPES OF APPLICATION: Preplant, At-planting, Preemergence, Postemergence (In-crop), Preharvest, Post-Harvest

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready® 2 Yield soybean.

Maximum Application Rates	
Combined total per year for all applications	6.5 quarts per acre
Total of all Preplant, At-planting, Preemergence applications	4 quarts per acre
Total of all In-crop applications from cracking through flowering (R2 stage of soybeans)	2.4 quarts per acre
Maximum prehavest application rate	0.8 quarts per acre

RESTRICTIONS: See the ROUNDUP READY® CROPS section of this label for precautionary instructions for use in Roundup Ready® crops. The maximum combined total quantity of this product for all applications in a season is 6.5 quarts per acre. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Roundup Ready® 2 Yield soybean.

TANK MIXTURES: This product may be tank-mixed with 2,4-D, or Dicamba and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the specific product being used is labeled for application prior to emergence of soybean. Read and follow label directions of all products in the tank mixture.

The following active ingredients – both branded or generic equivalents of these product - that are registered for use *at the time of planting, for preplant, at-planting and/or preemergence application to soybeans* may be used in tank-mixes:

Common Name	Brand Name(s)
2,4-D	Various
Alachlor	INTRRO®, Micro-Tech®
Carfentrazone-ethyl	Aim® EC Herbicide, Aim® EW Herbicide
Chlorimuron ethyl	Classic® Herbicide, Curio® Herbicide, Sheridan 25 WG
Chlorimuron ethyl + Metribuzin	Canopy® Herbicide, Cloak®, Resist™
Chlorimuron ethyl + Tribenuron methyl	Canopy® EX Herbicide, Cloak® EX
Clethodim	Arrow® 2 EC, Avatar S2, Cleanse™ 2 EC, Clethodim 2E, Dakota™, Dakota™ Herbicide, Intensity Post- Emergence Grass Herbicide®, Intensity® One Post- Emergence Grass Herbicide, Section® 2EC, Section® 2EC Herbicide, Section® Three Herbicide, Select® 2 EC, Select® 2 EC Herbicide, Select Max® Herbicide with Inside Technology™, Shadow®, Shadow® 3EC, Tapout®, Vaquero™, Volunteer™ Herbicide, Willowood Clethodim 2EC
Clomazone	Command® 3ME
Cloransulam-methyl	FirstRate® Herbicide, Gangster® Herbicide
Dimethenamid-p	Commit®, Establish™, Optill Pro®, Outlook® Herbicide, Slider®, Sortie® Herbicide
Fluazifop-p-butyl	Fusilade® DX
Flumetsulam	Accolade™ Herbicide, Python® WDG Herbicide
Flumiclorac pentyl ester	Resource® Herbicide
Flumioxazin	Encompass™, Outflank™, Panther™ Herbicide, Panther® SC Herbicide, Rowel™ Herbicide, Valor® SX Herbicide
Fluzifop-p-butyl + Fenoxaprop-p-buthyl	Fusion®
Fomesafen	Andros® 1.88, Battle Star®, Dawn® Herbicide, Flexstar®, Reflex®, Rhythm® Herbicide, Ringside®, Sedona®, Shafen Herbicide, Shafen Star, Top Gun™ Herbicide
Imazaquin	Scepter® 70DG, Scepter® 70DG Herbicide
Imazethapyr	Pursuit® Herbicide, Thunder™
Lactofen	Cobra® Herbicide, Phoenix™ Herbicide
Linuron	Linex® 4L Herbicide, Lorox® DF Herbicide
Metolachlor	Me-Too-Lachlor™, Parallel® Herbicide, Parallel® PCS Herbicide, Phenomenon™, Stalwart® Herbicide
Metribuzin	Dimetric® DF 75%, Glory™, Glory™ 4L, Metribuzin 75, Metribuzin 75DF, Tricor® 4F, Tricor® DF
Metribuzin + Flufenacet	Axiom® DF
Metribuzin + Metolachlor	Stalwart® MTZ
Metribuzin + s-Metolachlor	Boundary® 6.5 EC, Ledger™ Herbicide
Pendiemthalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide
Quizalofop-p-ethyl	Assure® II Herbicide, Se-Cure EC Herbicide, Targa®
s-Metolachlor	Brawl™, Brawl™ II, Charger Basic® Herbicide, Charger® Max Herbicide, Cinch®, Dual II Magnum®, Dual Magnum®, Medal®, Medal® II, Medal® II EC

Sulfentrazone	Blanket® 4F Herbicide, Helm Sulfentrazone 4F, HM-1512 AG, Spartan® 4F, Willowood Sulfentrazone 4SC, Zeus Herbicide
Sulfentrazone + Cloransulam-methyl	Authority® First DF, Sonic® Herbicide
Tribenuron methyl	Express® with TotalSol®, Nuance® Herbicide, Victory® Herbicide
Trifluralin	Dintec Treflan® 4D Herbicide, Treflan® 4 EC Herbicide, Treflan™ 4L Herbicide, Treflan® HFP Herbicide, Trifluralin 4 E.C., Trifluralin 4 EC Herbicide, Trifluralin HF, Triflurex® HFP, Trust® Herbicide

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 4 quarts per acre per season. Refer to individual tank mixture product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

Postemergence (In-crop)

USE INSTRUCTIONS: This product must be used to control annual grasses and broadleaf weeds in Roundup Ready® 2 Yield soybean. Application of this product can be made from emergence (cracking) through flowering (R2 stage soybeans). R2 stage soybean ends when a pod 5 millimeters (3/16 inch) long appears at one of the four uppermost nodes on the main stem with fully developed leaf (R3 stage). Refer to the "ANNUAL WEEDS RATE SECTION" of this label for application rates for specific annual weeds. Apply an initial application of 0.8 quarts per acre on 2 to 8-inch tall weeds. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be applied up to 1.6 quarts per acre as a single, in-crop application for control of annual weeds and where dense weed populations exist.

A 0.8 to 1.6 quarts per acre rate (single or multiple applications) of this product will control of suppress perennial weeds, such as, bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpet creeper, swamp smartweek and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions such as drought, hail, or wind damage, or a poor soybean stand that slows or delays canopy closure, a sequential application of this product may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY 2 YIELD SOYBEAN CROP. To control giant ragweed, apply 0.8 quarts of this product per acre when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Roundup Ready® 2 Yield soybean. Ensure that the specific product being used is labeled for application postemergence (in-crop) to soybean. Read and follow label directions of all products in the tank mix.

The following active ingredients – both branded or generic equivalents of these product - that are registered for use postemergence (in-crop) application to soybeans may be used in tank-mixes:

Common Name	Brand Name(s)
Acifluorfen	Avalanche® Ultra, Ultra Blazer®
Bentazon	Basagran®, Basagran® 5L, Basagran® Herbicide, BashAzon Herbicide, Broadloom™ Herbicide, Rezult® B herbicide
Chlorimuron ethyl	Classic® Herbicide, Curio® Herbicide, Sheridan 25 WG
Clethodim	Arrow® 2 EC, Avatar S2, Cleanse™ 2 EC, Clethodim 2E, Dakota™, Dakota™ Herbicide, Intensity Post- Emergence Grass Herbicide®, Intensity® One Post- Emergence Grass Herbicide, Section® 2EC, Section® 2EC Herbicide, Section® Three Herbicide, Select® 2 EC, Select® 2 EC Herbicide, Select Max® Herbicide with Inside Technology™, Shadow®, Shadow® 3EC, Tapout®, Vaquero™, Volunteer™ Herbicide, Willowood Clethodim 2EC
Cloransulam-methyl	FirstRate® Herbicide, Gangster® Herbicide

Fluazifop-p-butyl	Fusilade® DX
Flumiclorac pentyl ester	Resource® Herbicide
Fluzifop-p-butyl + Fenoxaprop-p-buthyl	Fusion®
Fomesafen	Andros® 1.88, Battle Star®, Dawn® Herbicide, Flexstar®, Reflex®, Rhythm® Herbicide, Ringside®, Sedona®, Shafen Herbicide, Shafen Star, Top Gun™ Herbicide
Imazamox	Raptor® Herbicide
Imazethapyr	Pursuit® Herbicide, Thunder™
Lactofen	Cobra® Herbicide, Phoenix™ Herbicide
Metolachlor	Me-Too-Lachlor™, Parallel® Herbicide, Parallel® PCS Herbicide, Phenomenon™, Stalwart® Herbicide
Pendiemthalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide
Quizalofop-p-ethyl	Assure® II Herbicide, Se-Cure EC Herbicide, Targa®
s-Metolachlor	Brawl™, Brawl™ II, Charger Basic® Herbicide, Charger® Max Herbicide, Cinch®, Dual II Magnum®, Dual Magnum®, Medal®, Medal® II, Medal® II EC
Sethoxydim	Nufarm Sethoxydim SPC Herbicide, Poast® Herbicide, Poast Plus® Herbicide, Rezult® G herbicide
Thifensulfuron-methyl	Harass® Herbicide, Harmony® SG with TotalSol®, Thief™, Treaty®, Volta®
Thifensulfuron-methyl + Chlorimuron ethyl	Synchrony® XP

RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 2.4 quarts per acre. The maximum combined total of this product that can be applied during flowering (R2 stage soybeans) is1.6 quarts per acre. Refer to individual tank-mix product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture. In some cases, these tank-mix products will cause visual soybean injury.

Preharvest

USE INSTRUCTIONS: This product may be applied to Roundup Ready® 2 Yield soybean for weed control prior to harvest. Apply up to 0.8 quarts of this product per acre after pods have set and lost all green color.

PRECAUTIONS: Take care to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS: Allow a minimum of 14 days between final application and harvest of soybean grain, forage or hay.

Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of Roundup Ready® 2 Yield soybean. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the specific product being used is labeled for weed control application after harvest of soybean. Read and follow label directions of all products in the tank mixture.

RESTRICTIONS: Application of this product must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

SUGAR BEETS WITH ROUNDUP READY® GENE

HELM AGRO INTENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON SUGAR BEET VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready® designation indicates that the sugar beet contains a patented gene, which provides resistance to this product. Information on Roundup Ready® sugarbeet may be obtained from your seed supplier or Helm Agro representative. Roundup Ready® crop varieties must be purchased from an authorized licensed seed supplier.

See the "ROUNDUP READY® CROPS" section of this label booklet for precautionary instructions for use in Roundup Ready® crops. Do NOT combine these instructions with other directions made for crop varieties that do not contain a Roundup Ready® gene listed in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" sections of this label booklet.

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop).

APPLICATION INSTRUCTIONS

Maximum Application Rates	
Combined total per year for all applications	6.5 quarts per acre
Preplant, Preemergence applications	4 quarts per acre
Emergence to 8 leaf stage	2 quarts per acre
Between 8 leaf stage and canopy closure	25 fl. ounces per acre

PRECAUTIONS: See the ROUNDUP READY® CROPS section of this label for precautionary instructions for use in Roundup Ready crops. Tank mixtures of this product with herbicides, insecticides or fungicides may result in crop injury or reduced weed control.

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready® sugar beets.
RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 4 quarts per acre per season.

Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Roundup Ready® sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.
RESTRICTIONS: Follow all precautionary instructions for use in Roundup Ready® crops.

- The combined total application from crop emergence through harvest must not exceed 2.5 quarts per acre.
- The maximum rate for any single application between emergence to the 8 leaf stage is 1.2 quarts per acre.
- The maximum rate for any single application between the 8 leaf stage and canopy closure is 25 fluid ounces per acre.
- Allow a minimum of 30 days between last application and sugar beet harvest.
- For any crop NOT listed in the CROPPING SYSTEM section of this label booklet, applications must be at least 30 days prior to planting.

NONCROP USES

See PRODUCT INFORMATION and MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS sections of this label for essential product performance information and the following NONCROP sections for specific uses.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE TURFGRASSES, TREES, SHRUBS OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seeds. Where repeat applications are necessary, DO NOT exceed 8.5 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. 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 rate. This product does not provide residual weed control. For subsequent weed control, follow a label-approved herbicide program.

This product may be tank mixed with the following active ingredients - – both branded or generic equivalents of these products. Refer to product labels for approved use sites and application rates. Read and carefully observe all cautionary statements and all other information appearing on the labels of all herbicides used.

Common Name	Brand Name(s)
2,4-D	Various
Bromacil + Diuron	Krovar® I DF Herbicide, Sweep® Herbicide

Chlorsulfuron	Glean® XP, Report™ Herbicide, Telar® XP,
Dicamba*	Banvel® Herbicide, Clarity® Herbicide, Clash™, Detonate®, Diablo® Herbicide, Dicamba DMA Salt, Dicamba HD, Diflexx®, Rifle®, Sterling Blue®, Sterling® Blue Herbicide, Strut®, Vision™ Herbicide
Diuron	Determine™ 4L, Direx® 4L, Diuron 4L, Diuron 80, Diuron 80 WDG Weed Killer, Karmex® DF, Parrot™ 4L, Parrot™ DF, Sekor™ 4L, SuperDi™ 4L
Imazapic	Impose®, Nufarm Imazapic 2SL, Open Range™ G, Plateau® Herbicide
Imazapyr	Alligare Imazapyr 2 SL, Alligare Imazapyr 4 SL, Alligare Rotary 2 SL, Arsenal® Herbicide Applicators Concentrate, Arsenal® PowerLine™ Herbicide, HABITAT® Herbicide, Nufarm Polaris® AC Complete Herbicide, Nufarm Polaris® Herbicide, Nufarm Polaris® AC Herbicide, Nufarm Polaris® SP, Stalker® Herbicide
Imazapyr + Diuron	Nufarm Imazuron™ Herbicide, Sahara® DG Herbicide
Metsulfuron methyl	Accurate® Herbicide, Ally® XP, Ciramet™ Herbicide, Manor® Selective Herbicide, Patriot® Herbicide, Plotter® Agricultural Herbicide, Purestand™
Oryzalin	Fugitive®, Oryzalin 4 A.S. Herbicide, Phoenix Harrier® 4L, Surflan® A.S. Agricultural, Surflan® AS Specialty, Surflan® Flex, Surflan® Flex T&O
Oxadiazon	Ronstar® 50 WSP, Ronstar® Flo
Pendimethalin	Acumen®, Framework® 3.3EC Herbicide, Helena® Pendemethalin, PendiPro 3.3 EC, Prowl® 3.3 EC Herbicide, Prowl® H2O, Satellite® HydroCap Herbicide, Stealth® Herbicide
Prodiamine	Barricade® 4FL, Barricade® 65WG, Cavalcade® 65WDG Herbicide, Endurance® Herbicide, Evade® 4 FL, Phoenix Knighthawk®, ProClipse® 65 WDG, Resolute® 4FL, Resolute™ 65WG
Simazine	Princep® 4L, Princep® Caliber 90® Herbicide, Sim-Trol® 4L Simazine Flowable Herbicide, Sim-Trol® 90DF Simazine Dry Flowable Herbicide, Simazine 4L, Simazine 4L Flowable, Simazine 90DF, Simazine 90 WDG
Sulfometuron methyl	Oust® XP, Spyder® Selective Herbicide

*Dicamba mixtures may not be applied by air in California.

INDUSTRIAL, RECREATIONAL AND PUBLIC AREAS

When applied as directed for NONCROP USES, under conditions described, this product controls annual and perennial weeds listed on this label growing in areas in-cluding airports, ditch banks, dry ditches, dry canals, fencerows, golf courses, highways, industrial plant sites, lumberyards, parking areas, parks, petroleum tank farms and pumping installations, pipelines, power and telephone rights-of-way, railroads, roadsides, schools, storage areas, utility substations, other public areas and similar industrial or noncrop areas.

For specific rates of application and instructions for control of various annual and perennial weeds and woody brush and trees, see the WEEDS CONTROLLED section of this label.

This product may be applied with recirculating sprayers, shielded applicators, or wiper applicators in any noncrop site specified on this label. See the SELECTIVE EQUIPMENT part of APPLICATION EQUIPMENT AND TECHNIQUES section of this label for information on proper use and calibration of this equipment.

FARMSTEADS

TYPES OF APPLICATIONS: Nonselective weed control, trim-and-edge, chemical mowing, cut stumps, habitat management, rangelands.

Nonselective Weed Control, Trim-and-edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditch banks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

This product may be tank mixed with active ingredients listed above. Refer to product labels for approved farmstead sites and application rates. For annual weeds, use 26 fluid ounces per acre of this product when weeds are less than 6 inches tall and 1.25 quarts per acre when weeds are greater than 6 inches tall. For perennial weeds, apply 1.75 to 4 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "HAND-HELD AND HIGH VOLUME EQUIPMENT" section of this label for directed rates.

ORNAMENTALS, TREE NURSERIES, AND CHRISTMAS TREES

DO NOT USE THIS PRODUCT AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES.

NOTE: Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.

When applied as instructed for the conditions described for NONCROP USES, this product controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shadehouses, and as a post-directed spray around established ornamentals.

For specific rates of application and instructions for control of various annual and perennial weeds, see the WEEDS CONTROLLED section of this label.

Where repeat applications are necessary, do not exceed 8.5 quarts of this product per acre per year.

Site Preparation

Following preplant applications of this product, any ornamental, nursery species, or Christmas tree species may be planted. Precautions should be taken to protect nontarget plants during site preparation applications.

Post-directed Spray

Use a postdirected spray around established woody ornamental species, nursery species, or Christmas trees such as those listed below. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Arborvitae	Buxus spp.	Privet	Picea spp.
Thuja spp.	Maple	Ligustrum spp.	Jojoba
Lilac	Acer spp.	Euonymus	Simmondsia chinensis
Syringa spp.	Crabapple	Euonymus spp.	Yew
Azalea	Malus spp.	Pine	Taxus spp.
Rhododendron spp.	Oak	Pinus spp.	Hollies
Magnolia	Quercus spp.	Fir	Ilex spp.
Magnolia spp.	Douglas fir	Abies spp.	
Boxwood	Pseudotsuga spp.	Spruce	

GREENHOUSE/SHADEHOUSE

This product may be used to control weeds in and around greenhouses and shadehouses.

RESTRICTIONS: Desirable vegetation must not be present during application and air circulation fans must be turned off before applying this product inside a greenhouse or shadehouse. Leave fans off until the application solution has dried. Do not use this product inside residential greenhouses.

CHRISTMAS TREES

TYPES OF APPLICATIONS: Post-directed, spot treatment, site preparation
USE INSTRUCTIONS: This product may be used as a post-directed spray and spot treatment around established Christmas trees.
PRECAUTIONS: Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. Do not apply this product using over-the-top broadcast spray in Christmas trees, as severe damage may occur.
Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees.

Site preparation
USE lNSTRUCTlONS: This product may be used prior to planting Christmas trees.
PRECAUTIONS: Take precautions to protect nontarget plants during site preparation applications.

CHEMICAL MOWING

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Apply this product at a rate of 5 to 6.5 fluid ounces per acre. Use 6.5 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass or quackgrass covers. Use 5 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.
PRECAUTIONS: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

CUT STUMPS

TYPES OF APPLICATION: Treating cut stumps in any noncrop site listed on this label.
USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.

Alder	Salt-cedar
Eucalyptus	Sweetgum
Madrone	Tan oak
Oak	Willow
Reed, giant	

PRECAUTIONS: DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT WOODY BRUSH OR TREES.

HABITAT MANAGEMENT

TYPES OF USES: Habitat restoration and maintenance, wildlife food plots.

HABITAT RESTORATION AND MAINTENANCE

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. The tank mixtures listed in this section of the label may be used for habitat restoration and maintenance.

WILDLIFE FOOD PLOTS

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species

may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

RANGELANDS

TYPES OF APPLICATIONS: Postemergence
USE INSTRUCTIONS: This product will control or suppress many annual weeds growing in perennial cool and warm season grass rangelands.
Preventing viable seed production is key to the successful control invasion of annual grassy weeds in rangelands. Make follow-up applications in sequential years to eliminate most of the viable seeds.
Delay grazing of treated areas to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.
RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product. Do not make more than one application per year. Do not apply more than 2.7 quarts of this product per acre per year on rangeland.
Postemergence
Apply 10-13 fluid ounces of this product to control or suppress many weeds, including downy brome, cheat grass, cereal rye and jointed goatgrass in rangelands. Apply when most mature brome plants are in early flower and before the plants including seedheads turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve, and encourages perennial grass conversion on weedy sites. Fall applications are possible, and directed where spring moisture is usually limited and fall germination allows for good weed growth.
Apply 13 fluid ounces when the medusahead has reached the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead dominated rangelands.
Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

SILVICULTURAL SITES AND UTILITY RIGHTS-OF-WAY

TYPES OF APPLICATIONS: This product may be used for the control or partial control of woody brush, trees and herbaceous weeds. This product is labeled for use in forestry and utility sites. This product is also for use in preparing or establishing wildlife openings within these sites and maintaining logging roads, and for side trimming along utility rights-of-way.
In forestry, this product may be used for use in site preparation prior to planting any tree species, including Christmas trees and silvicultural nursery sites.
In utilities, this product may be used for use along electrical power, pipeline and telephone rights-of-way, and in other utility sites associated with these rights-of-way, such as substations.

APPLICATION RATES AND TIMING:

Application	**HELOSATE 5 HERBICIDE (qts./A/Appl.)**	**HELOSATE 5 HERBICIDE (qts./A/year)**	**Spray Volume (Gal/A)**
	Broadcast		
Aerial	1.6	8	5 to 30
Ground	1.6 to 8	8	10 to 60
	Spray-to-Wet		
Handgun, Backpack, Mistblower	0.65% to 2.2% by volume		spray-to-wet
	Low Volume Directed Spray		
Handgun, Backpack, Mistblower	4.3% to 8.0% by volume		partial coverage*

*For low volume directed spray applications, coverage must be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results.

In forestry site preparation and utility rights-of-way applications, this product requires use with a nonionic surfactant. Use a nonionic surfactant with greater than 80 percent active ingredient and labeled for use with herbicides. Use of this product without surfactant will result in reduced performance. See the MIXING section of this labeling for more information.
Mix 2 or more quarts of the nonionic surfactant per 100 gallons of spray solution (0.5 percent or more by spray volume). Use of surfactant concentrations greater than 1.5 percent by spray volume with handgun applications or 2.5 percent by spray volume with broadcast applications is not recommended.
Use higher rates of this product within the specified range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the specified range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.
Use the lower rates of this product within the specified range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence.
This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not exceed 8 quarts of this product per acre per year.

Tank Mixtures
Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of both products used. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.
NOTE: For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions. For side trimming treatments in utility rights-of-way, tank mixtures with Imazapyr are not recommended. For side trimming treatments, this product be used alone as directed, or as a tank mixture with Triclorpyr 4.

Product	**Broadcast Rate**	**Use Sites**
Arsenal® Applicators Concentrate**	2 to 16 fl oz/a	Forestry site preparation
Chopper®	4 to 32 oz/a	Forestry site preparation
Escort®**	½ to 3 ½ oz/a	Forestry site preparation
Oust®	1 to 4 oz/a	Forestry site preparation, Utility sites
Garlon® 3A*, Garlon® 4	1 to 4 qts	Forestry site preparation, Utility sites
Arsenal® 2WSL**	4 to 32 fl oz/a	Utility sites

Product	**Spray-to-Wet Rates**	**Use Sites**
ArsenalApplicators Concentrate**	1/32 % to ½ % by volume	Forestry site preparation
Arsenal® 2WSL**	1/16 % to ½ % by volume	Utility sites

Product	**Low Volume Directed Spray Rates**	**Use Sites**
Arsenal® Applicators Concentrate**	1/8 % to ½ % by volume	Forestry site preparation
Arsenal® 2WSL**	1/8 % to ½ % by volume	Utility sites

*Ensure that Garlon® 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray compatibility problems.
**Arsenal® and Escort® are not registered in the state of California.
For control of herbaceous weeds, use the lower tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher rates.

RAILROAD RIGHTS-OF-WAY

HELOSATE 5 HERBICIDE plus Diuron plus Atrazine: Apply when plants are actively growing. Use the higher specified rates of these products where vegetation is heavy or dense, or where hard-to-control species are prevalent. Repeat applications may be necessary to maintain control where dense vegetation prevents good spray coverage. Applications should be made when weeds are less than 12 inches tall for best results. Nonionic surfactants which are labeled for use with herbicides may be used. Use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 50 percent active ingredient, or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 50 percent active ingredient. ead and carefully observe surfactant cautionary statements and other information appearing on the surfactant label. 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.

Read and carefully observe the label claims, cautionary statements and all information on the labels of both products used in this tank mixture. Use according to the most restrictive label directions for each product in the mixture. When used in combination as directed by HELM, the liability of HELM shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the HELM product in such combination use.

HELOSATE 5 HERBICIDE plus 2,4-D Amine plus Oust®
For control of trumpet creeper and johnsongrass:
EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE OF DESIRABLE TURFGRASSES, TREES, SHRUBS, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

NOTE: If spraying areas adjacent to desirable plants, use a shield made of cardboard, sheet metal or plyboard while spraying to help prevent spray from contacting foliage of desirable plants. Repeat treatments may be necessary to control weeds regenerating from underground parts or seeds.

HELOSATE 5 HERBICIDE does not provide residual weed control. For subsequent weed control, follow a label-approved herbicide program. This product may be applied in noncrop sites as indicated in the MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS section unless otherwise directed.

HELOSATE 5 HERBICIDE plus 2,4-D Amine: When applied as directed for noncrop uses, HELOSATE 5 HERBICIDE when tank-mixed with 2,4-D amine will provide burndown and control of trumpet creeper in railroad rights-of-way sites. Apply 1.6 to 2.4 quarts of HELOSATE 5 HERBICIDE with 1 to 2 pints of 2,4-D amine in 25 to 40 gallons of total spray solution per acre to actively growing trumpet creeper. Application should be made any time from early postemergence to before a killing frost. Use the higher rates of these products when weed growth is heavy or dense.

HELOSATE 5 HERBICIDE plus 2,4-D Amine plus Oust: When applied as directed for noncrop uses, HELOSATE 5 HERBICIDE when tank-mixed with 2,4-D amine and Oust will provide burndown control of johnsongrass and trumpet creeper. Apply 2 to 3 quarts of HELOSATE 5 HERBICIDE with 1 to 2 pints of 2,4-D amine plus 2 to 4 ounces of Oust in 25 to 40 gallons of total spray solution per acre. Application should be made any time from early postemergence to before a killing frost. Use the higher rates of these products when weed growth is heavy or dense.

Tank mixing and application instructions before using, refer to the individual product labels for precautionary statements. Do not apply this tank mixture, drain or flush equipment on or near desirable trees or other plants, on areas where their roots may extend, or in locations where Oust or 2,4-D amine may be washed or moved into contact with their roots.

Fill the spray tank at least one-third full of clean water. Mix the specified amount of Oust in a separate container with sufficient water to make a smooth slurry. Pour the slurry into the spray tank; fill spray tank with the required amount of 2,4-D amine and HELOSATE 5 HERBICIDE and mix well before using. Maintain agitation until spraying is completed.

Before using, refer to individual product labels for specific cleaning instructions.

FORESTRY CONIFER AND HARDWOOD RELEASE

Directed Spray and Selective Equipment

This product may be applied as a directed spray or by using selective equipment in forestry conifer and hardwood sites, including Christmas tree plantations and silvicultural nurseries. Mix 2 to 6 quarts of a nonionic surfactant per 100 gallons of spray solution (0.5 to 1.5 percent by spray volume) for all spray applications. Use a surfactant with greater than 80 percent active ingredient.

In hardwood plantations, tank mixtures with Oust® may be used. In pine plantations, tank mixtures with Triclorpyr 4 or Arsenal® AC may be used. Comply with all site restrictions, forestry species limitations and precautions on the tank mix product label.

Avoid contact of spray, drift, mist or drips with foliage, green bark or non-woody surface roots of desirable species.

See all sections in the APPLICATON EQUIPMENT AND TECHNIQUES portion of this labeling for specific equipment instructions and precautions.

For spray-to-wet applications, use a 1.6 percent spray solution for the control of undesirable woody brush and trees. To control herbaceous weeds, use a 0.8 to 1.6 percent solution.

For low volume directed spray applications, use a 4.3 to 8.0 percent spray solution. Coverage must be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the unwanted vegetation is important.

For equipment calibrated for ground broadcast applications, use 1.6 to 8 quarts of this product per acre. Apply in 10 to 60 gallons of clean water per acre. Shielded application equipment may be used to avoid contact of the spray solution with desirable plants. Adjust shields to prevent spray contact with the foliage or green bark of desirable vegetation.

Wiper application equipment may be used. See the SELECTIVE EQUIPMENT portion of this labeling for equipment and rate specifications.

BROADCAST SPRAY

Except where specifically listed below, use only where conifers have been established for more than one year.

Application must be made after formation of final conifer resting buds in the fall or prior to initial bud swelling in the spring.

Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied. Damage can be accentuated if applications are made when conifers are actively growing, or are under stress from drought, flood water, improper planting, insects, animal damage or diseases.

This product may require use with a surfactant. Unless otherwise specified in this section of this label, use surfactant at 10 to 30 fluid ounces per acre. Follow the instructions under the MIXING portion of this labeling.

For release of the following conifer species outside the Southeastern United States:

Douglas fir	Pines*
Pseudotsuga menziesii	*Pinus spp.*
Fir	Redwood, California**
Abies spp.	*Sequoia spp.*
Hemlock**	Spruce
Tsuga spp.	*Picea spp.*

*Includes all species except loblolly pine, longleaf pine, shortleaf pine or slash pine.

**Use of a surfactant is not directed for release of hemlock species or California redwood. In mixed conifer stands, injury to these species may result if a surfactant is used.

Apply 0.8 to 1.6 quarts of this product per acre as a broadcast spray.

NOTE: For release of Douglas fir with this product or tank mixtures of this product, a nonionic surfactant for over-the-top foliar sprays may be used. To avoid possible conifer injury, surfactant rates must not exceed 20 fluid ounces per acre at elevations above 1500 feet, or 10 fluid ounces per acre in the coastal range or at elevations below 1500 feet in Washington and Oregon. Nonionic surfactants may be used at 2 fluid ounces per acre at elevations above 1500 feet, or 1 fluid ounce per acre in the coastal range or at elevations below 1500 feet. Use of surfactant rates exceeding those listed above may result in unacceptable conifer injury and are not recommended. Ensure that the nonionic surfactant has been adequately tested for Douglas fir safety before use.

In Maine, up to 2.4 quarts per acre of this product or a tank mix with 1 oz/a of Arsenal® Applicators Concentrate may be used for the control of difficult species.

To release Douglas fir, pine and spruce species at the end of the first growing season (except in California), apply 0.8 to 1.2 quarts of this product per acre. Ensure that the conifers are well hardened off.

Oust® Tank Mixtures – To release jack pine, white pine and white spruce, apply 0.8 to 1.6 quarts of this product with 1 to 3 ounces (1 to 1.5 for white pine) of Oust® per acre. Make applications to actively growing weeds as a broadcast spray over the top of established conifers. Make applications at these rates after formation of conifer resting buds in the late summer or fall.
Arsenal® Applicators Concentrate Tank Mixtures – This product may be tank mixed with Arsenal® Applicators Concentrate for release of Douglas fir. Use 0.8 to 1.2 quarts of this product tank mixed with 2 to 6 fluid ounces of Arsenal® per acre. For release of balsam fir and red spruce, apply a mixture of 1.6 quarts of this product and 1 to 2.5 fluid ounces of Arsenal® Applicators Concentrate per acre.

For release of the following conifer species in the Southeastern United States:

Eastern white pine	Shortleaf pine
Pinus strobus	*Pinus echinata*
Loblolly pine	Slash pine
Pinus taeda	*Pinus elliottii*
Longleaf pine	Virginia pine
Pinus palustris	*Pinus virginiana*

Apply 1.2 to 2 quarts of this product per acre as a broadcast spray during late summer or early fall after the conifers have hardened off. For applications at the end of the first growing season, use 0.8 quart per acre of this product alone or in a specified tank mixture.
Arsenal® Applicators Concentrate Tank Mixtures – Apply 0.8 to 1.6 quarts of this product with 2 to 16 fluid ounces of Arsenal® Applicators Concentrate per acre as a broadcast spray for conifer release. Use only on conifer species that are labeled for over-the-top sprays for both products. Use the higher rates for dense, tough-to-control woody brush and trees. Read and carefully observe the label claims, cautionary statements and all information on the labels of each product used in these tank mixtures. Use according to the most restrictive precautionary statements for each product in the mixture.
Herbaceous Release
When applied as directed, this product plus listed residual herbicides provides postemergence control of the annual weeds and control or suppression of the perennial weeds listed in this label, and residual control of the weeds listed in the residual herbicide label. Make applications to actively growing weeds as a broadcast spray over the top of labeled conifers.
Oust® Tank Mixtures – To release loblolly pines, apply 13 to 20 fluid ounces of this product, plus 2 to 4 ounces of Oust® per acre. To release slash pines, apply 9.7 to 13 fluid ounces of this product, plus 2 to 4 ounces of Oust® per acre. Mix up to 3.2 fluid ounces per acre of surfactant with the specified rate of this product plus Oust®. Applications can be made over newly planted pines after the emergence of herbaceous weeds in the spring or early summer. Best results are obtained from applications made in May and June.
Weed control may be reduced if water volumes exceed 25 gallons per acre for these treatments.
Atrazine Tank Mixtures – To release Douglas fir, apply 0.8 quart of this product, plus 4 pounds active ingredient of atrazine per acre. Apply only over Douglas fir that has been established for at least one full growing season. Apply in the early Spring, usually mid-March through early April. Injury will occur if applications are made after bud swell in the Spring. Do not add surfactant to this mix for this use.

Common Name	Brand Name(s)
Atrazine	AAtrex® 4L Herbicide, AAtrex® Nine-O, Atra-5™ Herbicide, Atrazine 4L, Atrazine 4L Herbicide, Atrazine 90DF, Atrazine 90DF Herbicide, others
Imazapyr	Alligare Imazapyr 2 SL, Alligare Imazapyr 4 SL, Alligare Rotary 2 SL, Arsenal® Herbicide Applicators Concentrate, Arsenal® PowerLine™ Herbicide, HABITAT® Herbicide, Nufarm Polaris® AC Complete Herbicide, Nufarm Polaris® Herbicide, Nufarm Polaris® AC Herbicide, Nufarm Polaris® SP, Stalker® Herbicide

Sulfometuron methyl	Oust® XP, Spyder® Selective Herbicide
Triclopyr	Element® 4 Specialty Herbicide, Forestry Garlon® 4 Specialty Herbicide, Garlon® 4 Specialty Herbicide, Garlon® 4 Ultra Specialty Herbicide, Relegate® Selective Herbicide, Remedy® Ultra Specialty Herbicide, Tahoe® 4E Herbicide, Triclopyr 4E, Vastlan™

Always read and follow the manufacturer‘s label directions and restrictions for all herbicides and surfactants used.

WETLAND SITES

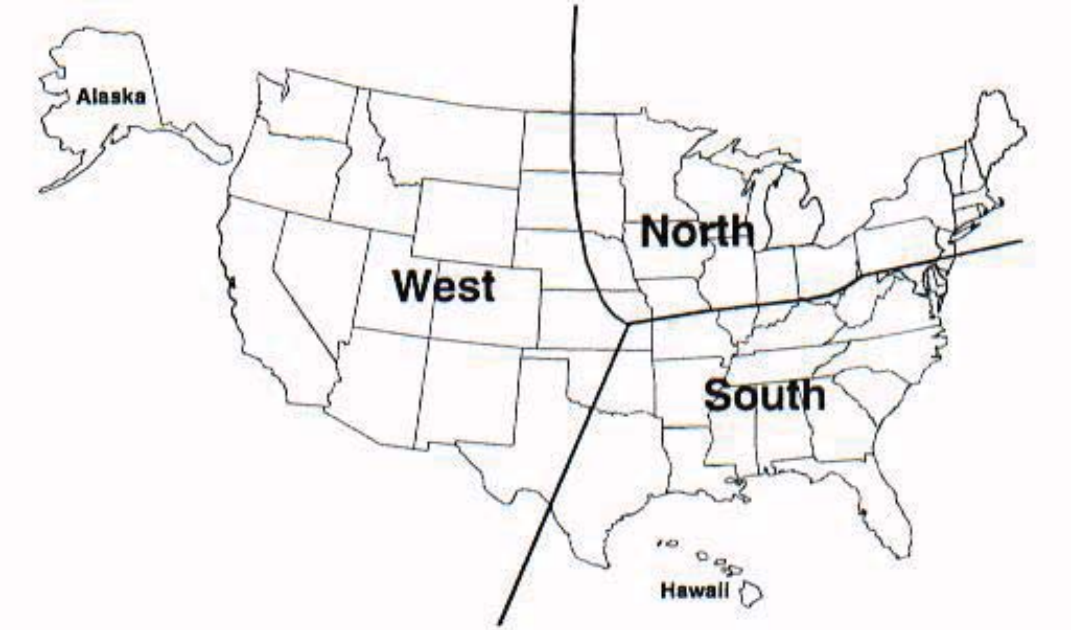
This product may be used in and around water (aquatic areas) and wetlands found in forestry and in power, telephone and pipeline rights-of-way sites, including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds. Read and observe the following before making applications in and around water.
Consult local public water control authorities before applying this product in and around public water.
Permits may be required to treat in such areas.
There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
Note: Do not apply this product directly to water within ½ mile up-stream 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. 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.
Do not spray open bodies of water where woody brush, trees and herbaceous weeds do not exist. The maximum application rate of 4 quarts per acre must not be exceeded in a single over-water broadcast application except as follows, where any specified rate may be applied:

- Stream crossings in utility rights-of-way.
- Where applications will result in less than 20 percent of the total water area being treated.

ANNUAL WEEDS RATE TABLES ALPHABETICALLY BY SPECIES

Use water carrier volumes of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications.
Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.
For those rates less than 40 fluid ounces per acre, this product may be used up to 40 fluid ounces per acre where heavy weed densities exist.
Refer to this map for location of the regions listed in the annual weed tables below.


Alaska
North
West
South
Hawaii

ANNUAL WEEDS RATE TABLE, NORTH AND SOUTH REGIONS

WEED SPECIES	REGION	RATE FLUID OUNCES PER ACRE					
		9	13	20	26	32	40
		MAXIMUM HEIGHT/LENGTH IN INCHES					
Annoda, spurred		-	1	2	3	5	8
Barley		-	18	18+	-	-	-
Barnyardgrass	South	-	3	5	7	9	12
	North	-	-	6	12	-	-
Bassia, fivehook		-	-	-	6	-	-
Bittercress		-	12	20	-	-	-
Bluegrass, annual		-	10	-	-	-	-
Brome, downy		6	-	-	-	-	-
Brome, Japanese		-	6	-	24	-	-
Browntop panicum		-	6	8	12	-	24
Burcucumber		-	-	6	12	-	-
Buttercup		-	12	20	-	-	-
Carolina foxtail		-	20	-	-	-	-
Carolina geranium		-	-	-	4	-	9
Carpetweed		-	-	6	12	-	-
Cheat		-	6	20	-	-	-
Chervil		-	20	-	-	-	-
Chickweed		-	12	18	-	-	-
Cocklebur		-	12	18	24	-	-
Copperleaf, hophornbeam		-	1	2	3	4	6
Copperleaf, Virginia		-	1	2	3	4	6
Corn		-	12	20	-	-	-
Corn speedwell		-	12	-	-	-	-
Crabgrass		-	12	18	-	-	-
Cutleaf evening primrose		-	-	-	3	3	6
Dwarfdandelion		-	20	-	-	-	-

WEED SPECIES	REGION	RATE FLUID OUNCES PER ACRE					
		9	13	20	26	32	40
		MAXIMUM HEIGHT/LENGTH IN INCHES					
Eastern mannagrass		-	8	12	-	-	-
Eclipta		-	4	8	12	-	-
Fall panicum	South	-	4	6	8	12	24
	North	-	6	12	18	-	-
Falsedandelion		-	20	-	-	-	-
Falseflax, smallseed		-	12	-	-	-	-
Fiddleneck		-	-	-	6	6	12

Field pennycress				-	6	12	-	-	-
Filaree				-	-	-	-	-	12
Fleabane, annual				-	6	20	-	-	-
Fleabane, hairy *(Conyza bonariensis)*				-	6	-	-	-	-
Fleabane, rough				-	3	6	12	-	-
Florida pusley				-	-	-	4	4	6
Foxtail		South		-	8	12	20	-	-
		North		18	18+	-	-	-	-
Goatgrass, jointed				-	6	-	-	-	-
Goosegrass				-	3	5	8	-	18
Grain sorghum (milo)				-	6	12	20	-	-
Groundsel, common				-	6	-	-	-	-
Hemp sesbania				-	-	2	4	6	8
Henbit				-	-	-	6	-	20
Horseweed/Marestail *(Conyza canadensis)*		South		-	-	12	30	-	-
		North		-	6	12	18	-	-
Itchgrass				-	6	12	18	-	-
Johnsongrass, seedling		South		-	-	18	-	-	-
		North		-	12	18	-	-	-
Junglerice				-	3	5	7	9	12
Knotweed				-	3	8	12	-	20
Kochia[1]				-	3 to 6	12	-	-	-
Lambsquarters				-	6	8	12	-	20
Little barley				-	20	-	-	-	-
London rocket				-	6	-	-	-	-
Mayweed				-	-	2	6	12	18
Morningglory *(Ipomoea spp.)*				-	-	2	4	-	6
Mustard, blue				6	-	-	-	-	-
Mustard, tansy				6	12	20	-	-	-
Mustard, tumble				6	-	-	-	-	-
Mustard, wild				6	12	18	-	-	-
Nightshade, black				-	6	12	-	-	-
Nightshade, hairy				-	6	12	-	-	-
Oats				-	-	6	20	-	-
Pigweed				-	12	18	24	-	-
Prickly lettuce				-	6	12	20	-	-
Purslane				-	-	-	6	6	12
Ragweed, common		South		-	4	6	8	-	11
		North		-	6	12	18	-	-
Ragweed, giant				-	-	4	6	-	11
Red rice				-	-	-	4	-	-
Russian thistle				-	-	-	6	-	-

Rye		South		-	6	20	60	-	-
		North		-	18	18+	-	-	-
Ryegrass				-	-	-	6	-	7+
Sandbur, field				12	-	-	-	-	-
Shattercane				-	12	18	-	-	-
Sheperd‘s purse				-	6	12	-	-	-
Sicklepod				-	-	2	4	-	8
Signalgrass, broadleaf				-	3	5	7	9	12
Smartweed, ladysthumb				-	4	6	8	-	12
Smartweed, Pennsylvania				-	4	6	8	-	12
Sowthistle, annual				-	-	-	6	-	12
Spanishneedles				-	-	-	8	-	18
Speedwell, purslane				-	12	-	-	-	-
Sprangletop				-	6	12	20	-	-
Spurge, prostrate				-	6	12	20	-	-
Spurge, spotted				-	6	12	20	-	-
Spurry, umbrella				6	-	-	-	-	-
Stinkgrass				12	-	-	-	-	-
Sunflower				-	12	18	-	-	-
Teaweed/Prickly sida				-	1	2	3	4	6
Texas panicum				-	6	8	12	-	24
Velvetleaf		South		-	2	3	4	5	8
		North		-	3	6	12	-	-
Virginia pepperweed				-	18	-	-	-	-
Waterhemp				-	-	6	12	-	-
Wheat		South		-	6	30	-	-	-
		North		-	18	18+	-	-	-
Wheat (overwintered)				-	6	18	-	-	-
Wild oats				-	12	-	-	-	-
Wild Proso Millet				-	-	6	12	12	18
Witchgrass				-	12	-	-	-	-
Woolly cupgrass				-	6	1	-	-	-
Yellow rocket				-	-	1	2	-	-

[1]Do not treat kochia in the button stage.

ANNUAL WEEDS RATE TABLE, WEST REGION

WEED SPECIES	**RATE**					
	FLUID OUNCES PER ACRE					
		9	**13**	**20**	**26**	**-40**
	MAXIMUM HEIGHT/LENGTH IN INCHES					
Barley		12	-	-	-	-
Barnyardgrass		6	-	-	-	-
Bluegrass, annual		6	-	-	-	-
Bluegrass, bulbous		-	6	-	-	-
Brome, downy[1]		6	-	-	-	-
Buttercup		-	12	-	-	-
Cheat		-	6	-	-	-

Chickweed		-	6	-	-	-
Cocklebur		-	12	-	-	-
Corn		-	6	-	-	-
Crabgrass		-	12	-	-	-
Dwarfdandelion		-	12	-	-	-
Fall panicum		-	12	-	-	-
Falseflax, smallseed		-	12	-	-	-
Field pennycress		-	6	-	-	-
Filaree		-	-	-	-	12
Fleabane, hairy *(Conyza bonariensis)*		-	6	-	-	-
Florida pusley		-	-	-	12	-
Foxtail		6 fl. oz. for up to 12 inches				
Goatgrass, jointed		-	6	-	-	-
Groundsel, common		-	6	-	-	-
Henbit		-	6	-	-	-
Horseweed/Marestail *(Conyza canadensis)*		-	6	-	-	-
Johnsongrass, seedling		-	12	-	-	-
Lambsquarters		-	6	-	-	-
London rocket		-	6	-	-	-
Morningglory *(lpomoea spp.)*		-	2	-	-	-
Mustard, blue		6	-	-	-	-
Mustard, tansy		6	-	-	-	-
Mustard, tumble		6	-	-	-	-
Mustard, wild		6	-	-	-	-
Pigweed		-	12	-	-	-
Rye		12	-	-	-	-
Ryegrass, Italian		-	6	-	-	-
Sandbur, field		12	-	-	-	-
Shattercane		12	-	-	-	-
Sheperd‘s purse		-	6	-	-	-
Sowthistle, annual		-	6	-	-	-
Spurge, annual		-	6	-	-	-
Stinkgrass		12	-	-	-	-
Texas panicum		-	12	-	-	-
Wheat		18	-	-	-	-
Wild oats		-	12	-	-	-
Witchgrass		-	12	-	-	-

[1]For control of Downy brome in no-till systems, use 13 fluid ounces per acre.

Annual Weeds: 10 to 40 Gallons Per Acre in Water
Apply 1.6 pints to 2.4 pints of this product per acre. Use 1.6 pints per acre if weeds are less than 6 inches tall and 2.4 pints per acre if weeds are over 6 inches tall.
These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications.

Annual Weeds – Tank Mixtures with 2,4-D or Dicamba
9 to 13 fluid ounces of this product plus 0.25 pounds a.i. of Dicamba or 0.5 pounds a.i. of 2,4-D per acre will control the following weeds with the maximum height or length indicated: 6”–prickly lettuce, marestail/horseweed (*Conyza canadensis*), morningglory (*lpomoea spp*.), kochia (Dicamba only); and 12” – cocklebur, lambsquarters, pigweed, Russian thistle.

13 fluid ounces of this product plus 0.5 pounds a.i. of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.
9 fluid ounces of the product plus 0.25 pounds a.i. of Dicamba or 0.5 pounds a.i. of 2,4-D per acre will control foxtail up to 18".

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Dicamba is applied within 45 days of planting.
DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

PERRENIAL WEEDS RATE TABLE ALPHABETICALLY BY SPECIES

Apply to actively growing perennial weeds.
NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the specified stages.
Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.
Unless otherwise stated, allow 7 or more days after application before tillage. Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution	Comments
Alfalfa	1– 1.75	3-10	2%	Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Follow applications with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	3.25	3-20	1.5%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	-	-	1 - 2%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Bahiagrass	2.5 - 4	3-20	2%	Apply when most plants have reached the early head stage.
Bentgrass	1.25	10-20	2%	For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Avoid tillage prior to treatment. Tillage 7 to 10 days after application is directed for best results.
Bermudagrass	2.5 - 4	3-20	2%	For control, apply 4 quarts of this product per acre. For partial control, apply 2.5 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (knotgrass)	1 – 1.25	5-10	2%	Apply 1.25 quarts of this product in 5 to 10 gallons of water per acre. Apply when water bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. Fall applications only: Apply 1 quart of this product in 5 to 10 gallons of water per acre. Till fallow fields prior to application. Apply prior to frost on water bermudagrass that is 12 to 18 inches in length. This product is not registered in California for use on water bermudagrass.

Bindweed, field	0.5 - 4	3-20	2%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. For control, apply 3.25 to 4 quarts of this product per acre west of the Mississippi River and 2.5 to 3.25 quarts east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Also for control, apply 1.75 quarts of this product plus 0.5 pounds a.i. of Dicamba in 10 to 20 gallons of water per acre. Do not apply by air. For suppression on irrigated agricultural land, apply 1 to 1.75 quarts of this product plus 1 pound a.i. of 2,4- D in 10 to 20 gallons of water per acre with ground equipment only. Make applications following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth. For suppression, apply 13 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Delay applications until maximum emergence has occurred and when vines are between 6 to 18 inches in length. **In California only**, apply 1 to 4 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.
Bluegrass, Kentucky	1 – 1.75	3-40	2%	Apply 1.75 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.25 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Blueweed, Texas	2.5 - 4	3-40	2%	Apply 3.25 to 4 quarts of this product per acre west of the Mississippi River and 2.5 to 3.25 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.
Brackenfern	2.5 – 3.25	3-40	1-1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1 – 1.75	3-40	2%	Apply 1.75 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.25 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly-leaf	-	3-20	2%	For control, apply 1.75 quarts of this product plus 0.5 lb.a.i. of Dicamba per acre. For partial control, apply 1 quart of this product plus 0.5 lb.a.i. of Dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.
Canarygrass, reed	1.75 – 2.5	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	2.5 - 4	3-40	2%	Apply when most plants have reached the early head stage.
Clover; red, white	2.5 - 4	3-20	2%	Apply when most plants have reached the early bud stage.
Cogongrass	2.5 - 4	10-40	2%	Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.
Dallisgrass	2.5 - 4	3-20	2%	Apply when most plants have reached the early head stage.
Dandelion	2.5 - 4	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 13 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dock, curly	2.5 - 4	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 13 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dogbane, hemp	3.25	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. For suppression, apply 13 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.
Fescue (except tall)	2.5 - 4	3-20	2%	Apply when most plants have reached the early head stage.
Fescue, tall	1 – 2.5	3-40	2%	Apply 2.5 quarts of this product per acre when most plants have reached boot-to-early seedhead stage of development. Fall applications only: Apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 13 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Guineagrass	2.5	3-40	2%	Apply when most plants have reached at least the 7- leaf stage of growth. Ensure thorough coverage when using hand-held equipment.
Horsenettle	2.5 - 4	3-20	2%	Apply when most plants have reached the early bud stage.
Horseradish	3.25	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Iceplant	-	-	2%	Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.
Jerusalem	2.5 - 4	3-20	2%	Apply when most plants are in the early bud stage.
Johnsongrass	0.5 – 2.5	3-40	1%	In annual cropping systems apply 1 to 1.75 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 1.75 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 1.75 to 2.5 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank - mix with residual herbicides when using the 1 quart per acre rate. For burndown of Johnsongrass, apply 13 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage. Spot treatment (partial control or suppression) – Apply a 1 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Make coverage uniform and complete.
Kikuyugrass	1.75 – 2.5	3-40	2%	Spray when most kikuyugrass is at least 8 inches in height (3 or 4-leaf stage of growth). Allow 3 or more days after application before tillage.
Knapweed	3.25	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.
Lantana	-	-	0.75-1.0%	Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.
Lespedeza	2.5 - 4	3-20	2%	Apply when most plants have reached the early bud stage.
Milkweed, common	2.5	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1 – 1.75	3-40	2%	Use 1 quart of this product in 3 to 10 gallons of water per acre. Use 3.2 pints of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.
Mullein, common	2.5 - 4	3-20	2%	Apply when most plants are in the early bud stage.
Napiergrass	2.5 - 4	3-20	2%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	1.75	3-10	2%	Make applications when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge; purple, yellow	0.5 – 2.5	3-40	1 - 2%	Apply 2.5 quarts of this product per acre or apply a 1 to 2 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers. Sequential applications: 1 to 1.75 quarts of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3 to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing plants, apply 13 fluid ounces to 1.75 quarts of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.
Orchardgrass	1 – 1.75	3-40	2%	Apply 1.75 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.25 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Orchardgrass sods going to no-till corn: Apply 1 to 1.25 quarts of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.
Pampasgrass	-	-	2%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	2.5 - 4	3-20	2%	Apply when most plants are in the early head stage.
Phragmites	2.5 - 4	10-40	1 -2%	For partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.
Poison hemlock	-	-	1 - 2%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Pokeweed, common	1	3-40	2%	Apply to actively growing plants up to 24 inches tall.

Quackgrass	1 – 2.5	3-40	2%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1 quart of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 1.75 quarts of this product. Do not tank mix with residual herbicides when using the 1 quart rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results. In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 1.75 to 2.5 quarts of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.
Redvine	0.75 – 1.75	5-10	2%	For suppression, apply 20 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 1.75 quarts per acre. Apply specified rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Reed, giant	-	-	2%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	1 – 2.5	3-40	1%	In annual cropping systems apply 1 to 1.75 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 1.75 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 1.75 to 2.5 quarts of this product in 10 to 40 gallons water per acre. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using the 1 quart per acre rate.
Smartweed, swamp	2.5 - 4	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 13 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.
Sowthistle, perennial	1.75 – 2.5	3-40	2%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
Spurge, leafy	-	3-10	2%	For suppression, apply 13 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.
Starthistle, yellow	1.75	10-40	2%	Best results are obtained when applications are made during the rosette, bolting and early flower stages.
Sweet potato, wild	-	-	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke	-	-	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, Canada	1.75 – 2.5	3-40	2%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage. For suppression, apply 1 quart of this product, or 13 fluid ounces of this product plus 0.5 pound a.i. 2,4-D, in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage.
Timothy	1.75 – 2.5	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	3.25 - 4	3-40	2%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.
Trumpet creeper	1.75	5-10	2%	Partial control. Apply in late September or October, to plants which are at least 18 inches tall and have been growing 45-60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Vaseygrass	2.5 - 4	3-20	2%	Apply when most plants are in the early head stage.
Velvetgrass	2.5 - 4	3-20	2%	Apply when most plants are in the early head stage.
Wheatgrass, western	1.75 – 2.5	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.

WOODY BRUSH AND TREES RATE TABLE ALPHABETICALLY BY SPECIES

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.

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.

Weed Species	**Rate (QT/A)**	**Water Volume (GPA)**	**Hand-Held % Solution**	**Comments**
Alder	2.5 – 3.25	3-40	1 - 2%	For control
Ash	1.75 - 4	3-40	1 - 2%	Partial control
Aspen, quaking	1.75 – 2.5	3-40	1 - 2%	For control
Bearmat (Bearclover)	1.75 - 4	3-40	1 - 2%	Partial control

Beech	1.75 - 4	3-40	1 - 2%	Partial control
Birch	1.75 - 2	3-40	1 -1.5%	For control
Blackberry	2.5 – 3.25	10-40	1 -1.5%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 1 percent solution of this product. For control of blackberries after leaf drop and until a killing frost or as long as stems are green, apply 2.5 to 3.25 quarts of this product in 10 to 40 gallons of water per acre.
Blackgum	1.75 - 4	3-40	1 -2%	For control
Bracken	1.75 - 4	3-40	1 -2%	For control
Broom; French, Scotch	-	-	1.5 - 2%	For control
Buckwheat, California	-	-	1 -2%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	1.75 - 4	3-40	1 -2%	Partial
Catsclaw	-	-	1 -2%	Partial
Ceanothus	1.75 - 4	3-40	1 -2%	Partial
Chamise	-	-	1 -2%	For control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black, pin	1.75 – 2.5	3-40	1 -2%	For control
Coyote brush	-	-	1.5 -2%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Dogwood	1.75 - 4	3-40	1 -2%	Partial
Elderberry	1.75 – 2.5	3-40	1 -1.5%	For control
Elm	1.75 - 4	3-40	1 -2%	Partial
Eucalyptus	-	-	2%	For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian Peppertree)	1.75 - 4	3-40	1 -2%	Partial control
Gorse	1.75 - 4	3-40	1 -2%	Partial
Hasardia	-	-	1 -2%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	1.75 – 2.5	3-40	1 -2%	For control
Hazel	1.75 – 2.5	3-40	1 -1.5%	For control
Hickory	1.75 - 4	3-40	1 -2%	Partial
Honeysuckle	1.75 – 3.25	3-40	1 -2%	For control
Hornbeam, American	1.75 - 4	3-40	1 -2%	Partial control
Kudzu	3.25 - 4	3-40	2%	For control. Repeat applications may be required to maintain control.
Locust, black	1.75 – 3.25	3-40	1 -2%	Partial
Madrone resprouts	-	-	2%	Partial control. Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.
Manzanita	1.75 - 4	3-40	1 -2%	Partial control

Maple, red	1.75 – 3.25	3-40	1 -2%	For control, apply a 1 to 2 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 1.75 to 3.25 quarts of this product per acre.
Maple, sugar	-	-	1 -2%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Monkey flower	-	-	1 -2%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	1.75 – 3.25	3-40	1 -2%	Partial control
Oak, post	2.5 – 3.25	3-40	1 –1.5%	For control
Oak; northern, pin	-	-	1 -2%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Oak, southern, red	1.75 – 2.5	3-40	1 -2%	For control
Persimmon	1.75 - 4	3-40	1 -2%	Partial control
Pine	1.75 - 4	3-40	1 -2%	For control
Poison ivy/Poison oak	3.25 - 4	3-40	2%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	1.75 - 4	3-40	1 -2%	Partial control
Redbud, eastern	1.75 - 4	3-40	1 -2%	For control
Rose, multiflora	1.75 – 2.5	3-40	1 -1.5%	For control. Make treatments prior to leaf deterioration by leaf-eating insects.
Russian olive	1.75 - 4	3-40	1 -2%	Partial control
Sage, black	-	-	1 -2%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	1.75 - 4	3-40	1 -2%	Partial control
Sage brush, California	-	-	1 -2%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	1.75 – 2.5	3-40	1 -1.5%	For control
Salt-cedar	1.75 - 4	3-40	1 -2%	For control
Sassafras	1.75 - 4	3-40	1 -2%	Partial control
Sourwood	1.75 - 4	3-40	1 -2%	Partial control
Sumac; poison, smooth, winged	1.75 – 3.25	3-40	2%	Partial control
Sweetgum	1.75 – 2.5	3-40	1 -2%	For control
Swordfern	1.75 - 4	3-40	1 -2%	Partial control
Tallowtree, Chinese	-	-	1 - 2%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak resprouts	-	-	2%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall
Thimbleberry	1.75 – 2.5	3-40	1 -1.5%	For control
Tobacco, tree	-	-	1 -2%	Partial control
Trumpet creeper	1.75 - 4	3-40	1 -2%	For control
Vine maple	1.75 - 4	3-40	1 -2%	Partial control
Virginia creeper	1.75 - 4	3-40	1 -2%	For control
Waxmyrtle, southern	1.75 - 4	3-40	1 -2%	Partial control
Willow	2.5 – 3.25	3-40	1 -1.5%	For control

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