5905-568

8/5/2009

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

NOTICE OF PESTICIDE:
__ Registration
_X_ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
5905-568	AUG 5 2009
Term of Issuance:	
Name of Pesticide Product: Brush Rhap	

Name and Address of Registrant (include ZIP Code):
Helena Chemical Company
225 Schilling Boulevard, Suite 300
Collierville, TN 38017

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

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA provided that you:

1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.

2) Place the First Aid section within a box.

Signature of Approving Official:	Date:
Joanne Miller Product Manager 23 Herbicide Branch Registration Division (7505P)	AUG 5 2009

3) The text "Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals" is not needed for this product and may be deleted from the Hazards to Humans and Domestic Animals section of the label.

4) The PPE must be revised to read:

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

Mixers, loaders, applicators, flaggers, and other handlers must wear:
Long sleeved-shirt and long pants,
Shoes and socks,
Goggles or face shield,
Chemical-resistant gloves,
Chemical-resistant apron when mixing, loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

See engineering controls of additional requirements."

5) The following engineering control text must be added to the label:

"Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40CFR 170.240 (d)(6)."

The mechanical transfer engineering control text is no longer needed and may be deleted from the label.

6) The text in **bold type** below must be added to the following User Safety Requirements:

"...If no such instructions for washables **exist**, use detergent and hot water..."

7) The text in bold type must be added to the User Safety Recommendation text currently on the label:

"User should remove clothing/**PPE** immediately if pesticide gets inside."

8) The Environmental Hazards text currently on the label must be revised to read:

"This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the

water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater."

9) The early entry PPE must be revised to read:

"Coveralls worn over short-sleeve shirt and short pants,
Chemical-resistant footwear plus socks,
Chemical-resistant gloves made of any waterproof material,
Chemical-resistant headgear for overhead exposure,
Protective eyewear."

10) The text "For early entry to treated areas, wear eye protection, chemical-resistant....., "appearing in the Non-Agricultural Use Requirements box must be deleted from the label. The text "Do not enter treated area until sprays have dried" must be revised to read "Do not enter or allow others to enter treated area until sprays have dried."

11) Per the combined label table, the spray drift section must be revised to read:

"Spray Drift Management
A variety of factors including weather conditions (e.g., wind directions, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size
When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a coarse or coarser spray, apply only as a coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When apply sprays that contain 2,4-D mixed with other active ingredients that require a medium or more fine spray, apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed
Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Temperature Inversions
If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements
Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment
All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

For aerial application:

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

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

For ground boom application:

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

12) The following revisions are needed to the directions for use:

Pastures, Rangeland and Grass (Hay, Silage):
-Per the revised Dicamba RED, the label must be revised to include a PHI for grass forage of 0-days and a PHI for grass hay of 7 days.

-Per the 2,4-D RED, the following rate restrictions must be added to the label and any conflicting text must be deleted:

"Maximum of 2 applications per year.
Minimum of 30 days between applications."

-Add "Do not cut forage for hay within 7 days of application."

Sorghum:
-Per the 2,4-D RED, add "Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days following application."

-Per the revised Dicamba RED, the label must be revised to include a PHI for sorghum grain and fodder of 30-days and a PHI for sorghum forage of 0-days.

Sugarcane:
- Per the Dicamba RED, the PHI for sugarcane cane must be revised to 87-days.

Wheat:
-Per the 2,4-D RED, the following rate restrictions must be added to the label:

"Postemergence
Limited to one postemergence application per crop cycle.
Preharvest
Limited to one preharvest application per crop cycle."

Fallow:
Per the 2,4-D RED, for the following restrictions must be added to the label and any conflicting text must be deleted:

"Only labeled crops can be planted within 30 days of treatment.
Limited to 2 applications per year.
Minimum of 30 days between applications."

Forestry:
-Per the 2,4-D RED, the label must be revised to specify "Limited to one broadcast application per year."

Noncrop Areas (Page 20 of the label):
Per the 2,4-D RED, the following restrictions must be added to the label:

"Postemergence (annual and perennial weeds);
Limited to 2 applications per year.
Minimum of 30 days between applications.
Postemergence (woody plants):
Limited to one application per year."

Conservation Reserve Programs:
Per the 2,4-D RED, add:
"Limited to 2 applications per year.
Minimum of 30 days between applications."

13) The size of the font of "Keep Out of Reach of Children" and "Danger/Peligro" must be changed to comply with 40 CFR 156.10.

14) On page 15, change "recommended interval" to "specified interval". On page 13, change "recommended label rate" to "specified label rate".

15) To the label add "Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et. al. v. EP, C01-0132C (W.D. WA). For Further information, please refer to http://www.epa.gov/espp/wtc."

16) Throughout the label list the noncrop areas when saying "Similar noncrop areas".

17) The Warranty section add "to the extent consistent with applicable law" in front of "Helena Chemical Company makes no other", "Buyer's Exclusive Remedy", and "In no case shall Helena".

18) Change the EPA Reg. # to 5905-568.

A stamped copy of the label is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this letter or the next printing of the label whichever occurs first, must bear the new revised label. This label supercedes all previously accepted labels. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. If you have any questions please call Erik Kraft at 703-308-9358 or email at Kraft.Erik@epa.gov.

Brush-Rhap

For control of a wide-spectrum of annual, biennial, and perennial broadleaf weeds and brush in Conservation Reserve Program land; Certain Non-Crop Areas, Set Aside Acres, and for Forest Management

ACTIVE INGREDIENT(S):		
3,6-dichloromethoxybenzoic acid		18.28%
2,4-Dichlorophenoxyacetic acid	ACCEPTED	24.62%
INERT INGREDIENTS:	with COMMENTS	57.10%
TOTAL	In EPA Letter Dated:	100.00%

AUG 5 2009
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.
5905-568

Equivalent to:
Dicamba Acid, 1.8 lbs./gal
2,4-D Acid, 2.4 lbs./gal

Isomer specific by AOAC Method 6.D01-5 (12th Ed.)

KEEP OUT OF REACH OF CHILDREN
DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it you in detail.).

FIRST AID

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have a person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER - Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

EPA REG. NO. 42750-100 EPA EST. NO. 42750-MO-001
NET CONTENTS:

Manufactured For:
Helena Chemical Company
Collierville, TN

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart.

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

- Long-sleeved shirt and long pants
- Shoes plus socks, and
- Chemical-resistant gloves (except for applicators using groundboom equipment, pilots, and flaggers)

See engineering controls for additional requirements and exceptions.

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

If this container contains over 1 gallon and less than 5 gallons, mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

If this container contains 5 gallons or more in capacity, do not open pour. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

ENGINEERING CONTROL STATEMENTS

When handlers use enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
Pilots must use cockpits in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6).

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target area. Spray equipment used in applying this product should be thoroughly cleaned before using for any other purpose. Use repeated flushing with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater Contamination: Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Endangered Species Concerns:
The use of any pesticide in a manner that may kill or otherwise harm and endangered species or adversely modify their habitat is a violation of federal law.

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 regulation.

Unless otherwise directed in supplemented labeling, all applicable directions, restrictions, precautions and Conditions of Sale and Warranty are to be followed. This labeling must be in the user's possession during application.
Maximum single application rate of Dicamba: 1.0 lb ai/acre and no more than 2 applications per year.

AGRICULTURAL USE REQUIREMENTS

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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 worn over short-sleeve shirt and short pants,
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant headgear for overhead exposure
- Protective eyewear

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

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.

USE REQUIREMENTS FOR PASTURES, PERENNIAL GRASSLANDS, RANGELAND, FALLOW LAND AND NONCROP AREAS: Do not enter or allow others to enter treated areas until spray has dried. For early entry to treated areas, wear eye protection, chemical-resistant gloves Category C, such as butyl rubber > 14 mils, or nitrile rubber > 14 mils, or neoprene rubber > 14 mils or viton > 14 mils, long-sleeved shirt, long pants, shoes and socks.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions that might adversely affect the container or its ability to function properly.

PESTICIDE STORAGE: Do not store below temperature of 32°F or above 100°F. Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:
Plastic/Metal Containers: Triple rinse (or equivalent) and add rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Returnable-Refillable Container (Drum/Bulk/Mini-bulk):
When this container is empty, replace the cap and seal all openings that have been opened during use; and return the container to the point of purchase or to a designated location named at the time of purchase of this product in a bulk container. This container may only be refilled with this herbicide. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact ChemTrec at 1-800-424-9300 or Albaugh, Inc. at 515-964-9444. If not returned to the point of purchase or to the designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

In Case of Spill: In case of large-scale spillage regarding this product, call ChemTrec 800-424-9300.

Steps to be taken in case material is released or spilled:
Dike and contain the spill with inert material (sand, earth, etc) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.

I. GENERAL INFORMATION

BRUSH-RHAP is a postemergence herbicide for controlling a wide spectrum of annual, biennial, and perennial broadleaf weeds and brush in pastures, rangeland, and grass (hay, silage); sorghum; wheat; conservation reserve program land; postharvest, fallow, crop stubble, set-aside acres; general farmstead areas; certain noncrop areas; and for forest management.

Mode of Action

BRUSH-RHAP contains two active ingredients uniquely formulated to be used alone or tank mixed with other listed products as well as liquid fertilizer solutions. BRUSH-RHAP is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. BRUSH-RHAP interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

For best results, thoroughly clean sprayer equipment (tank, lines and nozzles) immediately after use by flushing system with water and heavy duty detergent or other suitable tank cleaner.

II. APPLICATION INSTRUCTIONS

Apply BRUSH-RHAP at the rates and growth stages listed in Tables 1 and 2 as follows unless instructed differently by section on "Food/Feed Crop Specific Information" or "Non-Food/Feed Use (Land not Harvested, Grazed or Foraged)-Specific Information." BRUSH-RHAP may be applied using water or sprayable fluid fertilizer as a carrier. The most effective application rate and timing varies based on the target weed species (refer to Table I). In mixed populations of weeds the correct rate is determined by the weed species requiring the highest rate. Delaying application permits weeds to exceed the maximum size and will prevent adequate control. For certain specified applications liquid fertilizer or oil may replace part or all of the water as diluent. If dry flowable (DF), wettable powder (WP) or flowable (F) tank mix products are to be used, these should generally be added to the spray tank first. Refer to the mixing directions on the labels of the tank mix products.

Irrigation:
In irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth.

CHEMIGATION PROHIBITION

Do not apply this product through any type of irrigation system.

Spray Coverage:
Weeds must be thoroughly covered with spray. Dense leaf canopies shelter smaller weeds and prevent adequate spray coverage.

Sensitive Crop Precautions:
BRUSH-RHAP may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes and other broadleaf plants when contacting their roots, stems or foliage. At high temperatures (about 85 degrees or higher), vapors from this product may cause injury to the aforementioned susceptible crops. These plants are most sensitive to BRUSH-RHAP during their development or growing stage. Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of BRUSH-RHAP with the roots of desirable trees and shrubs.

Drift Reduction Information:
The following information may be helpful in reducing possible spray drift from ground or aerial applications. Avoid making applications when spray particle may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if the wind is gusty or in excess of 5 mph and moving in the direction of nearby sensitive crops or if a temperature inversion exists. Always determine the direction and distance of possible spray drift prior to application. Leave an adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays. Properly maintain and calibrate all spray equipment. The use of agriculturally accepted drift retardants are acceptable and advised. Avoid applications within the vicinity of susceptible plants when at all possible. Do not apply in greenhouses.

AERIAL APPLICATION METHODS AND EQUIPMENT

Water Volume: Use 3-10 gallons of water per acre. Use the higher spray volume when treating dense or tall vegetation.

Application Equipment: Select nozzles designed to produce minimal amounts of fine spray particles. Make applications at the lowest stage height to reduce the exposure of spray droplets to evaporation and wind. The applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

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 ¾ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

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

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

AERIAL DRIFT REDUCTION ADVISORY

[This section is advisory in nature and does not supersede the mandatory label requirements.]

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).

CONTROLLING DROPLET SIZE

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.

- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH

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

APPLICATION HEIGHT

Applications should 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 should increase with increasing drift potential (higher wind, smaller drops, etc.)

WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect 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 should 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 should 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).

Table 1. Application Rate and Timing – Annual Weeds
(For use in non-food/feed crops only: the addition of liquid fertilizer (28-0-0,32-0-0) solutions at ½ the GPA spray solution has shown to give increased efficacy.)

Weeds Controlled (including ALS – and triazine-resistant)	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 pints
Beebalm, Spotted	-	-	-	pre-bloom	post-bloom	-
Broomweed	1-3"	3" branching	-	branching	-	after branching
Buckwheat, Wild	-	1-6"	-	-	-	-
Buffalobur	-	-	-	1-6"	-	Flowering
Burdock	-	pre-flower	-	-	-	-
Buttercup	-	pre-flower	-	early bloom	late bloom	-
Chickweed, Common	-	Seedling	1-3"	-	-	-
Cockle, Cow	-	< 3"	-	-	-	-
Cocklebur, Common	-	1-6"	6-12"	12-18"	-	-
Coreopsis, Plains	1-4"	1-6"	-	-	-	-
Croton, Woolly	-	4-12"	12-30"	-	-	-
Dogfennel	-	-	-	10-15"	-	-
Evening Primrose	-	< 2"	-	2-6"	-	-
Flax	-	< 2"	-	-	-	-
Fleabane, Annual	-	1-4"	4-8"	8"	-	
Fixweed	-	< 3"	-	-	-	
Henbit	-	-	preflower	-	flower	-
Knotweed Spp.	-	< 3" runners	-	> 3" runners	-	actively growing
Kochia	-	1-6"	6-10"	10-20"	-	actively growing
Lambsquarters, Common	-	1-6"	6-10"	10-20"	-	actively growing
Mallow, Common	-	< 3"	-	-	-	-
Morning glory, Ivyleaf	-	pre-flower	-	-	-	-
, Tall	-	pre-flower	-	post-flower	-	-
Mustards, Annual		Rosette		early bolt	-	-
, Tansy	-	< 3"			-	
Pennycress, Field	-	-	-	rosette	-	-
Pepperweed, Virginia	-	-	1-3"	3-6"	after branching	-
Pigweed, Prostrate	-	< 3"	-	-	-	-
, Redroot	-	< 3"	3-10"	-	-	-
, Smooth	-	< 3"	-	-	-	-
, Tumble	-	< 3"	-	mature	-	-
Poorjoe	-	prior to flower	-	-	-	actively growing

Weeds Controlled (including ALS – and triazine-resistant)	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 pints
Purslane, Common		< 3"	3-8"		-	-
Ragweed, Common				>10"	-	
Western, Lanceleaf	1-3"	3-6"	6-10"	actively growing	-	-
Sedge[1]	-	-	-	-	-	-
Shepherdspurse	-	Rosette	-	-	-	-
Smartweed, Pennsylvania	-	< 4"	-	-	4-12"	-
Sneezeweed, Bitter	-	1-4"	Prior to flower	flower	-	-
Sowthistle	-	Rosette	-	bolting	-	-
Sunflower	-	1-3"	3-6"	6-24"	-	-
Thistle, Russian	-	-	-	rosette	-	-
Velvetleaf	-	< 6"	6-20"	> 20"	-	-

[1] For use in non-food/feed crop only. Adding crop oil concentrate has shown to improve performance on actively growing annual sedge.

Table 2. Application Rate and Timing – Biennial and Perennial Weeds.
(The addition of liquid fertilizer (28-0-0,32-0-0) at ½ the GPA of the spray solution has proven to give increase suppression or control on certain species of weeds.)

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 – 3 1/4 pints
Bindweed, Field	-	-	-	-	-	actively growing
Bittercress	-	2-3"	-	-	-	-
Buckeye species[1]	-	-	-	-	full leaf	-
Bullnettle[2]	-	-	-	flower	-	-
Chircory	-	-	-	-	early bolting	-
Clove, Bur	-	-	Pre-flower	-	-	-
Dandelion, Common	-	Rosette	-	bolting	-	-
Dewberry, Southern[1]	-	-	-	-	-	spring or fall
Dock, Curly	-	-	prior to bolting	-	after bolting	-
Elderberry[2]	-	-	-	-	-	actively growing
Goldenrod, Missouri	-	-	-	3-15"	flower	-
Groundsel, Texas	-	Rosette	post-bolting	-	-	-
Honeysuckle, Hairy	-	-	-	-	spring or fall	-
Horsenettle, Carolina[1]	-	-	-	-	-	flower or berry
Ivy, Poison	-	-	-	after bloom	-	-
Knapweed, Black[2]	-	-	-	-	-	actively growing
, Russian[2]	-	-	-	-	-	actively

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 – 3 1/4 pints
						growing
, Spotted	-	-	-	-	-	actively growing
Marshelder	-	-	-	<12"	12"/prebloom	
Mesquite[3]	-	-	-	-	-	45-90 days
						after budbreak
Milkweed, Antelopehorn[2]	-	-	-	pre-flower	-	Flower
Nightshade, Silverleaf[1]	-	-	-	full flower	-	-
,Black[1]	-	-	-	full flower	-	actively growing
Persimmon, Eastern[3]	-	-	-	-	-	actively growing
Prickly, Lettuce	-	-	-	rosette	-	actively growing
Rabbitbrush[2]	-	-	-	-	-	-
Ragwort, Tansy	-	-	-	rosette	-	actively growing
Redvine[2]	-	-	-	-	-	actively growing
Sagebrush, Fringed[2]	-	-	-	-	-	actively growing
Smartweed	-	-	-	-	-	-
Sorrel, Red	-	-	Rosette	bolting	flower	actively growing
Sowthistle[2]	-	-	-	-	-	actively growing
Spurge, Leafy[2]	-	-	-	-	-	full leaf
Tallow Tree, Chinese[4]	-	-	-	-	-	-
Thistle, Bull	-	-	Rosette	bolting	-	actively growing
, Canada[2]	-	-	-	-	-	-
, Musk	-	-	-	rosette/bolting	-	-
, Plumeless	-	-	Rosette	bolting	-	-
Vetch, Hairy	-	1-4"	4-8"	8" full flower	-	-
Yankeeweed	-	-	-	10-18"	-	Rosette
Yellow Starthistle[1]	-	-	-	-	-	-

[1] May require repeat applications
[2] Recommended rate will provide top growth suppression only.
[3] For improved root kill or woody species such as mesquite and eastern persimmon spray 2 pints of per acre BRUSH-RHAP each year for 3 consecutive years.
[4] Under dense populations, a second application may be needed the following growing season.
For increased control of weeds such as blackberry and dewberry, BRUSH-RHAP may be tank mixed with Ally® herbicide (0.1-0.2 ounces per acre), if labeled for the use site.

Ground Application (Broadcast)

Water volume: Use 10-25 gallons of spray solution per broadcast acre for optimal performance. Use the higher spray volume when treating dense or tall vegetation.

Application Equipment: Select nozzle design to produce minimal amounts of fine spray particles. Spray nozzles as close to the weeds as is practical for good weed coverage.

Spot or Small Area Application

BRUSH-RHAP may be applied to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems. For knapsack or other small capacity sprayers, prepare a solution of BRUSH-RHAP in water according to Table 3 (assuming that the spot treatment rate equates to 40 gallons pre acre on the broadcast basis.) Adding a surfactant (0.5% by volume) can help improve control.

Do not make spot treatments in addition to broadcast or band treatments.

Application equipment: Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

Table 3. – Knapsack Sprayer Dilution Instructions

Sprayer Capacity (gallons of water)	Amount of BRUSH-RHAP to add to the spray tank
1 gallon	2/3 fluid ounce*
3 gallons	2 fluid ounces
5 gallons	3 fluid ounces

* 1 fluid ounce = 2 tablespoons

III. ADDITIVES

To improve burndown of emerged weeds, surfactants and/or low use rates of liquid fertilizers (28-0-0; 32-0-0), or crop oil concentrate may be used with BRUSH-RHAP herbicide or BRUSH-RHAP tank mixes applied after the weeds have emerged. Crop oil concentrate is for non-food/feed crop uses only. Do not apply tank mixes that include Ammonium Sulfate or Crop Oil Concentrate to any food/feed crop use listed on this label. For food/feed crop use, do not use liquid fertilizers that contain Ammonium Sulfate (AMS) as a source of nitrogen as tolerances in commodities derived from the crop may contain residues that exceed established tolerances.

Oil Concentrate
A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be non-phytotoxic
- contain only EPA-exempt ingredients
- provide good mixing quality in the jar test, and
- be successful in local experience

The exact composition of suitable products will vary; however, vegetable oil and petroleum oil concentrates should contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see Compatibility Test for Mix Components.

Nitrogen Source
Sprayable liquid fertilizers: Use ½ GPA of sprayable liquid fertilizers (28-0-0; 32-0-0) per acre. Do not use brass or aluminum nozzles when spraying fertilizers.

Non-ionic Surfactant
The standard label recommendation is 2-4 pints of an 80% active non-ionic spray surfactant per 100 gallons of water. (Rate will vary with the size and condition of weeds to be controlled. Use lowest rate per 100 gallons when weeds are small and actively growing. As weeds increase in size and or become hardened off, the rate of non-ionic surfactant will have to be increased to give optimum coverage and control.)

Table 4. Additive Rate Per Acre.

Additive[1]	Rate Additive Per Acre
Non-ionic Surfactant	2-4 pints per 100 gallons[2]
Sprayable Liquid Fertilizers (28-0-0; 32-0-0)	½ GPA of spray solution
Crop Oil Concentrate	1 quart

[1] See manufacturer's label for specific rate recommendations.
[2] Use lowest rate per 100 gallons when weeds are small and actively growing. As weeds increase in size and or become hardened off, the rate of non-ionic surfactant will have to be increased to give optimum coverage and control.

IV. GENERAL TANK MIXING INFORMATION

Tank Mix Partners/Components

Do not tank mix BRUSH-RHAP with any other product that contains 2,4-D and/or dicamba.

The following products may be tank mixed with BRUSH-RHAP according to the specific tank mixing instructions in this label and respective product labels.

- Aim™ (carfentrazone-ethyl)
- Ally® (metsulfuron-methyl)
- Amber® (triasulfuron)
- Asulox® (asulam)
- Atrazine
- Basagran® (bentazon)
- Bronate® (bromoxynil + MCPA)
- Buctril® (bromoxynil)
- Canvas® (thifensulfuron-methyl + tribenuron-methyl + metsulfuron-methyl)
- Cyclone® (paraquat)
- Dakota® (fenoxaprop-p-ethyl + MCPA)
- Evik® (ametryn)
- Express® (tribenuron-methyl)
- Finesse® (chlorsulfuron + metsulfuron-methyl)
- Glean® (chlorsulfuron)
- Gly Star™ Plus (glyphosate)

- Gramoxone® Extra (paraquat)
- Harmony® Extra (thifensulfuron-methyl + tribenuron-methyl)
- Karmex® (diuron)
- Kerb ™ (pronamide)
- Laddok® S-12 (bentazon + atrazine)
- MCPA
- Paramount® (quinclorac)
- Peak® (prosulfuron)
- Permit® (halosulfuron-methyl)
- Roundup® Ultra (glyphosate)
- Sencor® (metribuzin)
- Sinbar® (terbacil)
- Stinger ™ (clopyralid)
- Tordon ™ (picloram)
- Touchdown® (glyphosate)

Read and follow the applicable Restrictions and Limitations and Directions for Use on all products involved in tank mixing. The most restrictive labeling applies to tank mixes. Physical incompatibility, or reduced weed control may result from mixing BRUSH-RHAP with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

Compatibility Test for Mix Components
Before mixing components, always perform a compatibility jar test.

For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes adjust accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in the Mixing Order using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is still incompatible, do not mix the ingredients in the same tank.

Mixing Order
If an inductor is used, rinse it thoroughly after each component has been added. Maintain constant agitation during application.

1. Water Begin by agitating a thoroughly clean sprayer tank half full of clean water.
2. Agitation. Maintain constant agitation throughout mixing and application.
3. Products in PVA bags. Place any product contained in water-soluble bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. Water-dispersible products (such as dry flowables, wettable powders, suspension concentrates, and suspo-emulsoins)
5. Water-soluble products (such as BRUSH-RHAP).
6. Emulsifiable concentrates (such as oil concentrate, when applicable).

7. Water-soluble additives (such as liquid fertilizers (28-0-0; 32-0-0), when applicable).*
8. Remaining quantity of water.

* If sprayable fluid fertilizer is used as the carrier.

Always perform the Compatibility Test before mixing into the spray tank. Also, when using a sprayable fluid fertilizer as the carrier, any product contained in PVA bags must first be completely dissolved in water before the contents can be added to the fertilizer mix.

V. RESTRICTIONS AND LIMITATIONS

- Maximum seasonal use rate: Refer to Table 5.
- Preharvest Interval (PHI): Refer to "Food/Feed Crop Specific Information"
- Restricted entry Interval (REI): 48 Hours
- Arid (dry) conditions: it is extremely important that the addition of a suitable Nonionic Surfactant, Oil, or sprayable fertilizer be used when applying BRUSH-RHAP. Higher rates of BRUSH-RHAP may be needed to control susceptible weeds in this environment.
- Rainfast Period: Rainfall or irrigation occurring within 4 hours after postemergence applications may reduce effectiveness of BRUSH-RHAP.
- Stress: Do not apply to crops under stress such as stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, as unsatisfactory control may result.
- Do not apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced or prolonged.
- Do not apply this product though any type of irrigation equipment. Do not contaminate irrigation ditches or water used for domestic purposes.
- This product cannot be used to formulate or reformulate another pesticide product.

VI. FOOD/FEED CROP SPECIFIC INFORMATION

Retreatments may be made as needed; however, do not exceed a total of 4 3/4 pints of BRUSH-RHAP per treated acre during a growing season.

Do not use on bentgrass, susceptible grass pastures (such as carpetgrass, buffalograss, or St. Augustine grass), lezpedeza, wild winter peas, vetch, clover, and alfalfa pastures as injury will occur.

When perennial weeds are reaching maturity, mowing and allowing some regrowth will enhance control. Difficult to control weeds may require a repeat application.

If grasses are grown for seed or for seed-down purposes, do not apply after grass reaches joint stage.

Ally®
Amber®

VII. NON-FOOD/FEED USE (LAND NOT HARVESTED, GRAZED OR FORAGED) – SPECIFIC INFORMATION.

BETWEEN CROP APPLICATIONS

PREPLANT DIRECTIONS (POSTHARVEST, FALLOW, CROP STUBBLE, SET-ASIDE) FOR BROADLEAF WEED CONTROL

BRUSH-RHAP can be applied postharvest in the fall, spring, or summer during the fallow period or to crop stubble/set-aside acres. Apply to weeds after crop harvest (postharvest) and before a killing frost or in the fallow cropland or crop stubble the following spring or summer.

See "V. Restrictions and Limitations" for the recommended interval between application and planting to prevent crop injury.

Rates and Timings:
Apply 1 – 3 2/3 pints of BRUSH-RHAP per acre. Refer to Table 1 to determine use rates for specific targeted weed species. Retreatments may be made as needed; however, do not exceed a total of 4 3/4 pints of BRUSH-RHAP per treated acre during a growing season. For best performance, apply BRUSH-RHAP when annual weeds are less than 6" tall, when biennial weeds are in the rosette stage and to perennial weed regrowth in late summer or fall following a mowing or tillage treatment. The most effective control of upright perennial broadleaf weeds such as Canada thistle and Jerusalem artichoke occurs if BRUSH-RHAP is applied when the majority of weeds have at least 4-6" of regrowth or for weeds such as field bindweed and hedge bindweed that are in or beyond the full bloom stage. The addition of liquid fertilizers (28-0-0, 32-0-0) at ½ GPA has shown to increase efficacy .

Avoid disturbing treated areas following application. Treatments may not kill weeds that develop from seed or underground plant parts such as rhizomes or bulblets, after the effective period for BRUSH-RHAP. For seedling control, a follow-up program or other cultural practices could be instituted.

Between Crop Tank Mixes:
In tank mixes with one or more of the following herbicides, apply 1.0 - 1.25 pints of BRUSH-RHAP per acre for control of annual weeds, or 1.25 - 4.25 pints of BRUSH-RHAP per acre for control of biennial and perennial weeds

- Aim™
- Ally®
- Amber®
- Atrazine
- Cyclone®
- Finesse®
- Glyphosate (Gly Star™ Plus)
- Gramoxone® Extra
- Kerb™
- Paramount®
- Sencor®
- Tordon™ 22K
- Touchdown®

FOREST MANAGEMENT

Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

Forest Site Preparation
Budbreak Spray: For control of alder, susceptible broadleaf weeds, and susceptible woody plants before planting forest seedlings, apply up to 2 quarts per acre in a minimum of 10 gallons spray mixture per acre. Apply as an oil spray (see "Mixing Instructions") after alder buds break, but before foliage is 1/4 full size. A water spray including 2 to 4 quarts per acre of diesel oil, fuel oil, stove oil, or crop oil concentrate may also be used.

Foliage Spray: To control alder and susceptible woody plants before planting forest seedlings, apply up to 2 quarts per acre in a minimum of 10 gallons spray mixture per acre. If desired, apply as a water spray including up to 1 quart of diesel oil, fuel oil, stove oil, or crop oil concentrate per gallon of water (see "Mixing Instructions"). For best results, apply after alder foliage has reached full size.

Conifer Release: Some Conifers are more susceptible to BRUSH-RHAP than others. Prior to application, consult your local Forestry agency about use pattern and history of use. To control alder, susceptible broadleaf weeds, and susceptible woody plants in young conifer stands, apply up to 2 pints per acre in a minimum of 10 gallons spray mixture per acre. This spring foliage treatment should be applied as a water spray when 3/4 of the brush foliage has full size leaves and before new conifer growth reaches 2 inches in length. Such stages usually occur between early May and mid-June, but application timing should be based on growth stages of brush and conifers. Application may cause leader deformation and other conifer injury, but trees should overcome it during the next growing season.

To control tanoak, madrone, ceanothus, canyon live oak, and manzanita, and to release Douglas fir, hemlock, Sitka spruce or grand fir, apply up to 3 pints per acre in a minimum of 10 gallons spray mixture per acre. This spring foliage treatment should be applied as a water spray including, if desired, up to 1 quart of diesel oil, fuel oil, stove oil, or crop oil concentrate per gallon of water (see "Mixing Instructions"). Make application before new growth on Douglas fir is 2 inches long. To release ponderosa pine from the same species, treat before new pine growth begins in the spring. Addition of oil or oil concentrate may cause unacceptable injury to pines. For dormant applications in late winter or early spring for control of susceptible woody species such as alder, willow, poplars, cherry, vine maple, ceanothus, tanoak, madrone, and manzanita, apply up to 3 pints per acre in a minimum of 10 gallons spray mixture per acre. This dormant treatment should be applied in diesel oil, fuel oil, stove oil, or other suitable diluent such as water plus crop oil concentrate (see "Mixing Instructions"). Do not use in plantations where pine and larch are among the desired crop species.

To control hazel brush in the Lake states, apply up to 2 pints per acre in a minimum of 10 gallons spray mixture per acre. Apply as a water spray when new shoot growth of hazel is complete (usually mid-July).

After conifer species such as white pine, ponderosa pine, jack pine, red pine, black spruce, white spruce, red spruce, and balsam fir crease growth and harden off and brush is still actively growing in late summer, apply up to 3 pints per acre in a minimum of 10 gallons spray mixture per acre. Apply as a water spray to control certain competing hardwoods such as alder, aspen, birch, hazel and willow. However, if possible injury cannot be tolerated, do not use since this treatment may cause conifer injury.

Forest Roadsides: To control susceptible broadleaf weeds and woody plants on forest roadsides, apply 1 to 3 pints per acre in a minimum of 10 gallons spray mixture per acre. Apply as a water spray and, if desired, include up to 3 quarts per acre of diesel oil, fuel oil, stove oil, or crop oil concentrate (see "Mixing Instructions"). Apply when sufficient foliage is present for absorption.

ROADSIDES; MEDIANS; HIGHWAY, RAILROAD, UTILITY AND PIPELINE RIGHTS-OF-WAY; VACANT LOTS; AROUND UTILITY INSTALLATIONS, TRANSFORMERS, PUMP HOUSES, AND BUILDINGS; STORAGE AREAS; FENCES; GUARDRAILS; LUMBER YARDS; INDUSTRIAL SITES; AIRPORTS; TANK FARMS; FARMSTEADS; AND SIMILAR NONCROP AREAS

Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

For control of many broadleaf weeds and small woody plants, apply 2/3 to 2 pints per acre. Use the high rate for woody plants. Applications may be as broadcast sprays, small area sprays or spot treatments. For small areas or spot spraying, use 2 fluid ounces per gallon of water and spray weeds to runoff. Regardless of the method of application, use adequate spray volume for full coverage of weeds. Preferred application timing is in the early spring when sufficient weeds have emerged, and when weeds are small and actively growing, but before weeds are too mature. Summer applications to older, drought-stressed weeds are less effective. However, weeds are more susceptible again in the fall when cooler, wetter conditions support active growth before a killing frost. For fall treatment of mature weeds or perennial weed regrowth, use up to 1.0 pints per acre. Several seasons of spring plus fall treatments may be

necessary to control certain perennials. Use of oil sprays or the addition of spray adjuvants increases the risk of damage to desirable ground covers.

Plant Response: Bent grass, other warm season or southern grasses, alfalfa, clover, or other legumes may be killed or injured. Do not apply when grass is in boot to milk stage, or after heading begins, if grass production is desired. Do not apply to newly seeded areas until grass is well established. Reseeding is not recommended for at least 30 days following application.

Do not apply more than 4 ¾ pints/Acre for a single application. (Equivalent to 1.45 lbs 2,4-D acid and 1.09 lbs dicamba acid per acre).

CONSERVATION RESERVE PROGRAMS AND GENERAL FARMSTEAD

BRUSH-RHAP is recommended for use for Conservation Reserve Programs, general farmstead (non-cropland only), weed and brush control, or use in State Recognized Noxious Weed areas (non-cropland areas).

Refer to Tables 1 and 2 for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 2 1/2 pints of BRUSH-RHAP per acre are for spot treatments only.

Retreatments may be made as needed; however, do not exceed a total of 4 3/4 pints of BRUSH-RHAP per treated acre during a growing season.

Farmstead and Fence-row Treatment Application Instructions
BRUSH-RHAP may be applied using water or oil and water emulsions in spot application to control undesirable vegetation using handgun or similar types of application equipment. In addition to weed species listed in Tables 1 and 2, these treatments may be used to control or suppress woody plant species listed in Table 7.

To prepare soil and water emulsions, mix in the order and proportions indicated below.

The solution should remain milky colored without an oily layer on top when under agitation. If an oily layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

Do not exceed 40 gallons of spray solution per treated acre per application. 4 ¾ pints of BRUSH-RHAP in forty gallons of spray solution contains 1.1 pounds acid equivalent of dicamba and 1.4 pounds acid equivalent of 2,4-D. Spray plants to wet. Do not allow this spray mix to contact desirable vegetation.

To control brush, briars, and weeds along fence-rows surrounding pasture and ranch lands, and fallow fields, use a tank mix of 1.5% BRUSH-RHAP, 88.5% water, 10% diesel oil, and sufficient emulsifier (to mix the diesel and emulsifier). The diesel oil in this tank mix will damage or kill desirable grasses and should not be used in pastures or where damage to desirable species cannot be tolerated.

1. Water: Begin by agitating a thoroughly clean sprayer tank with the desired quantity of clean water. Maintain constant agitation during complete mixing procedure.
2. Emulsifier: Add 0.5% volume to volume of water.
3. BRUSH-RHAP: add 1.5 gallons per 100 gallons of total intended solution.
4. Diesel Oil: Add 10 gallons per 100 gallons of total intended solution.

Maintain constant agitation during application. Under good agitation, the spray solution should be milky white with no oil layer on top. If oil layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

FOR SPRAYING FOLIAR APPLICATIONS:

1. Spray when leaves have reached full size but have not hardened due to drought or maturity.
2. Spray individual plants to wet with handgun.
3. For larger stems (up to 3" in diameter) and hard to control species, direct spray stream to base of stems to wet the stem at soil surface in addition to wetting the foliage.
4. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

FOR DORMANT BASAL APPLICATIONS:

1. Increase diesel oil content to 15% or 15 gallons of diesel oil per 100 gallons of total solution.
2. Spray in late winter and early spring before plants break dormancy.
3. Spray the bottom 24" of the target stem to wet on all sides.
4. For larger stems (up to 3" in diameter) and hard to kill species direct the spray solution to the base of target stems to wet the soil at the stem/soil junction in addition to wetting the stem.
5. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

FOR CUT SURFACE TREATMENTS:

Apply BRUSH-RHAP in an undiluted state as a cut surface treatment to control unwanted trees and prevent sprouts of cut trees.

- Frill or Girdle Treatments: Make a continuous cut or a series of overlapping cuts using an axe to girdle tree trunk. Spray or paint the cut surface with BRUSH-RHAP.

- Stump Treatments: Spray or paint freshly cut surface with BRUSH-RHAP. The cambium layer (the area adjacent to the bark) should be thoroughly wet. Treat stumps within 6 hours after cutting.

Table 7. The following list of trees and vines can be controlled on farmsteads and fencerows as foliar, basal, or cut surface treatments:

Alder
Ash
Aspen
Basswood
Beech
Blackberry
Blackgum
Cedar
Cherry
Chinquapin
Cottonwood
Creosotebush
Dewberry
Dogwood
Elm
Grape
Greenbriar
Hawthorn (Thornapple)
Hemlock
Hickory
Honeylocust
Honeysuckle
Hornbeam
Huckleberry
Huisache
Ivy, Poison
Kudzu
Locust, Black
Maple
Mesquite
Oak
Oak, Poison
Olive, Russian
Persimmon, Eastern
Pine
Plum, Sand (Wild Plum)
Poplar
Rabbitbrush
Redcedar, Eastern
Rose, McCartney
Rose, Multiflora
Sagebrush, Fringe
Sassafras
Spruce
Sumac
Sweetgum
Sycamore
Tarbrush
Willow
Witchhazel
Yaupon
Yucca

Weeds listed in this label:

Common Name	Scientific Name
ANNUALS	
Beebalm, Spotted	*Monarda punctata*
Broomweed, Common	*Gutierezia dracunculoides*
Buckwheat, Wild	*Polygonum convulvulus*
Buffalobur	*Solanum rostratum*
Burdock	*Arctium spp.*
Buttercup, Corn	*Ranneulus arvensis*
Chickweed, Common	*Stellaria media*
Cockle, Corn	*Agrostemma githago*
Cocklebur, Common	*Xanthium strumarium*
Coreopsis, Plains	*Coreopsis tinctoria*
Croton, Woolly	*Croton capitatus*
Devilsclaw,	*proboscidea luisianica*
Dogfennel (Cypressweed)	*Eupatorium capillifolium*
Eveningprimrose, Cutleaf	*Oenothera lacinata*
Flax	*Linum catharticum*
Fleabane, Annual	*Erigeron annuus*
Flixweed	*Descurainia sophia*
Henbit	*Lamium amplexicaule*
Knotweed, Prostrate	*Polygonum aviculare*
Kochia	*Kochia scoparia*
Lambsquarters, Common	*Chenopodium album*
Lettuce, Prickly	*Lactuca serriola*
Mallow, Common	*Maalva neglecta*
Mornigglory, Ivyleaf	*Ipomea hederacea*
Tall	*Ipomea purupurea*
Mustard, Annual	*Brassica spp.*
Tansy	*Descurainia pinnata*
Pennycress, Field	*Thlaspi arvense*
Pepperweed, Virginia	*Lepidium virginicum*
Pigweed, Prostrate,	*Amaranthus blitoides*
Redroot,	*Amaranthus retroflexus*
Smooth,	*Amaranthus hybridus*
Tumble	*Amaranthus albus*
Poorjoe	*Diodia teres*
Purslane, Common	*Portulaca oleracea*
Ragweed, Common,	*Ambrosia ariemisiifolia*
Lance-leaf,	*Ambrosia bidentata*
Western	*Ambrosia psilostachya*
Sedge	*Cyperus compressus*
Shepherdspurse	*Capsella bursa-pastoris*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Sneezeweed, Bitter	*Helenium amurum*
Sunflower, Common (wild)	*Helianthus annuus*
Thistle, Russian	*Salsola iberica*
BIENNALS AND PERENNIALS	
Bindweed, field	*Convolvulus arvensis*
Bittercress	*Cardamine spp.*

Common Name	Scientific Name
Buckeye	*Aesculus spp.*
Bullnettle	*Cnidosculus stimulosus*
Chicory	*Cichorium intybus*
Clover, Hop	*Trifoleum aureum*
Dandelion	*Taraxacum officinale*
Dock, Curly	*Rumex crispus*
Elderberry	*Sambucus canadensis*
Goldenrod, Missouri	*Solidago missouriensis*
Goldenweed, Common	*Isocp,a cprpmopifolia*
Groundset	*Senecio vulgaris*
Honeysuckle, Hairy	*Lonicera*
Horsenettle	*Solanum caroliniense*
Ivy, Poison	*Rhus radicans*
Knapweed, Black	*Centaurea nigra*
Russian	*Centaurea repens*
Spotted	*Centaurea maculosus*
Marshelder	*Ina annua*
Mesquite	*Prosopis juliflora*
Milkweed, Antelopehorn	*Asciepius*
Nightshade, Silverleaf	*Solanum elaeagnifolium*
Black	*Solanum nigrum*
Persimmon, Eastern	*Diospyros virginiana*
Rabbitbrush	*Chrysanthemus pulchellus*
Ragwort, Tansy	*Senecio jacobia*
Redvine	*Brunnichia ovata*
Sagebrush, Fringed	*Artemisia frigida*
Smartweed, Swamp	*Polygonum coccineum*
Sorrel, Red (Sheep Sorrel)	*Rumex acetosella*
Sowthistle, Perennial	*Sonchus arvensis*
Spurge, Leafy	*Euphorbia esula*
Starthistle, Yellow	*Centauria solstitialis*
Tallow Tree, Chinese	*Sapium sebiferum*
Thistle, Bull	*Cirsium vulgare*
Canada	*Cirsium arvense*
Musk	*Carduus nutans*
Plumeless	*Carduus acanthoides*
Vetch	*Vicia spp.*
Yankeeweed	*Eupatorium compositifolium*

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