



# GRASSMASTER™

For use on Conservation Reserve Program Land, Fallow Systems (Between Crop Applications), General Farmstead, Sorghum, Grass (Hay or Silage), Pastures, Rangeland, Sugarcane, Wheat, Corn (Preplant and Preemergence)\*, Soybeans (Preplant)\* and Cotton (Preplant)\*. Also for Control of Brush and Broadleaf Weeds on Rights-of-Way\*, Forest Brush\*, Industrial Sites\*, Non-Irrigation Ditchbanks\*, Fence Rows\*, and Other Labeled Non-Crop Areas\*.

\*Not approved for these uses in California

## ACTIVE INGREDIENTS:

Dimethylamine salt of 3,6-dichloromethoxybenzoic acid\* ..... 12.5%

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid\*\* ..... 36.0%

**OTHER INGREDIENTS:** ..... 51.5%

**TOTAL:** ..... 100.0%

\*This product contains 10.4% dicamba or 1 pound per gallon (120 grams per liter) acid equivalent.

\*\* This product contains 29.9% 2,4-D or 2.87 pounds per gallon (344 grams per liter) acid equivalent.

Isomer specific by AOAC method 978.05, 15th Edition

EPA Reg. No. 81927-42

EPA Est. No. 81927-AL-001<sup>PM</sup>

75640-COL-001<sup>PC</sup>; 7401-TX-001<sup>TX</sup>

Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

## 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 to you in detail.)

### 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, on skin, or on clothing.

Manufactured for:  
Alligare, LLC  
1565 5th Avenue  
Opelika, AL 36801

**Net Contents: 2.5 Gallons (9.46 liters)**

### FIRST AID

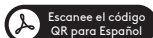
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious or convulsing person.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

### 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.

See inside booklet for complete Precautionary Statements and Directions for Use.



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## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material.

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

- Long-sleeved shirt and long pants
- Shoes and socks
- Chemical-resistant gloves
- Goggles or faceshield, and
- Chemical-resistant apron when mixing, loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

See Engineering Controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be re-used until it has been cleaned.

### Engineering Control Statements

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

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.

### 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. If pesticide gets on skin, wash immediately with soap and water. 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 fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to aquatic organisms in water adjacent to treated areas, and non-target plants. Do not contaminate water when disposing of equipment washwaters or rinsate.

### Groundwater Contamination

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.

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 an 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.

### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of **48 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, and
- Protective eyewear

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter until sprays have dried.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**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. Do not store under conditions that might adversely affect the container or its ability to function properly.

**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.

**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: Non-refillable containers. Plastic/Metal Containers.** Do not reuse or refill this container. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**Non-refillable container less than or equal 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 (all sizes):** 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.

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

## I. PRODUCT INFORMATION

**GRASSMASTER™** herbicide is a selective postemergence herbicide for controlling a wide spectrum of annual, biennial, and perennial broadleaf weeds and brush in grass forages and selected row crops.

### Mode of Action

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

## II. APPLICATION INSTRUCTIONS

Apply **GRASSMASTER** 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-Specific Information**." Applications can be made to actively growing weeds as aerial, broadcast, band, or spot spray applications. **GRASSMASTER** may be applied using water or sprayable fluid fertilizer as a carrier.

Sprayable fluid fertilizer may be used as the carrier in preplant or pre-emergence use for all crops listed on this label. Postemergence uses with sprayable fluid fertilizer may be made on pasture, hayland, or wheat crops only.

The most effective application rate and timing varies based on the target weed species (**refer to Table 1**). 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.

### Irrigation:

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

### Spray Coverage:

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

### Sensitive Crop Precautions:

**GRASSMASTER** 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. These plants are most sensitive to **GRASSMASTER** 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 **GRASSMASTER** with the roots of desirable trees and shrubs.

Do not use aerial equipment or apply **GRASSMASTER** when sensitive crops and plants are growing in the vicinity of area to be treated.

## SPRAY DRIFT MANAGEMENT

A variety of factors, including weather conditions (e.g., wind direction, 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 applying 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. Do not spray near susceptible plants if the wind is gusty or in excess of 5 mph and moving in the direction of nearby susceptible crops or if a temperature inversion exists. However, always make applications when there is some air movement to determine the direction and distance of possible spray drift. Leave an adequate buffer zone between area to be treated and susceptible plants. Coarse sprays are less likely to drift out of the target area than fine sprays. The use of agriculturally accepted drift retardants are acceptable and advised.

**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 and surrogates.

**Cleaning Spray Equipment:** Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions and then triple rinse the equipment before and after applying this product.

#### 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 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 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.

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.

Do not use aerial equipment if spray particles can be carried by the wind into areas where sensitive crops or plants are growing or when temperature inversions exist.

Table 1. Application Rate and Timing - Annual Weeds

Weeds Controlled (including ALS - and triazine-resistant)	Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4 pints
Amaranth, Palmer*	-	<3"	3 to 10"	-	-	-
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	-	1-6"	-	-	-	-
Croton, Woolly	1-4"	4-12"	12-30"	-	-	-
Devil's claw	-	-	-	< 8"	-	-
Dogfennel	-	-	-	10-15"	-	-
Evening Primrose	-	< 2"	-	2-6"	-	-
Falseflax, Smallseed	-	< 2"	-	-	-	-
Fleabane, Annual	-	1-4"	4-8"	8"	-	-
Flixweed	-	< 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"	-	-	-	-
Marestail (Horseweed)	-	-	rosette to 3"	3 to 6"	-	-
Mayweed	-	-	-	-	1 to 6"	-
Morning glory, Ivyleaf,	-	pre-flower	-	-	-	-
Tall	-	pre-flower	-	post-flower	-	-
Mustards, Annual,	-	rosette	-	early bolt	-	-
Tansy	-	< 3"	-	-	-	-
Nightshade, Black	-	-	-	full flower	-	actively growing

Weeds Controlled (including ALS - and triazine-resistant)	Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4 pints
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
Purslane, Common	-	< 3"	3-8"	-	-	-
Ragweed, Common	-	-	-	>10"	-	-
,Western, ,Lanceleaf	1-3"	3-6"	6-10"	actively growing	-	-
Sedge <sup>1</sup>	-	-	-	< 4 leaves	-	-
Shepherdspurse	-	rosette	-	-	-	-
Smartweed, Pennsylvania	-	<4"	-	-	4-12"	-
Sneezeweed, Bitter	-	1-4"	prior to flower	flower	-	-
Sowthistle, Annual	-	rosette	-	bolting	-	-
Sunflower	-	1-3"	3-6"	6-24"	-	-
Thistle, Russian	-	-	-	rosette	-	-
Velvetleaf	-	< 6"	6-20"	> 20"	-	-
Waterhemp, Common	-	<3"	3 to 10"	-	-	-

<sup>1</sup> For use in non-food/feed crop. Adding crop oil concentrate has shown to improve performance on actively growing annual sedge.  
 \*Not approved for this use in California

**Table 2. Application Rate and Timing - Biennial and Perennial Weeds**

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4-5 pints
Bindweed, Field	-	-	-	-	-	actively growing
Bittercress	-	2-3"	-	-	-	-
Buckeye species <sup>1</sup>	-	-	-	-	full leaf	-
Bullnettle <sup>2</sup>	-	-	-	flower	-	-
Chicory	-	-	-	rosette	early bolting	-
Clover, Bur	-	-	pre-flower	-	-	-
Dandelion, Common	-	rosette	-	bolting	-	-
Dewberry, Southern <sup>1</sup>	-	-	-	-	-	spring or fall
Dock, Curly	-	-	prior to bolting	-	after bolting	-
Elderberry <sup>2</sup>	-	-	-	-	-	actively growing
Goldenrod, Missouri	-	-	-	3-15"	flower	-
Goldenrod, Common	-	-	-	-	-	actively growing
Groundsel, Texas	-	rosette	post-bolting	-	-	-
Honeysuckle, Hairy	-	-	-	-	spring or fall	-
Horsenettle, Carolina <sup>1</sup>	-	-	-	-	-	flower or berry
Ivy, Poison	-	-	-	after bloom	-	-
Knapweed, Black <sup>2</sup> ,	-	-	-	-	-	actively growing
,Russian <sup>2</sup>	-	-	-	-	-	actively growing
,Spotted	-	-	-	-	-	actively growing
Lettuce, Prickly	-	-	-	rosette	-	actively growing
Marshelder	-	-	-	<12"	12"/prebloom	-
Mesquite <sup>3</sup>	-	-	-	-	-	45-90 days after budbreak
Milkweed <sup>1</sup>	-	-	-	pre-flower	-	flower
Nightshade, Silverleaf <sup>1</sup> ,	-	-	-	full flower	-	-
,Black <sup>1</sup>	-	-	-	full flower	-	actively growing
Persimmon, Eastern <sup>3</sup>	-	-	-	-	-	actively growing

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4-5 pints
Rabbitbrush <sup>2</sup>	-	-	-	-	-	-
Ragwort, Tansy	-	-	-	rosette	-	actively growing
Redvine <sup>2</sup>	-	-	-	-	-	actively growing
Sagebrush, Fringed <sup>2</sup>	-	-	-	-	-	actively growing
Smartweed, Perennial	-	-	-	-	-	-
Sorrel, Red	-	-	rosette	bolting	flower	actively growing
Sowthistle <sup>2</sup> , Perennial	-	-	-	-	-	actively growing
Spurge, Leafy <sup>2</sup>	-	-	-	-	flower	full leaf
Tallow Tree, Chinese <sup>4</sup>	-	-	-	-	-	full leaf
Thistle, Bull,	-	-	rosette	bolting	-	actively growing
,Canada <sup>2</sup>	-	-	-	-	-	actively growing
,Musk	-	-	-	rosette/bolting	-	-
,Plumeless	-	-	rosette	bolting	-	-
Vetch, Hairy	-	1-4"	4-8"	8"full flower	-	-
Yankeeeweed	-	-	-	10-18"	-	rosette
Yellow Starthistle <sup>1</sup>	-	-	-	-	-	rosette

<sup>1</sup> May require repeat applications

<sup>2</sup> Recommended rate will provide top growth suppression only.

<sup>3</sup> For improved root kill of woody species such as mesquite and eastern persimmon spray 4 pints per acre of **GRASSMASTER** each crop season for 3 consecutive crop seasons. For increased control of weeds such as blackberry and dewberry, **GRASSMASTER** may be tank mixed with Ally® herbicide (0.1-0.2 ounces per acre), if labeled for the use site.

<sup>4</sup> Under dense populations, a second application may be needed the following growing season.

#### Aerial Application Methods and Equipment

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

#### Ground Application (Banding)

When applying **GRASSMASTER** herbicide by banding, determine the amount of herbicide and water volume needed using the following formula:

Band width in inches x Broadcast rate = Banding herbicide  
Row width in inches per acre rate per acre

Band width in inches x Broadcast rate = Banding water  
Row width in inches volume per acre volume per acre

#### Ground Application (Broadcast)

**Water volume:** Use 5-40 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.

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

#### Spot or Small Area Application

**GRASSMASTER** 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 **GRASSMASTER** in water according to **Table 3** (assuming that the spot treatment rate equates to 60 gallons per acre on the broadcast basis.) Adding a surfactant (0.5% by volume) can help improve control.

For example, 5 gallons (40 pints or 640 fluid ounces) of herbicide solution would require 0.2 pints (3.2 fluid ounces) of surfactant.

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 <b>GRASSMASTER</b> to add to the spray tank
1 gallon	1 fluid ounce*
3 gallons	3 fluid ounces
5 gallons	5 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 **GRASSMASTER** herbicide or **GRASSMASTER** 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**.

Adjuvants containing crop oil concentrates may be used for preplant, pre-emergence and between cropping applications. **Do not use crop oil concentrate for postemergence applications in food/feed crops** (i.e. sorghum, grass (hay or silage), pastures, rangeland, sugarcane and wheat.)

#### Nitrogen Source

• **Sprayable liquid fertilizers:** Use one quart of sprayable liquid fertilizers (28-0-0; 32-0-0) per acre. Do not use brass or aluminum nozzles when spraying fertilizers.

#### Nonionic Surfactant

Use 2-4 pints of an 80% active non-ionic spray surfactant per 100 gallons of water. For certain weeds, use a higher spray surfactant rate.

**Table 4. - Additive Rate Per Acre**

Additive	Additive Rate Per Acre
Nonionic Surfactant	2-4 pints per 100 gallons
Sprayable Liquid Fertilizers (28-0-0; 32-0-0)	2 to 4 quarts
Crop Oil Concentrate	1 quart*

\* See manufacturer's label for specific adjuvant rate recommendations.

### IV. TANK MIXING INFORMATION

#### Tank Mix Partners/Components

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

- **Aim™** (carfentrazone-ethyl)
- **Ally®** or **Alligare MSM 60** (metsulfuron-methyl)
- **Amber®** (triasulfuron)
- **Asulox®** (asulam)
- **Atrazine**
- **Basagran®** (bentazon)
- **Bronate®** (bromoxynil + MCPA)
- **Buctril®** (bromoxynil)
- **Canvas®** (thifensulfuron-methyl + tribenuron-methyl + metsulfuron-methyl)
- **Clarity®** (dicamba)
- **Curtail™** or **Alligare Cody Herbicide** (clopyralid + 2,4-D)
- **Cyclone®** (paraquat)
- **Dakota®** (fenoxaprop-p-ethyl + MCPA)
- **Distinct®** (diflufenzopyr + dicamba)
- **Evik®** (ametryn)
- **Express®** (tribenuron-methyl)
- **Fallowmaster®** (glyphosate + dicamba)
- **Finesse®** (chlorsulfuron + metsulfuron-methyl)
- **Glean®** or **Alligare Chlorsulfuron 75** (chlorsulfuron)
- **Gramoxone® Extra** (paraquat)
- **Harmony® Extra** (thifensulfuron-methyl + tribenuron-methyl)
- **Karmex®** or **Alligare Diuron 80DF** (diuron)
- **Kerb™** (pronamide)
- **Laddok® S-12** (bentazon + atrazine)
- **Landmaster®** (glyphosate + 2,4-D)
- **Lexone®** (metribuzin)
- **MCPA**
- **Paramount®** or **Alligare Quinclorac 75 WDG** (quinclorac)
- **Peak®** (prosulfuron)
- **Permit®** (halosulfuron-methyl)
- **Rave™** (dicamba + triasulfuron)
- **Roundup® Ultra** or **Glyphosate 4 Plus** (glyphosate)
- **Sencor®** (metribuzin)
- **Sinbar®** (terbacil)
- **Stinger™** or **Alligare Clopyralid 3** (clopyralid)
- **Tiller®** (fenoxaprop-p-ethyl + 2,4-D + MCPA)

- **Tordon™** (picloram)
- **Touchdown®** (glyphosate)
- **2,4-D**

See **FOOD/FEED CROP SPECIFIC INFORMATION** section for more information for more details. 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, reduced weed control, or crop injury may result from mixing **GRASSMASTER** 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 inducer 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-emulsions)
5. **Water-soluble products** (such as **GRASSMASTER**).
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, **GRASSMASTER** must be diluted with a minimum of 5 parts water to 1 part **GRASSMASTER**. Then add 0.25-0.5% volume/volume of a nonionic surfactant to the dilution before adding it to the sprayable fluid fertilizer to reduce the concern for compatibility problems with this mix. 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



• **Crop Rotational Restrictions:** The interval between application and planting rotational crop is given below. Always exclude counting days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

**Planting/replanting restrictions for GRASSMASTER herbicide applications of 6 pints per acre or less:** No rotational cropping restrictions apply at 120 days or more following application. Additionally, for annual crop uses in this label including sorghum, follow the preplant use directions in section "Food/Feed Crop-Specific Information." For barley, oat, wheat, and other grass seedings, the interval between application and planting is 10 days per pint per acre.

**Planting/replanting restrictions for applications of more than 6 pints and up to 8 pints of GRASSMASTER per acre:** Corn, soybean, sorghum, cotton (east of the Rocky Mountains) and all other crops grown in areas with 30" or more of annual rainfall may be planted 120 days or more after application. Barley, oat, wheat, and other grass seedings, may be planted if the interval from application to planting is

10 days per pint per acre east of the Mississippi River and 15 days per pint per acre west of the Mississippi River. For all other crops in areas with less than 30" of annual rainfall, the interval between application and planting is 180 days or more.

- **Rainfast Period:** Rainfall or irrigation occurring within 4 hours after postemergence applications may reduce effectiveness of **GRASSMASTER**.
- **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.

**Table 5. Crop Specific Restrictions and Limitations**

Crop	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Per Season	Livestock Grazing or Feeding <sup>1</sup>	Aircraft Application	Comments
Between Crop Applications	5.5 pints	11 pints	Yes	Yes	Plant only labeled crops within 29 days following application. Limited to 2 applications per crop season. Minimum of 30 days between applications. Maximum of 5.5 pints <b>GRASSMASTER</b> per acre per application (11 pints <b>GRASSMASTER</b> per acre per crop season). Maximum of 2.0 lb ae 2,4-D and 1.0 lb ae dicamba per application.
Pasture, Hay, Silage	5.5 pints	11 pints	Yes	Yes	Maximum of 2 applications per crop season. Minimum of 30 days between applications. Maximum of 5.5 pints <b>GRASSMASTER</b> per acre per application (11 pints <b>GRASSMASTER</b> per acre per crop season). Maximum of 4.0 lb ae 2,4-D per acre per crop season.
Sorghum	1 pint	1 pint	Yes	Yes	Limited to one application per crop season.
Sugarcane	5.5 pints	11 pints	Yes	Yes	Limited to one application per crop cycle.
Wheat					Limited to one postemergence and one preharvest application per crop cycle. Limited to 4.8 pints <b>GRASSMASTER</b> per acre per crop season.
Postemergence	-	3.33 pints	Yes	Yes	<b>Postemergence:</b> Maximum 1.25 lb ae 2,4-D per acre per application (3.33 pints <b>GRASSMASTER</b> per acre per application).
Preharvest	-	1.39 pints	Yes	Yes	<b>Preharvest:</b> Maximum of 0.5 lb. ae 2,4-D per acre per application (1.39 pints <b>GRASSMASTER</b> per acre per application).

<sup>1</sup>Refer to **FOOD/FEED CROP SPECIFIC INFORMATION** for grazing and feeding restrictions.

## VI. FOOD/FEED CROP SPECIFIC INFORMATION

### Pastures, Rangeland and Grass (Hay, Silage)

**GRASSMASTER** can be used for pasture (including pasture grown for hay), rangeland, grass grown for hay or silage, between crop applications/fallow systems, Conservation Reserve Programs, and general farmstead (non-cropland only).

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 4 pints of **GRASSMASTER** per acre are for spot treatments only.

### **Crop Specific Restrictions:**

- Do not exceed a total of 11 pints of **GRASSMASTER** per treated acre per year.
- Maximum of 4.0 lb ae 2,4-D per acre per year.
- Maximum of 2 applications per year.
- Minimum of 30 days between applications.
- Maximum of 5.5 pints **GRASSMASTER** per acre per application per year.
- For spot treatment, do not exceed 5.5 pints **GRASSMASTER** per acre.
- Do not cut forage for hay within 7 days of application.
- Pre-harvest Interval (PHI) for grass is 7 days.
- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.



In newly established hybrid Bermudagrass, Pangolagrass, and stargrasses (*Cynodon* spp.) use 2 to 4 pints of **GRASSMASTER** per acre to control or suppress weeds after planting vegetative propagules (stolons) of hybrid bermudagrasses. In addition to the weeds listed in **Tables 1 and 2**, this rate of **GRASSMASTER** will control or suppress annual sedges, broadleaf signalgrass, crabgrass, and goosegrass.

Best results will be obtained if **GRASSMASTER** is applied at the germinating stage of weeds. Under favorable conditions, this is usually 7-10 days after planting these grasses. Reduced control can be expected if weeds are allowed to reach 1" in height before application or if germination of weeds occurs 10 days after application.

Do not use on bentgrass, susceptible grass pastures (such as carpetgrass, buffalograss, or St. Augustine grass), lespedeza, 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 and brush may require a repeat application.

**For pasture renovations**, wait 3 weeks per quart (2 pints) of **GRASSMASTER** used per acre before interseeding or injury may occur.

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

#### **Grasses for Seed Crops\***

**\*Not approved for this use in California**

Apply 1.25 to 4.0 pints of product in up to 30 gallons of water per acre by air or ground equipment in the spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the five leaf stage, using 1.25 pints per acre to control small seedling weeds. After the grass is well established, higher rates of up to 4.0 pints per acre can be used to control hard-to-control annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth.

#### **Use Restrictions for Grasses for Seed Crops**

- Do not make more than 2 applications per year.
- Maximum of 2.0 lbs. 2,4-D ae/acre (5.5 pints **GRASSMASTER**) per application.
- Minimum of 21 days between applications.
- Do not apply after the grass seed crop begins to joint.
- This product contains 1.0 lb. of dicamba active ingredient per gallon. Do not exceed a combined total of 1.0 lb. of dicamba active ingredient per acre per application.

#### **Use Precautions for Grasses for Seed Crops**

Application to bentgrass could result in injury.

#### **No-Till Application:**

This product may be used in the broadcast method with a normal boom or with direct pipes set 12" apart in 36" rows. When using this product, apply at a rate of 1.25 pints in 10 gallons of water per acre. Maintain uniform pressure and speed when applying.

#### **Grasses Cut for Hay or Silage:**

Use 1.25 to 4.0 pints of product in sufficient water to give good coverage to one acre depending on type of weeds and stage of growth. Use only on established stands of perennial grasses. Do not use on alfalfa, bentgrass, clover, or other legumes. Do not use on newly seeded areas until grass is well established. Do not apply after the crop begins to joint when grass seed production is desired.

#### **Use Restrictions for Grasses Cut for Hay or Silage**

- Do not cut forage for hay within 7 days of application.
- When using this product there is a 7 day pre-grazing interval for lactating dairy animals.
- When using this product there is a 30 day pre-slaughter interval for meat animals.
- Do not apply after the crop begins to joint when grass seed production is desired.
- This product contains 1.0 lb. of dicamba active ingredient per gallon. Do not exceed a combined total of 1.0 lb. of dicamba active ingredient per acre per application.

**Grazing and Feeding Non-Lactating Animals:** There is no waiting period between treatment and grazing for non-lactating, non-meat animals. Do not permit meat animals being finished for slaughter to graze treated fields within 30 days of slaughter.

**Grazing and Feeding Lactating Animals:** Do not graze lactating dairy animals within 7 days of treatment.

**Dry hay and Silage:** Treated grasses may be harvested for dry hay or silage but do not harvest within 7 days of treatment.

#### **Small grains (barley, corn, forage sorghum, oats, rye, sudangrass, or wheat) grown for pasture, hay, and silage only.**

Uses described in the Pastures, Rangeland and Grass (Hay, Silage) section above also pertain to small grains (barley, corn, forage sorghum, oats, rye, sudangrass, or wheat) grown for pasture, hay, and silage **only**. Newly seeded areas including small grains grown for pasture or hay, may be injured if rates of **GRASSMASTER** greater than 2 pints per acre are applied.

#### **Additional Restrictions when Applying to Wheat, Barley, Oats and Rye Grown for Pasture, Hay, and Silage Only**

- Pre-harvest Interval (PHI) is 14 days.
- Postemergence Applications: Limited to one postemergence application per crop cycle. Maximum of 3.4 pints **GRASSMASTER** (1.25 lbs. ae/acre) per application.
- Preharvest: Limited to one preharvest application per crop cycle. Maximum of 1.4 pints **GRASSMASTER** (0.5 lb. ae/acre) per application.
- Limited to 4.8 pints **GRASSMASTER** (1.75 lbs. ae/acre) per crop cycle.

#### **Pasture and Rangeland Tank Mixes**

**GRASSMASTER** may be applied in tank mixes with one or more of the following herbicides:

Ally®	Barvel®
Amber®	Clarity®
	Rave®

#### **Sorghum**

##### **Rates and Timings**

Apply 1 pint of **GRASSMASTER** per acre to sorghum in the 3-5 leaf stage (4"-8" tall.) For best performance apply when weeds are small (less than 3" tall).

Applications of **GRASSMASTER** to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling leaves. These effects are usually outgrown within 10-14 days. Sorghum growing under conditions of stress such as high moisture, low fertility, and abnormal temperature may be more sensitive to applications of **GRASSMASTER**.

#### **Crop Specific Restrictions:**

- Do not use surfactants or oils with postemergence applications of **GRASSMASTER** on sorghum crops.
- Do not use **GRASSMASTER** if the potential for sorghum injury is not acceptable.
- Do not apply **GRASSMASTER** to sorghum grown for seed production.

- Limited to 1 application per crop cycle.
- Maximum of 1 pint **GRASSMASTER** per acre per crop season.
- Pre-harvest interval (PHI) for grain sorghum is 30 days.

**Grazing Restrictions:** Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days following application. There is no waiting period between treatment and grazing for non-lactating or non-meat animals.

#### Sorghum Tank Mixes

**GRASSMASTER** may be applied in tank mixes with one or more of the following herbicides:

Atrazine	Laddock® S-12	Peak®
Basagran®	Paramount®	Permit®
Buctril®		

#### Sugarcane

Applications of **GRASSMASTER** can be made any time after weeds have emerged and are actively growing but prior to the close-in stage of sugarcane. When possible, direct the spray beneath the sugarcane canopy in order to minimize the likelihood of crop injury. The use of directed sprays will also aid in maximizing spray coverage of weed foliage. Application rates and timing are given below. Use the higher level of listed rate ranges when treating dense vegetative growth.

#### Rate:

- For control of listed annual broadleaf weeds, apply 2 pints of **GRASSMASTER** per treated acre.
- For suppression of listed perennial weeds, apply 1-5.5 pints of **GRASSMASTER** per acre per application.

#### Crop Specific Restrictions:

- Limited to 1 application per crop cycle.
- Do not exceed a maximum of 5.5 pints **GRASSMASTER** per application.
- Maximum of 11 pints **GRASSMASTER** per acre per year.
- Do not harvest cane prior to crop maturity.
- Do not apply more than 4 lbs. ae 2,4-D per acre per crop cycle.
- Pre-harvest interval (PHI) for sugarcane is 87 days.

#### Sugarcane Tank Mixes

**GRASSMASTER** may be applied in tank mixes with one or more of the following herbicides:

Asulox®	Lexone®
Atrazine	Sencor®
Evik®	Sinbar®

#### Wheat

##### (Fall and Spring-seeded)

If small grains are grown for pasture or hay only, refer to **Pastures, Rangeland and Grass (Hay, Silage)**.

#### Crop Specific Restrictions:

- Do not graze or harvest for livestock feed prior to crop maturity.
- Do not use **GRASSMASTER** in wheat underseeded with legumes.
- Applications are limited to 1 **postemergence** application per crop cycle and 1 **preharvest** application per crop cycle, with a maximum application of 1.75 lb ae 2,4-D per acre per crop cycle (4.8 pints **GRASSMASTER** per acre per crop season).

#### Postemergence:

- Limited to 1 application per crop cycle.
- Maximum application rate of 1.25 lb. ae 2,4-D per acre per application (3.33 pints **GRASSMASTER** per acre per application).

#### Preharvest:

- Limited to 1 application per crop cycle.
- Maximum application rate of 0.5 lb. ae 2,4-D per acre per application (1.39 pints **GRASSMASTER** per acre per application).

#### EARLY SEASON APPLICATION:

Apply 0.5-1 pint of **GRASSMASTER** per acre to wheat unless using one of the wheat specific programs below.

Early season applications to spring-seeded wheat must be made after tillering and before wheat reaches the 6-leaf stage.

Early season applications to fall-seeded wheat must be made after tillering and prior to the jointing stage.

Care should be taken in staging early developing wheat varieties such as TAM 107, Madison, or Wakefield to be certain that the application occurs prior to the jointing stage.

#### SPECIFIC USE PROGRAMS FOR FALL-SEEDED WHEAT ONLY:

Up to 1.39 pints of **GRASSMASTER** per acre may be applied on fall-seeded wheat after the wheat begins to tiller for suppression of perennial weeds, such as field bindweed. Applications may be made in the fall following a frost but before a killing freeze. Periods of extended stress such as cold and wet weather may enhance the possibility of crop injury. For fall applications only, do not use if the potential for crop injury is not acceptable.

#### PREHARVEST APPLICATIONS:

**GRASSMASTER** can be used to control weeds that may interfere with harvest of wheat. Apply up to 1.39 pints of **GRASSMASTER** per acre as a broadcast or spot treatment to annual broadleaf weeds when wheat is in the hard dough stage and the green color is gone from the nodes (joints) of the stem. Best results will be obtained if application can be made when weeds are actively growing but before weeds canopy.

A waiting interval of 14 days is required before harvest.

Do not use preharvest-treated wheat for seed unless a germination test is performed on the seed with an acceptable result of 95% germination or better.

For control of additional broadleaf weeds or grasses, **GRASSMASTER** may be tank mixed with other herbicides such as **Ally** or **Glyphosate 4 Plus** that are registered for preharvest use in wheat.

Preharvest use of **GRASSMASTER** is not registered for use in California.

**Table 6. Wheat Tank Mixes**

Tank Mix Partner	Rate Per Acre
Aim™	0.3 ounce
Ally® <sup>1</sup>	0.05 - 0.1 ounce
Amber® <sup>1</sup>	0.14 - 0.28 ounce
Bronate®	0.75 -1.5 pints
Buctril®	1-1.5 pints
Canvas® <sup>1</sup>	0.2- 0.4 ounce
Curtail™	2 - 2.67 pints
Dakota® <sup>2</sup>	16 fluid ounces
Express® <sup>1</sup>	0.083 - 0.167 ounce <sup>1</sup>
Finesse® <sup>1</sup>	0.167 - 0.33 ounce <sup>1</sup>
Glean®	0.167 ounce <sup>1</sup>
Harmony® Extra	0.167- 0.33 ounce <sup>1</sup>
Karmex® <sup>3</sup>	0.5 -1.5 pounds
2,4-D amine	4 - 20 fluid ounces <sup>4</sup>
Metribuzin® (Sencor®, Lexone®)	0.25 - 0.375 pounds a.i.

Peak® <sup>1</sup>	0.25 - 0.38 ounce
Stinger™	4 - 5.33 fluid ounces
Tiller® <sup>2</sup>	1 - 1.7 pints

<sup>1</sup>Do not use low rates of sulfonylurea herbicide, such as Ally®, Amber®, Canvas®, Express®, Finesse®, Glean®, Harmony® Extra, and Peak® on more mature weeds or on dense vegetative growth.

<sup>2</sup>Do not use **GRASSMASTER** as a tank mix treatment with Dakota or Tiller on Durum wheat. Do not tank mix with Tiller if wild oat is the larger weed.

<sup>3</sup>Tank mixes with Karmex and metribuzin are for use in **fall-seeded wheat only**.

\***GRASSMASTER** contains 0.36 pounds acid equivalent, of 2,4-D per pint. When tank mixing with 2,4-D do not exceed a combined total of 1.0 pound acid equivalent per acre of 2,4-D and do not exceed 0.5 pounds acid equivalent of 2,4-D unless injury to wheat is acceptable.

### PREPLANT APPLICATION DIRECTIONS FOR BROADLEAF CONTROL IN CROPLAND ROTATED TO WHEAT (POST-HARVEST / FALLOW / STUBBLE / SET-ASIDE)

#### WEEDS CONTROLLED

This product, when applied at the listed rates, will control the ANNUAL and BIENNIAL weeds and suppress the PERENNIAL weeds listed below.

#### ANNUALS

Buckwheat, Wild	Purslane, Common
Cockle, Cow	Ragweed, Common
Cocklebur, Common	Sage, Lanceleaf
Knotweed	Salsify, Western
Kochia	Smartweed, Pennsylvania
Lambsquarters, Common	Sowthistle, Annual
Mallow, Common	Sunflower
Mustards	Tansymustard
Nightshade, Black	Thistle, Russian
Pigweed, Redroot (Carelessweed)	Velvetleaf
Pigweed, Rough	

#### BIENNIALS

Carrot, Wild	Thistle, Musk
Ragwort, Tansy	Thistle, Bull
Starthistle, Yellow	Thistle, Plumeless

#### PERENNIALS

Bindweed, Field	Thistle, Canada
Dock, Curly	

#### RATES AND TIMING

Application may be made to fallow land, wheat stubble or land to be rotated to wheat. Application should be made to emerged and actively growing weeds. Use higher rate when treating dense vegetative growth. Avoid disturbing treated areas for seven days following application.

Wheat injury may occur if the interval between application and planting is less than 10 days for each pint per acre of this product is used. Exclude days when ground is frozen.

#### Weed Type & Stage Broadcast Rate Per Treated Acre Amount

##### Annual

Small, actively growing (less than 4 inches)	1.0 to 1.5 pints
Established weed growth (greater than 4 inches)	1.5 to 3.0 pints

##### Biennial

Rosette diameter (3 inches or less)	1.5 to 2.0 pints
(3 inches or more)	2.0 to 4.0 pints
Greater than 4 inches, tillering	4.0 pints
Bolted or flowering	

##### Perennial

Suppression or top growth control	2.0 to 4.0 pints
Seasonal Control	4.0 to 8.0 pints

Add 0.5% v/v of an agriculturally approved surfactant to this product when used alone or in a tank mix. The addition of a surfactant will enhance spray coverage and the herbicide's penetration of weed foliage. Retreatment may be made 30 days after initial treatment; however, do not exceed a total of 8 pints of this product per treated acre per year.

#### Cropland Rotated to Wheat (Post-Harvest / Fallow / Stubble / Set-Aside) Restrictions:

Plant only labeled crops within 29 days following application.

Limited to 2 applications per year.

Maximum of 2.0 lbs 2,4-D ae/acre per application.

Minimum of 30 days between applications.

#### TANK MIX TREATMENTS

This product may be tank mixed with one or more of the following herbicides for control of grasses or additional broadleaf weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, weeds controlled, geographic or other restrictions. Add 0.5% v/v of an agriculturally approved surfactant to all tank mixes.

Herbicide	Rate Per Treated Acre (lbs a.i.)
Atrazine	1/2 to 3.0
Chlorsulfuron	0.016 to 0.024
Glyphosate	1/4 to 2.0
Metribuzin	1/3 to 3/4
Paraquat	1/2 to 1.0

**CORN (PREPLANT and PREEMERGENCE ONLY)\*\***  
(Field, Popcorn, Seed)

	Amount of GRASSMASTER per Acre	Directions
<b>Preplant</b>	1.25 to 2.5	To control actively growing emerged broadleaf weed seedlings or existing cover crops prior to planting corn, apply 7 to 14 days* before planting. Preplant application may be used with no-tillage, conventional tillage or reduced tillage practices.

**Corn (Preplant) Restrictions:**

- Do not use more than 2.0 pints of this product per acre if the soil organic matter is less than 2%.
- Limited to one preplant application per crop cycle.
- See **Corn (Preplant and Preemergence) Restrictions** for additional restrictions.

<b>Preemergence</b>	2.0 to 2.5 pints	Apply 3 to 5 days* after planting but before corn emerges. Preemergence application may be used with no-tillage, conventional tillage or reduced tillage practices.
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**Corn (Preemergence) Restrictions:**

- Do not use this product if corn seeds are less than 1.5" below the soil surface.
- Do not use this product if the soil organic matter is less than 2%.
- Limited to one preemergence application per crop cycle.
- See **Corn (Preplant and Preemergence) Restrictions** for additional restrictions.

**Corn (Preplant and Preemergence) Restrictions:**

- Do not use more than 2.5 pints per acre per application.
- Do not use on light, sandy soil (sand, sandy loam, and loamy sand), or where soil moisture is inadequate for normal weed growth.
- Do not apply this product to popcorn or seed corn without first verifying the selectivity of this product on the variety with your local seed corn company (supplier).
- Do not use this product on sweet corn.
- Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D and dicamba pre-plant use.
- Limited to one preplant or one preemergence application per crop cycle.
  - If applying a spring preplant treatment following application of a fall post-harvest application to the previous crop, then the combination of both treatments may not exceed 5 pints of this product.
    - Limited to 2 applications per year.
    - A minimum of 30 days\* is required between applications.

\*\*Not currently registered for use in California.

**Notes:**

- Refer to Table 1 to determine use rates for specific targeted weed species, but do not exceed rate shown for corn preplant and preemergence.
- Use higher rate for less susceptible weeds, larger weeds or cover crops such as alfalfa.
- For applications applied 30 or more days\* before planting, follow the directions and precautions for 'Postharvest, Fallow, Crop Stubble' listed in Section VII, **NON-FOOD/FEED USE** of this label.
- Best results will be obtained when product is mixed with additives or tank mixed with additional herbicides see **ADDITIVES** and **TANK MIXING INFORMATION** sections of this label.
- For best control of legume sod (e.g., alfalfa or clover), apply this product after 4 to 6 inches of legume regrowth has occurred.
- Certain tillage equipment (e.g., drags, harrows) which concentrates treated soil over seed furrow may increase the risk of crop injury.
- Corn may be harvested or grazed for feed once the crop has reached the ensilage (milk) stage or later in maturity.

\*Minimum waiting interval excludes days when ground is frozen.

**SOYBEAN\* (PREPLANT ONLY)**

	Amount of GRASSMASTER per Acre	Minimum Waiting Interval Before Planting Soybeans	Directions
<b>Preplant</b>	1.0 to 1.25 pints	15 Days**	Apply before planting soybeans to control actively growing emerged broadleaf weed seedlings.
	1.25 to 2.5 pints	30 Days**	Apply to control actively growing emerged broadleaf weeds.

**Soybean Restrictions:**

- For use only preplant to soybeans.
- Following application, a minimum accumulation of 1" rainfall or overhead irrigation followed by the specified minimum waiting interval, is required before planting soybeans.
- Do not apply more than 2.5 pints of this product per acre per crop cycle under these directions for preplant application to soybeans.
- Only one application of this product may be made per crop cycle under these directions for preplant application to soybeans.
- Do not apply this product prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield.
- Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D and dicamba pre-plant use.
- Do not mow or cultivate weeds prior to treating with this product as poor control may result.
- Do not apply this product pre-plant to soybean in fields having a coarse-textured soil where the organic matter is less than 1%.
- Livestock should be restricted from feeding/grazing of treated cover crops. Do not cut treated cover crops for hay or feed.
- The minimum waiting intervals must be observed prior to planting soybean or crop injury may occur.
- **Do not make preplant applications of this product to soybean in geographic areas with average annual rainfall less than 25".**

\*Not currently registered for use in California.

**Notes:**

- Refer to Table 1 to determine use rates for specific targeted weed species, but do not exceed rate stated for soybeans preplant.
- For applications applied 60 or more days\*\* before planting soybeans, follow the directions and precautions for 'Postharvest, Fallow, Crop Stubble' listed in Section VII of this label.
- Best results will be obtained when product is mixed with additives or tank mixed with additional herbicides see **ADDITIVES** and **TANK MIXING INFORMATION** sections of the label.

\*\*Minimum waiting interval excludes days when ground is frozen.

# COTTON\* (PREPLANT ONLY)

	Amount of GRASSMASTER per Acre	Minimum Waiting Interval Before Planting Cotton	Directions
Preplant	2.0 pints	30 Days**	Apply to control actively growing emerged broadleaf weeds prior to planting cotton. For best performance, apply when weeds are in the 2-4 leaf stage and rosettes are less than 2" across.

## Cotton Restrictions:

- For use only preplant to cotton.
- Following application, a minimum accumulation of 1" rainfall or overhead irrigation followed by the specified minimum waiting interval, is required before planting cotton.
- Do not apply more than 2.0 pints of this product per application per acre in one season prior to planting cotton.
- Do not apply more than 2 applications per year.
- Do not apply this product prior to planting cotton if you are not prepared to accept the results of cotton injury including possible loss of stand and yield.
- Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D and dicamba pre-plant use.
- Mowing or cultivating weeds prior to treatment with this product may result in poor weed control.
- Do not apply this product pre-plant to cotton in fields having a coarse-textured soil where the organic matter is less than 1%.
- Do not feed treated hay, forage, or fodder. Livestock should be restricted from feeding/grazing of treated cover crops.
- Do not cut treated crop for feed, hay, forage, fodder or graze treated cotton to livestock.
- The minimum waiting intervals must be observed prior to planting cotton or crop injury may occur.
- Do not make preplant applications of this product to cotton in geographic areas with average annual rainfall less than 25".

\*Not currently registered for use in California.

## Notes:

- Refer to Table 1 to determine use rates for specific targeted weed species, but do not exceed rate stated for cotton preplant.
- For applications applied 75 or more days\*\* before planting, follow the direction and precautions for 'Postharvest, Fallow, Crop Stubble' listed in Section VII of the container label.
- Best results will be obtained when product is mixed with additives or tank mixed with additional herbicides see **ADDITIVES** and **TANK MIXING INFORMATION** sections of label.

\*\*Minimum waiting interval excludes days when ground is frozen.

## Between Crop Applications/Fallow Systems, Conservation Reserve Programs, and General Farmstead

These uses are considered Food/Feed Crops when harvested, grazed or foraged. Consult section on "**Tank Mixing Information**" for adjuvant restrictions and section on "**Additives**" for specific use directions.

## 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:**

**GRASSMASTER** 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 **RESTRICTIONS AND LIMITATIONS** for the required interval between application and planting to prevent crop injury.

### Rates and Timings:

Apply 0.5-5.5 pints of **GRASSMASTER** 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 11 pints of **GRASSMASTER** per treated acre during a growing season. For best performance, apply **GRASSMASTER** 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 **GRASSMASTER** 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.

Avoid disturbing treated areas following application. Treatments may not kill weeds that develop from seed or underground plant parts such as rhizomes or bulbets, after the effective period for **GRASSMASTER**. 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 0.5-2 pints of **GRASSMASTER** per acre for control of annual weeds, or 2-8 pints of **GRASSMASTER** per acre for control of biennial and perennial weeds.

Aim™ or Alligare MSM 60	Glyphosate
Ally®	Gramoxone® Extra
Amber®	Kerb™
Atrazine	Landmaster® BW
Bladex®	Paramount® or Alligare
	Quinclorac 75 WDG
Curtail™ or Alligare Cody Herbicide	Sencor®
Cyclone®	Tordon™ 22K or Alligare
	Picloram 22K
Distinct®	Touchdown®
Fallowmaster®	2,4-D
Finesse®	

### Conservation Reserve Programs and General Farmstead

**GRASSMASTER** may be used 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 4 pints of **GRASSMASTER** per acre are for spot treatments only.

Retreatments may be made as needed; however, do not exceed a total of 5.5 pints of **GRASSMASTER** per treated acre during a growing season.

### Farmstead and Fence-row Treatment Application Instructions

**GRASSMASTER** 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. Forty gallons of spray solution contains 1.0 pound acid equivalent of dicamba and 2.87 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 2.5% **GRASSMASTER**, 87.5% 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. **GRASSMASTER:** add 2.5 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 **GRASSMASTER** 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 **GRASSMASTER**.
- **Stump Treatments:** Spray or paint freshly cut surface with **GRASSMASTER**. 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	Kudzu
Ash	Locust, Black
Aspen	Maple
Basswood	Mesquite
Beech	Oak
Blackberry	Oak, Poison
Blackgum	Olive, Russian
Cedar	Persimmon, Eastern
Cherry	Pine
Chinquapin	Plum, Sand (Wild Plum)
Cottonwood	Poplar
Creosotebush	Rabbitbrush
Dewberry	Redcedar, Eastern
Dogwood	Rose, McCartney
Elm	Rose, Multiflora
Grape	Sagebrush, Fringe
Greenbriar	Sassafras
Hawthorn (Thornapple)	Spruce
Hemlock	Sumac
Hickory	Sweetgum
Honeylocust	Sycamore
Honeysuckle	Tarbrush
Hornbeam	Willow
Huckleberry	Witchhazel
Huisache	Yaupon
Ivy, Poison	Yucca

**Restrictions for Non-Crop Areas (CRP, General Farmstead, Fencerow)**

**Postemergence (annual and perennial weeds):**

- Limited to 2 applications per year.
- Maximum of 5.5 pints product (2.0 lbs. ae 2,4-D) per acre per application.
- Minimum of 30 days between applications.

**Postemergence (woody plants):**

- Limited to 1 application per year.
- Maximum of 8 pints product (2.87 lbs. ae 2,4-D, 1.0 lb. dicamba) per acre.
- Limited to one (1) basal spray or cut surface application per year.

**NON-CROP APPLICATIONS**

**RIGHTS-OF-WAY (RAILROAD, ROADSIDES, UTILITY, PIPELINE), NON-SELECTIVE FOREST BRUSH CONTROL, INDUSTRIAL SITES, NON-IRRIGATION DITCHBANKS, AND OTHER NON-CROP AREAS\*  
\*Not approved for this use in California**

When used as directed, this product will control or suppress many herbaceous broadleaf weeds (annual, biennial, and perennial) as well as many unwanted woody plant and vine species. Species controlled include:

ANNUALS			
Buckwheat, wild	Cocklebur	Lambsquarter	Purslane
Carpetweed	Daisy, English	Morningglory	Ragweed
Chickweed	Henbit	Mustard	Smartweed
Clover	Knaw	Pigweed	Velvetleaf
BIENNIALS			
Ragwort, Tansy		Thistle, Musk	
PERENNIALS			
Bindweed, Field	Dogfennel	Sorrel, Sheep	
Carrot, Wild (Queen Anne's Lace)	Knapweed, Russian	Spurge, Leafy	
Dock, Curly	Milkweed	Thistle, Canada	
	Ragweed, Perennial	Toadflax, Dalmatian	

## WOODY BRUSH AND VINES

Alder	Hemlock	Rose, Multiflora*
Ash	Honeysuckle	Sagebrush
Aspen	Ivy, Poison	Sassafras
Basswood	Kudzu	Schinus (Florida Holly,
Beech	Locust	Brazil Peppertree,
Birch	Maple	Christmas-berry)
Blackberry*	Oak	Serviceberry
Cherry	Olive, Russian	Snowberry
Creeper, Virginia	Persimmon	Spruce
Creosotebush*	Pine	Sumac
Cucumber tree	Plum, Wild*	Sycamore
Dogwood*	Poplar	Trumpetcreeper
Elderberry	Puncturevine	Waxmyrtle
Elm	Rasperry	Willow
Gum	Redcedar, Eastern*	Witchhazel
Hawthorn*	Redvine	Yaupon*

\*Suppression

## RATES

Regardless of the species to be controlled, spray volumes should be high enough to allow for good spray coverage. Make applications when weeds and brush are actively growing. The addition of surfactants can increase control. Biennials are best controlled when treated in the rosette stage. Regrowth may occur on resistant species. To control additional weed species, this product may be tank mixed with any of the products listed on this label.

## RESTRICTIONS

### Preemergence (annual and perennial weeds):

- Limited to 2 applications per year.
- Maximum of 5.5 pints (2.0 lbs. ae 2,4-D) per acre per application.
- Minimum of 30 days between applications.

### Postemergence (woody):

- Limited to 1 application per year.
- Maximum of 11 pints (4.0 lbs. ae 2,4-D) per year.
- Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

## HERBACEOUS BROADLEAF WEED CONTROL

Apply 1 to 2.75 pints of this product in 20 to 100 gallons of water per treated acre, (1/3 to 1 fluid ounce per 1,000 square feet). When using low-volume application equipment, 3 to 20 gallons of water per acre is acceptable. 1 to 2 pints (1/3 to 0.7 fluid ounce per 1,000 square feet) of this product may be used for annuals, 1.5 to 2.75 pints (0.55 to 1 fluid ounce per 1,000 square feet) for biennials and easy-to-kill perennials, and 2.75 pints for established perennials. Do not apply more than 5.5 pints of product per treated acre.

## BRUSH AND VINE CONTROL

**High Volume Foliar Spot Applications:** Mix 2.75 to 5.5 pints of this product in enough water to make 100 gallons of spray mix. When using low-volume application equipment, 3 to 20 gallons of water per acre is acceptable. Spray volume applied will depend on the size and density of the brush to be treated, but do not apply more than 5.5 pints of product per treated acre. Direct the spray to treat all foliage, stems, and root collars to wet.

**Broadcast Applications with Ground Equipment:** Apply 2.75 to 5.5 pints of this product in 20 to 100 gallons of water per treated acre. When using low-volume application equipment, 3 to 20 gallons of water per acre is acceptable. Spray volume applied will depend on the size and density of the brush to be treated, but do not apply more than 5.5 pints of product per treated acre. Spray all foliage, stems and root collars to wet.

## AERIAL APPLICATIONS

Aerial applications may be made to control either herbaceous or woody plants. Apply 1 to 2.75 pints of this product (for herbaceous weeds) or 2.75 to 5.5 pints of this product (for woody brush and vines) in 5 to 40 gallons of water per treated acre. Coverage is important, so increase spray volume when treating dense stands of brush of weeds. Do not apply more than 5.5 pints of product per treated acre.

## TANK MIX TREATMENTS

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, AND OTHER RESTRICTIONS. For broader spectrum control, this product may be tank mixed with one or more of the following herbicides for noncropland uses (e.g., railroad, highway, pipeline, etc.) including forest management, pastures and rangeland applications, if permitted by product labeling (e.g. 2,4-D). Add water to the spray tank prior to the addition of the tank mix products. Do not premix concentrates.

## HERBICIDE

## RATE

(LBS. A.I./TREATED ACRE)

Amitrol*	1.8 to 8.0
Asulam (Asulox®)	2.92 to 6.68
Atranol	4.77 to 39.96
Bromacil (Hyvar®)	1.6 to 24.0
Clorflurecol (Maintain®)	2.0 to 3.0
Chlorsulfuron	0.1875 to 2.25 oz.***
Dalapon	4.25 to 12.75
Dicamba (Diablo®)	0.25 to 1.75****
Diquat	0.5 to 1.0
Diuron (Karmex®)	4.0 to 48.0
Fenac (Fenatrol®)	4.5 to 18.0
Fosamine ammonium (Krenite®)	6.0 to 12.0
Glyphosate (Razor®)	0.75 to 3.75
Hexazinone (Velpar®)	0.675 to 10.8
Imazapyr** (Polaris®)	0.5 to 1.5
Limit***	0.625
Maleic hydrazide (Royal Slo-Gro®)	2.25 to 4.5
Mefluidide (Embarc®)	0.25 to 1.0
Metsulfuron Methyl (Patriot®)†	0.3 to 0.9***
MSMA	1.0 to 2.475
Paraquat*	0.5
Picloram* (Trooper® or Tordon®)	2.0 to 3.0
Simazine* (Princep®)	4.8 to 40.0
Sulfometuron methyl (Oust®)	0.75 to 9.0 oz.***
Tebuthiuron (Spike®)	1.0 to 16.0
Triclopyr (Tahoe®)	0.75 to 12.0
2,4-D	0.475 to 3.5*****
2,4-DP	0.5 to 11.1

Due to variations that may occur in formulated products and specific use ingredients (e.g., water supplies) a COMPATIBILITY TEST as described below is recommended prior to actual tank mixing.

\*Restricted use pesticides limited to certified applicators.

\*\*Limit does not have a common name.

\*\*\*Chlorsulf E-Pro = 0.1875 to 2.25 ounces a.i./acre (0.25 to 3.0 ounces product/acre)

Oust = 0.75 to 9.0 oz. a.i./acre (1.0 to 12.0 ounces product/acre)

Patriot = 0.3 to 0.9 oz. a.i. (0.5 to 1.5 ounces product/acre)

\*\*\*\*Do not exceed a total of 2 pounds a.i. dicamba per treated acre per growing season. (This product contains 1 pound a.i. dicamba per gallon.)

\*\*\*\*\*Use of extremely hard water (500 ppm) may cause this product to form a precipitate when used in a tank mix with this product. Do not exceed 4 pounds total 2,4-D acid equivalent per acre per application per site.

Using this product and Patriot to reduce the development and spread of resistant biotypes and problem weeds such as Kochia and Russian thistle: Some commonly resistant weeds typically require multiple spray applications to obtain adequate control. To reduce the number of



applications required, applicators can utilize a mixture of Patriot and this product. Apply as a tank mix for postemergence as follows: Add 0.5 ounce of Patriot to 1 quart of this product per acre. A non-ionic or silicone surfactant may be used for wetting and penetration.

**NOTE:** All intended tank mix combinations should be used only in recommended areas on the same broadleaf weed species found on both labels. For application methods and other use specifications, use the most restrictive limitations from labeling of both products.

#### COMPATIBILITY TEST

Before mixing in the spray tank, it is advisable to test compatibility by mixing all components in a small container in proportionate quantities (see following table).

#### AMOUNT OF HERBICIDE TO ADD TO ONE PINT OF SPRAY CARRIER (ASSUMING VOLUME IS 25 GALLONS PER ACRE)

HERBICIDE FORMULATIONS	RATE PER ACRE	LEVEL TEASPOONS
Dry	1 pound	1-1/2
Liquid	1 pint	1/2

If herbicide(s) do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested components are compatible. Usually incompatibility in any of the above described forms will occur within 5 minutes after mixing. If components are incompatible, the use of a compatibility agent is recommended. Rerun the above COMPATIBILITY TEST with a suitable compatibility agent (1/4 teaspoon is equivalent to 2 pints per 100 gallons of spray solution).

#### PROCEDURE FOR CLEANING SPRAY EQUIPMENT

The steps listed below are suggested for thorough cleaning of spray equipment following applications of this product or tank mixes of this product plus 2,4-D Amine.

1. Hose down thoroughly the inside as well as outside surfaces of equipment while filling the spray tank half full of water. Flush by operating sprayer until the system is purged of the rinse water.
2. Fill tank with water while adding 1 quart of household ammonia or 1/4 pint of Neutral-Clean™ for every 25 gallons of water. Operate the pump to circulate the ammonia solution through the sprayer system for 15 to 20 minutes and discharge a small amount of the ammonia solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Remove the nozzles and screens and flush the system with two full tanks of water.

The steps listed below are suggested for thorough cleaning of spray equipment used to apply this product as a tank mix with wettable powders (WP), emulsifiable concentrates (EC), or other types of water-dispersible formulations. Tank mixing this product with water-dispersible formulations, requires the use of a water/detergent rinse.

5. Complete Step 1.
6. Fill tank with water while adding 2 pounds of detergent for every 40 gallons of water. Operate the pump to circulate the detergent solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
7. Flush the detergent solution out of the spray tank through the boom.
8. Repeat Step 1, and follow with Steps 2, 3 and 4.

#### Weeds listed in this label:

##### Common Name

##### ANNUALS

Amaranthus, Palmer  
Beebalm, Spotted  
Broomweed, Common  
Buckwheat, Wild  
Buffalobur

##### Scientific Name

*Amaranthus palmeri*  
*Monarda punctata*  
*Gutierrezia dracunculoides*  
*Polygonum convulvulus*  
*Solanum rostratum*

#### Common Name

##### ANNUALS

Burdock  
Buttercup, Corn  
Carpetweed  
Chickweed, Common  
Cockle, Corn  
Cockle, Cow  
Cocklebur, Common  
Coreopsis, Plains  
Croton, Woolly  
Daisy, English  
Devil's claw  
Dogfennel (Cypressweed)  
Eveningprimrose, Cutleaf  
Falseflax, Smallseed  
Fleabane, Annual  
Flaxweed  
Henbit  
Knotweed, Prostrate  
Kochia  
Lambsquarters, Common  
Lettuce, Prickly  
Mallow, Common  
Marestail (Horseweed)  
Mayweed  
Morningglory, Ivyleaf  
Tall  
Mustard, Annual  
Tansy  
Nightshade  
Pennycress, Field  
Pepperweed, Virginia  
Pigweed, Prostrate  
Redroot  
Smooth  
Tumble  
Poojoe  
Purslane, Common  
Ragweed, Common  
Lance-leaf  
Western  
Sage, Lanceleaf  
Salsify, Western  
Sedge  
Shepherdspurse  
Smartweed, Pennsylvania  
Sneezeweed, Bitter  
Sowthistle, Annual  
Sunflower, Common (wild)  
Thistle, Russian  
Velvetleaf  
Waterhemp, Common

#### Common Name

##### BIENNALS AND PERENNIALS

Bindweed, field  
Bittercress  
Buckeye  
Bullnettle  
Carrot, Wild  
Chicory  
Clover, Hop  
Dandelion  
Dock, Curly  
Elderberry  
Goldenrod, Missouri  
Goldenweed, Common

#### Scientific Name

*Arctium* spp.  
*Ranunculus arvensis*  
*Mollugo verticillata*  
*Stellaria media*  
*Agrostemma githago*  
*Vaccaria hispanica*  
*Xanthium strumarium*  
*Coreopsis tinctoria*  
*Croton capitatus*  
*Bellis perennis*  
*Proboscidea luisianica*  
*Eupatorium capillifolium*  
*Oenothera lacinata*  
*Linum catharticum*  
*Erigeron annuus*  
*Descurainia sophia*  
*Lamium amplexicaule*  
*Polygonum aviculare*  
*Kochia scoparia*  
*Chenopodium album*  
*Lactuca serriola*  
*Maailva neglecta*  
*Conyza Canadensis*  
*Anthemis cotula*  
*Ipomea hederacea*  
*Ipomea purpurea*  
*Brassica* spp.  
*Descurainia pinnata*  
*Solanum nigrum*  
*Thlaspi arvense*  
*Lepidium virginicum*  
*Amaranthus blitoides*  
*Amaranthus retroflexus*  
*Amaranthus hybridus*  
*Amaranthus albus*  
*Diodia teres*  
*Portulaca oleracea*  
*Ambrosia artemisiifolia*  
*Ambrosia bidentata*  
*Ambrosia psilostachya*  
*Salvia reflexa*  
*Tragopogon dubius*  
*Cyperus compressus*  
*Capsella bursa-pastoris*  
*Polygonum pennsylvanicum*  
*Helenium amurum*  
*Sonchus oleraceus*  
*Helianthus annuus*  
*Salsola iberica*  
*Abutilon theophrasti*  
*Amaranthus rudis*

#### Scientific Name

*Convolvulus arvensis*  
*Cardamine* spp.  
*Aesculus* spp.  
*Cnidoscopus stimulosus*  
*Daucus carota*  
*Cichorium intybus*  
*Trifolium aureum*  
*Taraxacum officinale*  
*Rumex crispus*  
*Sambucus canadensis*  
*Solidago missouriensis*  
*Isocoma coronopifolia*

**Common Name****BIENNIALS AND PERENNIALS**

Groundsel  
 Honeysuckle, Hair  
 Horsenettle  
 Ivy, Poison  
 Knapweed, Black  
 ,Russian  
 ,Spotted  
 Marshelder  
 Mesquite  
 Milkweed  
 Nightshade, Silverleaf  
 ,Black  
 Persimmon, Eastern  
 Rabbitbrush  
 Ragwort, Tansy  
 Redvine  
 Sagebrush, Fringed  
 Smartweed, Swamp  
 Sorrel, Red (Sheep Sorrel)  
 Sowthistle, Perennial  
 Spurge, Leafy  
 Starthistle, Yellow  
 Tallow Tree, Chinese  
 Thistle, Bull,  
 ,Canada  
 ,Musk  
 ,Plumeless  
 Toadflax, dalmation  
 Vetch  
 Yankeeweed

**Scientific Name**

*Senecio vulgaris*  
*Lonicera*  
*Solanum carolinense*  
*Rhus radicans*  
*Centaurea nigra*  
*Centaurea repens*  
*Centaurea maculosus*  
*Ina annua*  
*Prosopis juliflora*  
*Asclepius*  
*Solanum elaeagnifolium*  
*Solanum nigrum*  
*Diospyros virginiana*  
*Chrysanthemum pulchellus*  
*Senecio jacobia*  
*Brunnichia ovata*  
*Artemisia frigida*  
*Polygonum coccineum*  
*Rumex acetosella*  
*Sonchus arvensis*  
*Euphorbia esula*  
*Centaurea solstitialis*  
*Sapium sebiferum*  
*Cirsium vulgare*  
*Cirsium arvense*  
*Carduus nutans*  
*Carduus acanthoides*  
*Linaria dalmatica*  
*Vicia spp.*  
*Eupatorium compositifolium*

product, including no implied warranty of merchantability or fitness for a particular purpose. No such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

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**Food/Feed Crop Uses**

This product can be used on the following:

\*Conservation Reserve Program Land

\*Fallow Systems (Between Crop Application)

\*General Farmstead

Grain Sorghum

Grass (Hay or Silage)

Corn (Preplant and Preemergence)\*\*

Soybean (Preplant)\*\*

Cotton (Preplant)\*\*

Pastures

Rangeland

Sugarcane

Wheat

\*These crops are considered Food/Feed crops only when harvested, grazed or foraged. Otherwise they are considered as non-Food/Feed uses.

\*\*Not approved for these uses in California

Use of this product in certain portions of California, Oregon and Washington is subject to the January 22, 2004 Order for Injunction Relief in Washington Toxics Coalition, et.al. v. EPA, C01-0132C (W.D.WA). For further information, please refer to EPA website: <http://www.epa.gov/esp>.

**CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

To the extent consistent with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

**Warranty:** Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the



# GRASSMASTER™

For use on Conservation Reserve Program Land, Fallow Systems (Between Crop Applications), General Farmstead, Sorghum, Grass (Hay or Silage), Pastures, Rangeland, Sugarcane, Wheat, Corn (Preplant and Preemergence)\*, Soybeans (Preplant)\* and Cotton (Preplant)\*. Also for Control of Brush and Broadleaf Weeds on Rights-of-Way\*, Forest Brush\*, Industrial Sites\*, Non-Irrigation Ditchbanks\*, Fence Rows\*, and Other Labeled Non-Crop Areas\*.

\*Not approved for these uses in California

## ACTIVE INGREDIENTS:

Dimethylamine salt of 3,6-dichloromethoxybenzoic acid* . . . . .	12.5%
Dimethylamine salt of 2,4-dichlorophenoxyacetic acid** . . . . .	36.0%
<b>OTHER INGREDIENTS:</b> . . . . .	<b>51.5%</b>
<b>TOTAL:</b> . . . . .	<b>100.0%</b>

\*This product contains 10.4% dicamba or 1 pound per gallon (120 grams per liter) acid equivalent.

\*\* This product contains 29.9% 2,4-D or 2.87 pounds per gallon (344 grams per liter) acid equivalent.

Isomer specific by AOAC method 978.05, 15th Edition

EPA Reg. No. 81927-42

EPA Est. No. 81927-AL-001™  
75640-COL-001<sup>PC</sup>; 7401-TX-001<sup>TX</sup>

Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

## 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 to 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 the 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 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.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. 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.

Manufactured for: Alligare, LLC  
1565 5th Avenue • Opelika, AL 36801

**Net Contents: 2.5 Gallons (9.46 liters)**

## 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, on skin, or on clothing.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**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. Do not store under conditions that might adversely affect the container or its ability to function properly.

**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.

**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: Non-refillable containers. Plastic/Metal Containers.** Do not reuse or refill this container. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**Non-refillable container less than or equal 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 (all sizes):** 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.

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

See inside booklet for complete Precautionary Statements and Directions for Use.



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PEEL BACK BOOK HERE