Loveland PRODUCTS

ACCEPTED
VIA NOTIFICATION
LABEL NOT REVIEWED
March 16, 2017
New York State Department
of Environmental Conservation
Division of Materials Management
Pesticide Product Registration

Doc id: 548956

GROUP 9 HERBICIDE

MAD DOG® PLUS

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:	59.0%
TOTAL	100.0%

*Contains 480 grams per liter or 4.0 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3.0 pounds per U.S. gallon of the acid, glyphosate.

Licensed for Roundup Ready® alfalfa, cotton, corn, canola, Flex cotton, sugarbeets and soybeans.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA REG. NO. 34704-890

051215 V1D 08O16

FORMULATED FOR
LOVELAND PRODUCTS, INC.®, P.O. BOX 1286, GREELEY, COLORADO 80632-1286

FIRST AID	
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.**	

1.0 INGREDIENTS

ACTIVE INGREDIENT	
***Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt**	**41.0%**
OTHER INGREDIENTS:	**59.0%**
TOTAL	**100.0%**

2.0 EMERGENCY PHONE NUMBERS

24-Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-866-944-8565
U.S. Coast Guard National Response Center: 1-800-424-8802

3.0 PRECAUTIONARY STATEMENTS

3.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

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

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

3.2 PERSONAL PROTECTIVE EQUIPMENT: (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Waterproof gloves.

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/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.

3.4 PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product must be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE, OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. 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 Limitation of Liability, Section 18.0, at the end of the label before buying or using. If terms are unacceptable, return at once unopened.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

3.5 AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with Worker Protection Standard (WPS), 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 (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.
Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Waterproof gloves
- 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 7.1.

4.0 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 Mixing, Section 6.0, 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 Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0, 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, spray coverage should be 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 8.0 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.

5.0 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.

5.1 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 Loveland Products, Inc. representative, local retailer, or county extension agent.

5.2 Management Directions for Glyphosate Resistance Biotypes
Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. Contact your Loveland Products, Inc. representative to determine if resistance has been confirmed to any particular weed biotype in your area, or visit on the internet www.weedresistancemangement.com or www.weedscience.org. For more information see the Annual Weeds and Perennial Weeds tables, Sections 14.0 and 15.0.

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 Loveland Products, Inc. representative.

Since the occurrence of new glyphosate-resistant weeds cannot be determined until after product use and scientific confirmation, Loveland Products, Inc. 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 crops.
- 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.

6.0 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.

6.1 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.

6.2 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 1/2 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 1 part flowable with 1 part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix 1 part emulsifiable concentrate with 2 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 should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to Tank Mixing, Section 4.0, for additional precautions.

6.3 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

	Amount Mad Dog Plus®					
Desired Volume	**0.5%**	**1.0%**	**1.5%**	**2.0%**	**5.0%**	**10.0%**
1.0 gal	0.6 oz	1.3 oz	2.0 oz	2.6 oz	6.5 oz	13.0 oz
25.0 gal	1.0 pt	1.0 qt	1.5 qt	2.0 qt	5.0 qt	10.0 qt
100 gal	2.0 qt	1.0 gal	1.5 gal	2.0 gal	5.0 gal	10.0 gal

2.0 tablespoons = 1.0 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.

6.4 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 Mad Dog Plus 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.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech® adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

6.5 Ammonium Sulfate
The addition of 1.0 to 2.0% dry ammonium sulfate by weight or 8.5 to 17.0 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.

6.6 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 specifications.

6.7 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.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

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

7.0 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.

7.1 Drift Precaution
Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation. 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.

7.2 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.

Use the specified rates of this herbicide in 3.0 to 15.0 gallons of water per acre unless otherwise specified, on this label. Unless otherwise specified do not exceed 1.0 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 manufacturers specified 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 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Do not apply 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 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).

Do not apply directly 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.
Do not apply tank mixes with dicamba products by air in California.

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 2.0 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 1.0 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 3.0 to 15.0 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

(From February 15 through March 31 Only)

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

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

Use Information: Always read and follow the label directions and precautionary statements for all products used in 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.

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 3.0 to 15.0 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.

7.3 Ground Broadcast Equipment
Use the specified rates of this product in 3.0 to 40.0 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased 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.

7.4 Hand-Held or High-Volume Equipment
Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage must be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For labeled rates and timing refer to Annual Weeds - Hand-Held or High-Volume Equipment, Section 14.3.

7.5 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.

Applications made above the crops should be made 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 and Perennial Weeds tables, Sections 14.0 and 15.0. 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 any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. 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° spray angle positioned at the top center of the hood. Minimum spray volume must be 20.0 to 30.0 gallons per acre.

These procedures will reduce the potential for crop injury:
- The spray hoods must be operated on the ground or 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.
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 Bristly starbur, Common rye, Shattercane, Sicklepod, Spanish needles, Texas panicum, and Volunteer corn; and SUPPRESSES many weeds including Bermuda grass, Canada thistle, Dogfennel, Florida beggarweed, Giant ragweed, Guineagrass, Hemp dogbane, Johnsongrass, Milkweed, Musk thistle, Redroot pigweed, Silverleaf nightshade, Smutgrass, Sunflower, Vaseygrass, and 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 1.0 gallon of this product in 2.0 gallons of water to prepare a 33% solution. Apply this solution to weeds listed above in this section.

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

7.6 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.

7.7 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 3.0 to 20.0 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20% solution of this product at a flow rate of 2.0 fluid ounces per minute and a walking speed of 1.5 mph (1.0 quart per acre). For the control of perennial weeds, apply a 20 to 40% solution of this product at a flow rate of 2.0 fluid ounces per minute and a walking speed of 0.75 mph (2.0 to 4.0 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.

8.0 ANNUAL AND PERENNIAL 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 Roundup Ready Crops, Section 11.0, or separately published Loveland Products, Inc. supplemental labeling for instructions for treating Roundup Ready crops.

Types of Applications
Chemical fallow, Preplant fallow beds, Preplant, Preemergence, At-planting, Hooded sprayers in row-middles, Shielded sprayers in row-middles, Wiper applications in row-middles and Postharvest 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 preemergent 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 AND TREES RATE TABLES, SECTIONS 14.0, 15.0 AND 16.0. Repeat applications may be made up to a maximum of 8.0 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 unmulched row-middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to Selective Equipment, Section 7.5, 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 shall 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
- Pre-harvest Interval (PHI): 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% 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 preemergence 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.
- Postharvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
- Pre-harvest Interval (PHI): For broadcast post-emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

8.1 CEREAL CROPS

LABELED CROPS: Barley, Buckwheat, Millet (Pearl and Proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all), Wild rice

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.	Do not treat rice fields or levees when the field contains floodwater.
Red rice control (prior to planting Rice)	Avoid spraying during low humidity conditions, as reduced control may result. Apply 1.5 qt of this product in 5.0 to 10.0 gal of water/A. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may only be partially controlled.	DO NOT TREAT RICE FIELDS OR LEVEES WHEN THE FIELDS CONTAIN FLOOD WATER. DO NOT REFLOOD TREATED FIELDS FOR 8 DAYS FOLLOWING APPLICATION.
Spot treatment (except Rice)	This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.	Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.
Over-the-top Wiper applications (feed barley and wheat only)	Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.	Pre-harvest Interval (PHI): Allow at least 35 days between application and harvest. Do not use roller applicators.
Preharvest (feed barley and wheat only)	This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest. This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10.0 to 20.0 gal of water/A. For aerial applications, apply this product in 3.0 to 10.0 gal of water/A.	Do not apply more than 1.0 qt of this product/A. Do not apply to wheat or barley grown for seed, as a reduction in germination or vigor may occur. Pre-harvest Interval (PHI): Allow 7 days between application and harvest or grazing.
Postharvest	This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.	For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.2 CORN (Non-Roundup Ready)
LABELED CROPS: Field corn, Seed corn, Silage corn, Sweet corn and Popcorn

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence 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 10.0 to 20.0 gal of water or 10.0 to 60.0 gal of nitrogen solution/A. 2,4 D Aim® Atrazine Axiom® Balance® Bicep Magnum® Bicep II Magnum® Bullet® Degree® Degree Xtra Distinct® Dual Magnum® Dual II Magnum® Epic® Frontier®/Outlook® Fultime® Guardsman®/Leadoff® Harness® Harness Xtra Harness Xtra 5.6L Lariat® Intrro® Linex®/Lorox® Marksman® Micro-Tech® Stealth® Python® simazine Topnotch® For difficult-to-control annual weeds such as Barnyardgrass, Broadleaf signal grass, Crabgrass, Fall panicum, and Shattercane, up to 2 inches tall and Pennsylvania smartweed up to 6 inches tall, apply this product at 2.0 pt/A in these tank mixtures. For other labeled weeds, apply 1.5 to 2.0 pt of this product/A when weeds are less than 6 inches tall, 2.0 to 3.0 pt 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 Annual ryegrass, Barnyardgrass, Broadleaf signalgrass, Fall panicum, and any perennial weeds. The area covered by these directions includes from Route 50 South in IL and IN and the following states: AK, AL, DE, FL, GA, KY, LA, MD, MI, NJ, NC, OK, SC, TN, TX, VA, and West VA.
Spot treatment	For spot treatments, apply this product prior to silking of corn.	Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray 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 7.0, of this label. 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.	Corn must be at least 12 inches tall, measured without extending leaves. Do not apply more than 1.0 qt of this product/A for each application and no more than 3.0 qt/A/yr for hooded sprayer applications.

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8.2 Corn (Non-Roundup Ready) cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preharvest	Make applications at 35% 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 3.0 qt of this product/A. For aerial applications, apply up to 2.0 qt of this product/A. PRECAUTION: It is not recommended that corn grown for seed be treated because a reduction in germination or vigor may occur.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest.
Postharvest	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.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 COTTON

LABELED CROPS: Cotton (Non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence 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 Selective Equipment, Section 7.5, for information on proper use and calibration of this equipment application and harvest. Pre-harvest Interval (PHI): 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% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.
Preharvest	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 Weeds, Perennial Weeds and Woody Brush and Trees rate tables, Sections 14.0, 15.0, and 16.0. Apply 1.0 pt to 2.0 qt of this product/A for cotton regrowth inhibition. Up to 2.0 qt 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® Ginstar® or Prep® to provide additional enhancement of cotton leaf drop.	Pre-harvest Interval (PHI): 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.

8.4 FALLOW SYSTEMS

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

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Chemical fallow	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 2.0 qt/A 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 CA. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.
Preplant 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 Weeds, Perennial Weeds and Woody Brush and Trees rate tables, Sections 14.0, 15.0, and 16.0. Tank Mixtures: In addition, 12.0 fl oz of this product plus 2.0 to 3.0 oz of Goal® 2XL (or generic equivalent)/A will control the following weeds with the maximum height or length indicated: 3" - Chickweed, Common cheeseweed, Groundsel; 6" - London rocket, Shepherd's-purse. 16.0 fl oz of this product plus 2.0 to 3.0 oz of Goal 2XL (or generic equivalent)/A will control the following weeds with the maximum height or length indicated: 6" - Common cheeseweed, Groundsel, Marestail (Conyza canadensis), 12" - Chickweed, London rocket, Shepherd's-purse. PRECAUTION: Some crop injury may occur if dicamba is applied within 45 days of planting.	For any crop not listed on this label applcations must be made at least 30 days prior to planting. DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CA. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.
Aid-to-Tillage	This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control Cheat, Downy brome, Foxtail, Tansy mustard, and Volunteer wheat. Apply 12.0 fl oz of this product in 3.0 to 10.0 gal of water/A. 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. PRECAUTION: Tank mixtures with residual herbicides may result in reduced performance.	Allow at least 1 day after application before tillage.

8.5 GRAIN SORGHUM (Milo)
LABELED CROPS: Grain Sorghum (Milo)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence 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. Tank Mixtures: Apply these tank mixtures in 10.0 to 20.0 gal of water or 10.0 to 60.0 gal of nitrogen solution/A. Atrazine — Lariat Bicep II Magnum — Lasso® Bullet® — Micro-Tech Dual II Magnum — Milo-Pro® For difficult-to-control annual weeds such as Barnyardgrass, Broadleaf signalgrass, Crabgrass, Fall panicum, and Shattercane up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2.0 pt/A in these tank mixtures. For other labeled annual weeds, apply, 1.5 to 2.0 pt of this product/A when weeds are less than 6 inches tall, and 2.0 to 3.0 pt when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.	For spot treatment. Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason. Pre-harvest Interval (PHI): 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.
Spot treatment Over-the-top Wiper applications	This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under Shielded and Hooded Applicators in Section 7.5.	See Restrictions in Section 8.0 For spot treatment do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason. Pre-harvest Interval (PHI): For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.
Hooded sprayers	This product may be used through hooded sprayers for weed control between the rows of milo. Only sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of Shielded and Hooded Applicators in Section 7.5. 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.	Milo must be at least 12 inches tall, measured without hooded extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. 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 graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 1.0 qt of this product/A/application and no more than 3.0 qt/A for hooded sprayer applications.

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8.5 Grain Sorghum (Milo) cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preharvest	It is not recommended that sorghum grown for seed be treated, as a reduction in germination or vigor may occur. Make applications at 30% grain moisture or less. The use of this product for pre-harvest grain sorghum (milo) is not registered in CA. 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.	Do not apply more than 2.0 qt of this product/A. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of sorghum.
Postharvest	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. This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1.0 qt of this product/A for control, or 1.5 pt of this product/A for suppression.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 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, Cilantro (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

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0 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, it is recommended to make applications 3 days before transplanting or planting.	See Restrictions in Section 8.0
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, hand guns, 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.	Pre-harvest Interval (PHI): Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10% of the total field area to be harvested can be treated at one time. Crop sprayed in treated area will be killed. Take care not to spray or allow spray to drift outside the target area to avoid unwanted crop destruction.

8.7 OIL SEED CROPS

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

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant At-planting Preemergence	This product may be applied before, during or after planting oilseed crops listed in this section, but must be applied prior to crop emergence. Observe the maximum application rates listed at the beginning of this section. Tank Mixtures: For sunflower, a tank mixture with Stealth may be applied before, during or after planting into conventionally tillage soil, a cover crop, established sod or previous crop residue.	
Preharvest (except Buffalo gourd)	This product provides weed control and serves as a harvest aid when applied to a physiologically mature oilseed crop listed in this section. For safflower, apply up to 3.0 qt of this product/A when seed has lost its opaque character, approximately 20 to 30 days after the end of flowering of the secondary branches. For sunflower, apply up to 1.0 qt of this product when the backsides of the sunflower heads are yellow and bracts are turning brown and seed moisture content is less than 35%. For all other oilseed crops listed in this section (except Buffalo gourd), apply up to 48.0 fl oz of this product/A prior to harvest.	DO NOT MAKE A PREHARVEST APPLICATION if you have exceeded the maximum application rates for the combined total of all preemergence and selective equipment applications listed in the table in this section. Make only 1 preharvest application of this product. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest or feeding to livestock. Application must be made a minimum of 30 days prior to the planting of any crop not listed on the Roundup Ultra® herbicide product label.
	Maximum Application Rates if a Preharvest Application is Made	
	Safflower Combined total for all Preemergence and Selective Equipment applications 3.0 qt/A	
	Preharvest application 3.0 qt/A	
	Sunflower Combined total for all Preemergence and Selective Equipment applications 1.0 qt/A	
	Preharvest application 1.0 qt/A	
	All Other Oilseed Crops Listed (Except Buffalo gourd) Combined total for all Preemergence and Selective Equipment applications 2.0 qt/A	
	Preharvest application 48.0 fl oz/A	
Postharvest	This product may be applied for weed control after harvest of oilseed crops. Higher rates might be required for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the specific product being used is labeled for postharvest application in the crop harvested. Read and follow label directions for all products in the tank mixture.	Do not exceed a total application rate of 8.0 qt of this product/A/year. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application of this product and harvest or feeding of vegetation in the application area. Application must be made a minimum of 30 days prior to the planting of any crop not listed on the Roundup Ultra herbicide product label.

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8.7 Oil Seed Crops cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Selective equipment	This product may be applied using a wiper applicator or shielded sprayer between crop rows once the crop is established. Observe the maximum application rates listed at the beginning of this section. See Application and Techniques, Section 7.0 for additional instructions on the use of wiper applicators and shielded sprayers.	See the use instructions at the beginning of this section for important information on maximum application rates for preemergence and selective equipment applications of this product.

8.8 SOYBEANS

LABELED CROPS: Soybeans (Non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence At-planting	This product may be applied before, during or after planting soybeans. Applications must be made prior to emergence of the crop. Refer to table below for tank mixtures that may be applied before, during or after planting in conventional tillage systems, into a cover 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 2.0 pt/A in these tank mixtures. For other labeled annual weeds, apply 1.5 to 2.0 pt of this product/A when weeds are less than 6 inches tall and 2.0 to 3.0 pt when weeds are over 6 inches tall. Tank Mixes: Aim, Assure® II, Authority®, Boundary®, Canopy, Canopy XL, Command, Domain, Dual, Dual II Magnum, Firstrate, Flexstar®, Frontline/Outlook, Fusion®, Gauntlet®, Intrro, Linex, Lorox/Linuron, Lorox Plus, Magnum, Micro-Tech, Pursuit®, Pursuit Plus, Reflex®, Scepter®, Sencor®/Lexone, Squadron®, Stealth, Steel®, Valor®	The tank mix recommendations in this section are not registered in CA.
Spot treatment	For spot treatments, apply this product prior to initial pod set in soybeans.	Do not treat more than 10% of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

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8.8 Soybeans cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preharvest	This product provides weed control when applied prior to harvest of soybeans. Apply at rates given in the Annual Weeds, Perennial Weeds and Woody Brush and Trees rate tables, Sections 14.0, 15.0, and 16.0. This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.	Do not apply more than 5.0 qt/A of this product for pre-harvest applications. Do not apply more than 2.0 qt/A of this product by air. Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last pre-harvest application. (If the application rate is 1.0 qt/A or lower, the grazing restriction is reduced to 14 days after the last pre-harvest application.) Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.
Selective equipment	This product may be applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. See Selective Equipment, Section 7.5, for information on proper use and calibration of this equipment.	Pre-harvest Interval (PHI): Allow at least 7 days between application and harvest.

8.9 SUGARCANE

LABELED CROPS: Sugarcane

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Preplant Preemergence 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	Avoid spray contact with healthy cane plants since severe damage or destruction may result. This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane make a 1% 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.
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 4.0 to 5.0 qt of this product in 10.0 to 40.0 gal of water/A to new growth having at least 7 new leaves. Ground or aerial application equipment may be used. Applications up to 3.0 qt/A 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.	Allow 7 or more days after application before tillage.

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8.9 Sugarcane cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
Hooded sprayers	This product may be used through hooded sprayers for weed control between the rows of sugarcane. See Application Equipment and Techniques, Section 7.0, for additional Use Directions. 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.	Do not allow treated weeds to come into contact with the crop.
For aid in sugarcane ripening (FL, HI, LA, PR and TX)	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. When applied as directed, under the conditions described, this product will hasten ripening and extend the period of high sucrose level in sugarcane. As a result of leaf desiccation, improved trash burn can be expected. 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. Prior to application, consult your state sugarcane authority or local Loveland Products, Inc. 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. Application Rates: Use the following application rates and timing instructions according to the state in which the sugarcane is grown. 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 produce a slight yellowing to pronounced browning and drying of leaves, and a shortening of upper internodes.	Do not make application to sugarcane grown for seed, as a reduction in germination or vigor may occur. Do not feed or graze treated sugarcane forage following application. Do not apply for enhanced ripening to any crops other than sugarcane. 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.

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8.9 Sugarcane cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 8.0	See Use Directions in Section 8.0	See Restrictions in Section 8.0
For aid in sugarcane ripening (FL, HI, LA, PR and TX) cont'd.:	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. FL - Apply 5.0 to 12.0 fl oz of this product/A 3 to 6 weeks before harvest of LAST RATOON CANE ONLY. HI - Apply 9.0 to 21.0 fl oz of this product/A 4 to 10 weeks before harvest. LA - Apply 3.5 to 12.0 fl oz of this product/A 3 to 7 weeks before harvest of RATOON CANE ONLY. PR - Apply 5.0 fl oz of this product/A 3 to 5 weeks before harvest of RATOON CANE ONLY. TX - Apply 5.0 to 12.0 fl oz of this product/A 3 to 5 weeks before harvest of RATOON CANE ONLY.	Do not make application to sugarcane grown for seed, as a reduction in germination or vigor may occur. Do not feed or graze treated sugarcane forage following application. Do not apply for enhanced ripening to any crops other than sugarcane. 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.

8.10 VEGETABLE CROPS

NOTE: THIS VEGETABLE CROPS SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 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 Postharvest, Directed applications (Non-Bearing Ginseng), Over-the-top wiper applications (Rutabagas only).

Precautions, Restrictions: 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 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. When making preemergence 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. Postharvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See Application Equipment and Techniques, Section 7.0, for additional information.

8.10-1 BRASSICA VEGETABLES

LABELED CROPS: Broccoli, Broccoli (raab), Brussels sprouts, Cabbage, Cabbage (Chinese), Cabbage (Chinese mustard), Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy and napa), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Restrictions in Section 8.10

8.10-2 BULB VEGETABLES

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Shallot, Welsh onion, Shallot

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Restrictions in Section 8.10

8.10-3 CUCURBIT VEGETABLES AND FRUITS

LABELED 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, and Persian, 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 Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	For cantaloupe, casaba melon, crenshaw melon, cucumber, gherkin, gourds, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, Persian melon, pumpkin, squash (summer and winter), and watermelon, allow at least 3 days between application and planting.

8.10-4 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 and upland), Dandelion dock (sorrel), Dokudami, Endive (escarole), Fennel (Florence), Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach (All), Swiss Chard, Watercress (upland),Water Spinach

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0 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 Vegetable Crops in Section 8.10

8.10-5 FRUITING VEGETABLES

LABELED CROPS: Eggplant, Ground cherry (*Physalis* spp.), Pepino, Pepper (includes bell, chili, cooking, pimento, sweet), Tomatillo, Tomato

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0 PRECAUTION: For tomato, hooded or shielded sprayer applications in row-middles are not recommended.	See Vegetable Crops in Section 8.10 For eggplant, ground cherry, pepino, pepper (all), tomatillo, and tomato allow at least 3 days between application and planting.

8.10-6 LEGUME VEGETABLES (succulent or dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean) Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil pea, (*Pisum*: includes dwarf pea, edible podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Vegetable Crops in Section 8.10
Preharvest broadcast spray (Dry beans)	This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry beans. Apply up to 32.0 fl oz in 3.0 to 20.0 gal of water/A at the hard dough stage of the legume seed (30% grain moisture or less). Either ground broadcast or aerial applications may be made.	Pre-harvest Interval (PHI): Apply at least 7 days before harvest for dry beans, dry peas, lentils and chickpeas. Only 1 application/yr may be made; do not combine a pre-harvest spray with a spot treatment on the same crop area. Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system. Do not treat field (feed) peas, since these are considered to be grown as livestock feed.
Preharvest broadcast spray (Dry peas, Lentils and Chickpeas)	Preharvest application is not recommended for dry beans, dry peas, lentils and chickpeas grown for seed, as a reduction in germination or vigor may occur.	

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8.10-6 Legume Vegetables (succulent or dried) cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preharvest broadcast spray cont'd (Dry peas, Lentils and Chickpeas)	This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry peas, lentils and chickpeas. Apply up to 64.0 fl oz in 3.0 to 20.0 gal of water/A at the hard dough stage of the legume seed (30% grain moisture or less). Either ground broadcast or aerial applications may be made.	
Spot treatment (Dry beans, Dry peas, Lentils, and Chickpeas)	This product may be applied as spot treatment to control troublesome weeds such as Canada thistle, Quackgrass, Mayweed (Dog fennel), and Milkweed in dry beans. Apply up to 26.0 fl oz in 10.0 to 20.0 gal of water through ground spray equipment or use a 2% solution in a handheld sprayer. For best results, applications should be made at or beyond the bud stage of growth. The crop receiving spray in treated areas will be killed.	Pre-harvest Interval (PHI): Apply at least 14 days before harvest. Only 1 application per year may be made; do not combine a pre-harvest spray with a spot treatment on the same crop. Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system. Do not treat field cowpeas, since these are considered to be grown as livestock feed.

8.10-7 ROOT AND TUBER VEGETABLES

LABELED CROPS: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and 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 and Spanish), Skirret, Sweet potato, Tanier, Tumeric, Turnip, Wasabi, Yacon, Yams, Yam bean, Yam (True)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Vegetable Crops in Section 8.10
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.	Pre-harvest Interval (PHI): Applications must be made at least 1 year prior to harvest.
Over-the-Top Wiper Application (Rutabaga only)	Wiper applicators may be used over-the-top of rutabagas.	Pre-harvest Interval (PHI): Allow at least 14 days between application and harvest of rutabagas.

8.11 MISCELLANEOUS CROPS

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar Beet (Non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	See Vegetable Crops in Section 8.10 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. When making preemergence 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

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8.11 Miscellaneous Crops cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Vegetable Crops in Section 8.10	See Use Directions in Section 8.0	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 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 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.	Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.
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% of the total field area to be harvested. Pre-harvest Interval (PHI): Do not harvest within 5 days of treatment.
Postharvest (Asparagus)	This product may be applied after the last harvest and all spears have been removed. If spears are allowed to re-grow, delay application until ferns have developed. Delayed treatments should be applied 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 postemergence 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 of spray with the crop.	Do not allow direct contact of the spray with the asparagus which will result in serious crop injury.

9.0 TREE, VINE AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE AND SHRUB CROPS WITHIN SECTION 9 CROP GROUPS. INDIVIDUAL CROPS MAY HAVE MORE SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

Types of Applications: Preplant (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 1.0 PINT TO 5.0 QUARTS PER ACRE ACCORDING TO THE ANNUAL WEEDS, PERENNIAL WEEDS, AND WOODY BRUSH AND TREES RATE TABLES, SECTIONS 14.0, 15.0 AND 16.0.** 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 with other than mature 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 Equipment and Techniques, Section 7.0, 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. 16.0 to 32.0 ounces per acre of this product plus 3.0 to 12.0 ounces per acre of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including Annual sowthistle, Common cheeseweed (malva), Common groundsel, Common lambsquarters, Common purslane (suppression), Common ryegrass, Crabgrass, Filaree (suppression), Horseweed/marestail (*Conyza canadensis*), Junglerice, Redroot pigweed, Shephard's-purse, and Stinging nettle. 16.0 to 32.0 ounces per acre of this product plus 3.0 to 12.0 ounces per acre of Goal 2XL will control Common cheeseweed (malva) or Hairy fleabane (*Conyza bonanensis*) 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).

Caliber 90	Simazine 4L
Devrinol® 50 DF	Simazine 80W
Direx® 4L	Sim-Trol® 4L
Goal 2XL	Solicam® DF
Karmex® DF	Stealth
Krovar® I	Sulfan AS
Krovar II	Surflan 75W
Princep®	

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 8.0 fluid ounces of this product in 10.0 to 20.0 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 6.0 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 6.0 fluid ounces of this product in 10.0 to 25.0 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 4.0 fluid ounces of this product per acre, followed by an application of 2.0 to 4.0 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 1.0 to 2.0 quarts of this product in 3.0 to 20.0 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 6.0 to 16.0 fluid ounces of this product per acre east of the Rocky Mountains and 16.0 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3.0 to 20.0 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, rates of 6.0 to 10.0 fluid ounces per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

9.1 CUT STUMPS (Tree crops)

LABELED CROPS: Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor

Fruit Trees: Apple, 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)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Suitable Hand-Held Equipment Section 7.4	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 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% solution of this product to the freshly-cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made 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.	DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES.

9.2 BERRY CROPS

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

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes or foliage. Pre-harvest Interval (PHI): 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.
See Types of Applications in Section 9.0 Spot Treatment (Cranberry production)	See Use Directions in Section 9.0 May be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under Application Equipment and Techniques, Section 7.0 may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers use 1 to 2% solution of this product. Spray-to-wet vegetation, not to run off.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): 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.

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9.2 Berry Crops cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot Treatment (Cranberry production) cont'd	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.	
Postharvest (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). Hand-held sprayers, wipers or other appropriate application equipment listed under Application Equipment and Techniques, Section 7.0, may be used. If using hand-held sprayers, use a 0.5 to 1% solution of this product. Spray-to-wet vegetation, not to run off. If using hand-held boom sprayers, apply 2.0 to 4.0 qt of his product/A.	Do not treat more than 10% of the total bog. Allow a minimum of 6 months after the last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. 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.

9.3 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	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0 FL and TX only: For burn down or control of the weeds listed below, apply the labeled rates of this product in 3.0 to 40.0 gal of water/A. Where weed foliage is dense, use 10.0 to 30.0 gal of water/A. For Goatweed, apply 2.0 to 3.0 qt of this product/A. Apply in 20.0 to 30.0 gal of water/A when plants are actively growing. Use 2.0 qt/A when plants are less than 8 inches tall and 3.0 qt/A when plants are greater than 8 inches tall. If Goatweed is greater than 8 inches tall, the addition of Krovar II or Karmex may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 1 day between last application and harvest. For citron groves apply as directed sprays only.

Perennial weeds S=Suppression B=Burndown PC=Partial Control C=Control

Weed Species	Mad Dog Plus Rate Per Acre				
	1.0 Qt	2.0 Qt	3.0 Qt	5.0 Qt	
Bermudagrass	B	—	PC	C	
Guineagrass Texas and Florida Ridge	B	C	C	C	
Guineagrass Florida Flatwoods	—	B	C	C	
Paragrass	B	C	C	C	
Torpedograss	S	—	PC	C	

9.4 MISCELLANEOUS TREE FOOD CROPS

LABELED CROPS: Cactus (fruits and pads), Palm (heart, leaves), Palm (oil)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0

9.5 NON-FOOD TREE CROPS

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other Non-food Tree Crops

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0
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 TREES.
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.
Directed spray (Eucalyptus and Poplar production)	This product can be used around established eucalyptus and poplar trees to control undesirable vegetation. Use a 1 to 2% spray solution to control herbaceous weeds in eucalyptus farms. Use a 2% spray solution for control of undesirable woody brush and trees. For "hard-to-control" weeds, use a 5 to 10% spray solution. Avoid contact of spray, drift, or mist with foliage, green bark or non-woody surface roots of plants.	AVOID HERBICIDE CONTACT WITH DESIRABLE VEGETATION.
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 Annual Weeds and Perennial Weeds, Sections 14.0 and 15.0. For wick applicators, mix 1.0 gal of this product with 2.0 gal 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.	

9.6 POME FRUIT

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 1 day between last application and harvest in pome fruits.

9.7 STONE FRUIT

LABELED CROPS: Apricot, Cherry (Sweet, Tart), Nectarine, Olive, Peach, Pear, Plum/Prune (All types), Plumcot

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): 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.

9.8 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 APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): 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.

9.9 TROPICAL CROPS AND SUBTROPICAL TREES AND FRUIT
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 and leaves), Wax jambu

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0 This product may be applied for weed control or for site preparation prior to transplanting crops listed in this section. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 1 day between last application and harvest of banana, guava, papaya and plantain crops. 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.
See Types of Applications in Section 9.0 Bananacide (Banana only)	See Use Directions in Section 9.0 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 buffer around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fl oz (1.0 mL) of this product's concentrate/2 to 3 inches of pseudostem diameter. Make the injection at least 1 ft above ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-ft radius) to a treated mat shallbe mechanically destroyed. 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	See Restrictions in Section 9.0 Do not apply more than 1/2 fl oz (15.0 mL) of this product's concentrate/mat (or units). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.

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9.9 Tropical Crops and Subtropical Trees and Fruit cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	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.	

9.10 VINE CROPS

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Types of Applications in Section 9.0	See Use Directions in Section 9.0 Applications must not be made when green shoots, canes or foliage are in the spray zone. In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.	See Restrictions in Section 9.0 Pre-harvest Interval (PHI): Allow a minimum of 14 days between last application and harvest. Do not use selective equipment in kiwi.

10.0 PASTURE, GRASSES, FORAGE LEGUMES AND RANGELANDS

10.1 ALFALFA, CLOVER AND 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
Preplant Preemergence 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 and Trees rate tables, Sections 14.0, 15.0 and 16.0. Applications must be made prior to emergence of the crop.	If a single application is made at rates of 2.0 qt/A or less, no waiting period between treatment and feeding or grazing is required. If application rates greater than 2.0 qt/A are made, remove domestic livestock before application. Pre-harvest Interval (PHI): Wait 8 wks 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 in Wiper Applicators, Section 7.5. 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 1/10 of any acre can be treated at one time. Pre-harvest Interval (PHI): 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 Downy brome, Cheatgrass and Quackgrass, in dormant alfalfa. Apply 8.0 to 12.0 oz/A of this product. Apply in the spring to alfalfa that is dormant. Applications should be made 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 Mad Dog Plus. Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated. Do not make more than 1 application/yr. Pre-harvest Interval (PHI): Allow 36 hours after application before grazing livestock or harvesting.

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10.1 Alfalfa, Clover and Other Forage Legumes cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preharvest (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. Use up to 1.0 qt of this product/A. 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.	Make only 1 application to an existing stand of alfalfa/yr. Do not apply more than 2.0 qt of this product/A as a pre-harvest treatment. Do not use for alfalfa grown for seed, as a reduction in germination or vigor may occur. Pre-harvest Interval (PHI): The treated crop and weeds can be harvested and fed to livestock after 36 hr.
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 and Trees rate tables, Sections 14.0, 15.0 and 16.0.	Remove domestic livestock before application. Pre-harvest Interval (PHI): If application rates of 2.0 qt/A or less are used, wait 36 hr after application before grazing or harvesting. If application rates greater than 2.0 qt/A are used, wait 8 wks after application before grazing or harvesting.

10.2 CONSERVATION RESERVE PROGRAM (CRP)

LABELED CROPS: 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 and Trees rate tables, Sections 14.0, 15.0 and 16.0. 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 3.0 qt/A/yr onto CRP grasses.
Postemergence 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 12.0 to 16.0 fl oz of this product/A 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.	Do not apply more than 3.0 qt/A year onto CRP grasses.

10.3 GRASS or TURFGRASS SEED PRODUCTION

LABELED CROPS: Any grass (*Gramineae* family), except corn, sorghum, sugarcane and those listed under Cereal Crops in Section 8.1.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence 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 and Trees rate tables, Sections 14.0, 15.0 and 16.0. 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. Delay tillage or renovation techniques such as vertical mowing, coring, or slicing for 7 days after application to allow proper translocation into underground plant parts. If application rates total 3.0 qt/A or less, no waiting period between treatment and feeding or livestock grazing is required. Pre-harvest Interval (PHI): If the rate is greater than 3.0 qt/A, remove domestic livestock and wait 8 wks following application before grazing or harvesting.
Shielded Sprayer	Apply 1.0 to 3.0 qt of this product as a broadcast spray in 10.0 to 20.0 gal of total spray volume/A. 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 Applications in Section 7.5. 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% solution. Apply this product prior to heading of grasses.	The crop receiving the spray in the treated area will be killed. Avoid drift or spray outside of the target area for the same reason.
Creating rows in Annual ryegrass	Use 16.0 to 32.0 fl oz of this product/A. 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 of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended. Grower assumes all responsibility for crop losses from misapplication.	

10.4 PASTURES

LABELED CROPS: Any grass (*Gramineae* family), except corn, sorghum, sugarcane and those listed under Cereal Crops in Section 8.1, including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuygrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot treatment Over-the-top Wiper Applications	This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.	For spot treatments or wiper application methods using rates of 3.0 qt/A or less, the entire field or any portion of it may be treated. When spot treatment or wiper applications are made using rates above 3.0 qt/A, no more the 10% of the total pasture may be treated at any one time. Pre-harvest Interval (PHI): Remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting.
Preplant Preemergence Pasture Renovation Stand Removal	This product may be applied prior to planting or emergence of forage grasses. In addition this product may be used to control perennial pasture species listed on this label prior to re-planting. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	If application rates total 3.0 qt/A or less, no waiting period between treatment and feeding or livestock grazing is required. Pre-harvest Interval (PHI): If the rate is greater than 3.0 qt/A, remove domestic livestock and wait 8 wks following application before grazing or harvesting.
Chemical mowing (Bermudagrass) pastures prior to spring growth or immediately after first cutting	This product may be applied at 16.0 fl oz/A to control the weeds listed below and most other winter annual grass and broadleaf weeds in established coastal bermudagrass pastures. Annual bluegrass, Cheat, Crabgrass, Henbit, Johnsongrass seedling, Little barley, Oats, Ryegrass, Sandbur field, Wheat, Wild mustard **Applications prior to spring growth:** Apply this product in the late winter or early spring but before new coastal bermudagrass growth begins in the spring. Applications to new growth can damage the 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.	Labeled application rates totaling 3.0 qt/A or less do not require a waiting period between treatment and feeding or livestock grazing. NOTE: ONLY 1 APPLICATION/YR MAY BE MADE TO ANY 1 FIELD. A SPRING APPLICATION PRIOR TO GROWTH AND AN APPLICATION FOLLOWING THE FIRST CUTTING MAY NOT BE MADE ON THE FIELD DURING THE SAME YEAR.

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 Cheatgrass (*Bromus secalinus*), Downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), and Soft chess (*Bromus mollis*) found in industrial, rangeland and pasture sites. Apply 8.0 to 16.0 fluid ounces of product per acre on a broadcast basis. For best results, treatment should coincide 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. Applications should be made 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 16.0 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 2.0 to 10.0 gallons of water per acre. For applications using ground equipment, apply in 10.0 to 20.0 gallons of water per acre.

When applied as directed there are no grazing restrictions.

10.5 RANGELANDS
LABELED CROPS: Rangeland (Perennial cool- and warm-season grass rangelands)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postemergence	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 and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds. Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition. Apply 12.0 to 16.0 fl oz/A to control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands including Cereal rye, Cheatgrass, Downy brome 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 encourages 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 16.0 fl oz/A 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.	Do not use ammonium sulfate when spraying rangeland grasses with this product. Do not apply more than 3.0 qt/A/yr. 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.

10.6 TURFGRASS SOD PRODUCTION
LABELED CROPS: Turfgrass for Sod

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence Renovation Site Preparation	This product controls most existing vegetation prior to renovating turf grass areas or establishing turfgrass 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 or good interception of the spray. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Desirable turfgrasses may be planted following the above procedures.	If application rates total 3.0 qt/A or less, no waiting period between treatment and feeding or livestock grazing is required. Pre-harvest Interval (PHI): If the rate is greater than 3.0 qt/A, removedomestic livestock and wait 8 wks following application before grazing or harvesting. Do not disturb soil or underground plant 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.
Spot treatment	Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass.	

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10.6 Turfgrass Sod Production cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
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. Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow 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.	Do not feed or graze turfgrass grown for seed or sod production for 8 wks following application.

10.7 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 8.0 to 64.0 fluid ounces of this product per acre alone or in a tank mixture with 0.25 to 1.0 ounce per acre of Oust. Apply the labeled rates in 10.0 to 40.0 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 1.0 ounce of Oust per acre on bermudagrass and no more than 0.5 ounce of Oust 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 1.0 to 3.0 pints of this product in 10.0 to 40.0 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	Fescue, tall	Trumpetcreeper
Bluestem, silver	Johnsongrass	Vaseygrass

This product may be tank mixed with Oust. If tank mixed, use no more than 1.0 to 2.0 pints of this product with 1.0 to 2.0 ounces of Oust 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 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	Dock, curly	Poorjoe
Bluestem, silver	Dogfennel	Trumpetcreeper
Broomsedge	Fescue, tall	Vaseygrass
Dallisgrass	Johnsongrass	Vervain, blue

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

Actively Growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6.0 fluid ounces of this product in 10.0 to 40.0 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 4.0 fluid ounces of this product per acre, followed by an application of 2.0 to 4.0 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 6.0 fluid ounces of this product plus 0.25 ounce of Oust per acre 1 to 2 weeks following an initial spring mowing. Make only 1 application per year.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Loveland Products, Inc. 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 other recommendations made for crop varieties that do not contain the Roundup Ready gene in Annual and Perennial Crops, Section 8.0.

THIS PRODUCT IS TO BE USED FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED 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.

For ground applications with broadcast equipment, apply this product in 5.0 to 20.0 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.

For aerial applications apply this product in 3.0 to 15.0 gallons of water per acre. See Application Equipment and Techniques, Section 7.0, 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 Mixing and Application Equipment and Techniques, Sections 6.0 and 7.0, 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 noted in this product label, supplemental labeling or fact sheets published separately by Loveland Products, Inc.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech® adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.
Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to Mixing, Sections 6.0, 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 Annual morningglory, Black nightshade, Broadleaf signalgrass, Burcucumber, Giant ragweed, Sandbur, Shattercane, Sicklepod, Texas panicum, Wild proso millet and Woolly cupgrass with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 ROUNDUP READY ALFALFA

FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY 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 Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence Postemergence	This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa. For ground applications with broadcast equipment, apply this product in 3.0 to 40.0 gal of spray solution/A. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets. For aerial application: Use the labeled rates of this product in 3.0 to 15.0 gal of spray solution/A. **A. New Stand Establishment (seeding year)** Prior to first cutting during new stand establishment:	DO NOT EXCEED 2.0 QT OF THIS PRODUCT/A WHEN MAKING APPLICATIONS BY AIR. Any single over-the-top application of this product must not exceed 2.0 qt (64.0 fl oz)/A. Sequential applications of this production must be at least 7 days apart. The combined total/yr for all in-crop applications in newly established and established stands must not exceed 6.0 qt (192 fl oz)/A. Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay. *Cont'd. next page*

11.1 Roundup Ready Alfalfa cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant *At-planting* *Preemergence* *Postemergence cont'd*	From emergence up to 4 trifoliate leaves: 2.0 qt/A From 5 trifoliate leaves up to 5 days before first cutting: 2.0 qt/A After first cutting in newly established stands: In-crop application/cutting, up to 5 days before cutting: 2.0 qt/A **B. Established Stands (non-seeding year)** In-Crop applications/cutting, up to 5 days before cutting: 2.0 qt/A 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, a single application of at least 1.0 qt/A of this product should be applied at or before the 3- to 4-trifoliate growth stage. In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, applications of this product should be made 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 Mad Dog Plus herbicide label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.	
Over-the-top applications	This product may be applied postemergence to Roundup Ready alfalfa from emergence until 5 days prior to cutting. Any single over-the-top applications of this product must not exceed 2.0 qt/A. 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 week control and are NOT recommended for over-the-top applications of this product.	Sequential applications of this production must be at least 7 days apart.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications, including preplant during year of establishment	7.75 qt/A
Combined total per year for in-crop applications for newly established and established stands	6.0 qt/A
Preplant, At-planting and Preemergence single applications	2.0 qt/A

11.2 ROUNDUP READY CANOLA (Spring Varieties)

LABELED 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.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence	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 preplant, at-planting and preemergence applications combined is 2.0 qt/season.
Postemergence (in-crop)	This product may be applied postemergence 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 11.0 to 16.0 fl oz of this product/A 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 11.0 fl oz/A are applied after the 4-leaf stage. **Sequential Application** - Apply 11.0 fl oz of this product/A 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 are recommended 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 2 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 22.0 fl oz of this product/A. Pre-harvest Interval (PHI): Allow a minimum of 60 days between last application and canola harvest.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Total of all preplant, at-planting, preemergence applications	2.0 qt/A
Total of all in-crop applications from emergence to 6-leaf stage	1.0 qt/A

11.3 ROUNDUP READY CANOLA (Fall and Winter Varieties)

LABELED 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.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence	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 preplant, at-planting and preemergence applications combined is 2.0 qt/A/season.
Postemergence (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 over-	No more than 2 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 2.0 qt of this product/A. Applications of greater than 24.0 fl oz/A prior to the 6-leaf stage may result in reduced crop growth in the fall. Pre-harvest Interval (PHI): Allow a minimum of 60 days between last application and harvest of canola grain.

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11.3 Roundup Ready Canola cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postemergence (in-crop) cont'd	wintered may require sequential applications of this product for control. The second application should be made after some re-growth has occurred and at least 60 days after a previous application of this product. **Single Application** - Apply 22.0 to 32.0 fl oz of this product/A in the fall. Applications in the fall should be made 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 16.0 fl oz/A 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 16.0 to 32.0 fl oz of this product/A 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 are recommended 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 perennial weeds. For some perennial weeds, sequential applications may be required to reduce competition with the crop.	No waiting period is required between application and open grazing of livestock.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES

Total of all preplant, at-planting, preemergence applications	2.0 qt/A
Total of all in-crop applications from emergence to canopy closure or prior to bolting in the spring	2.0 qt/A

11.4 ROUNDUP READY CORN

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	This product may be applied alone or in a tank mixture before, during or after planting corn. Tank Mixtures: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso, or Micro-Tech at 50 to 100% of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum re-cropping interval and rotational guidelines. The more restrictive requirements apply. Note: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	Applying this product to crop varieties that are not designated as glyphosate tolerant will result in severe crop injury and yield loss. 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 Mixing and Application Equipment and Techniques, Sections 6.0 and 7.0, for additional directions and restrictions on the application of this product.

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11.4 Roundup Ready Corn cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postemergence (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 qt/A 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 48.0 fl oz per/A. 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% 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 apply. Tank Mix Partner — Maximum Height of Corn Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L — 11 inches Bullet*, Micro-Tech* — 5 inches Atrazine — 12 inches Bullet and Micro-Tech are not registered for use as a postemergence application in TX.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready Crops. Single in-crop applications of this product are not to exceed 1.5 qt/A. The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 3.0 qt/A. Allow a minimum of 10 days between in-crop applications of this product. Pre-harvest Interval (PHI): Allow a minimum of 50 days between application of this product and harvest of corn forage.
Preharvest	In Roundup Ready corn, up to 1.0 qt/A of this product can be applied preharvest. Make applications at 35% grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).	Pre-harvest Interval (PHI): Allow a minimum of 7 days between application and harvest.

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11.4 Roundup Ready Corn cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Postharvest	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.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence, at-planting applications	5.0 qt/A
Maximum single in-crop application rate up to 48-inch corn	1.5 qt/A
Total in-crop applications from emergence through 48-inch corn	3.0 qt/A
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	1.0 qt/A

11.5 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
Preplant Preemergence 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 and Trees rate tables, Sections 14.0, 15.0 and 16.0.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops.
Postemergence (over-the-top)	This product may be applied by aerial or ground application equipment at rates up to 1.0 qt/A/application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the 5th true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. **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. 1.0 qt/A may be applied either as over-the-top applications or as a post directed treatment sprayed higher on the cotton plants and over the weeds. Note: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN 1 SALVAGE TREATMENT MAY BE USED/GROWING SEASON.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 6.0 qt/A. NO MORE THAN 2 OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN 2 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 2 NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. Pre-harvest Interval (PHI): ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.
Selective equipment	This product may be applied using precision post-directed or hooded sprayers at rates up to 1.0 qt/A/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. Contact of the spray with cotton leaves should be avoided 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	See Selective Equipment, Section 7.5, for information on proper use and calibration of this equipment.

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11.5 Roundup Ready Cotton cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Selective equipment cont'd	pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).	
Preharvest	This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20% boll crack. Up to 2.0 qt of this product may be applied using either aerial or ground spray equipment. Tank Mixtures: This product may be tank mixed with DEF 6, Folex, Ginstar, or Prep (or generic equivalents). Note: This product will not enhance the performance of these harvest aids when applied to Roundup Ready cotton.	Pre-harvest Interval (PHI): Allow a minimum of 7 days between application andharvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur. REFER TO MANUFACTURER'S LABELS FOR USE OF ADDITIVES (such as surfactants, stickers and spreaders) FOR PREHARVEST APPLICATION TO COTTON.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence, at-planting applications	5.0 qt/A
Total in-crop applications from ground cracking to layby	4.0 qt/A
Maximum preharvest application rate	2.0 qt/A

11.6 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 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
Preplant Preemergence 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 and Trees rate tables, Sections 14.0, 15.0 and 16.0.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops.
Postemergence (over-the-top)	When applied in accordance with this label, Mad Dog Plus 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 1 or more applications of this product. An initial application of 1.0 qt/A on 1- to 3-inch tall annual grass and broadleaf weeds is recommended. This product may be applied by ground application equipment at rates up to 1.5 qt/A/application post-emergence to Roundup Ready Flex cotton. In addition to broadcast applications, post directed equipment may be used to achieve weed coverage. Note: For specific rates of application and instructions refer to the Annual Weeds and Perennial Weeds rate tables, Sections 14.0 and 15.0.	The maximum rate for any single in-crop application of this product is 1.5 qt/A made using ground application equipment. In-crop application rates above 1.0 qt/A made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis. Except for pre-harvest use, do not exceed a maximum rate of 1.0 qt/A of this product when making applications by air. Between layby and 60% open bolls the maximum combined total rate of this product that may be applied is 2.0 qt/A. The maximum combined total of all applications made from crop emergence through 60% open bolls must not exceed 6.0 qt/A. Application after 10th leaf or 10th node may result in plant injury and yield loss.
Preharvest	This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready Flex cotton after 60% boll crack. Up to 2.0 qt of this product may be applied using	Pre-harvest Interval (PHI): 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.

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11.6 Roundup Ready Flex Cotton cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	either aerial or ground spray equipment. 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.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications (calculate the combined rate to be used for all preplant, in-crop and pre-harvest applications)	8.0 qt/A
Total of all preplant, at-planting, preemergence applications	5.0 qt/A
Total in-crop applications from ground cracking to 60% open bolls	6.0 qt/A
Maximum allowed from 60% bolls open to 7 days prior to harvest	2.0 qt/A

11.7 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.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant Preemergence At-planting	This product may be applied before, during or after planting soybeans. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	See Roundup Ready Crops, Section 11.0, for precautionary instructions for use in Roundup Ready crops.
Postemergence (in-crop) Preharvest	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 Annual Weeds rate table, Section 14.0, for rate specifications. For specific annual weeds, an initial application of 1.0 qt/A on 2- to 8-inch tall weeds is recommended. 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 2.0 qt/A in any single in-crop application for control of annual weeds and where heavy weed densities exist. A 1.0 to 2.0 qt/A 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, Johnsongrass, Marestail (horseweed), Nutsedge, Quackgrass, Redvine, Rhizome, Swamp smartweed, Trumpetcreeper 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	The combined total application from crop emergence through harvest must not exceed 3.0 qt/A. The maximum rate for any single in-crop application is 2.0 qt/A. The maximum combined total of this product that can be applied during flowering is 2.0 qt/A.

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11.7 Roundup Ready Soybeans cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	CROP. To control Giant ragweed, it is recommended that 1.0 qt/A of this product be applied when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.	
Preharvest	Care should be taken to avoid excessive seed shatter loss due to ground application equipment. This product provides weed control when applied prior to harvest of soybeans. Up to 1.0 qt/A of this product can be applied by aerial or ground application.	Pre-harvest Interval (PHI): Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.
Postharvest	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.	

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence, at-planting applications	5.0 qt/A
Total in-crop applications from cracking throughout flowering	3.0 qt/A
Maximum pre-harvest application rate	1.0 qt/A

11.8 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 sugar beet may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

DO NOT combine these instructions with other recommendations made for crop varieties that do not contain a Roundup Ready gene listed in Annual and Perennial Crops, Section 8.0.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Preplant At-planting Preemergence	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 and Trees rate tables, Sections 14.0, 15.0 and 16.0.	Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 5.0 qt/A/season.
Postemergence (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 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.	The combined total application from crop emergence through harvest must not exceed 4.5 qt/A. The maximum rate for any single application between emergence to the 8-leaf stage is 1.5 qt/A. The maximum rate for any single application between the 8-leaf stage and canopy closure is 1.0 qt/A. Pre-harvest Interval (PHI): Allow a minimum of 30 days between last application and sugar beet harvest. For any crop NOT listed in the crops sections of this label, applications must be at least 30 days prior to planting.

Enhanced product performance may be obtained with use of Loveland Products, Inc. Leci-Tech adjuvants. Consult with your local Loveland Products, Inc. representative for advice on specific product selection.

MAXIMUM ALLOWABLE APPLICATION RATES	
Combined total per year for all applications	8.0 qt/A
Total of all preplant, preemergence applications	5.0 qt/A
Emergence to 8-leaf stage	2.5 qt/A
Between 8-leaf stage and canopy closure	2.0 qt/A

12.0 NON-CROP USES AROUND THE FARMSTEAD

12.1 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.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 7.0.	This product may be used to control annual weeds, perennials weeds and woody brush which are found in any part of the farmstead. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Tank Mixtures: This product may be tank mixed with the following products (or generic equivalents). Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 1.0 qt/A of this product when weeds are less than 6 inches tall and 1.5 qt/A when weeds are greater than 6 inches tall. For perennial weeds, apply 2.0 to 5.0 qt/A in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the Hand-held or High-Volume Equipment, Section 7.4, for allowable application rates. Arsenal® — Plateau® Barricade® 65WG — Princep DF Diuron — Princep Liquid Endurance® — Ronstar® 50 WP Escort® — Sahara® Karmex DF — Simazine Krovar DF — Surflan Oust — Vanquish® Pendulum® 3.3 EC — 2,4-D Pendulum WDG For control or partial control of the following perennial weeds, apply 1.0 to 2.0 qt Mad Dog Plus + 2.0 to 4.0 oz of Oust/A. Bahiagrass — Fescue, tall Bermudagrass — Johnsongrass Broomsedge — Poorjoe Dallisgrass — Quackgrass Dock, curly — Vaseygrass Dogfennel — Vervain, blue	This product plus dicamba tank mixtures may not be applied by air in CA.

12.2 GREENHOUSE/SHADEHOUSE

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot spray Directed spray	Desirable vegetation should not be present during application. This product may be used to control weeds in and around greenhouses and shadehouses. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0.	Air circulation fans must be turned off during application.

12.3 CHEMICAL MOWING

LABELED USES: Farm Ditches and Other Parts of Farmsteads

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 7.0.	This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8.0 fl oz of Mad Dog Plus/A when treating tall fescue, fine fescue, orchardgrass or quackgrass covers. Use 6.0 fl oz of Mad Dog Plus/A when treating Kentucky bluegrass. Use 16.0 fl oz of Mad Dog Plus when treating bermudagrass. Use 64.0 fl oz of Mad Dog Plus when treating Torpedograss or Paragrass. Apply treatments in 10.0 to 20.0 gal of spray solution/A.	Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 CUT STUMPS

LABELED USES: Cut Stumps (on any non-crop site listed on this label)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Suitable Hand-held Equipment	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% solution of this product to the freshly-cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion. Alder — Reed, giant Eucalyptus — Salt cedar Madrone — Sweetgum Oak — Tan oak Pepper, Brazilian — Willow Pine, Austrian	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.

12.5 HABITAT MANAGEMENT

LABELED USES: Habitat Restoration and Maintenance, Wildlife Food Plots

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in Section 7.0.	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 and Trees rate tables, Sections 14.0, 15.0 and 16.0. 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.

13.0 FORESTRY, INDUSTRIAL, TURF AND ORNAMENTAL

13.1 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	This product is recommended for the control or partial control of woody brush, trees and herbaceous weeds in forestry. This product is also recommended for use in preparing or establishing wildlife openings with these sites and maintaining logging roads. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. This product is recommended for use in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites. Use higher rates of this product within the labeled range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the labeled range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear. Use the lower rates of this product within the labeled range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence. Tank Mixtures: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the restrictive precautionary statements for each product in the mixture. Note: For forestry site preparation, make sure the tank mix product is approved for use prior to planting the desired species. Observe planting interval restrictions. Any labeled rate of this product may be used in a tank mix with the following products (or generic equivalents) for forestry site preparation. Arsenal Applicators Concentrate Chopper® Escort or Escort XP Garlon® 3A Garlon 4A Landmark® XP Oust or Oust XP Westar® For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled rates.	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 Loveland Products, Inc. for this product.

13.2 NON-CROP AREAS AND INDUSTRIAL SITES

LABELED 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, golf 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 7.0.	This product may be used to trim and edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. Repeated applications of this product may be used, as weeds emerge, to maintain bare ground. Tank Mixtures: This product may be tank mixed with the following products (or generic equivalents) provided that the specific product is registered for use on the target site. Refer to these product labels for approved 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. User is responsible for ensuring that the mixture product's label allows the specific applications. Arsenal Atrazine Barricade 65WG Certainty® dicamba* diuron Endurance Escort Escort XP Gallery® 75DF Garlon 3A Garlon 4 Goal 2XL Krovar I DF Oust Oust XP Outrider® pendimethalin Plateau Crossbow® L Landmark II MP Landmark II Poast® Ronstar 50 WP simazine Surflan AS Surflan WDG Transline® Velpar® DF Velpar L 2,4-D When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control of partial control of emerged perennial weeds, woody brush and trees. For control or partial control of the following perennial weeds, apply 1.0 to 2.0 qt of Mad Dog Plus + 2.0 to 4.0 oz of Oust or Oust XP/A. Bahiagrass Bermudagrass Broomsedge Dallisgrass Dock, curly Dogfennel Fescue, tall Johnsongrass Poorjoe Quackgrass Vaseygrass Vervain, blue	*This product plus dicamba tank mixtures may not be applied by air in CA.

13.3 INJECTION AND FRILL (Woody Brush and Trees)

LABELED SITES: Woody brush and Trees in non-crop areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Injection or Frill applications	Apply this product using suitable equipment which must penetrate into the living tissue. Apply the equivalent of 1.0 mL of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100% concentration of Mad Dog Plus either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. For best results, application should be made during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below: <u>Control</u> — <u>Partial Control</u> Oak — Black gum Poplar — Dogwood Sweetgum — Hickory Sycamore — Maple, red	Avoid 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% concentration of this product.

13.4 HOLLOW STEM INJECTION

LABELED SITES: Hollow-stem plants, growing in any non-crop site specified on this label.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Hand-held injection devices that deliver labeled amounts of this product	For control of the following hollow stem plants, use the application rates below: • Japanese Knotweed (*Polygonum cuspidatum*) Inject 5.0 mL/stem Mad Dog Plus between 2nd and 3rd internode. • Bohemian Knotweed (*Polygonum bohemicum*) Inject 5.0 mL/stem Mad Dog Plus between 2nd and 3rd internode. • Giant Hogweed (*Hercleum mantegazzianum*) Inject 1 leaf cane/plant 12 inches above the root crown with 5.0 mL of a 5% v/v solution of Mad Dog Plus. • Poison Hemlock (*Conium maculatum*) Inject 1 leaf cane/plant 10 to 12 inches above the root crown with 5.0 mL of a 5% v/v solution of Mad Dog Plus. • Field horsetail (*Equisetum arvense*) Inject 1 segment above the root crown with 0.5 mL/stem of Mad Dog Plus. 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 slowly removed as 0.5 mL/stem of this product is injected into the stem.	The combined total for all treatments must not exceed 7.0 qt of Mad Dog Plus/A. At 5.0 mL/stem, 7.0 qt will treat approximately 1300 stems/A.

13.5 ORNAMENTALS, PLANT NURSERIES AND CHRISTMAS TREES

LABELED SITES: Plant Nurseries, Christmas Tree farms and 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 Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0, 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 Selective Equipment, Section 7.5, for further information about the proper use of wiper applicators.	

13.6 PARKS, RECREATIONAL AND RESIDENTIAL AREAS

LABELED SITES: Around Trees, Fences, Paths, Driveways, around Buildings, Patios, Sidewalks, Flower Beds, around Shrubs, and other Ornamental Plants

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Trim-and-edge Spot treatment	This product may be used to eliminate unwanted weeds growing in areas listed above. Use suitable hand-held equipment for directed spraying according to instructions in Mixing for Hand-held Sprayers, Section 6.3. If necessary, use cardboard or plastic to shield desirable plants. Do not use for spot weed control in lawns since desirable lawn grass will also be killed.	Spray only when air is calm. Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.
Site preparation Lawn renovation	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. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. 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. Seven days after application, soil may be tilled, fertilized and seeded.	Spray only when air is calm. Care must be taken to avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species.

13.7 RAILROADS

LABELED SITES: Railroad Rights-of-Way, Railroad Ballast areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment	All of the instructions in Noncrop Areas and Industrial Sites, Section 13.2, apply to railroads. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. 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 80.0 gal of spray solution/A may be used. 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 — Velpar Garlon 4 — 2,4-D Hyvar® X Brush control: This product may be used to control woody brush and trees on railroad rights-of-way. Apply 4.0 to 10.0 qt of Mad Dog Plus/A as a broadcast spray, using boom-type or boomless nozzles. Up to 80.0 gal of spray solution/A may be used. Apply a 0.5 to 2% solution of this product when using high-volume spray-to-wet applications. Apply a 5 to 10% 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 — Tordon® 22K Escort — Tordon K Garlon 3A — Transline Garlon 4 — Vanquish Kernite — Velpar	Observe application precautions in Application and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.

13.8 ROADSIDES

LABELED SITES: Roadside Rights-of-Way areas (including Shoulders, Guardrails and Signposts)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment and similar equipment	All the instructions in the Noncrop Areas and Industrial Sites, Section 13.2, apply to roadsides. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. This product may be used on road shoulders, under guardrails and around signposts and other objects along roadsides that may be obstacles to mowing. Tank Mixtures: This product may be tank mixed with the following products (or generic equivalent) for shoulder, guardrail, spot and bare ground treatments: diuron — Princep Liquid Endurance — Rifle® Escort — Ronstar 50 WP Krovar I DF — Sahara Oust — simazine Pendulum 3.3 EC — Surflan Pendulum WDG — Vanquish Princep DF — 2,4-D See Noncrop Areas and Industrial Sites, Section 13.2, for instructions for tank mixing.	Observe application precautions in Application Equipment and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.
Spot treatment	This product must be used as a spot treatment to control unwanted vegetation growing along roadsides.	

13.9 UTILITY SITES

LABELED SITES: Electrical Power, Pipeline And Telephone rights-of-way, and in other sites associated with these rights-of-way, Including Substations, Roadsides, Railroads or Similar Rights-of-way that run in conjunction with Utilities.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers Shielded boom sprayers High-volume off-center nozzles Hand-held equipment and similar equipment	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. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables, Sections 14.0, 15.0 and 16.0. 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	Observe application precautions in Application Equipment and Techniques, Section 7.0. Avoid application to non-target plants due to drift, overspray or runoff.

Cont'd. next page

13.9 Utility Sites cont'd.:

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom sprayers *Shielded boom sprayers* *High-volume off-center nozzles* *Hand-held equipment and similar equipment cont'd*	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. 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 — Outrider atrazine[1] — pendimethalin[1] Barricade 65WG — Plateau dicamba[1] — Princep diuron[1] — Ronstar 50WP Endurance — Sahara Escort — simazine[1] Escort XP — Surflan AS Garlon 3A[2] — Surflan WDG Garlon 4[3] — Transline Krenite® — Vanquish Krovar 1 DF — Velpar DF Oust — Velpar L Oust XP — 2,4-D[2] [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 added to avoid spray incompatibility problems. [3]For side trimming treatments, it is recommended that this product be used alone or in a tank mixture with Garlon 4.	

14.0 ANNUAL WEEDS RATE TABLES (Alphabetical by Species)

WATER CARRIER VOLUMES OF 3.0 TO 10.0 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3.0 TO 5.0 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 48.0 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
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"	-	-

Cont'd. next page

Annual Weeds Rate Table cont'd.:

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
Bittercress	12"	20"	-	-	-
Bluegrass, annual	10"	-	-	-	-
Bluegrass, bulbous	6"	-	-	-	-
Brome, downy[1, 2]	6"	12"	-	-	-
Brome, Japanese	6"	12"	24"	-	-
Browntop panicum	6"	8"	12"	-	24"
Buckwheat, wild[3]	-	1"	2"	-	-
Burcucumber	-	6"	12"	-	18"
Buttercup	6"	20"	-	-	-
Carolina geranium	-	-	4"	-	9"
Carpetweed	-	6"	12"	-	-
Cheat[2]	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"	-	-
Dwarf dandelion	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"	-	-
Foxtail, Carolina	10"	-	-	-	-
Foxtail, 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 (*Conyza canadensis*)	-	6"	12"	-	18"

Cont'd. next page

Annual Weeds Rate Table cont'd.:

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
Itchgrass	6"	8"	12"	-	18"
Jimsonweed	-	-	12"	-	18"
Johnsongrass, seedling	6"	12"	18"	-	24"
Junglerice	-	3"	6"	7"	9"
Knotweed	-	-	6"	-	12"
Kochia[4]	-	3" to 6"	12"	-	-
Lambsquarters	-	6"	12"	-	20"
Little barley	6"	12"	-	-	-
London rocket	6"	-	24"	-	-
Mayweed	-	2"	6"	12"	18"
Morningglory (*Ipomoea* spp.)	-	-	3"	-	6"
Mustard, blue	6"	12"	18"	-	-
Mustard, tansy	6"	12"	18"	-	-
Mustard, tumble	6"	12"	18"	-	-
Mustard, wild	6"	12"	18"	-	-
Nightshade, black	-	4"	6"	-	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[2]	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"	-	-
Spurge, prostrate	-	6"	12"	-	-
Spurge, spotted	-	6"	12"	-	-
Spurry, umbrella	6"	-	-	-	-
Stinkgrass	-	12"	-	-	-
Sunflower	12"	18"	-	-	-
Swinecress	-	5"	12"	-	-
Teaweed/Prickly sida	-	2"	4"	-	6"
Texas panicum	6"	8"	12"	24"	-
Thistle, Russian[5]	-	6"	12"	-	-
Velvetleaf	-	-	6"	-	12"
Virginia pepperweed	-	18"	-	-	-
Waterhemp	-	-	6"	-	12"

Cont'd. next page

Annual Weeds Rate Table cont'd.:

WEED SPECIES	APPLICATION RATE (Fl Oz/Acre)				
	16	24	32	40	48
	Maximum height/length (in inches)				
Wheat[2]	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"	-	-

[1]For control of Downy brome in no-till systems use 24.0 fluid ounces per acre.
[2]Performance is better if application is made before this weed reaches the boot stage of growth.
[3]Use 24.0 fluid ounces per acre of this product to control Wild buckwheat in the cotyledon to 2-leaf stage.
Use 32.0 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 32.0 fluid ounces followed by 32.0 fluid ounces of this product per acre.
[4]Do not treat Kochia in the button stage.
[5]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.

14.1 ANNUAL WEEDS - Water Carrier Volumes of 10.0 to 40.0 Gallons per Acre
Apply 1.0 to 2.0 quarts of this product per acre. Use 1.0 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 2.0 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 10.0 to 40.0 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even of they meet the size requirements.

14.2 ANNUAL WEEDS - Tank Mixtures with 2,4-D or Dicamba or Picloram 22K
12.0 to 16.0 fluid ounces of this product plus 0.25 pound active ingredient of dicamba or 0.5 pound active ingredient of 2,4-D per acre or 1.0 to 2.0 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).

16.0 fluid ounces of this product plus 0.5 pound active ingredient 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.

14.3 ANNUAL WEEDS – Hand-Held or High-Volume Equipment
For control of weeds listed in the Annual Weeds rate table, Section 14.0, apply a 0.5% 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% solution.

For best results, use a 2% solution on harder-to-control perennials, such as Bermudagrass, Canada thistle, Dock, Dogbane milkweed, Field bindweed and Hemp.

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

14.4 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 1.0 pound of atrazine per acre.

24.0 to 28.0 fluid ounces of this product plus 1.0 to 2.0 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 28.0 ounces for control), Downy brome, Field sandbur, Green foxtail, Kochia (add 0.125 pound of dicamba for control) Lambsquarters, Pigweed, Prickly lettuce, Stinkgrass, Tansy mustard, Russian thistle, Volunteer wheat and Witchgrass.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.

15.0 PERENNIAL WEEDS RATE TABLE (Alphabetical by Species)

Apply to actively growing perennial weeds.

Note: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the specified stages.
Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.
Unless otherwise stated, allow 7 or more days after application before tillage.
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

	Amount of Mad Dog Plus					
Desired Volume	**0.5%**	**1%**	**1.5 %**	**2%**	**5%**	**10%**
1.0 Gal	0.6 oz	1.3 oz	2.0 oz	2.6 oz	6.5 oz	13.0 oz
25.0 Gal	1.0 pt	1.0 qt	1.5 qt	2.0 qt	5.0 qt	10.0 qt
100 Gal	2.0 qt	1.0 gal	1.5 gal	2.0 gal	5.0 gal	10.0 gal

WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Alfalfa	1.0 to 2.0	3.0 to 10.0	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. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	4.0	3.0 to 20.0	1.5%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	—	—	1 to 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	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early head stage.
Bentgrass	1.5	10.0 to 20.0	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. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.
Bermudagrass	3.0 to 5.0	3.0 to 20.0	2%	For control, apply 5.0 qt of Mad Dog Plus/A. For partial control, apply 3.0 qt/A. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (Knotgrass)	1.0 to 1.5	5.0 to 10.0	2%	Apply 1.5 qt of Mad Dog Plus in 5.0 to 10.0 gal of water/A. 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 1.0 qt of Mad Dog Plus in 5.0 to 10.0 gal of water/A. Fallow fields should be tilled prior to application. Apply prior to frost on Water bermudagrass that is 12 to 18 inches in length. This product is not registered in CA for use on Water bermudagrass.
Bindweed, field	0.5 to 5.0	3.0 to 20.0	2%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. For control, apply 4.0 to 5.0 qt of Mad Dog Plus/A west of the Mississippi River and 3.0 to 4.0 qt 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 2.0 qt of Mad Dog Plus + 0.5 lb AI of Rifle in 10.0 to 20.0 gal of water/A. Do not apply by air.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Bindweed, field cont'd				For suppression on irrigated agricultural land, apply 1.0 to 2.0 qt of Mad Dog Plus + 1.0 lb AI of 2,4-D in 10.0 to 20.0 gal of water/A with ground equipment only. Applications should be made 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 1 irrigation will promote active Bindweed growth. For suppression, apply 16.0 fl oz of Mad Dog Plus + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A for ground applications and 3.0 to 5.0 gal of water/A for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length. In CA only, apply 1.0 to 5.0 qt of Mad Dog Plus/A. 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 1.0 qt of this product in 3.0 to 10.0 gal of water/A. 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	1.0 to 2.0	3.0 to 40.0	2%	Apply 2.0 qt of Mad Dog Plus in 10.0 to 40.0 gal of water/A when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1.0 to 1.5 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Blueweed, Texas	3.0 to 5.0	3.0 to 40.0	2%	Apply 4.0 to 5.0 qt of Mad Dog Plus/A west of the Mississippi River and 3.0 to 4.0 qt/A 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	3.0 to 4.0	3.0 to 40.0	1 to 1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1.0 to 2.0	3.0 to 40.0	2%	Apply 2.0 qt of Mad Dog Plus in 10.0 to 40.0 gal of water/A when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1.0 to 1.5 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Bursage, woolly-leaf	-	3.0 to 20.0	2%	For control, apply 2.0 qt of Mad Dog Plus + 1.0 pt of Rifle/A. For partial control, apply 1.0 qt of Mad Dog Plus + 1.0 pt of Rifle/A. 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	2.0 to 3.0	3.0 to 40.0	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early head stage.
Clover; red, white	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early bud stage. Also for control, apply 16.0 to 32.0 fl oz of Mad Dog Plus + 0.5 to 1.0 lb of 2,4 -D in 3.0 to 10.0 gal of water/A.
Cogongrass	3.0 to 5.0	10.0 to 40.0	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	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early head stage.
Dandelion	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16.0 fl oz of Mad Dog Plus + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A.
Dock, curly	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16.0 fl oz of Mad Dog Plus + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A.
Dogbane, hemp	4.0	3.0 to 40.0	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.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Dogbane, hemp cont'd				For suppression, apply 16.0 fl oz of Mad Dog Plus + 0.5 lb AI of 2,4-D in 3.0 to 10.0 gal of water/A for ground applications and 3.0 to 5.0 gal of water/A for aerial applications. Delay applications until maximum emergence of Dogbane has occurred.
Fescue (except tall)	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early head stage.
Fescue, tall	1.0 to 3.0	3.0 to 40.0	2%	Apply 3.0 qt of Mad Dog Plus/A when most plants have reached boot-to-early seedhead stage of development. Fall applications only: Apply 1.0 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. Apply to Fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 1.0 pt/A of Mad Dog Plus will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Guineagrass	2.0 to 3.0	3.0 to 40.0	1%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.
Horsenettle	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early bud stage.
Horseradish	4.0	3.0 to 40.0	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 to 2%	Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.
Jerusalem artichoke	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early bud stage.
Johnsongrass	0.5 to 3.0	3.0 to 40.0	1%	In annual cropping systems, apply 1.0 to 2.0 qt of Mad Dog Plus/A. Apply 1.0 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. Use 2.0 qt of Mad Dog Plus when applying 10.0 to 40.0 gal of water/A. In noncrop, or areas where annual tillage (no till) is not practiced, apply 2.0 to 3.0 qt of Mad Dog Plus in 10.0 to 40.0 gal of water/A. 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 1.0 qt/A rate. For burndown of Johnsongrass, apply 1.0 pt of Mad Dog Plus in 3.0 to 10.0 gal of water/A 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% solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage must be uniform and complete.
Kikuyugrass	2.0 to 3.0	3.0 to 40.0	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	4.0	3.0 to 40.0	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 to 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	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants have reached the early bud stage.
Milkweed, common	3.0	3.0 to 40.0	2%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1.0 to 2.0	3.0 to 40.0	2%	Use 1.0 qt of Mad Dog Plus, in 3.0 to 10.0 gal of water/A. Use 2.0 qt of Mad Dog Plus when applying 10.0 to 40.0 gal of water/A 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. Pre-harvest Interval (PHI): Allow 3 or more days after application before tillage.
Mullein, common	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early bud stage.
Napiergrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	2.0	3.0 to 10.0	2%	Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing frost.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Nutsedge; purple, yellow	0.5 to 3.0	3.0 to 40.0	1 to 2%	Apply 3.0 qt of Mad Dog Plus/A or apply a 1 to 2% 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: 1.0 to 2.0 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A 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 1.0 pt to 2.0 qt of Mad Dog Plus in 3.0 to 40.0 gal of water/A. 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	1.0 to 2.0	3.0 to 40.0	2%	Apply 2.0 qt of Mad Dog Plus in 10.0 to 40.0 gal of water/A when most plants have reached boot-to-early seed-head stage of development. For partial control in pasture or hay crop renovation, apply 1.0 to 1.5 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. Apply to actively growing plants when most have reached 4 to 12 inches in height. Orchardgrass sods going to no till corn: Apply 1.0 to 1.5 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. 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 to 2%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Phragmites	3.0 to 5.0	10.0 to 40.0	1 to 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 to 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	1.0	3.0 to 40.0	2%	Apply to actively growing plants up to 24 inches tall.
Quackgrass	1.0 to 3.0	3.0 to 40.0	2%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1.0 qt of Mad Dog Plus in 3.0 to 10.0 gal of water/A. For 10.0 to 40.0 gal of water/A, apply 2.0 qt of Mad Dog Plus. Do not tank mix with residual herbicides when using the 1.0 qt 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 2.0 to 3.0 qt of Mad Dog Plus in 10.0 to 40.0 gal of water/A when the Quackgrass is greater than 8 inches tall.
Redvine	0.75 to 2.0	5.0 to 10.0	2%	For suppression, apply 24.0 fl oz of Mad Dog Plus/A at each of 2 applications 7 to 14 days apart or a single application of 2.0 qt/A. Apply labeled rates in 5.0 to 10.0 gal of water/A. 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.

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WEED SPECIES	RATE (QT/A)	WATER VOLUME (GPA)	HAND-HELD % SOLUTION	COMMENTS
Ryegrass, perennial	1.0 to 3.0	3.0 to 40.0	1%	In annual cropping systems, apply 1.0 to 2.0 qt of Mad Dog Plus/A. Apply 1.0 qt of this product in 3.0 to 10.0 gal of water/A. Use 2.0 qt of Mad Dog Plus when applying 10.0 to 40.0 gal of water/A. In noncrop, or areas where annual tillage (no till) is not practiced, apply 2.0 to 3.0 qt of Mad Dog Plus in 10.0 to 40.0 gal water/A. 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 1.0 qt/A rate.
Smartweed, swamp	3.0 to 5.0	3.0 to 40.0	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16.0 fl oz of Mad Dog Plus + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A in the late summer or fall.
Sowthistle, perennial	2.0 to 3.0	3.0 to 40.0	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 Mad Dog Plus. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
Spurge, leafy	-	3.0 to 10.0	2%	For suppression, apply 16.0 fl oz of Mad Dog Plus + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A 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	2.0	10.0 to 40.0	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	2.0 to 3.0	3.0 to 40.0	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 1.0 qt of Mad Dog Plus, or 1.0 pt of Mad Dog Plus + 0.5 lb AI 2,4-D in 3.0 to 10.0 gal of water/A 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	2.0 to 3.0	3.0 to 40.0	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	4.0 to 5.0	3.0 to 40.0	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	2.0	5.0 to 10.0	2%	Partial control. Apply in late September or 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.
Vaseygrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Velvetgrass	3.0 to 5.0	3.0 to 20.0	2%	Apply when most plants are in the early head stage.
Wheatgrass, western	2.0 to 3.0	3.0 to 40.0	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.

Refer to the specific product labels and comply with all restrictions and application instructions for all products used in tank mixes.

15.1 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 Cheatgrass (*Bromus secalinus*), Downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*) and Soft chess (*Bromus mollis*) found in industrial, rangeland and pasture sites. Apply 8.0 to 16.0 fluid ounces of product per acre on a broadcast basis. For best results, treatment should coincide 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. Applications should be made 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 16.0 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 2.0 to 10.0 gallons of water per acre. For applications using ground equipment, apply in 10.0 to 20.0 gallons of water per acre.
When applied as directed there are no grazing restrictions.

16.0 WOODY BRUSH AND TREES RATE TABLE
(Alphabetical 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 3.0 to 40.0 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	3.0 to 4.0	1 to 1.5%	For control
Ash	2.0 to 5.0	1 to 2%	Partial control
Aspen, quaking	2.0 to 3.0	1 to 1.5%	For control
Bearmat (Bearclover)	2.0 to 5.0	1 to 2%	Partial control
Beech	2.0 to 5.0	1 to 2%	Partial control
Birch	2.0	1%	For control
Blackberry	3.0 to 4.0	1 to 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 0.5% solution of this product. For control of blackberries after leaf drop and until a killing frost or as long as stems are green, apply 3.0 to 4.0 qt of Mad Dog Plus in 10.0 to 40.0 gal of water/A.
Blackgum	2.0 to 5.0	1 to 2%	For control
Bracken	2.0 to 5.0	1 to 2%	For control
Broom; French Scotch	-	1.5 to 2%	For control
Buckwheat, California	-	1 to 2%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	2.0 to 5.0	1 to 2%	Partial control
Catsclaw	-	1 to 1.5%	Partial control
Ceanothus	2.0 to 5.0	1 to 2%	Partial control
Chamise	-	1%	For control. Thorough coverage of foliage is necessary for best results.

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WEED SPECIES	RATE (QT/A)	HAND-HELD % SOLUTION	COMMENTS
Cherry; bitter, black, pin	2.0 to 3.0	1 to 1.5%	For control
Coyote brush	-	1.5 to 2%	For control. Apply when at least 50% of the new leaves are fully developed.
Dogwood	2.0 to 5.0	1 to 2%	Partial control
Elderberry	2.0	1%	For control
Elm	2.0 to 5.0	1 to 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)	2.0 to 5.0	1 to 2%	Partial control
Gorse	2.0 to 5.0	1 to 2%	Partial control
Hasardia	-	1 to 2%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	2.0 to 3.0	1 to 1.5%	For control
Hazel	2.0	1%	For control
Hickory	2.0 to 5.0	1 to 2%	Partial control
Honeysuckle	3.0 to 4.0	1 to 1.5%	For control
Hornbeam, American	2.0 to 5.0	1 to 2%	Partial control
Kudzu	4.0	2%	For control. Repeat applications may be required to maintain control.
Locust, black	2.0 to 4.0	1 to 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	2.0 to 5.0	1 to 2%	Partial control
Maple, red	2.0 to 4.0	1 to 1.5%	For control, apply a 1 to 1.5% solution when at least 50% of the new leaves are fully developed. For partial control, apply 2.0 to 4.0 qt of Mad Dog Plus/A.
Maple, sugar	-	1 to 1.5%	For control. Apply when at least 50% of the new leaves are fully developed.
Monkey flower	-	1 to 2%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	2.0 to 4.0	1 to 2%	Partial control
Oak, post	3.0 to 4.0	1 to 1.5%	For control
Oak; northern, pin	-	1 to 1.5%	For control. Apply when at least 50% of the new leaves are fully developed.
Oak, southern, red	2.0 to 3.0	1 to 1.5%	For control
Persimmon	2.0 to 5.0	1 to 2%	Partial control
Pine	2.0 to 5.0	1 to 2%	For control
Poison ivy/Poison oak	4.0 to 5.0	2%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	2.0 to 5.0	1 to 2%	Partial control
Redbud, eastern	2.0 to 5.0	1 to 2%	For control
Rose, multiflora	2.0	1%	For control. Treatments should be made prior to leaf deterioration by leaf-eating insects.
Russian olive	2.0 to 5.0	1 to 2%	Partial control
Sage, black	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	2.0 to 5.0	1 to 2%	Partial control
Sage brush, California	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	2.0	1%	For control
Salt-cedar	2.0 to 5.0	1 to 2%	For control
Sassafras	2.0 to 5.0	1 to 2%	Partial control
Sourwood	2.0 to 5.0	1 to 2%	Partial control
Sumac; poison, smooth, winged	2.0 to 4.0	1 to 2%	Partial control
Sweetgum	2.0 to 3.0	1 to 1.5%	For control
Swordfern	2.0 to 5.0	1 to 2%	Partial control

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WEED SPECIES	RATE (QT/A)	HAND-HELD % SOLUTION	COMMENTS
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	2.0	1%	For control
Tobacco, tree	-	1 to 2%	Partial control
Trumpetcreeper	2.0 to 3.0	1 to 1.5%	For control
Vine maple	2.0 to 5.0	1 to 2%	Partial control
Virginia creeper	2.0 to 5.0	1 to 2%	For control
Waxmyrtle, southern	2.0 to 5.0	1 to 2%	Partial control
Willow	3.0	1%	For control

Refer to the specific product labels and comply with all restrictions and application instructions for all products used in tank mixes.

17.0 STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: 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 must 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 cleansed, reconditioned, or destroyed.

CONTAINER HANDLING: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **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.

For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. 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.

For packages greater than 56 gallons: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

18.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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