

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

sion (7505P) 5905-596 a Ave., N.W.

EPA Reg. Number: Date of Issuance:

8/31/15

NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance:
Unconditional

Name of Pesticide Product:

HM-0705-A Herbicide

Name and Address of Registrant (include ZIP Code):

Helena Chemical Company 225 Schilling Blvd., Suite 300 Collierville, TN 38017

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

- 1. Submit and/or cite all data required for registration/registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 5905-596."
  - Assure that the net contents and EPA establishment number is added to the final printed label.
  - Assure that a batch code is added to all non-refillable containers of this product.

Signature of Approving Official:	P. C.
Rank Ja	Date:
Reuben Baris, Product Manager 25 Herbicide Branch, Registration Division (7505P)	8/31/15

Page 2 of 2 EPA Reg. No. 5905-596 Decision No. 499699

3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 01/26/2015
- Alternate CSF 1 dated 01/26/2015

If you have any questions, please contact Beth Benbow by phone at 703-347-8072, or via email at <a href="mailto:benbow.bethany@epa.gov">benbow.bethany@epa.gov</a>.

Sincerely,

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

Enclosure

# HM-0705-A **HERBICIDE**

For use in certain cropping systems, including Roundup Ready® Corn, Cotton and Soybeans; for reduced tillage and fallow systems; many noncrop areas

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

#### **ACTIVE INGREDIENT:**

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt		41.0%
OTHER INGREDIENTS:		
	TOTAL	100.0%

<sup>\*</sup>Contains 480 grams per litre or 4 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per litre or 3 pounds per U.S. gallon of the acid, glyphosate.

# KEEP OUT OF REACH OF CHILDREN

# **CAUTION**

	FIRST AID
IF INHALED	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth- to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF SWALLOWED	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
IF ON SKIN OR CLOTHING	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul> HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact ChemTrec at 800-424-9300 for emergency medical information.

EPA Reg. No. 5905-LOA AD xxxxxx

EPA Est. No. 42750-MO-001 NET CONTENTS: \_\_\_\_ Gallons

ACCEPTED 08/31/2015 Under the Federal Insecticide, Fungicide

and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

5905-596

Manufactured for: Helena Chemical Company 225 Schilling Boulevard, Suite 300 Collierville, TN 38017

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#### 3.0 - PRECAUTIONARY STATEMENTS

# 3.1 - HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled. Avoid breathing spray mist or vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Remove and wash contaminated clothing and wash clothing before reuse.

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.

# 3.2 - PERSONAL PROTECTIVE EQUIPMENT: (PPE)

Applicators and other handlers must wear:

- 1. Long-sleeved shirt and long pants,
- 2. Shoes plus socks.

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

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 or PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### 3.3 - 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 cleaning equipment or disposing of equipment washwaters or rinsate.

# 3.4 - PHYSICAL OR CHEMICAL HAZARDS

DO NOT mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur. 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. This 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.

Read the entire label before using this product. Use only according to label instructions.

Read the "CONDITIONS OF SALE AND WARRANTY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This product can only be used in accordance with the Directions for Use on this label or in separately published Helena Chemical Company supplemental labeling. Supplemental labeling can be found on the internet at <a href="www.cdms.net">www.cdms.net</a> or Helena Chemical Company representative.

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.

#### 3.5 - AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

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

- 1. Coveralls
- Waterproof gloves
- 3. Shoes plus socks.

#### 3.6 - 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 has dried.

#### 3.7 - SEED POTATO PRECAUTION

Potatoes grown for seed are very sensitive to glyphosate at extremely low concentrations. Exposure of the seed potato crop can cause germination failure or deformities. Daughter tuber damage may occur at levels where mother crop symptoms are not visible. Multiple sprouting from eyes, weak and distorted stems, "little potato syndrome", cauliflower sprouts, root distortions, excessive root growth, suppressed tuber initiation and bulking, failure or delay in opening of eyes, and rotting of tubers in the field or store can result. Subsequent plantings of seed pieces from the exposed mother crop can result in delayed or no emergence or produce lower than normal yields.

Glyphosate can contaminate seed potato crops through carryover residue in application equipment or drift from applying glyphosate to nearby crops.

Always follow good wash-out procedures using detergents or other suitable cleaning agents to remove all residual traces of glyphosate from application equipment that may be used to apply other products to seed potato crops.

To avoid contamination from spray drift follow the directions and precautions in the Spray Drift Management section of the label

#### 4.0 - STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Keep container closed to prevent spills and contamination. Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

CONTAINER HANDLING: (See the Net Contents section on the container to determine if it non-refillable or refillable.) APPROPRIATE BOX MUST BE CHECKED.

Non-refillable containers (1 and 2.5 gallon): Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Non-refillable containers (>5 gallon): Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto 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.

Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable containers: Refillable container. Refill this container with glyphosate only. Do not reuse this container for any other purpose.

When this container is empty, replace the cap and seal all openings that have been made during usage and return the container to the point of purchase, or to an alternate location designated by the manufacturer at the time of purchase of this product. If not returned, clean container the empty container and offer for recycling, if available.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

If the container cannot be refilled, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# 5.0 - USE INFORMATION

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, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the MIXING section of this label for instructions.

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 aboveground growth and deterioration of underground plant parts.

STAGE OF WEEDS: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial, woody brush and trees rate tables for use directions for specific weeds.

Always use the higher rate of this product per acre within the labeled rate 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 recommended 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, assure that spray coverage is 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 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.

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

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.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this label. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

ANNUAL MAXIMUM USE RATE: Except as otherwise specified in a food crop section of this label, the combined total of all treatments must not exceed 8 quarts of this product per acre per year. For non-food/non-crop uses, the combined total of all treatments must not exceed 10.6 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.

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

#### 6.0 - WEED RESISTANCE MANAGEMENT

Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices or mechanical practices.

## 6.1 - WEED MANAGEMENT DIRECTIONS

To minimize the occurrence of glyphosate-resistant biotypes, observe the following weed management recommendations:

- Scout your fields before and after herbicide applications.
- Start with a clean field, use either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation)
  where appropriate.
- One method of adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.

- Utilize the labeled rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that
  reduce this product's efficacy (through antagonism), or tank mixture recommendations that encourage application rates
  of this product below the labeled rate.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Helena Chemical Company representative, local retailer, or county extension agent.

#### 6.2 - MANAGEMENT DIRECTIONS FOR GLYPHOSATE RESISTANCE BIOTYPES

Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. Contact your Helena Chemical Company representative to determine if resistance has been confirmed to any particular weed biotype in your area, or visit on the internet <a href="https://www.weedresistancemangement.com">www.weedresistancemangement.com</a> or <a href="https://www.weedscience.org">www.weedscience.org</a>. For more information see the "ANNUAL WEEDS RATE SECTION" of this label.

Control directions for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental labeling or fact sheets for this product and can be obtained from your local retailer or Helena Chemical Company representative.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, Helena Chemical Company is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate resistant biotypes:

- If a naturally occurring resistant biotype is present in your field, this product should be tank-mixed or applied sequentially
  with an appropriately labeled herbicide with a different mode of action to achieve control
- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready corps.
- Scout treated fields after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

# 7.0 - MIXING

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 VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

#### 7.1 - 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 labeled 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 agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or de-foaming agent.

# 7.2 - TANK MIXING PROCEDURE

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 ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
- 4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.

- 5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- 6. 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.
- 7. Continue filling the spray tank with water and add the required amount of this product near the end of 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 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 "TANK MIXING" section of "USE INFORMATION" for additional precautions.

#### 7.3 - 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:

#### Spray Solution

Desired			Amount of HM-	0705-A Herbicide		
Volume	1/2%	1%	1 1/2%	2%	5%	10%
1 Gal	2/3 fl. oz	1 1/3 fl. oz	2 fl. oz	2 2/3 fl. oz	6 ½ fl. oz	13 fl. oz
25 Gal	1 pt	1 qt	1 ½ qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1 ½ gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the labeled amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

# 7.4 - SURFACTANTS

#### **OPTIONAL STATEMENTS:**

No additional surfactant in the spray solution is needed or recommended. This includes additives containing surfactants, buffering agents or pH adjusting agents when **[INSERT BRAND NAME]** is the only pesticide used unless otherwise directed.

#### OR

Additional surfactants labeled for use with herbicides may be used. Do not reduce application rates of this herbicide when adding surfactants. Read and carefully observe cautionary statements and other information appearing on the additives label.

#### 7.5 - 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 specified in this label. Lower rates will result in reduced performance.

#### 7.6 - 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 manufacturer's recommendations.

#### 7.7 - 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.

NOTE: The use of drift control additives can affect spray coverage which may result in reduced performance.

# 8.0 - 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 or High-Volume Spray Equipment Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.
- Selective Equipment Shielded and hooded sprayers, wiper applicators and sponge bars.
- Injection Systems Aerial or ground injection sprayers.
- Controlled Droplet Applicator (CDA) Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

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

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

#### 8.1 -- DRIFT PRECAUTION

Extreme care must be exercised to avoid contact of spray with foliage, green stems or fruit of desirable crops, plants, trees or other 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. Examples of, but not limited to, crop types that may be sensitive to glyphosate exposure include rice, small grain cereals, peanuts, potatoes, vegetables, fruits and ornamentals.

Applicators should be aware of any potentially sensitive crops near application zone before making application. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

- 1. Do not apply within 100 feet of any desirable vegetation or crops.
- 2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
- 3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

If unsure of appropriate buffer zone, contact your local Extension Agent for advice.

# 8.2 - AERIAL EQUIPMENT

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL. FOR AERIAL APPLICATION IN CALIFORNIA AND ARKANSAS, REFER TO INSTRUCTIONS SPECIFIC TO THOSE STATES.

This product plus dicamba tank mixtures may not be applied by air in California.

Use the specified 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 1 quart 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 labeled volumes and application rates.

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

# AERIAL SPRAY DRIFT MANAGEMENT

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 is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

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

Where states have more stringent regulations, they must be observed.

#### INFORMATION ON DROPLET SIZE

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

#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure
  produces larger droplets. 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 parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from 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 the largest droplets and the lowest drift.
- Boom Length For some use patterns, reducing the effective boom length to less than 3/4 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 target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **SWATH ADJUSTMENT**

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

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided 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 spray 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

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

Avoid direct application to any body of water.

#### Aircraft Maintenance -

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 MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

#### FOR AERIAL APPLICATION IN CALIFORNIA ONLY

Aerial applications of this product are allowed in the following situations:

- 1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
- 2. In alfalfa and pasture renovation applications.
- 3. Over-the-top applications in Roundup Ready® corn and cotton.
- 4. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready® corn and Roundup Ready® cotton.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application. When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED A MAXIMUM RATE OF 2 QUARTS PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN FALLOW AND REDUCED TILLAGE SYSTEMS AND ALFALFA AND PASTURE RENOVATION APPLICATIONS.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN ALFALFA, CORN, COTTON, WHEAT, ROUNDUP READY® CORN AND ROUNDUP READY® COTTON PRIOR TO HARVEST. THIS RESTRICTION ALSO APPLIES TO OVER-THE-TOP APPLICATIONS IN ROUNDUP READY® CORN AND COTTON.

#### Aerial Equipment

Use the labeled rates of this product in 3 to 15 gallons of water per acre.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

- 1. Do not apply within 100 feet of all desirable vegetation or crop(s).
- 2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
- 3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
- 4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

# FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA (Only From February 15 through March 31 Only)

#### Applicable Area:

The area contained inside the following boundaries within Fresno County, California.

North: Fresno County line South: Fresno County line East: State Highway 99 West: Fresno County line

#### Use Information:

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

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#### Written Recommendations:

A written recommendation MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation MUST state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

#### Aerial Applicator Training and Equipment:

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

# Applications at Night:

Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

Note: For aerial application from April 1 through February 14, refer to the "For Aerial Application in California Only" section of this label.

#### FOR AERIAL APPLICATION IN ARKANSAS ONLY

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the specified rate of this product in 3 to 15 gallons of water per acre. Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range are recommended.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety. The distance of the outermost nozzles on the boom must not exceed 75% of the length of the wingspan or rotor. In many cases, reducing this distance to 65% of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.

Do not apply this product when wind speeds are in excess of 10 miles per hour.

Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 mph.

Use the following guidelines when applications are made near crops or other desirable vegetation:

- 1. Do not apply within 100 feet of any desirable vegetation or crops.
- 2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
- 3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

# 8.3 - GROUND BROADCAST EQUIPMENT

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increase, increase spray volume within the labeled 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.

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# 8.4 - 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. Use coarse sprays only. For labeled rates and timing, refer to the "ANNUAL WEEDS – HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of this label.

#### 8.5 - SELECTIVE EQUIPMENT

This product may be applied through 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.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically labeled in this product's labeling.

#### AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation must be adjusted 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 applications 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 and Hooded Applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at labeled rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE RABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops 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. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in anyway. If the goods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. Use a single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood. Minimum spray volume must be 20 to 30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground of skimmed across the ground.
- 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 miles per hour to avoid bouncing of the spray hoods.
- · Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

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.

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EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

#### WIPER APPLICATORS

When applied under the conditions described in the following paragraphs, this product CONTROLS many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, Spanish needles and bristly starbur: and SUPPRESSES many weeds including Florida beggarweed, Bermuda grass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass & velvetleaf.

Wiper applicators are 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.

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators – Mix 1 gallon of this product in 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed above in this section.

For Panel Applicators – Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

#### 8.6 - 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.

# 8.7 - CONTROLLED DROPLET APPLICATION (CDA) EQUIPMENT

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount labeled in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 20 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 to 40 percent solution of this product at a flow 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.

# 9.0 - ANNUAL & PERRENNIAL CROPS (Alphabetical)

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category.

SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label or separately published Helena Chemical Company supplemental labeling for instructions for treating Roundup Ready crops.

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#### TYPES OF APPLICATIONS

Chemical fallow, Pre-plant fallow beds, Pre-plant, Pre-emergence, At Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, and Post-Harvest Treatments.

Additional application types may be specified or allowed in individual Crop Categories.

#### **USE DIRECTIONS**

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at planting, or pre-emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop NOT listed in this label, applications must be made at least 30 days prior to planting. UNLESS OTHERWISE SPECIFIED, WEED CONTROL APPLICATIONS MAY BE MADE ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL. Repeat applications may be made up to a maximum of 8 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or un-mulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and hall be the sole responsibility of the applicator.

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.

# **PRECAUTIONS**

- Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.
- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.

#### RESTRICTIONS

- Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.
- When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings.
- Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
- For broadcast post-emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

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#### 9.1 - CEREAL CROPS LABELED CROPS: Barley, Buckwheat, Millet (Pearl & Proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (All). Wild rice. TYPES OF USE DIRECTIONS RESTRICTIONS **APPLICATIONS** See Section 9.0 See Use Directions in Section 9.0 See Section 9.0 Do not treat rice fields or levees when the field This product may be applied before, during or after planting of Pre-Plant. cereal crops. Applications must be made prior to emergence of contains floodwater. Pre-Emergence, the crop. At-Planting Apply 1.5 quarts of this product in 5 to 10 gallons of water per DO NOT TREAT RICE FIELDS OR LEVEES Red Rice Control acre. Flush fields prior to application to obtain uniform WHEN THE FIELDS CONTAIN FLOOD WATER. (prior to planting germination and stand of red rice. Make application when the rice) DO NOT RE-FLOOD TREATED FIELDS FOR 8 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 DAYS FOLLOWING APPLICATION. leaves may only be partially controlled. Avoid spraying during low humidity conditions, as reduced control may result. This product may be applied as a spot treatment in cereal crops. Do not treat more than 10 percent of the total Spot treatment Apply this product before heading in small grains. field area to be harvested. (except rice) The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason. Wiper applications may be used in wheat. To control common Allow at least 35 days between application and Over the Top rye or cereal rye, apply after the weeds have headed and harvest. Wiper applications achieved maximum growth, when the rye is at least 6 inches (Feed barley & above the wheat crop. Do not use roller applicators. wheat only) This product provides weed control when applied prior to Do not apply more than 1 quart of this product Pre-harvest harvest of wheat. Apply after the hard-dough stage of grain per acre. (Feed barley & (30% or less grain moisture) and at least 7 days prior to harvest. wheat only) Wheat stubble may be grazed immediately after harvest. Do not apply to wheat or barley grown for seed, as a reduction in germination or vigor may occur. This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to Allow 7 days between application and harvest or 20 gallons of water per acre. For aerial applications, apply this grazing. product in 3 to 10 gallons of water per acre. This product may be applied after harvest of cereal crops. For any crop not listed on this label, applications Post-harvest Higher rates may be required for control of large weeds which must be made at least 30 days prior to planting were growing in the crop at the time of harvest. Tank mixtures the next crop. with 2,4-D or dicamba may be used. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

9.2 - CORN (Non-Roundup Ready)					
LABELLED CROPS: Field corn, Seed corn, Silage corn, Sweet corn and Popcorn					
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS			
See Section 9.0	See Use Directions in Section 9.0	See Section 9.0			
Pre-plant, Pre-emergence, At planting	This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop.  TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.  2,4-D Distinct Lariat Aim Dual Magnum Intro Atrazine Dual II Magnum Linex/Lorox Axiom Epic Marksman Balance Frontier/Outlook Micro-Tech Bicep Magnum Fultime Prowl Bicep II Magnum Guardsman/Leadoff Python Bullet Harness simazine Degree Harness Xtra Topnotch Degree Xtra Harness Xtra 5.6L  For difficult to control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signal grass up to 2 inches tall and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled weeds, apply 1.5 to 2 pints of this product per acre when weeds are less than 6 inches tall, 2 to 3 pints when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.	Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.  For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds.  The area covered by these directions includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.			
Spot treatment	For spot treatments, apply this product prior to silking of corn.	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. Do not spray or allow drift outside target area for the same reason.			
Hooded sprayers	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.  See additional instructions for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.	Corn must be at least 12 inches tall, measured without extending leaves.  Do not apply more than 1 quart of this product per acre for each application and no more than 3 quarts per acre per year for hooded sprayer applications.			
	Precaution: 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.				
Pre-harvest	Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).  For ground applications, apply up to 3 quarts of this product per acre.  For aerial applications, apply up to 2 quarts of this product per acre.	Allow a minimum of 7 days between application and harvest.  Do not make applications to corn grown for seed.			
Post-harvest	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.	Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.			

9.3 – COTTON					
LABELLED CROPS: Cotton (non-Roundup Ready)					
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS			
See Section 9.0	See Use Directions in Section 9.0	See Section 9.0			
Pre-plant, Pre-emergence, At-planting	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	This product may be applied through hooded sprayers, shielded applicators or wiper applicators in cotton.	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.			
		Allow at least 7 days between application and harvest.			
Spot treatment	For spot treatments, apply this product prior to boll opening of cotton.	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. Do not spray or allow drift outside target area for the same reason.			
Pre-harvest	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 1 pint to 2 quarts of this product per acre for cotton regrowth inhibition.  Up to 2 quarts of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.  TANK MIXTURES: This product may be tank mixed with DEF® 6, Folex®,	Allow at least 7 days between application and harvest.  Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur.  THE USE OF ADDITIVES OTHER THAN THOSE LISTED ON THIS LABEL, FOR PREHARVEST APPLICATION TO COTTON IS PROHIBITED.			
	Ginstar or Prep™ to provide additional enhancement of cotton leaf drop.				

# 9.4 - FALLOW SYSTEMS

LABELLED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label

this label.	C. This product may be applied daining the fallow period prior to planting o	· ······g······g	
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Chemical Fallow	See Use Directions in Section 9.0	See Section 9.0	
	This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label.  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. Applications up to 2 quarts per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.	For any crop not listed on this label, applications must be made at least 30 days prior to planting.  DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.  Refer to the specific product	
Pre-plant Fallow Beds	This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. This product will control weeds listed in the annual, perennial and woody brush tables.	labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.	
	TANK MIXTURES: In addition, 12 fluid ounces of this product plus 2 to 3 oz of Goal® 2XL (or generic equivalent) per acre will control the following weeds with the maximum height or length indicated: 3" – common cheeseweed, chickweed, groundsel; 6" – London rocket, shepherdspurse.		
	16 fluid ounces of this product plus 2 to 3 oz of Goal® 2XL (or generic equivalent) per acre will control the following weeds with the maximum height or length indicated: 6" – common cheeseweed, groundsel, marestail (Conyza canadensis), 12" – chickweed, London rocket, shepherdspurse.		
	PRECAUTION: Some crop injury may occur if dicamba is applied within 45 days of planting.		
Aid-to-Tillage	This product may be used in conjunction with tillage practices in fallow systems or pre-plant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 12 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.	
	PRECAUTION: Tank mixtures with residual herbicides may result in reduced performance.		

9.5 - GRAIN SORGHM (Milo)				
LABELLED CROPS:	Grain Sorghum (Milo)			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
See Section 9.0	See Use Directions in Section 9.0	See Section 9.0		
Pre-Plant, Pre-Emergence, At-Planting	This product may be applied alone or in tank mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.	For spot treatment, do not treat more than 10 percent of the total field area to be harvested.		
	TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.  atrazine Lariat Bicep II Magnum Lasso Bullet Micro-Tech Dual II Magnum Milo-Pro  For difficult-to-control annual 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 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1.5 to 2 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased	The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.  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.		
	for acceptable weed control.			
Spot Treatment, Over-the-Top	This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo.			
Wiper Applications	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.			
Hooded Sprayers	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. See additional instruction for the use of hooded sprayers in the "APPLICATIONS EQUIPMENT AND TECHNIQUES" section of this label.  Treat before milo sends tillers between the drill rows. If such tillers are	Milo must be at least 12 inches tall, measured without extending leaves.  Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers.		
	contacted with the spray solution, the main plant may be killed. 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.	Do not apply more than 1 quart of this product per acre per application and no more than 3 quarts per acre for hooded sprayer applications.		
	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.			
Pre-harvest	Make applications at 30% grain moisture or less.	Do not apply more than 2 quarts of this		
	As with other herbicides that cause sudden plant death, avoid pre-harvest applications of this product to milo infected with charcoal rot as lodging can occur.	Allow a minimum of 7 days between application and harvest of sorghum.		
		The use of this product for pre-harvest grain sorghum (milo) is not registered in California.		
		Do not make applications to sorghum grown for seed.		
Post-harvest	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.	Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.		
	This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1 quart of this product per acre for control, or 1.5 pints of this product per acre for suppression.			

# 9.6 - HERBS AND SPICES

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Chamomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cilantro (seed), Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or Chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Miaga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
See Section 9.0	PRECAUTION: This product could cause crop injury. When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove product residues from the plastic prior to planting. Residual product can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care must be taken to ensure that the washwater flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings. For some crops below, applications must be made 3 days before transplanting or planting.	See Section 9.0		
Over-the-Top Wiper Application, Spot Treatment (Peppermint and Spearmint only)	This product may be applied as a spot treatment or over the top of peppermint or spearmint with wiper applications in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack sprayers, pump-up pressure sprayers, handguns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area.  In wiper applications, the applicator must be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.  PRECAUTION: Contact of the herbicide solution with the crop may result in discoloration, stunting, or destruction.  Further applications may be made in the same area at 30-day intervals.	Allow at least 7 days between application and harvest.  In spot treatment applications, no more than 10 percent of the total field area to be harvested can be treated at one time.  The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.		

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# 9.7 OIL SEED CROPS

LABELED CROPS: Borage, Buffalo gourd (seed), Canola (non-Roundup Ready), Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

Meadowloam, Mustard (seed), Rape, Samower, Sesame, Sumlower.					
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS			
See Section 9.0	See Use Directions in Section 9.0	See Section 9.0			
	This product may be applied before, during or after planting oil seed crops listed in this section. Broadcast applications must be made prior to crop emergence. Wiper applications or hooded	For use with canola, do not apply more than 2 quarts of this product per acre.			
	sprayers may be used between the rows once the crop is established.	For use with sunflowers, do not apply more than 1 quart of this product per acre as a single pre-plant or pre-emergence			
	TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage	application per year.			
	systems, into a cover crop, established sod or in previous crop residue.	Do not feed or graze sunflower forage following application of this product.			
Pre-Harvest	This product provides weed control when applied as a harvest aid to a physiologically mature crop prior to harvest of sunflower or	Allow a minimum of 7 days between treatment and harvest or livestock feeding.			
(Sunflower & safflower)	safflower.  For safflower, apply when seed has lost its opaque character, approximately 20 to 30 days after the end of flowering of the	Apply no more than 3 quarts of this product at a pre-harvest timing to safflower.			
	secondary branches.	Apply no more than 1 quart of this product at a pre-harvest timing to sunflower.			
	For sunflower, apply when the backsides of sunflower heads are yellow and bracts are turning brown and seed moisture content is less than 35%.				
Post-Harvest	This product may be applied after harvest of safflower or sunflower. Higher rates may be required for control of large weeds, which are	Allow a minimum of 7 days between treatment and harvest or feeding of treated			
(Sunflower & safflower)	growing in the crops at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.	vegetation.			
		Applications must be made at least 30 days prior to planting any crop not listed on the HM-0705-A Herbicide label booklet.			

	9.8 - SOYBEANS			
LABELLED CRO	LABELLED CROPS: Soybeans (non-Roundup Ready)			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
See Section 9.0	See Use Directions in Section 9.0	See Section 9.0		
Pre-Plant, Pre-Emergence, At-Planting	This product may be applied before, during or after planting soybeans. Applications must be made prior to emergence of the crop.	The tank mix recommendations in this section are not registered in California.		
, a risaming	Refer to table below for tank mixtures that may be applied before, during or after planting in conventional tillage systems, into a cove crop, established sod or in previous crop residue.	,		
	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.			
	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 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1.5 to 2.0 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.			
	TANK MIXES:  Aim Firstrate Micro Tech Assure II Flexstar Prowl Authority Frontline/Outlook Pursuit Boundry Fusion Pursuit Plus Canopy Gauntlet Reflex Canopy XL Intrro Scepter Command Linex Sencor/Lexone Domain Lorox/Linuron Squadron Dual Lorox Plus Steel Dual II Magnum Magnum Valor			
Spot treatment	For spot treatments, apply this product prior to initial pod set in soybeans.	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. Do not spray or allow drift outside target area for the same reason.		
Pre-harvest	This product provides weed control when applied prior to harvest c soybeans.	Do not apply more than 5 quarts per acre of this product for pre-harvest applications.		
	Apply at rates given in the annual, perennial and woody brush tables.	Do not apply more than 2 quart per acre of this product by air.		
	This product may be applied using either aerial or ground spray equipment.	Allow a minimum of 7 days between application and harvest of soybeans.		
	Apply after pods have set and lost all green color. Take care to avoid excessive seed shatter loss due to ground application equipment.  Do not graze or harvest livestock feed within 25 application. (If the appl acre or lower, the grazing the grazing transport of the gra			
	Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.	14 days after the last pre-harvest application.)		
Selective equipment	This product may be applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans.	Allow at least 7 days between application and harvest.		
	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.			

	9.9 - SUGARCANE	
LABELLED CROPS	S: Sugarcane	
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions in Section 9.0	See Section 9.0
Pre-plant, Pre-emergence, At-planting	This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.	Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.
Spot Treatment	This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 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.	Do not feed or graze treated sugarcane foliage following application.
	Avoid spray contact with healthy cane plants since severe damage or destruction may result.	
Fallow treatments	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 4 to 5 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves.	Allow 7 or more days after application before tillage.
	Ground or aerial application equipment may be used. Applications up to 3 quarts per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.	
Hooded sprayers	This product may be used through hooded sprayers for weed control between the rows of sugarcane. See Section 8.0 for "APPLICATION EQUIPMENT & TECHNIQUES" for additional USE DIRECTIONS.	Do not allow treated weeds to come into contact with the crop.
	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.	
	PRECAUTION: Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction.	
	Such damage shall be the sole responsibility of the applicator.	
FOR AID IN SUGARCANE RIPENING	This product is a foliar-applied plant growth regulator to hasten ripening and increase the level of sucrose in sugarcane. It is effective in both low and high-tonnage sugarcane.	Do not make application to sugarcane grown for seed, as a reduction in germination or vigor may occur.
(FLORIDA, HAWAII,	When applied as directed under the conditions described, this product will hasten ripening and extend the period of high sucrose level in sugarcane.	Do not feed or graze treated sugarcane forage following
LOUISIANA, PUERTO RICO	As a result of leaf desiccation, improved trash burn can be expected.	application.
AND TEXAS)	Most of the sucrose increase is concentrated in the top nodes of the treated cane stalk. In order to recover the maximum sugar where topping is practiced during harvest, top at the base of the fourth leaf.	Do not apply for enhanced ripening to any crops other than sugarcane.
	Prior to application, consult your state sugarcane authority or local Helena Chemical Company representative regarding the degree of sucrose response anticipated from the variety of sugarcane to be treated. Do not plant subsequent crops in treated fields other than the following for 30 days after application: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybeans, squash (all types) or wheat.	Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.
	APPLICATION RATES: Use the following application rates and timing instructions according to the State in which the sugarcane is grown.	

	9.9 - SUGARCANE		
LABELLED CROP	S: Sugarcane		
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
	PRECAUTION: Application of this product may initiate development of shooting eyes. This product may not increase the sucrose content of sugarcane under conditions of good nature ripening. Within 2 to 3 weeks after application, this product may product a slight yellowing to pronounced browning and drying of leaves, and a shortening of upper internodes. Spindle death may occur.  Rainfall within 6 hours after application may reduce effectiveness.  NOTE: Use the higher rate within the labeled range when treating sugarcane under adverse ripening conditions or when less responsive varieties are to be treated.		
	FLORIDA - Apply 5 to 12 fluid ounces of this product per acre 3 to 6 weeks before harvest of LAST RATTON CANE ONLY.  HAWAII – Apply 9 to 21 fluid ounces of this product per acre 4 to 10 weeks		
	before harvest.  LOUISIANA - Apply 3.5 to 12 fluid ounces of this product per acre 3 to 7 weeks before harvest of RATOON CANE ONLY.  PUERTO RICO – Apply 5 fluid ounces of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.		
	TEXAS – Apply 5 to 12 fluid ounces of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.		

# 9.10 - VEGETABLE CROPS

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 9.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in Row Middles, Shielded Sprayers in Row Middles, Wiper Applications in Row Middles, and Post Harvest, Directed Applications (Non-Bearing Ginseng), Over-the-top Wiper Applications (Rutabagas Only).

# PRECAUTIONS:

When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care must be taken to insure that the wash water flushed off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.

# **RESTRICTIONS:**

When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles must be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.

See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

# 9.10.1 – BRASSICA VEGETABLES LABELLED CROPS: Broccoli, Broccoli (raab), Brussels sprouts, Cabbage, Cabbage (Chinese), Cabbage (Chinese)

mustard), Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy & napa), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

Roman, Mizuna, Mustare	Normani, Mizuna, Mustaru greens, Mustaru spinach, Nape greens		
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
	See Use Directions under Section 9.0	See Section 9.10	

	9.10.2 – BULB VEGETABLES		
LABELLED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb & green), Shallot, Welsh onion, Shallot			
TYPES OF USE DIRECTIONS RESTRICTIONS APPLICATIONS			
See Section 9.10	See Use Directions under Section 9.0	See Section 9.10	

#### 9.10.3 - CUCURBIT VEGETABLES & FRUITS

LABELLED CROPS: Chayote (fruit), Chinese waxgourd, Citron melon, Cucumber, Gherkin, Gourds, Gourds (edible including hyotan, cucuzza, hechima, Chinese okra), Melons (All), *Momordica spp.* (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (cantaloupe, casaba, crenshaw, golden pershaw, honeydew, honey ball, mango melon & Persion, pineapple, Santa Claus, snake), Pumpkin, Summer Squash (including crookneck, scallop, straightneck, vegetable marrow, zucchini) Winter squash (including butternut, calabaza, hubbard, acorn, spaghetti), Watermelon

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	See Use Directions under Section 9.0	For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all) Muskmelon, Persian melon, Pumpkin, Squash (summer & winter), AND Watermelon, allow at least 3 days between application and planting.

# 9.10.4 - LEAFY VEGETABLES

LABELED CROPS: Amaranth (Chinese spinach), Arrugula (roquette), Beet greens, Cardoon, Celery, Celery (Chinese), Celtuce, Chaya, Chervil, Chrysanthemum (edible leaved), Chrysanthemum (Garland), Corn salad, Cress (garden & upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Fennel (Florence), Gow kee, Lettuce (head & leaf), Orach, Parsley, Purslane (garden & winter), Radicchio (red chicory), Rhubarb, Spinach (All), Swiss Chard, Watercress (upland), Water Spinach

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	See Use Directions under Section 9.0  For Watercress, avoid application within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.	See Section 9.10

	9.10.5 - FRUITING VEGETABLES			
LABELLED CROPS: Eggplant, Ground cherry ( <i>Physalis spp.</i> ), Pepino, Pepper (includes bell, chili, cooking, pimento, sweet), Tomatillo, Tomato				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
See Section 9.10	See Use Directions under Section 9.0	See Section 9.10  For Eggplant, Ground cherry, Pepino, Pepper (all), Tomatillo and Tomato, allow at least 3 days between application and planting.  Do not use hooded or shielded sprayer applications in row middles of tomatoes.		

	9.10.6 – LEGUME VEGETABLE			
	LABELED CROPS: Bean (Lupinus: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean			
(Phaseolus: include	es field bean, kidney bean, lima bean, navy bea	n, pinto bean, runner bean, snap bean, tepary bean,		
wax bean), Bean (	<i>Vigna</i> : includes adzuki bean, asparagus bean, b	lackeyed pea, catjang, Chinese longbean, cowpea,		
		l bean, yardlong bean), Broad bean (fava), Chickpea		
		udes dwarf pea, edible podded pea, English pea, field		
	reen pea, snowpea, sugar snap pea), Pigeon pe			
TYPES OF	USE DIRECTIONS	RESTRICTIONS		
APPLICATIONS	COL BINEOTIONS	RESTRICTIONS		
ALLEGATIONS				
See Section 9.10	See Use Directions under Section 9.0	See Section 9.10		
Pre-harvest	This product may be applied as an over the top			
broadcast spray	broadcast spray to control labeled weeds prior to	Apply at least 7 days before harvest for Dry Beans, Dry		
(Dry beans)	the harvest of dry beans. Apply up to 32 fluid	Peas, Lentils & Chickpeas.		
	ounces in 3 to 20 gallons of water per acre at the			
	hard dough stage of the legume seed (30 percent	Only one application per year may be made; do not combine		
	grain moisture or less). Either ground broadcast	a pre-harvest spray with a spot treatment on the same crop		
D 1 1	or aerial applications may be made.	area.		
Pre-harvest	This product may be applied as an over the top broadcast spray to control labeled weeds prior to	Do not feed treated vines and hay from these crops to		
broadcast spray	the harvest of dry peas, lentils, and chickpeas.	livestock. Do not apply this product through any type of		
(Dry Peas,	Apply up to 64 fluid ounces in 3 to 20 gallons of	irrigation system.		
Lentils &	water per acre at the hard dough stage of the	anganan system		
Chickpeas)	legume seed (30 percent grain moisture or less).	Do not treat field (feed) peas, since these are considered to		
		be grown as livestock feed.		
	Either ground broadcast or aerial applications			
	may be made.	Do not make pre-harvest applications to Dry Beans, Dry		
		Peas, Lentils & Chickpeas grown for seed.		
Cnot trootmost	This product may be applied as spot treatment to	Apply at least 14 days before beryest		
Spot treatment	control troublesome weeds such as Canada	Apply at least 14 days before harvest		
(Dry beans,	thistle, quackgrass, mayweed (dog fennel), and	Only one application per year may be made; do not combine		
Dry Peas,	milkweed in dry beans. Apply up to 26 fluid	a pre-harvest spray with a spot treatment on the same crop		
Lentils,	ounces in 10 to 20 gallons of water through	area.		
Chickpeas)	ground spray equipment or use a 2 percent			
	solution in a handheld sprayer. For best results,	Do not feed treated vines and hay from these crops to		
	make applications at or beyond the bud stage of	livestock. Do not apply this product through any type of		
	growth. The crop receiving spray in treated areas	irrigation system.		
	will be killed.			
		Do not treat field cowpeas, since these are considered to be		
		grown as livestock feed.		

# 9.10.7 - ROOT & TUBER VEGETABLES

LABELLED CROPS: Arracacha, Arrowroot, Artichoke (Chinese & Jerusalem), Beet (garden), Burdock, Canna, Carrot, Cassava (bitter & sweet), Celeriac, Chayote (root), Chervil, Chicory, Chufa, Dasheen, Galangal, Ginger, Ginseng, Horseradish, Leren, Kava, Parsley, Parsnips, Potato (Irish), Radish, Radish (Oriental), Rutabaga, Salsify, Salsify (Black & Spanish), Skirret, Sweet potato, Tanier, Tumeric, Turnip, Wasabi, Yacon, Yams, Yam bean, Yam (True)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.10	See Use Directions under Section 9.0	See Section 9.10
Direct Application (Non-bearing Ginseng)	This product may be used for weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.  PRECAUTION: 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 desirable plants. Contact of this product with other than matured brown bark can result in serious crop damage.	Applications must be made at least one year prior to harvest.
Over-the-Top Wiper Application (Rutabaga Only)	Wiper applicators may be used over-the-top of rutabagas.	Allow at least 14 days between application and harvest of rutabagas.

# 9.11 - MISCELLANEOUS CROPS

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple,

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.10	See Use Directions under Section 9.0  Avoid contact of herbicide with foliage, green shoots or stems. Bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.	See Section 9.10  When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid serious crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles must be made prior to vine development otherwise severe injury or destruction may result.  Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.  Post harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
Weed control, Site preparation	This product may be applied for weed control or for site preparation prior to planting or transplanting crops listed in this section.  When applying this product prior to transplanting or direct seeding crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting.  Residues can be removed by 0.5 inch natural rainfall or by applying water via a sprinkler system. Care must be	Do not apply within a week before the first asparagus spears emerge.  Do not feed or graze treated pineapple forage following application.

	9.11 – MISCE	ELLANEOUS CROPS
	Aloe vera, Asparagus, Bamboo shoot eet (non-Roundup Ready)	ts, Globe artichoke, Okra, Peanut (ground nut), Pineapple,
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Injury made at emergence will result in injury or death to emerged seedlings.	
Spot treatment (Asparagus)	This product may be applied immediately after cutting, but prior to the emergence of new spears.	Do not treat more than 10 percent of the total field area to be harvested.  Do not harvest within 5 days of treatment.
Post-harvest (Asparagus)	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. Make delayed treatments as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.  Select and use recommended types of spray equipment for post-emergence postharvest 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	Do not allow direct contact of the spray with the asparagus which will result in serious crop injury.

# 10.0 - TREE, VINE, & SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE & SHRUB CROPS WITHIN SECTION 10 CROP GROUPS. INDIVIDUAL CROPS MAY HAVE MORE SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Pre-plant (Site Preparation) Broadcast Sprays, Weed control, Middles (between rows of trees, vines or shrubs), Strips (within rows of trees, vines or shrubs), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

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.

# **USE DIRECTIONS:**

This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for weed control or perennial grass suppression in established tree fruit and tree nut groves, orchards, berries and vineyards. This product may also be used for site preparation prior to planting or transplanting these crops. APPLY AT 1 PINT TO 5 QUARTS PER ACRE ACCORDING TO THE "ANNUAL WEEDS" AND "PERENNIAL WEEDS RATE TABLES" SECTIONS OF THIS LABEL. Utilize rates at the higher end of the labeled rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 10.6 quarts 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.

# 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 part of the trees, canes and vines.
- Avoid applications when recent pruning wounds or other mechanical injury has occurred.
- Contact of this product other than matures brown bark can result in serious crop damage or destruction.
- For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) must be used to minimize the potential for leakage or drift of herbicide sprays onto crop.

See "APPLICATION EQUPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

# **RESTRICTIONS:**

- Only wipers or shielded applicators capable of preventing all contact with crop may be used.
- Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance.
- For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back.
- Allow a minimum of 3 days between applications and transplanting.

Middles (between rows of trees, vines or bushes)

USE DIRECTIONS: 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.

TANK MIXTURES: A tank mixture of this product plus Goal® 2XL (or generic equivalent) may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 16 to 32 oz/A of this product plus 3 to 12 oz/A of Goal® 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherdspurse, annual sowthistle, common cheeseweed (malva), filaree (suppression), horseweed/marestail (*Conyza canadensis*), stinging nettle and common purslane (suppression). 16 to 32 oz/A of this product plus 3 to 12 oz/A of Goal® 2XL will control common cheeseweed (malva) or hairy fleabane (*Conyza bonariensis*), with a maximum height or diameter of 3 inches.

Strips (in rows of trees, vines or bushes)

TANK MIXTURES: This product may be applied in rows of tree or vine crops and may also be tank mixed with the following products (or generic equivalent).

DEVRINOL® 50 DF
DIREX® 4L
GOAL® 2XL
KARMEX® DF
KROVAR® I
KROVAR® II
SULFLAN®AS
PROWL®
PRINCEP® CALIBER 90
SIMAZINE 4L
SIMAZINE 80W
SIM-TROL™ 4L
SOLICAM® DF
SULFLAN®AS
SURFLAN® 75W

Do not apply these tank mixtures in Puerto Rico.

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

#### 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, orchardgrass and quackgrass, apply 8 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 6 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 bahiagrass for approximately 45 days, apply 6 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 4 fluid ounces of this product per acre, followed by an application of 2 to 4 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of bermudagrass, apply 1 to 2 quarts 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 6 to 16 fluid ounces of this product per acre east of the Rocky Mountains and 16 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 6 to 10 fluid ounces per acre in shaded conditions or where a lesser degree of suppression is desired.

#### CUT STUMPS (Tree crops)

#### LABELED CROPS:

<u>Citrus Trees:</u> Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor.

Fruit Trees: Apply, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio. Walnut (black, English).

Fistacino, Walnut (black, English).					
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS			
Suitable Hand-held Equipment	Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed blow.  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.  PRECAUTION: Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.				

# 10.1 - BERRY CROPS

LABELED CROPS: Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thronless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectarberry, olallie berry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Raspberry (Black, Red), Salai

Googe Berry, Frankie	eberry, Loganberry, Raspberry (black, Red), Salai	
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0  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 make directed sprays within the cranberry bush areas prior to berry harvest.
Spot Treatment (Cranberry production)	May be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Handheld sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. Drop water level to remove standing wate in ditches prior to application. In hand-held sprayers, use 1 to 2 percent solution of this product. Spray to wet vegetation, not to run-off.  For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control.  Apply this product within 1 day after draw down to ensure application to actively growing weeds.	Allow a minimum of 30 days between last application and harvest of cranberries.  Do not apply this material through irrigation system.  Do not make applications by air.  Do not apply directly to water. Use nozzles that emit medium- to large-sized droplets to minimize drift in order to avoid crop injury.
Post-harvest (Cranberry Production)	Make applications only after cranberries have been harvested to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Handheld sprayers, wipers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using handheld sprayers, use a 0.5 to 1 percent solution of this product. Spray to wet vegetation, not to run off. If using hand-held boom sprayers, apply 2 to 4 quarts of his product per acre.  Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.	

10.2 - CITRUS						
LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (All), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor						
TYPES OF APPLICATIONS		USE	DIRECTIONS		RESTRI	ICTIONS
See Section 10.0	See Use Directions under Section 10.0			See Section 10.0		
	Florida and Texas only: For burn down or control of the weeds listed below, apply the labeled rates of this product in 3 to 40 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.			Allow a minimum of 1 day between last application and harvest.  For citron groves apply as directed sprays only.		
	to 30 ga quarts p acre wh than 8 i control.	attweed, apply 2 to 3 quality and the service of th	when plants are active less than 8 inches than 8 inches tall. If gof Krovar® II or Karm I product labels for sp	vely growing. Use 2 tall and 3 quarts per loatweed is greater ex® may improve pecific crops, rates,		
Perennial w	eeds:	S=Suppression	B=Burndown	PC=Partial Co	ntrol C	=Control
We Bermudagrass	eed Spe	cies	1 QT B	HM-0705-A Herb 2 QT -	icide Rate Per Acr 3 QT PC	e 5 QT C
Guineagrass Texas and Florida F Florida Flatwoods Paragrass	Ridge		В - В	C B C	C C	C C C
Torpedograss			S	-	PC	С

10.3 - MISCELLANEOUS TREE FOOD CROPS			
LABELED CROPS: Cactus (fruits & pads), Palm (heart, leaves), Palm (oil)			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0	

10.4 – NON-FOOD TREE CROPS			
LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other Non-food Tree Crops.			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0	
Directed sprays, Spot treatments, Wiper applications	This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas Trees and other non-food tree crops.  PRECAUTION: Care must be exercised to avoid contact of spray drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.	THIS PRODUCT IS NOT LABELED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREE,	
Site Preparation	This product may be used prior to planting non-food tree crops.  Precautions must be taken to protect non-target plants during site preparations applications.		

10.4 – NON-FOOD TREE CROPS		
LABELED CROPS:	Pine, Poplar, Eucalyptus, Christmas Trees, Other Non-food Tree C	rops.
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Directed Spray	This product can be used around established eucalyptus and poplar trees to control undesirable vegetation.	
(Eucalyptus and Poplar Production)	Use a 1 to 2 percent spray solution to control herbaceous weeds in eucalyptus farms. Use a 2 percent spray solution for control of undesirable woody brush and trees. For "hard-to-control" weeds, use a 5 to 10 percent spray solution. Avoid contact of spray, drift, or mist with foliage, green bark or non-woody surface roots of plants.	
Wiper Application (Eucalyptus and Poplar Production)	This product may be used through wick or other suitable wiper applicators for control or partial control of grass and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. For wick applicators, mix 1 gallon of this product with 2 gallons water to make a 33% solution. For wiper systems that can handle thicker solutions, such as force-fed systems, a 33 to 100% solution may be used. For best results, ensure that the herbicide solution is allowed to contact the maximum amount of leaf surface. As weed densities increase, decrease equipment speed to allow sufficient herbicide flow to wet all weed surfaces contacted. Weeds not contacted will be unaffected.  PRECAUTION: Desirable vegetation contacted by the herbicide solution may be injured or controlled. This includes foliage, fruit, or green stems.	

10.5 – POME FRUIT			
LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince			
TYPES OF APPLICATIONS USE DIRECTIONS RESTRICTIONS			
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0  Allow a minimum of 1 day between last application and harvest in pome fruits.	

10.6 – STONE FRUIT				
LABELED CROPS: Ap	LABELED CROPS: Apricot, Cherry (Sweet, Tart), Nectarine, Olive, Peach, Pear, Plum/Prune (All types), Plumcot.			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0  Allow a minimum of 17 days between last application and harvest in stone fruit crops.  For olive groves, apply as directed sprays only.		

#### RESTRICTIONS ON APPLICATION EQUIPMENT:

For cherries, any application equipment listed in this section may be used in all states.

Any application equipment listed in this section may be used in 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 spray or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low hanging limbs at least 10 days prior to application. Avoid application near trees with recent pruning wounds or other mechanical injury. Apply only near trees that 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.

	10.7 - TREE NUTS			
LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (Hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (Black, English)				
TYPES OF USE DIRECTIONS RESTRICTIONS APPLICATIONS		RESTRICTIONS		
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0  Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut.  Allow 14 days between application and harvest in coconuts.		

#### 10.8 - TROPICAL CROPS & SUBTROPICAL TREES & FRUITS

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados Cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Ilama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots & leaves), Wax jambu.

Tamannd, Tea, 11 (100ts & leaves), vvax jambu.			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0	
	This product may be applied for weed control or for site preparation prior to transplanting crops listed in this section.	Allow a minimum of 1 day between last application and harvest of banana, guava, papaya and plantain crops.	
	In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.	Allow a minimum of 14 days between last application and harvest of any other tropical or subtropical tree fruit.	
		Allow a minimum of 28 days between last application and harvest in coffee crops.	
Bananacide (Banana only)	See Use Directions under Section 10.0	See Section 10.0	
,,	This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish a disease free buffers around plantations.	Do not apply more than ½ fluid ounce (15 mL) of this product's concentrate per mat (or units).	
	Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make	Remove all fruit from plants and mats (or units) prior to treatment.	
	the injection at least one foot above ground, except for very	Do not harvest any fruit or plant materials from treated mats (or units) following injection.	
	mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.	Do not allow livestock to consume treated materials.	
	For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the disease for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.	Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.	

10.9 - VINE CROPS		
LABELED CROPS	: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit	
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 10.0	See Use Directions under Section 10.0	See Section 10.0
	Applications must not be made when green shoots, canes or foliage are in the spray zone.	Allow a minimum of 14 days between last application and harvest.
	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.	Do not use selective equipment in kiwi

# 11.0 - PASTURE GRASSES, FORAGE LEGUMES & RANGELANDS

	11.1 – ALFALFA, CLOVER, & OTHER FORAGE LEGUMES		
LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types)			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Pre-plant, Pre-emergence, At-Planting	This product may be applied before, during or after planting crops listed.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.  Applications must be made prior to emergence of the crop.	If a single application is made at rates of 2 quarts per acre or less, no waiting period between treatment and feeding or grazing is required.  If application rates greater than 2 quarts per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.	
Spot treatment, Over-the-Top Wiper applications (Alfalfa and Clover only)	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.	For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled.  No more than one-tenth of any acre can be treated at one time.  Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.	
Dormant (Alfalfa Only)	This product will control or suppress many weeds including quackgrass, downy brome and cheatgrass in dormant alfalfa. Apply 8 to 12 ounces per acre of this product. Apply in the spring to alfalfa that is dormant. Make applications after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield.  Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off.  PRECAUTION: Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.	Do not use ammonium sulfate when spraying dormant alfalfa with HM-0705-A Herbicide.  Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated.  Do not make more than one application per year.  Allow 36 hours after application before grazing livestock or harvesting.	
Pre-harvest (Alfalfa Only)	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 quackgrass, when applied prior to the harvest of alfalfa.	Make only one application to an existing stand of alfalfa per year.  Do not apply more than 2 quarts of this product per acre as a pre-harvest treatment.  Do not use for alfalfa grown for seed, as a reduction in	

	11.1 – ALFALFA, CLOVER, & OTHER FORAGE LEGUMES			
LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types)				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
	Use up to 1 quart of this product per acre. Applications may be made at any time of the year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.	germination or vigor may occur.  Wait 36 hours before treated crop and weeds can be harvested and fed to livestock.		
Renovation	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.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.	Remove domestic livestock before application.  If application rates of 2 quarts per acre or less are used wait 36 hours after application before grazing or harvesting.  If application rates greater than 2 quarts per acre are used, wait 8 weeks after application before grazing or harvesting.		

	11.2 - CONSERVATION RESERVE PROGRAM (CRP)	
LABELLED CROPS	S: Conservation Reserve Program (CRP) Acres	
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Renovation (rotating out of CRP), Site preparation	This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.  For any crop not listed in the "CROPS" sections of this label applications must be made at least 30 days prior to planting.  PRECAUTION: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.	Do not apply more than 3 quarts per acre per year onto CRP grasses.
Post-emergence Weed control in Dormant Acres, Over-the-Top Wiper Application	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 12 to 16 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.	

# 11.3 - GRASS or TURFGRASS SEED PRODUCTION

LABELLED CDODS: Ar

LABELLED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS"			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Pre-plant, Pre-emergence, Renovation, Site preparation	This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.  Applications must be made prior to the emergence of the crop to avoid injury.  For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall applications provide best control.	Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing must be delayed for 7 days after application to allow proper translocation into underground plant parts.  If application rates total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required.  If the rate is greater than 3 quarts per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.	
Shielded Sprayer	Apply 1 to 3 quarts of this product as a broadcast spray in 10 to 20 gallons of total spray volume per acre. 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.  PRECAUTION: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage.  Grower assumes all responsibility for crop losses from misapplication.		
Over-the-Top Wiper Applications	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.  Weeds should be 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 weed height 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.	Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators must be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation.	
Spot treatments	Use a 1- to 1.5 percent solution  Apply this product prior to heading of grasses.	The crop receiving the spray in the treated area will be killed. Do not allow drift or spray outside of the target area for the same reason.	
Creating Rows in Annual Ryegrass	Use 16 to 32 fluid ounces of this product per acre. 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.  PRECAUTION: Set nozzle height 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 low-pressure nozzles, or drop nozzles designed to target the application over a narrow band.		

	11.3 - GRASS or TURFGRASS SEED PRODUCTION		
LABELLED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS"			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
	Grower assumes all responsibility for crop losses from misapplication.		

#### 11.4 - PASTURES LABELLED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS". Including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuyugrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass. TYPES OF **USE DIRECTIONS** RESTRICTIONS **APPLICATIONS** Spot treatment. This product may be applied as a spot treatment or When spot treatment or wiper applications are made using with wiper applicators in pastures. rates above 3 quarts per acre, no more the 10 percent of Over-the Top the total pasture may be treated at any one time. Wiper Applications Applications may be made in the same area at 30-day Remove domestic livestock before application and wait 7 intervals. days after application before grazing livestock or harvesting. For spot treatments or wiper application methods using rates of 3 quarts per acre or less, the entire field or any portion of it may be treated. This product may be applied prior to planting or If application rates total 3 quarts per acre or less, no waiting Pre-plant, emergence of forage grasses. In addition, this product period between treatment and feeding or livestock grazing is Pre-emergence. may be used to control perennial pasture species Pasture listed on this label prior to re-planting. renovation, If the rate is greater than 3 quarts per acre, remove Stand Removal domestic livestock and wait 8 weeks following application MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS". PERENNIAL before grazing or harvesting. WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL. This product may be applied at 16 fluid ounces per **Chemical Mowing** Labeled application rates totaling 3 quarts per acre or less acre to control the weeds listed below and most other do not require a waiting period between treatment and (Bermudagrass winter annual grass and broadleaf weeds in feeding or livestock grazing. Pastures Prior To established coastal bermudagrass pastures. Spring Growth Or If the rate is greater than 3 quarts per acre, remove Immediately After domestic livestock and wait 8 weeks following application Annual bluegrass, Cheat, Crabgrass, Henbit, First Cutting) Johnsongrass seedling, Little barley, Oats, Ryegrass, before grazing or harvesting. Sandbur field, Wheat, Wild mustard NOTE: ONLY ONE APPLICATION PER YEAR MAY BE MADE TO ANY ONE FIELD. A SPRING APPLICATION Applications prior to spring growth: Apply this product in the late winter or early spring but before new PRIOR TO GROWTH AND AN APPLICATION coastal bermudagrass growth begins in the spring. FOLLOWING THE FIRST CUTTING MAY NOT BE MADE Applications to new growth can damage the ON THE FILED DURING THE SAME YEAR. bermudagrass. Applications following the first cutting: Apply this product after the first bermudagrass cutting when the bermudagrass has not yet begun to regrow. Applications made after regrowth has begun can damage the bermudagrass.

Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming Only

Bromus Species: This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 8 to 16 fluid ounces of product per acre on a broadcast basis. For best results, coincide application with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Make applications to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the site.

Medusahead: To treat medusahead, apply 16 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4 leaf stage. Applications may be made in the fall or spring.

Application Equipment and Techniques: Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre.

When applied as directed there are no grazing restrictions.

11.5 - RANGELANDS			
LABELLED CROPS: Rangeland (Perennial cool and warm season grass rangelands)			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Post-emergence	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	Do not use ammonium sulfate when spraying rangeland grasses with this product.	
	and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.	Do not apply more than 3 quarts per acre per year.	
	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.		
	Apply 12 to 16 fluid ounces per acre to control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands including downy brome, cheat grass, cereal rye and jointed goatgrass. 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 encourage perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.		
	For medusahead, apply 16 fluid ounces per acre at 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.		
	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.		

11.6 - TURF GRASS SOD PRODUCTION				
LABELLED CROPS:	LABELLED CROPS: Turfgrass for Sod			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Pre-plant, Pre-emergence, Renovation, Site Preparation	This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for sod. Broadcast of hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding 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 the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.	If application rates total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 3 quarts per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.  Do not disturb soil or underground plant before treatment. Tillage or renovation techniques such as vertical mowing, coring, or slicing must be delayed for 7 days after application to allow translocation into underground plant parts.		
	MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.			
	Desirable turfgrasses may be planted following the above procedures.			
Spot treatment	Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass			
Turfgrass Renovation for sod production	This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding 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 the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.	sod production for 8 weeks following application.		
	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 translocation into underground plant parts.			
	Desirable turfgrass may be planted following the above procedures.			
	Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.			

# 11.7 - RELEASE OF BERMUDAGRASS OR BAHIAGRASS

### Dormant applications

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring greenup. This product may also be tank-mixed with Oust® for residual control. Tank mixtures of this product with Oust® may delay greenup.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4 to 6-leaf stage.

Apply 8 to 64 fluid ounces of this product per acre alone or in a tank mixture with ¼ to 1 ounce per acre of Oust®. Apply the labeled rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in greenup and minimize

injury, add no more than 1 ounce of Oust<sup>®</sup> per acre on bermudagrass and no more than 0.5 ounce of Oust<sup>®</sup> per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

#### Actively growing bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass Johnsongrass
Bluestem, silver Trumpetcreeper
Fescue, tall Vaseygrass

This product may be tank-mixed with Oust<sup>®</sup>. If tank-mixed, use no more than 1 to 2 pints of this product with 1 to 2 ounces of Oust<sup>®</sup> per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust<sup>®</sup> label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass Johnsongrass
Bluestem, silver
Broomsedge Trumpetcreeper
Dallisgrass Vaseygrass
Dock, curly Vervain, blue
Dogfennel
Fescue, tall

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Do not repeat applications of the tank mix in the same season since severe injury may occur.

#### Actively growing bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6 fluid ounces of this product in 10 to 40 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 4 fluid ounces of this product per acre, followed by an application of 2 to 4 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus Oust® may be used. Apply 6 fluid ounces of this product plus 0.25 ounce of Oust® per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

### 12.0 - ROUNDUP READY® CROPS

The following instructions or those separately published on Helena Chemical Company Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. Do NOT combine these instructions with those listed for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

THIS PRODUCT IS TO BE USED FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNEATED AS CONTAINING A ROUNDUP READY GENE OR GLYPHOSATE TOLERANT GENE.

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

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectivity controlling weeds using glyphosate on a Roundup Ready crop, are protected under several U.S. Patents. A license to use Roundup Ready seed must be obtained prior to use.

<u>For Ground Applications</u> 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 spray nozzles. Check for even distribution of spray droplets.

<u>For Aerial Applications</u> apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNOLOGIES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE.

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

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise specified in this product label, or supplemental labeling published separately by Helena Chemical Company.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for USE DIRECTIONS for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.

NOTE: The following use directions are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, use a preplant burn-down treatment of this product to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth has occurred and at least 10 days after a previous application of this product.

### 12.1 - ROUNDUP READY CANOLA (Spring Varieties)

LABELLED CROPS: Roundup Ready spring canola is defined as those Roundup Ready canola varieties that are seeded in the spring and harvested in the fall and do not enter a winter dormancy period.

DO NOT USE THIS PRODUCT ON SPRING CANOLA WITH A ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA, EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL NOT BE FOR HUMAN OR LIVESTOCK FOOD

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TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Pre-plant, At-Planting, Pre-emergence	This product may be applied before, during or after planting Roundup Ready spring canola.	Maximum quantity of this product that may be applied for all pre-plant, at-planting and pre-emergence applications combined is 2 quarts per season.		
Post-emergence (In-crop)	This product may be applied post-emergence to Roundup Ready spring canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.  Single Application – Apply 11 to 16 fluid ounces of this product per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications as this may result in temporary yellowing, delayed flowering, and or growth reduction. Similar crop injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.  Sequential Application – Apply 11 fluid ounces of this product per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage.  Sequential applications can be made for early emerged annual weeds and perennial weeds such as Canada thistle and quackgrass, or when multiple applications are needed for adequate weed control.	No more than two in-crop (over-the-top) broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total of all in-crop applications must not exceed 22 fluid ounces of this product per acre.  Allow a minimum of 60 days between last application and canola harvest.		
MAXIMUM ALLOWABLE APPLICATION RATES				
Total of all Pre-plant, At Planting, Pre-emergence applications 2 quarts per acre				
Total of all In-crop applications from emergence to 6-leaf stage 1 quart per acre				

# 12.2 - ROUNDUP READY CANOLA (Fall & Winter Varieties)

LABELLED CROPS: Roundup Ready winter canola is defined as those Roundup Ready canola varieties that are seeded in early fall and harvested the following spring or summer. Winter canola varieties are intended to enter a cold period dormancy in the winter.

dormancy in the winter.				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Pre-plant, At-Planting, Pre-emergence	This product may be applied before, during or after planting Roundup Ready winter canola.	Maximum quantity of this product that may be applied for all pre-plant, at-planting and pre-emergence applications combines is 2 quarts per acre per season.		
Post-emergence (In-crop)	This product may be applied to Roundup Ready winter canola varieties from emergence to canopy closure in the fall and prior to bolting in the spring. Applications made during or after bolting may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.  Some weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered may require sequential applications of this product for control. Make the second application after some re-growth has occurred and at least 60 days after a previous application of this product.  Single Application – Apply 22 to 32 fluid ounces of this product per acre in the fall. Make applications in the fall when weeds are small and actively growing. Use the higher rate in the labeled range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Applications of greater than 16 fluid ounces per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. Avoid overlaps. Spray overlaps may result in temporary yellowing and/or growth reduction.  Sequential Applications Apply 16 to 32 fluid ounces of this product per acre to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate and at a minimum interval of 60 days, but before bolting in the spring. Sequential applications can be made for early emerging annual weeds and winter emerging weeds such as downy brome, jointed goatgrass and ryegrass, and for weeds that have overwintered. This product will control or suppress most of perennial weeds. For some perennial weeds, sequential applications may be required to reduce competition with the crop.	No more than two over-the-top broadcast applications may be made from crop emergence up to the onset of bolting, and the total in-crop application must not exceed 2 quarts of this product per acre.  Allow a minimum of 60 days between last application and harvest of canola grain.  No waiting period is required between application and open grazing of livestock.		
MAXIMUM ALLOWABLE APPLICATION RATES				
Total of all Pre-plant	, At Planting, Pre-emergence applications	2 quarts per acre		
Total of all In-crop bolting in the spring	applications from emergence to canopy closure or prior to	2 quarts per acre		

12.3 - ROUNDUP READY CORN				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Pre-plant, Pre-emergence, At-Planting	This product may be applied alone or in a tank-mixture before, during or after planting corn.	Applying this product to crop varieties that are not designated as glyphosate tolerant will result in severe crop injury and yield loss.		
	TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech 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 pre-emergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines - the more restrictive requirements apply.  NOTE: For maximum weed control, apply a postemergence (in-crop) application of this product following the use of less than labeled rates of the pre-emergence residual products listed above.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.	Do not allow contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain a Roundup Ready or glyphosate tolerant gene, since severe injury or destruction will result.  AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE.  See the "MIXING and APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.		
Post-emergence (in-crop)	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 application of this product. The post-emergent application of 0.75 to 1.5 quarts per acre-of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.  This product may be applied over-the-top to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 48 inches, whichever comes first,.  Use drop nozzles when corn height is 24 to 30 inches (free standing), 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 adjusted to avoid spraying into the whorls of the corn plants.  If product is applied to whorls of corn, plant injury and yield reduction can occur.  Maximum single in-crop application rate of this product up to 48-inch corn is 48 fluid ounces per acre.  See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.  TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit and Atrazine at labeled rates. 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	Single in-crop applications of this product are not to exceed 1.5 quarts per acre.  The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 3 quarts 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.		

12.3 - ROUNDUP READY CO			RN
TYPES OF APPLICATIONS	USE DIRECTIONS		RESTRICTIONS
	Tank-mix Maximum Height Partner For Applicati		
	Degree 11 inches Degree Xtra Harness Harness Xtra Harness Xtra 5.6L Bullet* 5 inches Micro-Tech* Atrazine 12 inches		
	* Bullet and Micro-Tech are not registered for post-emergence application in Texas.		
Pre-Harvest	In Roundup Ready corn, up to 1 quart per acre of this product can be applied pre-harvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).		Allow a minimum of 7 days between application and harvest.
Post-Harvest	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.		Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.
	MAXIMUM ALLOWABLE	APPLICATION	I RATES
Combined total per year for all applications			8 quarts per acre
Total of all Pre-plant, Pre-emergence, At-Planting applications			5 quarts per acre
Maximum single in-crop application rate up to 48-inch corn			1.5 quarts per acre
Total in-crop applications from emergence through 48-inch corn			3 quarts per acre
Maximum pre-harvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest			1 quart per acre

### 12.4 - ROUNDUP READY COTTON

ATTENTION: USE OF THIS PRODUCT 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.

RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Pre-plant, Pre-emergence, At-planting	This product may be applied before, during or after planting cotton.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.  See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready			
	crops.			
Post-emergence (Over-the-Top)	This product may be applied by aerial or ground application equipment at rates up to 1 quart per acre per application post-emergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Overthe-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.	The combined total application of this product from cotton emergence until harvest must not exceed 6 quarts per acre.  NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT.		
	Salvage Treatment. This treatment may be used after the 4-leaf stage of development and must only be used where weeds threaten to cause the loss of the crop. One quart per acre may be applied either as an over-the-top applications or as a post-directed treatments 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. NO MORE THAN ONE SALVAGE TREATMENT MAY BE USED PER GROWING SEASON.	NO MORE THAN TWO APPLICATIONS MAY BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.		
	See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.			
Selective Equipment	This product may be applied using precision post-directed or hooded sprayers at rates up to 1 quart per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment must be used 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).	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.		
Pre-harvest	This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boil crack. Up to 2 quarts of this product may be applied using either aerial or ground spray equipment.	Allow a minimum of 7 days between application and harvest of cotton.		
	Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.			
	TANK MIXTURES: This product may be tank mixed with DEF™ 6, Folex™, Ginstar, or Prep™ (or generic equivalents).			
	REFER TO MANUFACTURERES LABELS FOR USE OF			

#### 12.4 - ROUNDUP READY COTTON

ATTENTION: USE OF THIS PRODUCT 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.

TYPES OF APPLICATIONS	USE DIRECTIONS		RESTRICTIONS
	ADDITIVES (such as surfactants, stickers ar FOR PREHARVEST APPLICATION TO CO NOTE: This product will not enhance the pe these harvest aids when applied to Roundup	TTON.	
	MAXIMUM ALLOWABLE	APPLICATION	IRATES
Combined total per year for all applications			8 quarts per acre
Total of all Pre-plant, Pre-emergence, At-Planting applications			5 quarts per acre
Total in-crop applications from ground cracking to layby			4 quarts per acre
Maximum pre-harvest application rate			2 quarts per acre

### .12.5 - ROUNDUP READY® FLEX COTTON

ATTENTION: USE OF THIS PRODUCT 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 (MPOSSIBLE 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.

RESCHING SOLE LOSS, BLEINES MINTONIA MARION TILLS LOSS.			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Pre-plant, Pre-emergence, At-planting	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.		
	MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.		
	See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.		
Post-emergence (Over-the-Top)	When applied in accordance with this label, HM-0705-A 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	The maximum rate for any single in-crop application of this product is 1.5 quart per acre made using ground application equipment.	
	one or more applications of this product.  In-crop application rates above 1.0 quart per acre made alone or with the addition of other crop chemical products	Except for pre-harvest use, do not exceed a maximum rate of 1.0 quart per acre of this product when making applications by air.	
	containing surfactant may cause a crop response including leaf speckling or leaf necrosis.	Between layby and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 2.0 quarts per acre.	
	Make an initial application of 1.0 quart per acre on 1 to 3 inch tall annual grass and broadleaf weeds. This product may be applied by ground application equipment at rates	The maximum combined total of all applications made from crop emergence through 60 percent	

### .12.5 - ROUNDUP READY® FLEX COTTON

ATTENTION: USE OF THIS PRODUCT 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 (MPOSSIBLE 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.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	up to 1.5 quarts per acre per application post-emergence to Roundup Ready Flex cotton. In addition to broadcast applications, post-directed equipment may be used to achieve weed coverage.	open bolls must not exceed 6.0 quarts per acre.
	Application after 10 <sup>th</sup> leaf or 10 <sup>th</sup> node may result in plant injury and yield loss.	
	NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTION" in the label booklet for HM-0705-A Herbicide.	
Pre-harvest	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 2.0 quarts of this product may be applied using either aerial or ground spray equipment.	Allow a minimum of 7 days between application and harvest of cotton.  Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.
	NOTE: This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex cotton.	THE USE OF ADDITIVES, OTHER THAN THOSE LISTED ON THIS LABEL, FOR PREHARVEST APPLICATION TO COTTON IS PROHIBITED.
	MAXIMUM ALLOWABLE APPLICATION	ON RATES
	ear for all applications (Calculate the combined rate to be crop and pre-harvest applications)	8.0 quarts per acre
Total of all Pre-plant,	At-planting, Pre-emergence applications	5.0 quarts per acre
Total in-crop applications from ground cracking to 60 percent open bolls		6.0 quarts per acre
Maximum allowed fro	m 60 percent bolls open to 7 days prior to harvest	2.0 quarts per acre

12.6 - ROUNDUP READY SOYBEANS			
THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTION FOR USE.			
Pre-plant, Pre-emergence,	This product may be applied before, during or after planting soybeans.		
At-Planting	MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.		
	See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.		
Post-emergence (In-Crop)	When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for specific rates on various annual weeds. Make an initial application of 1 quart per acre on 2-to 8-inch tall weeds for best results. 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 used up to 2 quarts per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.	The combined total application from crop emergence through harvest must not exceed 3 quarts per acre.  The maximum rate for any single in-crop application is 2 quarts per acre.  The maximum combined total of this product that can be applied during flowering is 2 quarts per acre.	
	A 1- to 2 quarts 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, trumpetcreeper, swamp smartweed 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, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this 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 SOYBEAN CROP. To control giant ragweed, apply up to 1 quart per acre of this product when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.		
Pre-Harvest	This product provides weed control when applied prior to harvest of soybeans. Up to 1 quart per acre of this product can be applied by aerial or ground application.	Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.	
	Care should be taken to avoid excessive seed shatter loss due to ground application equipment.		
Post-Harvest	This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures 2,4-D or dicamba may be used.		
MAXIMUM ALLOWABLE APPLICATION RATES			
Combined total per year	for all applications	8 quarts per acre	
Total of all Pre-plant, P	re-emergence, At-Planting applications	5 quarts per acre	
Total in-crop applications	s from cracking throughout flowering	3 quarts per acre	
Maximum pre-harvest ap	oplication rate	1 quart per acre	

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### 12.7 - ROUNDUP READY® SUGAR BEETS

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

Do NOT combine these instructions with those listed for crop varieties that do not contain a Roundup Ready gene listed in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" sections of the HM-0705-A Herbicide label booklet.

AND PERENNIAL CROPS (Alphabetical)" sections of the HM-0705-A Herbicide label booklet.			
Pre-plant, At-Planting, Pre-emergence	This product may be applied before, during or after planting of Roundup Ready sugar beets.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS" AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.		
Post-emergence (In-crop)	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 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminat crop competition throughout the growing season.	emergence to the 8 leaf stage is 1.5 quarts per acre.  The maximum rate for any single application between the 8 leaf stage and canopy closure is 1.0 quart per acre.	
	MAXIMUM ALLOWABLE APPL	ICATION RATES	
Combined total per year for all application		8.0 quarts per acre	
Total of all Pre-plant, Pre-emergence applications		5.0 quarts per acre	
Emergence to 8 leaf stage		2.5 quarts per acre	

2.0 quarts per acre

Between 8 leaf stage and canopy closure

### 12.8 - ROUNDUP READY ALFALFA

FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP RADY GENE.

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

crop varieties must be purchased from an authorized licensed seed supplier.			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Pre-plant, At-planting, Pre-emergence	This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa.	DO NOT EXCEED 2.0 QUARTS OF THIS PRODUCT PER ACRE	
and Post-emergence	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	WHEN MAKING APPLICATIONS BY AIR.	
	for even distribution of spray droplets.  For aerial application: Use the labeled rates of this product in 3 to 15 gallons of spray solution per acre.	Any single over-the-top application of this product must not exceed 2.0 quarts (64 fluid ounces) per acre.	
	A. New Stand Establishment (seeding year)		
	Prior to First Cutting During New Stand Establishment: From emergence up to 4 trifoliate leaves 2.0 quarts per acre From 5 trifoliate leaves up to 5 days before 2.0 quarts per acre	Sequential applications of this production must be at least 7 days apart.	
	first cutting  After First Cutting in Newly Established Stands:  In-crop application, per cutting, up to 5  days before cutting	The combined total per year for all in-crop applications in newly established and established stands must not exceed 6.0 quarts (192	
	B. Established Stands (non-seeding year) In-Crop applications, per cutting, up to 5 days before cutting  2.0 quarts per acre	fluid ounces) per acre.  Remove domestic livestock before application and wait	
	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 1.0 quart per acre of this product at or before the 3 to 4 trifoliate growth stage.	a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay.	
	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 re-growth interferes with application spray coverage of the target weeds.		
	In addition to those weeds listed in the HM-0705-A HERBICIDE label booklet, this product will suppress or control the parasitic weed, Dodder ( <i>Cuscuta spp.</i> ) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.		
Over-the-top applications	This product may be applied post-emergence to Roundup Ready alfalfa from emergence until 5 days prior to cutting. Any single over-the-top applications of this product must not exceed 2.0 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.		
	Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and must not be used for over-the-top applications of this product.		
MAXIMUM ALLOWABLE APPLICATION RATES			
Combined total per	7.75 quarts per acre		
Combined total per	6.0 quarts per acre		
Pre-plant, At-planti	ing and Pre-emergence single applications	2.0 quarts per acre	

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# 13.0 - NON-CROP USES AROUND THE FARMSTEAD

# 13.1 - WEED CONTROL & TRIM-AND-EDGE

LABELED SITES: Non-crop Areas including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

ditcribanks, farm for	ads, shelterbelts, prior to landscape plantings and equipment storage areas.				
TYPES OF APPLICATIONS		USE DIRE	ECTIONS		RESTRICTIONS
Any suitable application equipment described in Section 8.0 of this label	brush which are found in MAKE APPLICATIONS WEEDS", PERENNIAL VTABLES" IN THIS LABE  TANK MIXTURES: This (or generic equivalents). sites and application rate when weeds are less that greater than 6 inches tall these tank mixes.	in any part of the farmstead.  ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", AND WOODY BRUSH & TREES RATE EL.  is product may be tank mixed with the following products  ). Refer to these product labels for approved farmstead tes. For annual weeds, use 1 quart per acre of this product han 6 inches tall and 1.5 quarts per acre when weeds are all. For perennial weeds, apply 2 to 5 quarts per acre in these products through backpack sprayers, handguns or sy-to-wet applications, see the "HAND-HELD AND HIGH		This product plus dicamba tank mixtures may not be applied by air in California	
	Arsenal Barricade 65WG Diuron Endurance Escort Karmex DF Krovar DF	Pendul Pendu Pl Princ Princ Ronst htrol of the followi		Sahara Simazine Surflan Elar Vanquish 2,4-D	
	of this product plus 2 to 4	Bahiagrass Bermudagrass Broomsedge Dallisgrass Dock, curly Dogfennel	Fescue, tall Johnsongrass Poorjoe Quackgrass Vaseygrass Vervain, blue		

13.2 - GREENHOUSE/SHADEHOUSE			
LABELLED USES:			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS	
Spot Spray, Directed Spray	This product may be used to control weeds in and around greenhouses and shadehouses.	Air circulation fans must be turned off during application.	
	MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.	Desirable vegetation must not be present during application.	

13.3 – CHEMICAL MOWING		
LABELLED USES	Farm Ditches and Other Parts of Farmsteads	
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 8.0 of this label t	This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass or quackgrass covers. Use 6 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 16 fluid ounces of this product when treating bermudagrass. Use 64 fluid ounces of this product when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre.	Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

	13.4 – CUT STUMPS			
LABELLED USES:	: Cut Stumps (on any	non-crop site listed on th	is label)	
TYPES OF APPLICATIONS		USE DIRECTIONS		RESTRICTIONS
Suitable Hand- Held Equipment	woody brush and tree s product using suitable of Cut trees or resprouts of solution of this product Delays in application m applications during peri Some sprouts, stems, of having a similar age, he grafted or shared, injury	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.  Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.		
	Alder Eucalyptus Madrone Oak	Pepper, brazilian Pine, Austrian Reed, giant Salt cedar	Sweetgum Tan oak Willow	

	13.5 – HABITAT MANAGEMENT			
LABELLED USE	S: Habitat Restoration & Maintenance, Wildlife Food Plots			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Any suitable application equipment described in Section 8.0 of this label	This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas including rangeland and wildlife refuges. 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.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.  Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.  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 to allow translocation into underground plant parts.		

# 14.0 – FORESTRY, INDUSTRIAL, TURF & ORNAMENTAL

14.1 – FORESTRY SITE PREPARATION			
TYPES OF APPLICATIONS	USE	DIRECTIONS	RESTRICTIONS
Boom Sprayers, Shielded Boom Sprayers, High- Volume Off- Center Nozzles, Hand-Held Equipment, And Similar Equipment.	herbaceous weeds in forestry, as well a openings with these sites and maintaini MAKE APPLICATIONS ACCORDING TPERENNIAL WEEDS", AND WOODY ELABEL.  This product can be used in site prepara Christmas trees, eucalyptus, hybrid trees. Use higher rates of this product within the woody brush, trees and hard-to-control apply to actively growing woody brush a color and leaf drop. Increase rates with herbaceous weeds any time after emergappear.  Use the lower rates of this product within herbaceous weeds and actively growing flowers or berries appear. Apply to the five weeds any time after emergence.  TANK MIXTURES: Tank mixtures of this of vegetation controlled. When tank mix cautionary statements and all informatic according to the restrictive precautionar NOTE: For forestry site preparation, maprior to planting the desired species. Ob Any labeled rate of this product may be (or generic equivalents) for forestry site Arsenal Applicators Concentrate Chopper Escort or Escort XP Garlon 3A  For control of herbaceous weeds, use the second control of herbaceous weeds, use the preparation of the product of the pro	TO THE RATES LISTED IN "ANNUAL WEEDS", BRUSH & TREES RATE TABLES" IN THIS  ation prior to planting any tree species, including a cultivars and silvicultural nursery sites.  The labeled range for control or partial control of perennial herbaceous weeds. For best results, and trees after full leaf expansion and before fall in the labeled range for control of perennial gence and before seedheads, flowers or berries  The labeled range for control of annual gence and before seedheads, flowers or berries  The labeled range for control of annual gence and before seedheads, oliage of actively growing annual herbaceous  The sproduct may be used to increase the spectrum ing, read and carefully observe the label claims, on on the labels of all products used. Use y statements for each product in the mixture.  The sproduct is approved for use serve planting interval restrictions.  The sproduct is approved for use serve planting interval restrictions.	Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release unless otherwise specified on this label, or in separate supplemental labeling published by Helena Chemical Company for this product.

#### 14.2 - NONCROP AREAS & INDUSTRIAL SITES

LABELLED USES: Non-crop areas including airports, apartment complexes, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, dry ditches, dry canals, fencerows, gold courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreational areas, residential areas, rights-of-way, roadsides, schools, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management areas.

TYPES OF APPLICATIONS		USE DIRECTIONS		RESTRICTIONS	
This product may be applied with any suitable application equipment described in Section 8.0 of this	treatment of unwanted vegeti established shrub beds or ori	trim-and-edge around objects ation and to eliminate unwante namental plantings. This produ atals, flowers, turgrass (sod or setion projects.	d weeds growing in ct may be used prior to	* This product plus dicamba tank mixtures may not be applied by air in California.	
label.		ORDING TO THE RATES LIS' WOODY BRUSH & TREES RA			
	Repeated applications of this ground.	product may be used, as week	ds emerge, to maintain bare		
	generic equivalents) provided target site. Refer to these pro and carefully observe the cau	uct may be tank mixed with the did that the specific product is requout labels for approved sites attionary statements and all others. Use according to the most in the mixture.	gistered for use on the and application rates. Read er information appearing on		
	Use is responsible for ensuring applications.	ng that the mixture product's la	bel allows the specific		
	Arsenal™ atrazine Barricade™ 65WG Certainty dicamba* diuron Endurance™	Outrider pendimethalin Plateau™ Crossbow L Landmark II MP Landmark II Ronstar™ 50 WP			
	Escort™ Escort XP Gallery 75DF Garlon™ 3A Garlon 4 Goal 2XL	simazine Surflan™ AS Surflan WDG Telar™ DF Transline Velpar DF			
	Krovar™ I DF Oust Oust XP	Velpar L 2,4-D Poast			
		ure for bare ground, this produc control of partial control of eme			
	For control or partial control of product plus 2 to 4 ounces of	of the following perennial weed: Oust or Oust XP per acre.	s, apply 1 to 2 quarts of this		
	Bahiagrass Bermudagrass Broomsedge Dallisgrass	Dock, curly Dogfennel Fescue, tall Johnsongrass	Poorjoe Quackgrass Vaseygrass Vervain, blue		

	14.3 - INJECTION & FRILL (Woody Brush & Trees)			
LABELED SITES:	Woody brush & Trees in non-crop areas			
TYPES OF APPLICATIONS	USE DIRECT	TIONS	RESTRICTIONS	
Injection or Frill Applications	Apply this product using suitable equipment we tissue. Apply the equivalent of 1 mL of this producter at breast height (DBH). This is best percent concentration of this product either to as cuts evenly spaced around the tree below increases in size, better results are achieved continuous frill or more closely spaced cutting.  For best results, make application during periexpansion. This product will control many specific control.  Control Oak Poplar Sweetgum Sycamore	oduct per each 2 to 3 inches of trunk achieved by applying a 50 to 100 a continuous frill around the tree or all branches. As tree diameter by applying diluted material to a s.	Do not use application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely.  In species such as this, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent concentration of this product.	

14.4 – HOLLOW STEM INJECTION					
LABELLED SITES	LABELLED SITES: Hollow-stem plants growing in any non-crop site specified on this label.				
TYPES OF	USE DIRECTIONS	RESTRICTIONS			
APPLICATIONS					
Hand-Held Injection	For control of the following hollow-stem plants, use the application rates below:	The combined total for all treatments must not exceed 7			
Devices That	Japanese Knotweed, Polygonum cuspidatum	quarts of this product per			
Deliver Labeled	Inject 5mL per stem of this product between second and third internode.	acre.			
Amounts Of	Bohemian Knotweed, Polygonum bohemicum	At 5 mL per stem, 7 quarts will			
This Product	Inject 5mL per stem of this product between the second and third internode.	treat approximately 1300 stems per acre.			
	Giant Hogweed, Hercleum mantegazzianum	·			
	Inject one leaf cane per plant 12 inches above the root brown with 5 mL of a 5% v/v solution of this product.				
	Poison Hemlock, Conium maculatum Inject one leaf cane per plant 10 to 12 inches above the root crown with 5 mL of a 5% v/v solution of this product.				
	Field horsetail, Equisetum arvense Inject one segment above the root crown with 0.5 mL per stem of this product. Use a small syringe that calibrates to this rate.				
	Canada Thistle, Circisum arvense Cut 8 to 9 of the tallest plants at bud stage in a clump with clippers. Use a cavity needle that is pushed into the stem center and then slowed removed as 0.5 mL per stem of this product is injected into the stem.				

	14.5 – ORNAMENTALS, PLANT NURSERIES & CHRISTMAS TREES			
LABELED SITES	LABELED SITES: Plant Nurseries, Christmas Tree farms & other non-food tree production sites			
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS		
Post-Directed, Trim-and-Edge	This product may be used as a post-directed spray around established woody ornamental species (including arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew, growing in plant nurseries, on Christmas tree farms, or on other non-food tree production sites), or to trim and edge around trees, buildings, sidewalks, roads, potted plants and other objects in a production setting.  Apply at a concentration labeled by Section 15.0 or Section 16.0 or Section 16.1 or Section 17.0 appropriate to the species of weed to be controlled.  Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.	UNLESS OTHERWISE DIRECTED, THIS PRODUCT IS NOT ALLOWED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES.  Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.		
Site Preparation	This product may be used prior to planting any tree, shrub or vine, including Christmas tree species, in a nursery or production setting.			
Wiper Application	This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established trees, shrubs or vines. See the "SELECTIVE EQUIPMENT" section of this label for further information about the proper use of wiper applicators.			

14.6 – PARKS, RECREATIONAL & RESIDENTIAL AREAS				
LABELLED SITES: Around Trees, Fences, Paths, Driveways, Around Buildings, Patios, Sidewalks, Flower Beds, Around Shrubs and				
	other Ornamental Plants			
TYPES OF	USE DIRECTIONS	RESTRICTIONS		
APPLICATIONS				
Trim-and-Edge, Spot Treatment	This product may be used to eliminate unwanted weeds growing in areas listed above.	Spray only when air is calm.		
	Use suitable hand held equipment for directed spraying according to instructions in Section 7.3 "MIXING FOR HAND-HELD SPRAYERS".	Do not allow spray, drift or mist to contact foliage or green bark of desirable		
	If necessary, use cardboard or plastic to shield desirable plants.	ornamental species.		
	Do not use for spot weed control in lawns since desirable lawn grass will also be killed.			
Site Preparation, Lawn	This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), lawn renovation or prior to laying asphalt or beginning construction projects.			
Renovation	MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.			
	Apply using suitable broadcast or directed spray equipment.			
	For lawn renovation, thorough coverage is necessary to kill all weeds and old lawn.			
	For best results, apply when daytime temperatures are at least 60 F. Do not mow for 7 days before or after treatment.			
	7 days after application, soil may be tilled, fertilized and seeded.			

14.7 – RAILROADS					
	LABELLED SITES: Railroad Rights-of-Way, Railroad Ballast areas				
TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS			
Boom Sprayers, Shielded Boom	All of the instructions in the "NONCROP AREAS AND INDUSTRIAL SITES" section apply to railroads.	Observe application precautions in Section 8.0.			
Sprayers, High- Volume Off- Center Nozzles,	MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.				
Hand-Held Equipment	This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used.				
	Avoid application to non-target plants due to drift, overspray or runoff.				
	TANK MIXTURES: This product may be tank mixed with the following products (or generic equivalent) for ballast, shoulder, spot, bare ground and crossing treatments provided that the specific product is registered for use on such sites. Refer to these product labels for approved non-crop sites and application rates. 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 precautionary statements for each product in the mixture.				
	ARSENAL® KROVAR® I DF Dicamba OUST® DIURON SAHARA® ESCORT® SPIKE® GARLON® 3A TELAR® GARLON® 4 VELPAR® HYVAR® X 2,4-D				
	Brush control				
	This product may be used to control woody brush and trees on railroad rights-of-way. Apply 4 to 10 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a ¾ to 2 percent solution of this product when using high-volume spray-to-wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment. This product may be mixed with the following products (or generic equivalent) for enhanced control of woody brush and trees:				
	ARSENAL® TELAR DF ESCORT® TORDON® K GARLON® 3A TORDON 22K				
	GARLON 4 TRANSLINE				
	KERNITE VANQUISH				
	VELPAR				

14.8 – ROADSIDES							
LABELLED SITES	S: Roadside Rights of Way areas (including Shoulders, Guardrails and Signp	oosts)					
TYPES OF	USE DIRECTIONS	RESTRICTIONS					
APPLICATIONS							
Boom Sprayers, Shielded Boom Sprayers, High- Volume Off-	All the instructions in the "NONCROP AREAS AND INDUSTRIAL SITES" section apply to roadsides.  MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL"	Observe application precautions in Section 8.0.					
Center Nozzles, Hand-Held	WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.						
Equipment, And Similar Equipment.	This product may be used on road shoulders, under guardrails and around signposts and other objects along roadsides that may be obstacles to mowing.						
	Avoid application to non-target plants due to drift, overspray or runoff.						
	TANK MIXTURES: This product may be tank-mixed with the following products (or generic equivalent) for shoulder, guardrail, spot and bare ground treatments:						
	BANVEL® PRINCEP® LIQUID DIURON RONSTAR® 50 WP ENDURANCE® SAHARA® ESCORT® SIMAZINE KROVAR® I DF SURFLAN® OUST® TELAR® PENDULUM® 3.3 EC VANQUISH® PENDULUM® WDG PRINCEP® DF						
	See the "NONCROP AREAS AND INDUSTRIAL SITES" section of this label for instructions for tank mixing.						
Spot treatment	This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.						

This product may be used vegetation and to eliminat ornamental plantings. This ornamentals, flowers, turfornamentals, flowers, turfornamentals,	USE DIRECTIONS in utility sites and substatice unwanted weeds growing product may be used prior	ts-Of-Way, And In Other Sites Amilar Rights-Of-Way That Run In						
This product may be used vegetation and to eliminat ornamental plantings. This ornamentals, flowers, turfornamentals,	USE DIRECTIONS in utility sites and substation a unwanted weeds growing product may be used prior	Sons to control unwanted	RESTRICTIONS					
vegetation and to eliminat ornamental plantings. This ornamentals, flowers, turfo	in utility sites and substations unwanted weeds growing product may be used prior	ons to control unwanted						
vegetation and to eliminat ornamental plantings. This ornamentals, flowers, turfo	e unwanted weeds growing s product may be used prior		Observe application					
MAKE ADDITIONS A		This product may be used in utility sites and substations to control unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.						
Avoid application to non-ta	arget plants due to drift, ove	erspray or runoff.						
Repeated applications of t bare ground.	his product may be used, a	s weeds emerge, to maintain						
For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands of tough-to-control woody brush and trees, use the higher labeled rates.								
TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees. This product may be tank mixed with the following products or generic equivalent). Refer to these products' labels for approved non-crop sites and application rates. Read and carefully observe the cautionary statements an all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.								
provided the specific prod <sup>2</sup> Ensure that Garlon 3A is before adding this product	uct is registered for the use. thoroughly mixed with water. Have spray mixture agitati	. er according to label directions						
	WEEDS", PERENNIAL WITHIS LABEL.  Avoid application to non-take Repeated applications of the bare ground.  This product can also be used these sites, maintaining actions of dense stands of toughtrates.  TANK MIXTURES: Tankin spectrum of control for her be tank mixed with the folliproducts' labels for approvious observe the cautionary state all herbicides used. Use an each product in the mixture.  User is responsible for ensapplication when tank mixed atrazine arricade 65WG dicambar diuron Barricade 65WG dicambar secont Escort XP Garlon 3A2 Garlon 43  Tank mixtures with product provided the specific product added to avoid spray incorrect asserts.	WEEDS", PERENNIAL WEEDS", AND WOODY BRUTHIS LABEL.  Avoid application to non-target plants due to drift, over Repeated applications of this product may be used, a bare ground.  This product can also be used when preparing or estathese sites, maintaining access roads and for side trift.  For control of herbaceous weeds, use the lower label of dense stands of tough-to-control woody brush and rates.  TANK MIXTURES: Tank mixtures of this product may spectrum of control for herbaceous weeds, woody brush be tank mixed with the following products or generic eproducts' labels for approved non-crop sites and applications used. Use according to the most restrict each product in the mixture.  User is responsible for ensuring that the mixture product application when tank mixing with a single generic acceptal atrazine Arsenal Krenite atrazine Strong Oust Coust Oust Oust Coust Oust Coust	WEEDS", PERENNIAL WEEDS", AND WOODY BRUSH & TREES RATE TABLES" IN THIS LABEL.  Avoid application to non-target plants due to drift, overspray or runoff.  Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.  This product can also be used when preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.  For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands of tough-to-control woody brush and trees, use the higher labeled rates.  TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees. This product may be tank mixed with the following products or generic equivalent). Refer to these products' labels for approved non-crop sites and application rates. Read and carefully observe the cautionary statements an all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.  User is responsible for ensuring that the mixture product's label allows the specific application when tank mixing with a single generic active ingredient listed below.  Arsenal Krenite simazine¹ Krovar 1 DF Surflan AS Barricade 65WG Oust Surflan WDG dicamba¹ Oust XP Telar DF diuron¹ Outrider Transline Findurance pendimethalin¹ Vanquish Escort Plateau Velpar DF Scort XP Princep Velpar L Garlon 3A² Ronstar 50WP 2,4-D² Garlon 3A² Ronstar 50WP 2,4-D² Sahara  1 Tank mixtures with product containing this generic active ingredient may be made provided the specific product is registered for the use. 2 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					

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### 15.0 - ANNUAL WEEDS RATE TABLES ALPHABETICALLY BY SPECIES

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE REQUIRED.

- Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.
- Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.
- 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.
- This product may be used up to 48 fluid ounces per acre where heavy weed densities exist.

#### ANNUAL WEEDS RATE TABLE

	APPLICATION RATE (fluid ounces/acre)							
WEED SPECIES	16	24	32	40	48			
	Max	imum heig	_	(in inche	s)			
Ammannia, purple	3"	6"	12"	-	18"			
Annoda, spurred	-	2"	3"	5"	8"			
Barley	18"	18"+	-	-	-			
Barnyardgrass	-	3"	6"	7"	9"			
Bassia, fivehook	-	-	6"	-	-			
Beggarweed, Florida	_	5"	8"	-	-			
Bittercress	12"	20"	-	-	-			
Bluegrass, annual	10"	-	_	-	-			
Bluegrass, bulbous	6"	-	_	-	-			
Brome, downy <sup>1,2</sup>	6"	12"	_	_	_			
Brome, Japanese	6"	12"	24"	_	_			
Browntop panicum	6"	8"	12"	_	24"			
Buckwheat, wild <sup>3</sup>	-	1"	2"	_				
Burcucumber	_	6"	12"	-	18"			
Buttercup	12"	20"	-	_	-			
Carolina geranium	-		4"	_	9"			
Carpetweed	_	6"	12"	_	-			
Cheat <sup>2</sup>	6"	20"	-	_	_			
Chervil	20"	-	_	_	_			
Chickweed	-	12"	18"	-	_			
Cocklebur	12"	18"	24"	-	36"			
Copperleaf, hophornbeam	-	2"	4"	-	6"			
Copperleaf, Virginia	_	2"	4"	_	6"			
Coreopsis, plains	_	6"	12"	_	18"			
Corn, Volunteer	6"	12"	20"	_	-			
Corn speedwell	12"	-	-	_	_			
Crabgrass	3"	6"	12"	-	_			
Crowfootgrass		-	6"	_	12"			
Cutleaf evening primrose	_	_	3"	_	6"			
Devilsclaw (unicorn plant)	_	3"	6"	_	_			
Dwarfdandelion	12"	-	_	_	_			
Eastern mannagrass	8"	12"	_	_	_			
Eclipta	-	4"	8"	12"	_			
Fall panicum	4"	-	6"	-	12"			
Falsedandelion	-	20"	-	_	-			
Falseflax, smallseed	12"	-	_	_	_			
Fiddleneck	-	6"	12"	_	_			
Field pennycress	6"	12"	-	-	_			
Filaree	-	-	6"	_	12"			
Fleabane, annual	6"	20"	-	-	-			
Fleabane, hairy								
(Conyza bonariensis)	-	-	6"	-	10"			
Fleabane, rough	3"	6"	12"	-	-			
Florida pusley	-	-	4"	-	6"			
Foxtail, giant, bristly, yellow	6"	12"	20"	-	-			

	APPLICATION RATE (fluid ounces/acre)						
WEED SPECIES	16	24	32	40	48		
	Max	ximum hei	ht/length	(in inche	s)		
Foxtail, Carolina	10"	-	-	-	-		
Foxtain, green	12"	-	-	-	-		
Goatgrass, jointed	6"	12"	-	-	-		
Goosegrass	-	3"	6"	-	12"		
Grain sorghum (milo)	6"	12"	20"	-	_		
Groundcherry	-	3"	6"	-	9"		
Groundsel, common	-	6"	10"		_		
Hemp sesbania	_	2"	4"	6"	8"		
Henbit	_		6"		12"		
Horseweed/Marestail	-	6"	12"	-	18"		
(Conyza canadensis)	0"	0"	40"		40"		
Itchgrass	6"	8"	12"	-	18"		
Jimsonweed	-	-	12"	-	18"		
Johnsongrass, seedling	6"	12"	18"	-	24"		
Junglerice	-	3"	6"	7"	9"		
Knotweed	-	-	6"	-	12"		
Kochia <sup>4</sup>	-	3" to 6"	12"	-	-		
Lambsquarters	-	6"	12"	-	20"		
Little barley	6"	12"	-	-	-		
London rocket	6"	-	24"	-	-		
Mayweed	-	2"	6"	12"	18"		
Morningglory (Lpomoea spp.)	-	-	3"	-	6"		
Mustard, blue	6"	12"	18"	-	_		
Mustard, tansy	6"	12"	18"	_	_		
Mustard, tumble	6"	12"	18"		_		
	6"	12"	18"	-	_		
Mustard, wild	О	4"	6"	-	40"		
Nightshade, black	-			-	12"		
Nightshade, hairy	-	4"	6"	-	12"		
Oats	3"	6"	18"	-	-		
Pigweed	-	12"	18"	24"	-		
Prickly lettuce	-	6"	12"	-	-		
Purslane	-	-	3"	-	6"		
Ragweed, common	-	6"	12"	-	18"		
Ragweed, giant	-	6"	12"	-	18"		
Red rice	-	-	4"	-	-		
Rye, volunteer/cereal <sup>2</sup>	6"	18"	18" +	-	-		
Ryegrass	-	-	6"	-	12"		
Sandbur, field	6"	12"	-	-	-		
Sandbur, longspine	6"	12"	-	-	-		
Shattercane	6"	12"	20"	-	-		
Shepherdspurse	6"	12"	-	-	-		
Sicklepod	-	2"	4"	-	8"		
Signalgrass, broadleaf	-	3"	6"	7"	9"		
Smartweed, ladysthumb	-	-	6"	-	9"		
Smartweed, Pennsylvania	-	-	6"	-	9"		
Sowthistle, annual	_	-	6"	_	12"		
Spanishneedles	_	-	6"	-	12"		
Speedwell, purslane	12"	_	-	-	-		
Sprangletop	6"	12"	20"	-	_		
		6"	12"				
Spurge, prostrate	-			-	-		
Spurge, spotted	- 0"	6"	12"	-	-		
Spurry, umbrella	6"	-	-	-	-		
Stinkgrass	-	12"	-	-	-		
Sunflower	12"	18"	-	-	-		
Swinecress	-	5"	12"	-	-		
Teaweed/Prickly sida	-	2"	4"	-	6"		

	APPLIC	ATION R	ATE (fluid	d ounces/	acre)
WEED SPECIES	16	24	32	40	48
	Max	imum heig	ght/length	(in inche	s)
Texas panicum	6"	8"	12"	-	24"
Thistle, Russian <sup>5</sup>	-	6"	12"	-	-
Velvetleaf	-	-	6"	-	12"
Virginia pepperweed	-	18"	-	-	-
Waterhemp	-	-	6"	-	12"
Wheat <sup>2</sup>	6"	12"	18"	-	-
Wheat (overwintered)	-	6"	12"	-	18"
Wild oats	3"	6"	18"	-	-
Wild proso millet	-	6"	12"	-	18"
Witchgrass	-	12"	-	-	-
Woolly cupgrass	-	6"	12"	-	-
Yellow rocket	-	12"	20"	-	-

<sup>&</sup>lt;sup>1</sup> For control of downy brome in no-till systems, use 24 fluid ounces per acre.

#### 15.1 - ANNUAL WEEDS - Water Carrier Volumes of 10 to 40 Gallons per Acre

Apply 1 to 2 quarts of this product per acre. Use 1 quart per acre if weeds are less than 6 inches tall and 1.5 quarts per acre if weeds are 6 to 12 inches tall and 2 quarts per acre if weeds are greater than 12 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. Older, mature (hardened) annual weed species may require higher rates even of they meet the size requirements.

#### 15.2 - ANNUAL WEEDS - Tank Mixtures with 2.4-D or Dicamba or Picloram 22K

12 to 16 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 or 1 to 2 fluid ounces of Picloram 22K per acre will control the following weeds with the maximum height or length indicated:

6" – prickly lettuce, marestail/horseweed (Conyza canadensis), morningglory (Ipomoea spp.), kochia (dicamba only); Wild buckwheat (Picloram 22K only)

12" - cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

16 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.

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 *or Picloram 22K* is applied within 45 days of planting.

### DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

# 15.3 - ANNUAL WEEDS - Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLE", apply a 0.5 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation 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 bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 5 percent solution for annual and perennial weeds and a 5 to 10 percent solution for woody brush and trees.

<sup>&</sup>lt;sup>2</sup> Performance is better if application is made before this weed reaches the boot stage of growth.

<sup>&</sup>lt;sup>3</sup> Use 24 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 32 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 32 fluid ounces followed by 32 fluid ounces of this product per acre.

<sup>&</sup>lt;sup>4</sup> Do not treat kochia in the button stage.

<sup>&</sup>lt;sup>5</sup> Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

#### 15.4 - ANNUAL WEEDS - Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

24 to 28 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 28 ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 1/8 pound of dicamba for control).

#### 16.0 - PERENNIAL 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 recommended 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.

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

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:

#### Spray Solution

Desired			Amount of HM-0	705-A Herbicide	9	
Volume	1/2%	1%	1 1/2%	2%	5%	10%
1 Gal	2/3 oz	1 1/3 oz	2 oz	2 2/3 oz	6 ½ oz	13 oz
25 Gal	1 pt	1 qt	1 ½ qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1 ½ gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

WEED SPECIES	RATE (QT/A)	WATER VOL. (GPA)	HAND-HELD % SOLUTION	COMMENTS
Alfalfa	1 - 2	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	4	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	3-5	3-20	2%	Apply when most plants have reached the early head stage.
Bentgrass	1.5	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. Do not till prior to treatment. Till 7 to 10 days after application for best results.
Bermudagrass	3-5	3-20	2%	For control, apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (knotgrass)	1-1.5	5-10	2%	Apply 1.5 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.

WEED SPECIES	RATE (QT/A)	WATER VOL. (GPA)	HAND-HELD % SOLUTION	COMMENTS
Bindweed, field	0.5-5	3-20	2%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.
				For control, apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 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 2 quarts of this product plus 0.5 pounds a.i. of Banvel® in 10 to 20 gallons of water per acre. Do not apply by air.
				For suppression on irrigated agricultural land, apply 1 to 2 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 16 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 5 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	1-2	3-40	2%	Apply 2 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 1.5 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	3-5	3-40	2%	Apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 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	3-4	3-40	1-1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1-2	3-40	2%	Apply 2 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 1.5 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 2 quarts of this product plus 1 pint of Banvel® per acre. For partial control, apply 1 quart of this product plus 1 pint of Banvel® 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	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	3-5	3-40	2%	Apply when most plants have reached the early head stage.
Clover; red, white	3-5	3-20	2%	Apply when most plants have reached the early bud stage.  Also for control, apply 16 to 32 fluid ounces of this product plus ½ to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.
Cogongrass	3-5	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	3-5	3-20	2%	Apply when most plants have reached the early head stage.

WEED SPECIES	RATE (QT/A)	WATER VOL. (GPA)	HAND-HELD % SOLUTION	COMMENTS
Dandelion	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth.
				Also for control, apply 16 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	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 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	4	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 16 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)	3-5	3-20	2%	Apply when most plants have reached the early head stage.
Fescue, tall	1-3	3-40	2%	Apply 3 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 1 pint per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Guineagrass	2 - 3	3-40	1%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.
Horsenettle	3-5	3-20	2%	Apply when most plants have reached the early bud stage.
Horseradish	4	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	-	-	1.5-2%	Iceplant should be at or beyond the early bud stage of growth.  Thorough coverage is necessary for best control.
Jerusalem artichoke	3-5	3-20	2%	Apply when most plants are in the early bud stage.
Johnsongrass	0.5-3	3-40	1%	In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 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 2 to 3 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 1 pint 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. Coverage must be uniform and complete.
Kikuyugrass	2-3	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	4	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	-	-	1-1.25%	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	3-5	3-20	2%	Apply when most plants have reached the early bud stage.
Milkweed, common	3	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1-2	3-40	2%	Use 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts 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.

WEED SPECIES	RATE (QT/A)	WATER VOL. (GPA)	HAND-HELD % SOLUTION	COMMENTS
Mullein, common	3-5	3-20	2%	Apply when most plants are in the early bud stage.
Napiergrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	2	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	0.5-3	3-40	1-2%	Apply 3 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 2 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 1 pint to 2 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	1-2	3-40	2%	Apply 2 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 1.5 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 1.5 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	-	-	1.5-2%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Phragmites	3-5	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	1-3	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 2 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 2 to 3 quarts of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

WEED SPECIES	RATE (QT/A)	WATER VOL. (GPA)	HAND-HELD % SOLUTION	COMMENTS
Redvine	0.75-2	5-10	2%	For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 2 quarts per acre. Apply labeled 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	1-3	3-40	1%	In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 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 2 to 3 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	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 16 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	2-3	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 16 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	2	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	2-3	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 1 pint 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. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.
Timothy	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	4-5	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.
Trumpetcreeper	2	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	3-5	3-20	2%	Apply when most plants are in the early head stage.
Velvetgrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Wheatgrass, western	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to- head stage of growth.

#### 16.1 - PERENNIAL WEEDS - Bromus Species and Medusahead

For Use in the States of Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming Only

Bromus Species: This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 8 to 16 fluid ounces of product per acre on a broadcast basis. For best results, coincide treatment with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Make applications to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the site.

Medusahead: To treat medusahead, apply 16 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4 leaf stage. Applications may be made in the fall or spring.

Application Equipment and Techniques: Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre. When applied as directed there are no grazing restrictions.

#### 17.0 -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.

Unless otherwise directed, apply broadcast treatments in 3 to 40 gallons of water per acre. 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)	HAND-HELD % SOLUTION	COMMENTS	
Alder	3-4	1-1.5%	For control	
Ash	2-5	1-2%	Partial control	
Aspen, quaking	2-3	1-1.5%	For control	
Bearmat (Bearclover)	2-5	1-2%	Partial control	
Beech	2-5	1-2%	Partial control	
Birch	2	1%	For control	
Blackberry	3-4	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 ¾ 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 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.	
Blackgum	2-5	1-2%	For control	
Bracken	2-5	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	2-5	1-2%	Partial control	
Catsclaw	-	1-1.5%	Partial control	
Ceanothus	2-5	1-2%	Partial control	
Chamise	-	1%	For control. Thorough coverage of foliage is necessary for best results.	
Cherry; bitter, black, pin	2-3	1-1.5%	For control	
Coyote brush	-	1.5-2%	For control. Apply when at least 50 percent of the new leaves are fully developed.	
Dogwood	2-5	1-2%	Partial control	
Elderberry	2	1%	For control	

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WEED SPECIES	RATE (QT/A)	HAND-HELD % SOLUTION	COMMENTS
Elm	2-5	1-2%	Partial control
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)	2-5	1-2%	Partial control
Gorse	2-5	1-2%	Partial control
Hasardia	-	1-2%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	2-3	1-1.5%	For control
Hazel	2	1%	For control
Hickory	2-5	1-2%	Partial control
Honeysuckle	3-4	1-1.5%	For control
Hornbeam,	2-5	1-2%	Partial control
American			
Kudzu	4	2%	For control. Repeat applications may be required to maintain control.
Locust, black	2-4	1-2%	Partial control
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	2-5	1-2%	Partial control
Maple, red	2-4	1-1.5%	For control, apply a 1 to 1.5 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre.
Maple, sugar	-	1-1.5%	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	2-4	1-2%	Partial control
Oak, post	3-4	1-1.5%	For control
Oak; northern, pin	-	1-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Oak, southern, red	2-3	1-1.5%	For control
Persimmon	2-5	1-2%	Partial control
Pine	2-5	1-2%	For control
Poison ivy/Poison oak	4-5	2%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	2-5	1-2%	Partial control
Redbud, eastern	2-5	1-2%	For control
Rose, multiflora	2	1%	For control. make treatments prior to leaf deterioration by leaf-eating insects.
Russian olive	2-5	1-2%	Partial control
Sage, black	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	2-5	1-2%	Partial control
Sage brush, California	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	2	1%	For control
Salt-cedar	2-5	1-2%	For control
Sassafras	2-5	1-2%	Partial control
Sourwood	2-5	1-2%	Partial control
Sumac; poison,	2-4	1-2%	Partial control
smooth, winged	0.5	4.4 ===:	
Sweetgum	2-3	1-1.5%	For control
Swordfern	2-5	1-2%	Partial control
Tallowtree, Chinese	-	1%	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 applications.
Thimbleberry	2	1%	For control
Tobacco, tree	-	1-2%	Partial control
Trumpetcreeper	2-3	1-1.5%	For control
Vine maple	2-5	1-2%	Partial control
Virginia creeper	2-5	1-2%	For control
Waxmyrtle, southern	2-5	1-2%	Partial control
Willow	3	1%	For control

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The DIRECTIONS FOR USE of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of HELENA CEHMICAL COMPANY, its Supplemental Distributors, or the Seller. All such risks shall be assumed by the Buyer.

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