

74530-30

3-12-2008

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
74530-30

Date of Issuance:

12 MAR 2008

NOTICE OF PESTICIDE:
 Registration
 Reregistration

(under FIFRA, as amended)

Term of Issuance:
Unconditional

Name of Pesticide Product:
Helmba Herbicide

Name and Address of Registrant (include ZIP Code):
Helm Agro US, INC.
8295 Tournament Drive #310
Memphis, TN 38125

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

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

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

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

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product.
2. Make the labeling changes listed below before you release the product for shipment.

Add the phrase "EPA Registration No. 74530-30".

Signature of Approving Official: *Joanne J. Miller*

Date: 12 MAR 2008

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3. Revise the warranty statement to include the following statement:

"To the extent consistent with applicable law", HELM AGRO US INC. MAKES NO OTHER EXPRESS...OR IMPLIED WARRANTY. "To the extent consistent with applicable law" in no case shall HELM AGRO US INC. or the Seller be liable ...handling this product.

4. Under the heading Storage and Disposal, revise as follows:

Pesticide Storage: Store in original...material for disposal.

5. Replace **all** occurrences of *recommended rates* throughout the labeling with **specified rate(s)**.

6. Under the heading Environmental Hazards revise to include the following:

Do not contaminate...washwater or **rinsate**.

7. Under the heading Agricultural Use Requirements, revise the early entry PPE to include the following:

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

8. Under the heading Directions for Use/General Information, include the following text:

The maximum single application rate is 1.0 lb ai/acre and no more than 2 applications per year.

Submit one(1) copy of your final printed labeling for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Enclosed for your records is a copy of your label stamped "Accepted with Comments".

Sincerely,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505P)

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ACCEPTED
with COMMENTS
in EPA Letter Dated

12 MAR 2008

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

74530-30



Helm Agro US, Inc. HELMBA HERBICIDE

FOR WEED CONTROL IN CORN, SORGHUM, SMALL GRAINS, PASTURE, HAY RANGELAND, GENERAL FARMSTEAD (Non-Cropland), RIGHTS-OF-WAY, PUBLIC UTILITY AND INDUSTRIAL AREAS; FALLOW, SUGARCANE, ASPARAGUS, TURF AND GRASS SEED CROPS.

Active ingredient:

Dimethylamine salt of dicamba (3,6-dichloro-o-anisic acid)*	49.77%
Inert Ingredients:	50.23%
TOTAL	100.00%

* This product contains 41.35% 3,6-dichloro-o-anisic acid (dicamba) or 4 pounds per gallon (480 g/L)

EPA Reg. No. 74530

KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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

WARNING. Causes eye irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. Avoid breathing spray mist. Wash thoroughly after handling.

FIRST AID (Substituted Benzoic acid)	
If inhaled:	<ul style="list-style-type: none"> Remove 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.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> 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 eyes. Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none"> Call 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER (Substituted Benzoic acid)	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical treatment information call: 1-(866)-359-5660	
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage.	

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENTS:

When handlers use closed 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.

User Safety Recommendations

USERS SHOULD:

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

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ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Apply this product only as directed on label.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or tribe, consult the agency responsible for pesticide regulation. 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.

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 24 hours.

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

- Coveralls
- Waterproof Gloves
- Shoes plus socks
- Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

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

Keep unprotected persons, including children and pets, out of the treated areas until sprays have dried.

Before applying HELMBA HERBICIDE, read all directions and precautions appearing on the container label and in this booklet. Failure to follow all directions and precautions may result in unsatisfactory weed control, crop injury, or illegal residues.

GENERAL INFORMATION

The following directions apply to all uses of HELMBA HERBICIDE. Additional precautions and restrictions will be found in each specific use section.

Do not treat irrigation ditches or water used for crop irrigation or domestic uses.

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

MIXING AND APPLICATION

UNLESS OTHERWISE SPECIFIED UNDER THE INDIVIDUAL USE HEADINGS OF THIS BOOKLET, THE FOLLOWING DIRECTIONS APPLY TO ALL CROP AND NON-CROP USES OF HELMBA HERBICIDE. REFER TO INDIVIDUAL USE SECTIONS FOR ADDITIONAL PRECAUTIONS, RESTRICTIONS, APPLICATION RATES AND TIMINGS.

HELMBA HERBICIDE is a water-soluble formulation that can be applied using water or sprayable fluid fertilizer as the carrier. If a fluid fertilizer is to be used, a compatibility test (see COMPATIBILITY TEST on page 6) should be made prior to tank mixing.

Ground or aerial application equipment which will give good spray coverage of weed foliage should be used. HOWEVER, DO NOT USE AERIAL APPLICATION EQUIPMENT IF SPRAY PARTICLES CAN BE CARRIED BY WIND INTO AREAS WHERE SENSITIVE CROPS OR PLANTS ARE GROWING OR WHEN TEMPERATURE INVERSIONS EXIST.

Apply 3 to 50 gallons of a diluted spray per treated acre when using ground application equipment, or 1 to 10 gallons of a diluted spray per treated acre (2 to 20 gallons of diluted spray per acre for preharvest uses) in a water-based carrier when using aerial application equipment. Use the higher level of the listed spray volumes when treating dense or tall vegetation. Use coarse sprays.

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.

To avoid uneven spray coverage, HELMBA HERBICIDE should not be applied during periods of gusty wind or when wind is in excess of 15 mph.

Avoid disturbing (e.g. cultivating or mowing) treated areas for at least 7 days following application.

BEST STEWARDSHIP PRACTICES

HELMBA HERBICIDE provides effective broadleaf weed and brush control when properly applied. Best stewardship practices in all mixing, loading and application operations not only maximize weed control, but also protect ground and surface waters and minimize off-target movement.

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Ground and Surface Waters Protection

1. Point source contamination - To prevent point source contamination, do not mix, load this pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. Do not apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas as described below.

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Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment, or container leaks, equipment wash waters, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Care must be taken when using this product to prevent: a) back siphoning into wells, b) spills or c) improper disposal of excess pesticide, spray mixtures or rinsates. Check valves or antisiphoning devices must be used on all mixing equipment.

2. Movement by surface runoff or through soil - Do not apply under conditions which favor runoff. Do not apply to impervious substrates such as paved or highly compacted surfaces in areas with high potential for ground water contamination. Ground water contamination may occur in areas where soils are permeable or coarse and ground water is near the surface. Do not apply to soils classified as sand with less than 3% organic matter and where ground water depth is shallow. To minimize the possibility of ground water contamination, carefully follow application rate recommendations as affected by soil type in the general information section of this label.
3. Movement by water erosion of treated soil - Do not apply or incorporate this product through any type of irrigation equipment nor by flood or furrow irrigation. Ensure treated areas have received at least one-half inch rainfall (or irrigation) before using tailwater for subsequent irrigation of other fields.

SENSITIVE CROP PRECAUTIONS

HELMBA HERBICIDE 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 HELMBA HERBICIDE during their development or growing stage. FOLLOW THE PRECAUTIONS LISTED BELOW WHEN USING HELMBA HERBICIDE.

- Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of HELMBA HERBICIDE with the roots of desirable plants such as trees and shrubs.
- Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing, or when temperature inversions exist. Do not spray near sensitive plants if wind is gusty or in excess of 5 mph and moving in the direction of adjacent sensitive crops. Leave an adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays.
- Use coarse sprays to avoid potential herbicide drift. Select nozzles which are designed to produce minimal amounts of fine spray particles. Examples of nozzles designed to produce coarse sprays via ground applications are Delavan Raindrops, Spraying Systems XR flat fans or large capacity flood nozzles such as D10, TK10 or greater capacity tips. Keep the spray pressure at or below 20 psi and the spray volume at or above 20 gpa, unless otherwise required by the manufacturer of drift-reducing nozzles. Consult with your spray nozzle supplier concerning the choice of drift reducing nozzles.
- Agriculturally approved drift-reducing additives may be used.
- Do not apply HELMBA HERBICIDE adjacent to sensitive crops when the temperature on the day of application is expected to exceed 85°F as drift is more likely to occur.
- To avoid injury to desirable plants, equipment used to apply HELMBA HERBICIDE should be thoroughly cleaned (see PROCEDURE FOR CLEANING SPRAY EQUIPMENT on page 6) before reusing to apply any other chemicals.

All crop uses of HELMBA HERBICIDE are intended for a normal growing interval between planting and harvest. No crop rotation restrictions exist if normal harvest of treated crop has occurred. If this interval is shortened, such as in cover crops that will be plowed under, do not follow up with the planting of a sensitive crop.

Crops growing under stress conditions such as drought, poor fertility, or foliar damage due to hail, wind or insects, can exhibit various injury symptoms that may be more pronounced if herbicides are applied.

Consult your local or state authorities for possible application restrictions and advice concerning these and other special local use situations. **Tank mix recommendations are for use only in states where the tank mix product and application site are registered.**

Band Treatments

HELMBA HERBICIDE may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per acre.

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast RATE per treated acre} = \text{Band RATE per treated acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast Volume per treated acre} = \text{Band Volume per treated acre}$$

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 lb.	1 1/2
Liquid	1 pt.	1/2

If herbicide(s) do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested spray mix is 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. Re-run the above COMPATIBILITY TEST with a suitable compatibility agent (1/4 teaspoon is equivalent to 2 pints per 100 gallons of fluid fertilizer).

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PROCEDURE FOR CLEANING SPRAY EQUIPMENT

The steps listed below are suggested for thorough cleaning of spray equipment following applications of HELMBA HERBICIDE or tank mixes of HELMBA HERBICIDE or tank mixes of HELMBA HERBICIDE 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 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 HELMBA HERBICIDE as a tank mix with wettable powders (WP), emulsifiable concentrates (EC), or other types of water-dispersible formulations. HELMBA HERBICIDE tank mixes with water-dispersible formulations require the use of a water/detergent rinse.
5. Complete step 1.
 6. Fill tank with water while adding 2 lbs. of detergent for every 40 gallons of water. Operate the pump to circulate the detergent solution through the sprayer system for 5 to 10 minutes and discharge a small amount of the 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.

GENERAL WEED LIST

This is a general list of weeds which may be treated with HELMBA HERBICIDE in accordance with this label as recommended under the rates and timing sections of the Individual Use Headings. Proper usage of this product will give control or growth suppression of many ANNUAL, BIENNIAL, and PERENNIAL broadleaf weeds, and many WOODY brush and vine species including:

Annuals

Amaranth, Spiny (Spiny Pigweed)	Fleabane, Annual	Pepperweed, Virginia (Peppergrass)	Sida, Prickly (Teaweed)
Aster, Slender	Goosefoot, Nettleleaf	Pigweed, Prostrate	Smartweed, Green
Bedstraw	Henbit	Pigweed, Redroot (Carelessweed)	Smartweed, Pennsylvania
Beggarweed, Florida	Jimsonweed	Pigweed, Rough	Sneezeweed, Bitter
Broomweed, Common	Knotweed	Pigweed, Smooth	Sowthistle, Annual
Buckwheat, Wild	Kochia	Pigweed, (triazine resistant)	Sowthistle, Spiny
Buffalobur	Ladysthumb	Pigweed, Tumble	Spikeweed, Common
Burclover, California	Lambsquarters, Common	Poorjoe	Spurge, Prostrate
Burcucumber	Lambsquarters (triazine resistant)	Puncturevine	Spurry, Corn
Buttercup, Roughseed	Lettuce, Prickly	Purslane, Common	Starbur, Bristly
Carpetweed	Mallow, Common	Rudley, Florida	Sumpweed, Rough
Catchfly, Nightflowering	Mallow, Venice	Radish, Wild	Sunflower, Common (Wild)
Chamomile, Corn	Mayweed	Ragweed, Common	Sunflower, volunteer
Chickweed, Common	Morningglory, Ivyleaf	Ragweed, Giant (Buffaloweed)	Thistle, Russian
Clovers (Annual)	Morningglory, Tall	Ragweed, Lance-Leaf	Velvetleaf
Cockle, Corn	Mustard, Tansy	Rubberweed, Bitter (Bitterweed)	Waterhemp
Cockle, Cow	Mustard, Wild	Sesbania, Hemp	Waterprimrose, Winged
Cocklebur, Common	Mustard (Yellowtops)	Shepherdspurse	Wormwood, Annual
Croton, Tropic	Nightshade, Black	Sicklepod	
Croton, Woolly	Pennycress, Field (Fanweed, Frenchweed, Stinkweed)		
Daisy, English			
Evening primrose, Cutleaf			

Biennials

Burdock, Common	Geranium, Carolina	Ragwort, Tansy	Thistle, Musk
Carrot, Wild (Queen Anne's Lace)	Gromwell	Starthistle, Yellow	Thistle, Plumeless
Cockle, White	Knapweed, Diffuse	Teasel	
Evening primrose, Common	Knapweed, Spotted	Thistle, Bull	
	Mallow, Dwarf	Thistle, Milk	
	Plantain, Bracted		

Perennials

*Alfalfa	*Clover, Hop	Milkweed, Climbing	Sowthistle
Artichoke, Jerusalem	*Dandelion, Common	Milkweed, Common	Sowthistle, Perennial
Aster, Spiny	*Dock, Broadleaf (Bitterdock)	Milkweed, Honeyvine	Spurge, Leafy
Aster, Whitehead	*Dock, Curly	Milkweed, Western Whorled	Sundrop, Halfshrub (Evening Primrose)
Beadstraw, Smooth	Dogbane, Hemp	Nettle, Stinging	Thistle, Canada
Bindweed, Field	*Dogfennel (Cypressweed)	Nightshade, Silverleaf (White Horsenettle)	Toadflex, Dalmation
Bindweed, Hedge	Fern, Bracken	Onion, Wild	Tropical Soda Apple
Blueweed, Texas	Garlic, Wild	*Plantain, Broadleaf	Trumpet creeper (Buckvine)
*Bursage, (Bur Ragweed, Lakeweed, Povertyweed)	Goldenrod, Canada	Plantain, Buckhorn	Vetch
Bursage, Woollyleaf (Lakeweed)	Goldenrod, Missouri	Pokeweed	Waterhemlock
Buttercup, Tall	Goldenrod, Common	Ragweed, Western	Waterprimrose, creeping
Campion, Bladder	Hawkweed	Redvine	*Woodsorel, Creeping Common Yellow
Chickweed, Field	Horsenettle, Carolina	Sericia Lespedeza	Wormwood, Common
Chickweed (Mouseear, Canada)	Ironweed	Smartweed, Swamp	Wormwood, Louisiana
Chicory	Knapweed, Black	Snakeweed, Broom	*Yankeeweed
	Knapweed, Russian	*Sorrel, Red (Sheep Sorrel)	Yarrow, Common
	Mare's Tail (Horseweed)		

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*Noted perennials may be controlled using HELMBA HERBICIDE at rates lower than those recommended for other listed perennial weeds. (See APPLICATION RATES AND TIMINGS sections on pages 9-13, 15, 20, 21 and 23-26).

Woody

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

*Growth Suppression

FIELD, SEED*, POPCORN* AND SILAGE CORN

Observe all PRECAUTIONS on page 1. Read and follow MIXING AND APPLICATION instructions on page 4 as well as the following:

* Do not apply HELMBA HERBICIDE to seed corn or popcorn without first verifying with your local seed corn company (supplier) the HELMBA HERBICIDE selectivity on your inbred line or variety of popcorn. This precaution will help avoid potential injury of sensitive varieties.

HELMBA HERBICIDE is not registered for use on sweet corn.

Direct contact of HELMBA HERBICIDE with corn seed must be avoided. If corn seeds are less than 1 1/2 inches below the surface, delay application until corn has emerged.

Up to 2 applications of HELMBA HERBICIDE may be made during a growing season. Do not exceed a total 1 1/2 pints of HELMBA HERBICIDE per treated acre per crop year. Allow two weeks or more between applications of HELMBA HERBICIDE. See appropriate section for rate information. For combination options or sequential treatments, refer to appropriate section.

Applications of HELMBA HERBICIDE to corn during periods of rapid growth may result in temporary leaning. Corn will usually become erect within 3 to 7 days. Cultivation should be delayed until after corn is growing normally to avoid breakage.

Agriculturally approved surfactants or sprayable fertilizers (1/2-1 gallon per acre of 28%, 30%, 32% urea ammonium nitrate or 2.5 pounds per acre spray grade ammonium sulfate*) may be added to the spray mixture to improve postemergence weed control, particularly in dry growing conditions.

Do not use adjuvants containing penetrants such as petroleum based oils after crop emergence or crop injury may result.

Corn may be harvested or grazed for feed once the crop has reached the ensilage (milk) stage or later in maturity.

Several synthetic pyrethroid insecticides are labeled for tankmix applications with HELMBA HERBICIDE. Refer to their label for specific recommendations.

* Not for use in California

Weeds Controlled

HELMBA HERBICIDE will control many ANNUAL broadleaf weeds or give growth suppression of many PERENNIAL broadleaf weeds commonly found in corn. (Refer to the GENERAL WEED LIST on pages 7 and 8).

For best performance, make application when weeds have emerged and are actively growing.

Preemergence control of cocklebur, velvetleaf, and jimsonweed may be reduced if conditions such as low temperature or lack of soil moisture cause delayed or deep germination of weeds.

Preplant/Preemergence In No-Tillage Corn

Applications of HELMBA HERBICIDE may be made before, during, or after planting to emerged and actively growing broadleaf weeds. Apply HELMBA HERBICIDE at 1 pint per treated acre on medium or fine textured soils containing 2% or greater organic matter. Use 1/2 pint per treated acre on coarse textured soils (sand, sandy loam, and loamy sand) or medium and fine textured soils with less than 2% organic matter.

When planting into a legumè sod (e.g., alfalfa or clover), apply HELMBA HERBICIDE after 4-6 inches of regrowth has occurred.

Preemergence In Conventional or Reduced Tillage Corn

HELMBA HERBICIDE may be applied after planting and prior to corn emergence. Application at 1 pint per treated acre may be made to medium or fine textured soils which contain 2% or greater organic matter. DO NOT apply to coarse textured soils (sand, sandy loam and loamy sand) until after crop emergence (see Early Postemergence uses below).

Preemergence application of HELMBA HERBICIDE does not require mechanical incorporation to become active. A shallow mechanical incorporation is recommended if application is not followed by adequate rainfall or sprinkler irrigation. Avoid tillage equipment (e.g., drags, harrows) which concentrate treated soil over seed furrow.

Early Postemergence (All Tillage Systems)

Spike through 8 Inch tall corn

HELMBA HERBICIDE at 1 pint per treated acre may be applied during the period from corn emergence through the five leaf stage or 8 inches tall, whichever comes first. Reduce the rate to 1/2 pint per treated acre if corn is growing on coarse textured soils (sand, sandy loam, loamy sand). See Late Postemergence applications given below if the 6th true leaf is emerging from whorl or corn is greater than 8 inches tall.

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Late Postemergence (All Tillage Systems)

8 to 36 inches tall corn

Application of HELMBA HERBICIDE at 1/2 pint per treated acre may be made from 8 to 36 inch tall corn or 15 days before tassel emergence, whichever comes first. For best performance, make applications when weeds are less than 3 inches tall.

Make directed spray application when: (1) corn leaves prevent proper spray coverage; (2) sensitive crops are growing nearby; (3) tank mixing with 2,4-D.

DO NOT apply HELMBA HERBICIDE when soybeans are growing nearby if any of these conditions exist:

- corn is more than 24 inches tall
- soybeans are more than 10 inches tall
- soybeans have begun to bloom

Overlay (Sequential) Treatments

HELMBA HERBICIDE may be applied to ground previously treated with one or more of the following herbicides:

acetochlor (Surpass®, Harness® Plus)	Clarity®	Marksman®
alachlor (Lasso®, Lasso MT®, Partner®)	dimethenamid (Frontier®)	s-metolachlor (Dual® II Magnum)
atrazine	EPTC (Eradicane®)	paraquat (Gramoxone®)
Bicep® II Magnum	Guardsman®	pendimethalin (Prowl®)
Bullet®	glyphosate (Roundup®)	simazine (Princep®)
butylate (Sutan+®)	halosulfuron (Permit®)	
	Lariat®	

Apply HELMBA HERBICIDE at 1/2 pint per treated acre to ground previously treated with full rates of Clarity® or Marksman® herbicides. Allow at least 2 weeks between applications.

READ AND FOLLOW LABEL DIRECTIONS FOR EACH OF THE ABOVE PRODUCTS.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more of, but not limited to, the following herbicides for control of grasses or additional broadleaf weeds in corn. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Rates and Timings

HELMBA HERBICIDE Plus	Preplant/ Preemergent (No Tillage Corn) Directions	Preemergent (Conventional or Reduced Tillage Corn)	Early Post-Emergent (All Tillage Systems)	Late Post-Emergent (All Tillage Systems)	Additional Directions
ACCENT® (nicosulfuron)	—	—	1/2-1 oz. ai/A	1/2-1 oz. ai/A (to improve spray coverage of weeds and reduce risk of corn injury, use drop pipes to direct spray beneath corn leaves when corn is greater than 8 inches tall.)	Application may be made to emerged weeds before corn is greater than 24 inches tall. Use non-ionic surfactant at .25% (V/V) with this tank mixture.
atrazine	1 1/4-2 lbs. ai/A	1 1/4-2 lbs. ai/A	1 1/4-2 lbs. ai/A Crop oil concentrates may be used with this mixture if corn is 5 inches or less in height.	1 1/4-2 lbs. ai/A Do not apply if corn is greater than 12 inches tall.	Application may be made before grasses are 1 1/2" tall. Follow all state and Federal restrictions pertaining to atrazine applications.
BEACON® (primisulfuron)	—	—	0.31-0.62 oz. ai/A	0.31-0.62 oz. ai/A (to improve spray coverage of weeds and reduce risk of corn injury, use drop pipes to direct spray beneath corn leaves when corn is greater than 8 inches tall.)	Application may be made to emerged weeds when corn is 4 to 24 inches tall. Use non-ionic surfactant at .25% (V/V) with this tank mixture.
DUAL® II Magnum/II Magnum SI (metolachlor)	0.8-1.6 lbs. ai/A	0.8-1.6 lbs. ai/A (use only on fine or medium soils with 2.5% or greater organic matter.)	0.8-1.6 lbs. ai/A	—	Application may be made before grasses reach the 2 leaf stage and before corn is greater than 3 inches tall.
FRONTIER® (dimethenamid)	13-25 fl. oz/A	13-25 fl. oz/A (use only on fine or medium textured soils with 2.5% or greater organic matter.)	13-25 fl. oz/A	—	Application may be made up to 8 inch tall corn. This treatment must be combined with a herbicide that provides postemergence control of grass weeds if they are greater than 1 inch tall at the time of application
GRAMOXONE® (paraquat)	1/4-1 lb. ai/A	1/4-1 lb. ai/A	—	—	Application may be made to emerged weeds but prior to corn emergence.

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Rates and Timings (continued)

HELMBA HERBICIDE Plus	Preplant/ Preemergent (No Tillage Corn) Directions	Preemergent (Conventional or Reduced Tillage Corn)	Early Post-Emergent (All Tillage Systems)	Late Post-Emergent (All Tillage Systems)	Additional Directions
SURPASS® (acetochlor)	1 1/2-3 lbs. ai/A	1 1/2-3 lbs. ai/A (use only on fine or medium textured soils with 2.5% or greater organic matter.)	—	—	Application should be made prior to corn emergence.
LASSO® (alachlor)	1 1/2-4 lbs. ai/A	1 1/2-4 lbs. ai/A (use only on fine textured soils with greater than 2.5% organic matter).	1 1/2-4 lbs. ai/A	—	Application may be made before grasses reach the 2 leaf stage and before corn is greater than 3 inches tall. If microencapsulated forms of alachlor are used (Lasso MT, Partner), applications must be made prior to grass emergence.
PRINCEP® (simazine)	2.0-3.0 lbs. ai/A	2.0-3.0 lbs. ai/A	—	—	Application may be made prior to corn or weed emergence.
PROWL® (pendimethalin)	—	3/4-1 1/2 lbs. ai/A (use only on fine or medium textured soils with 2.5% or greater organic matter.)	3/4-1 1/2 lbs. ai/A	—	Application may be made immediately after planting but prior to weed emergence. Corn should not be beyond the 2 leaf stage of growth.
ROUNDUP® (glyphosate)	1.0-3.0 lbs. ai/A	1.0-3.0 lbs. ai/A	—	—	Application may be made to emerged weeds but prior to corn emergence.
2,4-D	1/4-1/2 lbs. ai/A	1/4-1/2 lbs. ai/A	Not recommended	1/8 lbs. ai/A	Drop pipes are to be used when corn height is 8 inches or greater. Keeping the spray off the corn leaves and out of the whorl will reduce the likelihood of crop injury and improve spray coverage of the weed foliage.

COTTON (Except California)

PREPLANT APPLICATION: Apply up to 8 fluid ounces of HELMBA HERBICIDE per acre to control emerged broadleaf weeds prior to planting cotton in conventional or conservation tillage systems.

For best performance, apply HELMBA HERBICIDE when weeds are in the 2 – 4 leaf stage and rosettes are less than 2" across.

Following application of HELMBA HERBICIDE and a minimum accumulation of 1" of rainfall or overhead irrigation, a waiting interval of 21 days is required per 8 fluid ounces per acre or less. These intervals must be observed prior to planting cotton.

Do not apply preplant to cotton west of the Rockies.

Do not make HELMBA HERBICIDE preplant applications to geographic areas with average annual rainfall less than 25".

If applying a spring preplant treatment following application of a fall preplant (postharvest) treatment, then the combination of both treatments may not exceed 2 lbs. acid equivalent per acre.

Tank Mix Treatments

For control of grasses or additional broadleaf weeds, HELMBA HERBICIDE may be tank mixed with Bladex®, Caparol®, Gramonone® Extra, and Roundup® herbicides

SORGHUM (MILO)

Observe all PRECAUTIONS on page 3, including the reference to crops growing under stress. Read and follow mixing AND application instructions on page 4.

Applications of HELMBA HERBICIDE to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling of leaves. These effects are usually outgrown within 10 to 14 days.

Do not graze or feed treated sorghum forage or silage prior to mature grain stage. If sorghum is grown for pasture or hay, refer to the pasture use section of this label. Do not apply HELMBA HERBICIDE to sorghum grown for seed production.

Make no more than one application per growing season.

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Weeds Controlled

HELMBA HERBICIDE, when applied at the recommended rate for sorghum, will control many actively growing ANNUAL broadleaf weeds and will reduce competition from established PERENNIAL broadleaf weeds as well as control their seedlings. (Refer to GENERAL WEED LIST on pages 7 and 8.)

Rates and Timings

HELMBA HERBICIDE may be applied to emerged and actively growing weeds at least 15 days prior to planting. Postemergence application of HELMBA HERBICIDE must be made after sorghum is in the spike stage (all sorghum emerged) but before sorghum is 15 inches tall. For best performance, make applications when sorghum is in the 3-5 leaf stage and weeds are small (less than 3 inches tall). Use drop pipes (drop nozzles) if sorghum is taller than 8 inches. Keeping the spray off the sorghum leaves and out of the whorl will reduce the likelihood of crop injury and improve spray coverage of weed foliage.

Broadcast Rate Per Treated Acre:

1/2 pint (1/4 lb. ai)

Tank Mix Treatment

HELMBA HERBICIDE plus Atrazine

For improved control of emerged, actively growing broadleaf weeds including triazine resistant species and added suppression of perennial broadleaf weeds, tank mix 1/2 pint HELMBA HERBICIDE with 0.5 to 1.25 lbs. a.i. atrazine per treated acre. For control of grasses (less than 1.5 inches tall), tank mix 1/2 pint HELMBA HERBICIDE with 2 lbs. a.i. atrazine per treated acre. For best performance and minimal crop injury, make application when sorghum is 3-8 inches tall and when broadleaf weeds are small (less than 6 inches tall). Application of atrazine must be made before sorghum is beyond 12 inches tall. The atrazine rate will depend upon soil texture and length of residual weed control desired. Follow all state and Federal restrictions pertaining to atrazine applications.

HELMBA HERBICIDE plus Buctril®

For improved control of broadleaf weeds, tank mix 1/2 pint HELMBA HERBICIDE with 1-1 1/2 pint Buctril Herbicide per treated acre. Make application at 4 leaf to 15 inch tall sorghum. Use drop nozzles to direct spray beneath sorghum leaves when sorghum is greater than 8 inches tall.

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND TIMINGS AND OTHER RESTRICTIONS.

Overlay (Sequential) Treatments

HELMBA HERBICIDE may be applied to ground previously treated with one or more of the following herbicides:

Herbicide	Maximum Rate Per Treated Acre (lbs. ai)
alachlor (Lasso®) (Screen®-treated seed)	4
atrazine ¹	2.5
s-metolachlor (Dual® II Magnum) (Concep®-treated seed)	1.33

¹ Maximum use rate for atrazine is determined by soil type, tillage practices used, surface residue, and state or local restrictions. Follow the more restrictive requirements when determining the maximum use rate for atrazine.

Preharvest Uses

For Use Only in the States of Texas and Oklahoma

HELMBA HERBICIDE may be applied for weed suppression any time after the sorghum has reached the soft dough stage. An agriculturally approved surfactant may be used to improve performance. For aerial applications use at least 2 gallons of water-based carrier per treated acre.

Delay harvest until 30 days after treatment.

Broadcast Rate Per Treated Acre:

1/2 pint (1/4 lbs. ai)

**SMALL GRAINS (WHEAT, BARLEY AND OATS)
NOT UNDERSEEDED TO LEGUMES**

Important

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4.

If small grains are used for pasture hay, the following restrictions apply:

- Animals cannot be removed from treated area for slaughter prior to 30 days after last application.
- There is no waiting period between treatment and grazing for non-lactating dairy animals.
- Treated areas may not be grazed by lactating dairy animals before 7 days after treatment.
- Do not harvest hay from treated areas before 37 days after treatment.

NOTE: Observe all precautions and restrictions on the labels of products used in tank mix treatments.

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Weeds Controlled

HELMBA HERBICIDE, or combinations with listed tank mix partners, will provide control or suppression of annual broadleaf weeds listed below. For improved control of listed weeds, it is recommended that HELMBA HERBICIDE be applied in a tank mix with other herbicides. Refer to specific crop tank mix options.

Alkanet ¹	Falseflax,	Mayweed, Chamomile	Pigweed, Redroot	Sorrel, Red (Sheep
Bedstraw, Catchweed ¹	Smallseeded ¹	(Dogfennel) ¹	(Carelessweed)	Sorrel) ¹
Bindweed, Field ²	Fiddleneck (Tarweed) ¹	Mustard, Blue (Purple)	Pigweed, Rough	Sowthistle, Annual
Buckwheat, Tartary	Flixweed ¹		Pigweed, Tumble	Starthistle, Yellow ¹
Buckwheat, Wild	Fumitory ¹	Mustard, Tansy	Pineappleweed ¹	Sunflower, Common
Carpetweed ¹	Gromwell, Corn ¹	Mustard, Treacle ¹	Plantain, Broadleaf ²	(Wild)
Chamomile, Corn	Groundsel, Common ¹	Mustard, Tumble	Poppy, Red Horned ¹	Thistle, Canada ²
Chervil, Bur ¹	Hempnettle ¹	(Jim Hill) ¹	Puncturevine ¹	Thistle, Russian
Chickweed, Common ¹	Henbit	Mustard, Wild ¹	Purslane, Common ¹	Yarrow, Common ²
Cockle, Corn	Jacobs Ladder ¹	Nightshade, Black	Radish, Wild ¹	Velvetleaf
Cockle, Cow	Knawel (German	Nightshade, Cutleaf ¹	Ragweed, Common ¹	Vetch ¹
Cocklebur, Common	Moss)	Nightshade, Silverleaf ²	Ragweed, Giant	
Cornflower	Knotweed, Prostrate	(White Horsenettle)	(Buffaloweed) ¹	
(Bachelorbutton) ¹	Kochia	Pennycress, Field	Rocket, London ¹	
Dandelion, Common ²	Ladysthumb	(Fanweed,	Rocket, Yellow ¹	
Dock, Curly ²	Lambsquarters,	Frenchweed,	Salsify (Goatsbeard) ¹	
Dragonhead,	Common	Stinkweed)	Sheperdspurse ¹	
American ¹	Lettuce, Miners ¹	Pepperweed,	Smartweed, Green	
Evening Primrose,	Lettuce, Prickly	Peppergrass ¹	Smartweed,	
Cutleaf ¹	Mallow, Common		Pennsylvania	

¹ These weeds will be controlled with HELMBA HERBICIDE tank mixtures. Refer to tank mix label for specific weeds controlled.

² HELMBA HERBICIDE tank mixes will provide suppression of established broadleaf weeds and control of their seedlings.

Rates and Timings

Application of HELMBA HERBICIDE may be made before, during or after planting small grains. For best performance, make applications when weeds are in the 2-3 leaf stage and rosettes are less than 2 inches across. Application of HELMBA HERBICIDE to small grains during periods of rapid growth may result in crop leaning. This condition is temporary and will not reduce crop yields.

Use HELMBA HERBICIDE at 2 to 4 fluid ounces per treated acre in wheat, fall seeded barley, and oats, and at 2 to 3 fluid ounces per treated acre in spring seeded barley. Use the higher level of listed rate ranges when treating difficult to control weeds such as kochia, Russian thistle and prickly lettuce or dense vegetative growth.

HELMBA HERBICIDE used in a tank mix with other herbicides offers the best spectrum of weed control and herbicide tolerant or resistant weed management. Refer to specific crop for HELMBA HERBICIDE rate and application timing.

For applications prior to the emergence of weeds or when sulfonylurea resistant weeds are present or suspected, use a minimum of 3 fluid ounces per treated acre of HELMBA HERBICIDE with a tank mix herbicide. Non-sulfonylurea herbicides such as 2,4-D or MCPA tank mixed with HELMBA HERBICIDE will offer more consistent control of sulfonylurea resistant weeds.

When tank mixing with sulfonylurea herbicides, such as Ally®, Amber®, Express®, Finesse®, Glean® and Harmony® Extra, use an agriculturally approved surfactant of at least 80% active ingredient at the rate of 1-4 pints/100 gallons of spray or not more than 0.25-0.5% by volume. Use the highest rate of surfactant when using the lower rate ranges of the tank mix and/or when treating more mature and difficult to control weeds or dense vegetative growth.

FALL AND SPRING SEEDED WHEAT

HELMBA HERBICIDE MUST BE APPLIED TO FALL SEEDED WHEAT PRIOR TO THE JOINTING STAGE. APPLICATIONS TO SPRING SEEDED WHEAT MUST BE MADE BEFORE WHEAT EXCEEDS THE 5 LEAF STAGE. Early developing wheat varieties such as TAM 107, MADISON, or WAKEFIELD must receive application between early tillering and the jointing stage. Care should be taken in staging these varieties to be certain that the application occurs prior to the jointing stage.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more, but not limited to, the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled and geographic and other restrictions.

Broadcast Rate Per Treated Acre:

Apply 2-4 fluid ounces of HELMBA HERBICIDE with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D Amine or Ester	2,4-D	4 lb/gal	8-12 fl oz. (.25-.375 lb ai/A) ¹
MCPA Amine or Ester	MCPA	4 lb/gal	8-12 fl oz. (.25-.375 lb ai/A) ¹
Ally®	metsulfuron-methyl	60% DF	1/10 oz.
Amber®	triasulfuron	75% DF	0.28 oz.
Express®	thifensulfuron + tribenuron-methyl	75% DF	1/6 oz.
Finesse®	chlorsulfuron + metsulfuron-methyl	75% DF	1/3 oz.
Glean®	chlorsulfuron	75% DF	1/6 oz.
Harmony® Extra	thifensulfuron + tribenuron-methyl	75% DF	1/3 oz.
Buctril®	bromoxynil ²	2 lb/gal	1-1 1/2 pts.
Bronate®	bromoxynil + MCPA	4 lb/gal	1-2 pts.

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Product	Active Ingredient	Formulation	Amount of Product Per Acre
Curtail [®]	clopyralid + 2,4-D	2.38 lb/gal	2-2 2/3 pts.
Stinger [®]	clopyralid	3 lb/gal	1/4-1/3 pt.
Karmex ^{®3}	diuron ²	80% DF	1/2-1 1/2 lbs.
Sencor ^{®3}	metribuzin ²	75% DF	1-10 oz.
Tiller ^{®4}	fenoxaprop-ethyl + MCPA + 2,4-D	2.7 lb/gal	1-1.7 pts.

¹ When using formulations other than 4 lb/gal use pounds active/acre listed.
² Herbicides with the same active ingredient and/or different formulation may be used.
³ Tank mixtures for fall seeded wheat only.
⁴ Use 2 fluid ounces of HELMBA HERBICIDE only. Do not use if wild oats is the target weed. Do not use on Durum wheat.

Special Use Tank Mixes For Spring and Fall Seeded Wheat
 (See Footnotes for Applicable Uses)

Apply 3-4¹ fluid ounces of HELMBA HERBICIDE with:

Product ²	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D or MCPA Amine	2,4-D or MCPA	4 lb/gal	1-2 pts. ³ (0.5-1.0 lb ai/A) ⁴
2,4-D or MCPA Ester	2,4-D or MCPA	4 lb/gal	1-1.5 pts. ³ (0.5-0.75 lb ai/A) ⁴
Ally [®]	metsulfuron-methyl	60% DF	1/20-1/10 oz.
Amber [®]	triasulfuron	75% DF	0.14-0.28 oz.
Express [®]	thifensulfuron + tribenuron-methyl	75% DF	1/12-1/6 oz.
Finesse [®]	chlorsulfuron + metsulfuron-methyl	75% DF	1/6-1/3 oz.
Glean [®]	chlorsulfuron	75% DF	1/6 oz.
Harmony [®] Extra	thifensulfuron + tribenuron-methyl	75% DF	1/6-1/3 oz.
Ally [®] + 2,4-D Amine or Ester ⁵	metsulfuron-methyl + 2,4-D	60% DF + 4 lb/gal	1/20-1/10 oz. + 8 fl oz.
Amber [®] + 2,4-D Amine or Ester ⁵	triasulfuron + 2,4-D	75% DF + 4 lb/gal	0.14-0.28 oz. + 8 fl oz.
Express [®] + 2,4-D Amine or Ester ⁵	(thifensulfuron + tribenuron-methyl) + 2,4-D	75% DF + 4 lb/gal	1/12-1/6 oz + 8 fl oz.
Finesse [®] + 2,4-D Amine or Ester ⁵	(chlorsulfuron + metsulfuron-methyl) + 2,4-D	75% DF + 4 lb/gal	1/6-1/3 oz + 8 fl oz.
Glean [®] + 2,4-D or Ester ⁵	chlorsulfuron + 2,4-D	75% DF + 4 lb/gal	1/6 oz + 8 fl oz.
Harmony [®] Extra + 2,4-D Amine or Ester ⁵	(thifensulfuron + tribenuron-methyl) + 2,4-D	75% DF + 4 lb/gal	1/6-1/3 oz + 8 fl oz.
Roundup ^{®6}	glyphosate	3 lb/gal	12-16 fl oz.

¹ HELMBA HERBICIDE may be used at 6 fluid ounces on fall seeded wheat in Western Oregon as a spring application only. In CO, KS, NM, OK and TX up to 8 fluid ounces of HELMBA HERBICIDE may be applied on fall seeded wheat after it exceeds the 3 leaf stage for suppression of perennial weeds, such as field bindweed. Applications may be made in the fall following a frost but before a killing freeze. HELMBA HERBICIDE may be tank mixed with 2,4-D amine at 8 fluid ounces after wheat begins to tiller. 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.
² Do not use low rates of sulfonylurea herbicides (Ally[®], Amber[®], Express[®], Finesse[®], Glean[®], and Harmony[®] Extra) on more mature weeds and/or on dense vegetative growth.
³ NOTE: For use on Fall Seeded Wheat Only. Do Not Use unless potential crop injury will be acceptable.
⁴ When using formulations other than 4 lb/gal use pounds active/acre listed.
⁵ Use for improved control of Russian thistle, flaxweed, gromwell, mayweed and fiddleneck.
⁶ HELMBA HERBICIDE may be applied at 2 fluid ounces with Roundup[®] as a preplant application to small grains with no waiting period prior to planting. Add 0.5% by volume of an agriculturally approved non-ionic surfactant.

FALL SEEDED BARLEY

HELMBA HERBICIDE MUST BE APPLIED TO FALL SEEDED BARLEY PRIOR TO THE JOINTING STAGE.

NOTE: For spring barley varieties that are seeded during the winter months or later, follow the rates and timings given for spring seeded barley.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more, but not limited to, the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled and geographic and other restrictions.

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Broadcast Rate Per Treated Acre:
Apply 2-4 fluid ounces of HELMBA HERBICIDE with:

Product ¹	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D Amine or Ester	2,4-D	4 lb/gal	8 fl oz. (0.25 lb ai/A) ²
MCPA Amine or Ester	MCPA	4 lb/gal	8-12 fl oz. (0.25-0.375 lb ai/A)
Ally [®]	metsulfuron-methyl	60% DF	1/20 - 1/10 oz.
Amber [®]	triasulfuron	75% DF	0.14 - 0.28 oz.
Express [®]	thifensulfuron + tribenuron-methyl	75% DF	1/12 - 1/6 oz.
Finesse [®]	chlorsulfuron + metsulfuron-methyl	75% DF	1/6 - 1/3 oz.
Glean [®]	chlorsulfuron	75% DF	1/6 oz.
Harmony [®] Extra	thifensulfuron + tribenuron-methyl	75% DF	1/6 - 1/3 oz.
Sencor [®]	metribuzin ³	75% DF	1-10 oz.
Buctril [®]	bromoxynil	2 lb/gal	1-1 1/2 pts.
Bronate [®]	bromoxynil + MCPA	4 lb/gal	3/4-1 1/2 pts.

¹ Do not use low rates of sulfonylureas (Ally[®], Amber[®], Express[®], Finesse[®], Glean[®], and Harmony[®] Extra) on more mature weeds and/or on dense vegetative growth.

² When using formulations other than 4 lb/gal use pounds active/acre listed.

³ Herbicides with the same active ingredient and/or different formulations may be used.

SPRING SEEDED BARLEY

HELMBA HERBICIDE MUST BE APPLIED BEFORE SPRING SEEDED BARLEY EXCEEDS THE 4 LEAF STAGE.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more of, but not limited to, the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled and geographic and other restrictions.

Broadcast Rate Per Treated Acre:

Apply 2-3 fluid ounces of HELMBA HERBICIDE with:

Product ¹	Active Ingredient	Formulation	Amount of Product Per Acre
MCPA Amine or Ester	MCPA	4 lb/gal	8-12 fl oz. (0.25-0.375 lb ai/A) ²
Ally [®]	metsulfuron-methyl	60% DF	1/20 - 1/10 oz.
Amber [®]	triasulfuron	75% DF	0.14 - 0.28 oz.
Express [®]	thifensulfuron + tribenuron-methyl	75% DF	1/12 - 1/6 oz.
Finesse [®]	chlorsulfuron + metsulfuron-methyl	75% DF	1/6 - 1/3 oz.
Glean [®]	chlorsulfuron	75% DF	1/6 oz.
Harmony [®] Extra	thifensulfuron + tribenuron-methyl	75% DF	1/6 - 1/3 oz.
Sencor [®]	metribuzin ³	75% DF	1-10 oz.
Buctril [®]	bromoxynil	2 lb/gal	1-1 1/2 pts.
Bronate [®]	bromoxynil + MCPA	4 lb/gal	3/4-1 1/2 pts.

¹ Do not use low rates of sulfonylureas (Ally[®], Amber[®], Express[®], Finesse[®], Glean[®], and Harmony[®] Extra) on more mature weeds and/or on dense vegetative growth.

² When using formulations other than 4 lb/gal use pounds active/acre listed.

³ Herbicides with the same active ingredient and/or different formulations may be used.

FALL AND SPRING SEEDED OATS

HELMBA HERBICIDE MUST BE APPLIED BEFORE SPRING SEEDED OATS EXCEED THE 5 LEAF STAGE. APPLICATIONS TO FALL SEEDED OATS MUST BE MADE PRIOR TO THE JOINTING STAGE.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more of, but not limited to, the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled and geographic and other restrictions.

Broadcast Rate Per Treated Acre:

Apply 2-4 fluid ounces of HELMBA HERBICIDE with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
MCPA Amine or Ester	MCPA	4 lb/gal	8-12 fl oz. (0.25-0.375 lb ai/A) ¹

¹ When using formulations other than 4 lb/gal use pounds active/acre listed.

SUGARCANE

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4.

Consult your local or state authorities for possible application restrictions, especially concerning aerial applications and advice concerning special local use situations.

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Weeds Controlled

HELMBA HERBICIDE, when applied at recommended rates, will control many ANNUAL, BIENNIAL and PERENNIAL broadleaf weeds commonly found in sugarcane. (Refer to GENERAL WEED LIST on pages 7 and 8.)

Rates and Timings

Application of HELMBA HERBICIDE may be made any time after weeds have emerged and are actively growing but before the close-in stage of sugarcane. Application rates and timings of HELMBA HERBICIDE are given below. Use the higher level of listed rate ranges when treating dense vegetative growth.

Weed Stage and Type	Amount Product	Broadcast Rate Per Treated Acre lbs. ai
Annual		
Small, actively growing	1/2-1 pt	1/4 - 1/2
Established weed growth	1-1 1/2 pts	1/2 - 3/4
Biennial	1-2 pts	1/2 - 1
Perennial	2-4 pts	1 - 2 ¹

¹ Application made over the top of actively growing sugarcane may result in crop injury.

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.

Retreatments may be made as needed, however, do not exceed a total of 4 pints (2 lbs. ai) of HELMBA HERBICIDE per treated acre during a growing season.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more of, but not limited to, 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 and other restrictions.

Herbicide	Rates per treated acre (lbs. ai)
Ametryn (Evik®)	2/5 - 8
asulam (Asulox®)	2 - 3 1/3
atrazine	2/5 - 4
2,4-D	1/2 - 3 ¹

¹ Application of HELMBA HERBICIDE plus 2,4-D tank mix at the higher listed rate range may result in crop injury.

PASTURE, HAY, RANGELAND AND GENERAL FARMSTEAD (Non-Cropland), RIGHTS-OF-WAY, AND PUBLIC UTILITY AND INDUSTRIAL AREAS

HELMBA HERBICIDE is recommended for use on pasture, hay, rangeland, general farmstead (non-cropland, including fence rows and non-irrigation ditchbanks) for broadleaf weed and brush control, and for use on non-cropland areas such as rights-of-way, rest areas, utility, railroad, highway, pipeline, and rights-of-way that run through pasture and rangeland); public utility facilities (such as substations, pipelines, tankfarms, pumping stations, parking and storage areas, fencerows and nonirrigated ditchbanks); brush control for forest site preparation or maintenance. HELMBA HERBICIDE may also be applied to non-cropland areas for the control of broadleaf weeds in Noxious Weed Control Programs, Districts or Areas including broadcast or spot treatment of roadsides and highways, utilities, railroad and pipeline rights-of-way. Noxious weeds must be recognized at the State level but programs may be administered at State, County or other levels.

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4.

General Farmstead

HELMBA HERBICIDE uses described in this section also pertain to small grains (such as barley, forage, sorghum, oats, rye, sudangrass or wheat) grown for pasture use only.

NEWLY SEEDED AREAS, including small grains grown for pasture may be severely injured if rates of HELMBA HERBICIDE greater than 1 pint/acre are applied.

ESTABLISHED GRASS CROPS growing under stress can exhibit various injury symptoms that may be more pronounced if herbicides are applied. Furthermore, rates of HELMBA HERBICIDE in excess of 2 quarts (2 lbs. ai) per treated acre may cause temporary injury to many grass species.

Bentgrass, carpetgrass, buffalograss and St. Augustine grass may be injured at rates exceeding 1 pint HELMBA HERBICIDE (1/2 lb. ai) per treated acre. Usually colonial bentgrasses are more tolerant than creeping types. Velvetgrasses are most easily injured. Treatments will kill alfalfa, clovers, lespedeza, wild winter peas, vetch and other legumes.

ANIMALS CANNOT BE REMOVED FROM TREATED AREA FOR SLAUGHTER PRIOR TO 30 DAYS AFTER LAST APPLICATION.

THERE IS NO WAITING PERIOD BETWEEN TREATMENT AND GRAZING FOR NON-LACTATING ANIMALS.

Timing Restrictions for Lactating Dairy Animals Following Treatment

HELMBA HERBICIDE Rate per Treated Acre	Days Before Grazing	Days Before Hay Harvest
Up to 1 pint (1/2 lb. ai)	7 days	37 days
Up to 1 quart (1 lb. ai)	21 days	51 days
Up to 2 quarts (2 lbs. ai)	40 days	70 days

NOTE: Observe all precautions and restrictions on labels of products used in tank mixtures.

Rights-Of-Way

HELMBA HERBICIDE can be used to control many broadleaf weeds on rights-of-way. This use includes applications to roadside, roadway and highways; to areas along utilities such as cable and powerlines; railroad track and embankment; highways, highway medians, bridge abutments, pipelines, and rights-of-way that run through pasture and rangeland. Use controlled application techniques that minimize the risk of off-target movement.

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Public Utility and Industrial Areas

HELMBA HERBICIDE can be used to control many broadleaf weeds and brush in noncrop areas on or surrounding substations, pipelines, tankfarms, pump stations, production facilities, and bareground situations. It may also be used on parking and storage areas (refer to Best Stewardship Practices to avoid direct runoff from impervious surfaces).

Mixing and Application

Read and observe Sensitive Crop Precautions recommendations in this label.

HELMBA HERBICIDE can be applied using water, oil in water emulsions (including invert systems), or sprayable fluid fertilizer as a carrier. A COMPATABILITY TEST (page 6 of this booklet) should be made prior to tank mixing.

To prepare oil in water emulsions, half-fill spray tank with water, then add the appropriate amount of emulsifier. With continuous agitation, slowly add the herbicide and then the oil (such as diesel oil or fuel oil) or a premix of oil plus additional emulsifier to spray tank. Complete filling of spray tank with water. Maintain vigorous agitation during spray operation to prevent oil and water from forming separate layers.

HELMBA HERBICIDE may be applied broadcast using either ground or aerial application equipment. When using ground equipment, apply 3 to 600 gallons of diluted spray per treated acre. Volume of spray applied will depend on the height, density, and type of weeds or brush being treated and on the type of equipment being used. When using aerial equipment apply 1 to 40 gallons of diluted spray per treated acre in a water-based carrier.

HELMBA HERBICIDE may be applied to individual clumps or small areas (SPOT TREATMENT) of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to run-off) of foliage and stems.

Herbicide adjuvants or other spray additives (emulsifiers, surfactants, wetting agents, drift control agents, or penetrants) may be used for wetting, penetration, or drift control. Spray additives must be agriculturally approved when used in pasture applications. If spray additives are used, read and follow all use recommendations and precautions on product label.

Weeds and Brush Controlled

HELMBA HERBICIDE, when applied at recommended rates, will give control of many ANNUAL, BIENNIAL, and PERENNIAL broadleaf weeds, and many WOODY brush and vine species commonly found in pasture, hay, rangeland, and general farmstead (non-cropland) areas. (Refer to GENERAL WEED LIST on pages 7 and 8.)

Noted (*) PERENNIAL weeds may be controlled with lower rates of either HELMBA HERBICIDE or HELMBA HERBICIDE plus 2,4-D. See RATES AND TIMINGS below.

Rates and Timings

Application rates and timing of HELMBA HERBICIDE are given below. Use the higher level of listed rate ranges when treating dense or tall vegetative growth.

Weed Stage and Type	Amount Product	Broadcast Rate Per Treated Acre lbs. ai
Annual Small, actively growing Established weed growth	1/2 - 1 pt. 1 - 1 1/2 pts.	1/4 - 1/2 1/2 - 3/4
Biennial ¹ Rosette diameter Less than 3 inches 3 inches or more Bolting	1/2 - 1 pt. 1 - 2 pts. 2 - 3 pts.	1/4 - 1/2 1/2 - 1 1 - 1 1/2
Perennial Suppression or top growth control Noted (*) Perennials Other perennials	1/2 - 1 qt. 1 - 2 qts. 2 qts.	1/2 - 1 1 - 2 2
Woody Brush & Vines Top growth suppression Top growth control ² Stems and stem suppression	1/2 - 1 qt. 1 - 2 qts. 2 qts.	1/2 - 1 1 - 2 2

¹ For best performance, make application when BIENNIAL weeds are in the rosette stage.

² Species noted in GENERAL WEED LIST, pages 7 and 8, will require tank mixtures for adequate control.

Retreatments may be made as needed; however, do not exceed a total of 2 quarts (2 lbs. ai) of HELMBA HERBICIDE per treated acre during a growing season.

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Tank Mix Treatments

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND OTHER RESTRICTIONS.

HELMBA HERBICIDE may be tank mixed with one or more, but not limited to, the following herbicides for control of grasses, additional broadleaf weeds, and woody brush and vines.

Herbicide	Rates Per Treated Acre (lbs. ai)
Pasture, hay, rangeland and general farmstead (non-cropland) use: glyphosate (Roundup®) metsulfuron methyl (Ally®) paraquat (Gramoxone®) picloram (Tordon®) triclopyr (Garlon®) 2,4-D	3/4 to 3 3/4 0.0038 to 0.011 1/2 to 1 1/8 to 3 3/4 to 9 1/4 to 6

Due to the variations that may occur on formulated products and specific use ingredients (e.g. water supplies), a COMPATIBILITY TEST as described on page 6 is recommended prior to actual tank mixing.

CUT SURFACE TREE TREATMENTS

HELMBA HERBICIDE may be applied as a cut surface treatment for control of unwanted trees and prevention of sprouts of cut trees. A mix of 1 part HELMBA HERBICIDE with 1 to 3 parts water should be used in application. Use the lower dilution when treating difficult-to-control species.

Frill or Girdle Treatments: Make a continuous cut or a series of overlapping cuts using an ax to girdle tree trunk. Spray or paint cut surface with the HELMBA HERBICIDE/water mix.

Stump Treatments: Spray or paint freshly cut surface with the water mix. The area adjacent to the bark should be thoroughly wet.

NOTE: For more rapid foliar effects, 2,4-D may be added to the HELMBA HERBICIDE/water mix.

DORMANT APPLICATIONS FOR CONTROL OF MULTIFLORA ROSE

HELMBA HERBICIDE can be applied when plants are dormant as an undiluted SPOT-CONCENTRATE directly to the soil or as a LO-OIL BASAL BARK treatment using an oil-water emulsion solution.

SPOT-CONCENTRATE applications of HELMBA HERBICIDE should be applied directly to the soil as close as possible to the root crown but within 6-8 inches of the crown. On sloping terrain, application should be made to the uphill side of the crown. Do not make application when snow or water prevents applying HELMBA HERBICIDE directly to the soil. The use rate of HELMBA HERBICIDE is dependent on the canopy diameter of the multiflora rose. Examples: Use HELMBA HERBICIDE at 1/4, 1 or 2 1/4 fluid ounces of product respectively, for 5, 10, or 15 feet canopy diameters. Do not exceed a total of 2 qts. HELMBA HERBICIDE per acre per year.

LO-OIL BASAL BARK applications of HELMBA HERBICIDE should be applied to the basal stem region from the ground up to a height of 12-18 inches. Spray until runoff, with special emphasis on covering the root crown. For best results, make application when plants are dormant. Do not make application after bud break or when plants are showing signs of active growth. Do not make application when snow or water prevents applying HELMBA HERBICIDE to the ground line. Refer to Mixing and Applications above in this section for method of preparing oil-in-water emulsion. Example for making approximately 2 gallons of a Lo-Oil spray solution mixture: combine 1 1/2 gallons water plus 1 ounce emulsifier plus 1 pint HELMBA HERBICIDE plus 2 1/2 pints of No. 2 diesel fuel. Adjust amounts of materials used proportionately to the amount of final spray solution desired. Do not exceed 8 gallons of spray solution mix applied per acre per year.

CONSERVATION RESERVE PROGRAM (CRP)

HELMBA HERBICIDE is recommended for use on both newly seeded and established grasses grown in Conservation Reserve or Federal Set-Aside Programs.

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION directions on page 4.

HELMBA HERBICIDE treatment will cause injury or may kill alfalfa, clovers, lespedeza, wild winter peas, vetch, and other legumes.

Agriculturally approved surfactants may be added to the spray mixture to improve postemergence weed control, particularly in dry growing conditions.

Do not use adjuvants containing penetrants such as petroleum based oils after grass emergence on newly seeded grasses.

Newly Seeded Areas

HELMBA HERBICIDE may be applied either preplant or postemergence to newly seeded grasses or small grains such as barley, oats, rye, sudangrass, wheat, or other grain species grown as a cover crop. Postemergence applications may be made after seedling grasses exceed the 3 leaf stage. Rates of HELMBA HERBICIDE greater than 1 pint per treated acre may severely injure newly seeded grasses. Preplant applications - injury to new seedlings may occur if intervals between application and grass planting is less than 45 days per pint of HELMBA HERBICIDE per treated acre West of the Mississippi River or 20 days per pint East of the Mississippi River.

Established Grass Stands

Established grass stands are perennial grasses planted one or more seasons prior to treatment. Certain species: bentgrass, carpetgrass, smooth brome, buffalograss or St. Augustine grass may be injured when treated with HELMBA HERBICIDE at rates exceeding 1 pint per treated acre.

Weeds Controlled

HELMBA HERBICIDE, when applied at recommended rates, will control many annual and biennial weeds and provide control and suppression of many perennial weeds. (Refer to GENERAL WEED LIST on pages 7 and 8.)

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Rates and Timings

Application rates and timing of HELMBA HERBICIDE treatment are given below. Use the higher rate of the rate range when vegetation is either dense or tall, or when weeds are growing under stressed conditions such as drought or cool temperature.

Weed Type* & Stage	Broadcast Rate Per Treated Acre	
	Amount of Formulated HELMBA HERBICIDE pints	Equivalent lbs. ai
Annuals		
Small actively growing	1/4 to 1	1/8 to 1/2
Established weed growth	1	1/2
Biennials**		
Rosette diameter		
a) less than 3 inches	1/2 to 1	1/4 to 1/2
b) 3 inches or greater	1 to 2	1/2 to 1
c) bolting biennial	2 to 3	1 to 1 1/2
Perennials**		
Suppression/Control	2 to 4	1 to 2

* For best results, treat Biennial weeds with HELMBA HERBICIDE when they are in the rosette stage of growth. Retreatments may be made as needed; however, DO NOT EXCEED A TOTAL OF 2 QUARTS (2 lbs. ai) of HELMBA HERBICIDE per treated acre during the growing season.

** Biennial and Perennial weeds will require follow-up (sequential) treatments for seedling control and escapes.

Tank Mix Treatments

To control grasses and additional broadleaf weeds, HELMBA HERBICIDE may be tank mixed with other herbicides registered for use in Conservation Reserve Programs such as 2,4-D, glyphosate (Roundup®), paraquat (Gramoxone®), metsulfuron (Ally®) and others. READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES, AND OTHER RESTRICTIONS.

ASPARAGUS

IMPORTANT

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4.

If spray contacts emerged spears, crooking (twisting) of some spears may result. If such crooking occurs, discard affected spears.

Do not harvest prior to 24 hours after treatment.

Do not use in the Coachella Valley of California.

Multiple applications may be made per growing season. Do not exceed a total of 1 pint of HELMBA HERBICIDE per treated acre per crop year.

Rates and Timings

Apply HELMBA HERBICIDE to emerged and actively growing weeds in 40 to 60 gallons of diluted spray per treated acre immediately after cutting the field, but at least 24 hours before the next cutting.

Weeds	Rate per Treated Acre
Mustard, Black Pigweed, Redroot (Carelessweed) Sowthistle, Annual *Thistle, Canada Thistle, Russian	1/2 to 1 pt. (1/4-1/2 lb. ai)
*Bindweed, Field Chickweed, Common Goosefoot, Nettleleaf Radish, Wild Thistle, Milk	1 pt. (1/2 lb. ai)

HELMBA HERBICIDE may be applied in a tank mixture with either 2,4-D or Roundup Herbicide for improved control of noted (*) weeds. READ AND FOLLOW 2,4-D AND ROUNDUP HERBICIDE PRODUCT LABELING FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND TIMINGS, AND OTHER RESTRICTIONS.

TURF AND LAWNS
For Use In General Farmstead
(Non-Cropland) And Sod Farms

IMPORTANT

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4.

To avoid injury to newly seeded grasses, application of HELMBA HERBICIDE should be delayed until after the second mowing. Furthermore, application rates in excess of 1 pint (1/2 lb. ai) per treated acre may cause noticeable stunting or discoloration of sensitive grass species such as bentgrass, carpetgrass, buffalograss, and St. Augustine grass.

In areas where roots of sensitive plants extend, do not apply in excess if 1/4 pint (1/8 lb. ai) of HELMBA HERBICIDE per treated acre on coarse textured (sandy-type) soils, or in excess of 1/2 pint (1/4 lb. ai) per treated acre on fine textured (clay-type) soils. Do not make repeat applications in these areas for 30 days and until previous applications of HELMBA HERBICIDE have been activated in the soil by rain or irrigation.

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Weeds Controlled

HELMBA HERBICIDE, when applied at recommended rates, will give control of many ANNUAL, BIENNIAL, and noted (*) PERENNIAL broadleaf weeds commonly found in turf. HELMBA HERBICIDE will also give growth suppression of many other listed PERENNIAL broadleaf weeds and WOODY brush and vine species. (Refer to GENERAL WEED LIST on pages 7 and 8.)

Mixing and Application

Apply 30 to 200 gallons of diluted spray per treated acre (3 qts. to 4 1/4 gals. per 1,000 sq. ft.) depending on density or height of weeds treated and on the type of equipment used.

Rates and Timings

Use the higher level of listed rate ranges when treating dense vegetative growth.

Weed Stage And Type	HELMBA HERBICIDE		
	Pints Per Treated Acre	lbs. ai Per Treated Acre	Teaspoons Per 1,000 sq. ft.
Annual			
Small, actively growing	1/2 to 1	1/4 to 1/2	1 to 2 1/4
Established weed growth	1 to 1 1/2	1/2 to 3/4	2 1/4 to 3 1/4
Biennial Rosette diameter			
less than 3 inches	1/2 to 1	1/4 to 1/2	1 to 2 1/4
3 inches or more	1 to 2	1/2 to 1	2 1/4 to 4 1/2
Perennials and Woody			
Brush and Vines	1 to 2	1/2 to 1	2 1/4 to 4 1/2

For best performance, apply when weeds are emerged and actively growing.

Retreatments may be made as needed; however, do not exceed a total of 2 pints (1 lb. ai) HELMBA HERBICIDE per treated acre during the growing season.

Tank Mix Treatments

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND TIMINGS, AND OTHER RESTRICTIONS.

Tank mix treatments of HELMBA HERBICIDE may be made with 2,4-D, MCPA, MCPP, or bromoxynil for control of additional weeds listed on the tank mix product.

Apply 1/5 to 1/2 pint (1/10-1/4 lb. ai) of HELMBA HERBICIDE per treated acre with 1/2 to 1 1/2 lbs. acid equivalent of 2,4-D, MCPA, or MCPP, or with 3/8 to 1/2 lb. ai of bromoxynil. Use the higher level of the listed rate ranges when treating established weeds. Repeat treatments may be made as needed; however, do not exceed 2 pints (1 lb. ai) of HELMBA HERBICIDE per treated acre during the growing season.

GRASS SEED CROPS: Grasses Grown for Seed such as Bermuda Grass, Bluegrass, Fescue and Ryegrass

IMPORTANT

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4.

Refer to PASTURE, HAY, RANGELAND, AND GENERAL FARMSTEAD (Non-Cropland) section (pages 20-22) for possible grazing and feeding restrictions.

Do not use on bentgrass unless possible crop injury can be tolerated.

Weeds Controlled

HELMBA HERBICIDE will provide control or suppression of annual broadleaf weeds listed below. For improved control of listed weeds plus additional weeds, it is recommended that HELMBA HERBICIDE be applied in a tank mix with other herbicides.

Alfalfa ¹	Chamomile, Corn	Hemlock, Poison	Lettuce, Prickly
Bedstraw, Catchweed	Chickweed, Common	Knapweed, Russian ¹	Mayweed (Dogfennel)
Bindweed, Field	Chickweed, Mouseear	Knawel	Ragwort, Tansy
Buttercup, Corn	Clover	Knotweed, Prostrate	Sorrel, Red (Sheep Sorrel)
Buttercup, Creeping	Cockle, White	Kochia	Sowthistle, Annual
Buttercup, Western Field	Dock, Broadleaf	Ladysthumb	Starwort, Little
Catchfly, Nightflowering	Dock, Curly	Lambsquarters, Common	Thistle, Canada ¹

¹ Top growth only.

Rates and Timings

Apply 1/2 to 1 pint of HELMBA HERBICIDE per treated acre on SEEDLING GRASS after the crop reaches the 3-5 leaf stage. Apply up to 2 pints of HELMBA HERBICIDE on well-established Perennial grass. DO NOT APPLY AFTER THE GRASS SEED CROP BEGINS TO JOINT. For best performance, make applications when weeds are in the 2-4 leaf stage and rosettes are less than 2 inches across. Use the higher level of listed rate ranges when treating more mature weeds or dense vegetative growth.

Tank Mix Treatments

For control of grasses or additional broadleaf weeds, HELMBA HERBICIDE may be tank mixed with all broadleaf herbicides registered for use in Grass Seed Production. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, and geographic and other restrictions.

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Broadcast Rate Per Treated Acre:

Apply 1/2 to 2 pints of HELMBA HERBICIDE with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D Amine or Ester	2,4-D	4 lb/gal	1 - 4 pts. (0.5 - 2.0 lb ai/A) ¹
MCPA Amine	MCPA	4 lb/gal	1 - 2 pts. (0.5-1.0 lb ai/A) ¹
Buctril [®]	bromoxynil ²	2 lb/gal	1 - 2 pts.
Curtail [®]	clopyralid + 2,4-D	2.38 lb/gal	1 3/4 - 4 pts.
Karmex [®]	diuron ²	80% DF	2 - 4 lbs.
Stinger [®]	clopyralid	3 lb/gal	1/4 - 1 pt.

¹ When using formulations other than 4 lb/gal, use pounds active/acre listed.

² Herbicides with the same common name and/or different formulations may be used.

Annual Grass Control

For suppression of ANNUAL GRASS WEEDS such as: Brome, Downy (Cheatgrass) Fescue, Rattail
Brome, Rippgut, Windgrass

Apply up to 4 pints of HELMBA HERBICIDE per treated acre in the fall or late summer after harvest and burning of established grass seed crops. Applications should be made immediately following the first irrigation when the soil is moist and before weeds have more than 2 leaves.

**PREPLANT DIRECTIONS (POST HARVEST/FALLOW/CROP STUBBLE/SET-A-SIDE)
FOR BROADLEAF WEED CONTROL BEFORE WHEAT, CORN, SORGHUM, SOYBEANS**

IMPORTANT

Observe all precautions. Read and follow mixing and application instructions.

Weeds Controlled

HELMBA HERBICIDE may be applied alone or in tank mix combinations with other herbicides registered for this use.

HELMBA HERBICIDE can be applied either POST HARVEST in the fall, spring or summer during the FALLOW period or to CROP STUBBLE/SET-A-SIDE acres. HELMBA HERBICIDE, when applied at the recommended rates, will control many ANNUAL broadleaf weeds, see the WEEDS CONTROLLED section under small grains. In addition, HELMBA HERBICIDE will control or suppress the following BIENNIAL and PERENNIAL broadleaf weeds:

Alfalfa ¹	Bursage (Bur Ragweed,	Horsenettle,	Smartweed, Swamp	Thistle, Musk
Artichoke, Jerusalem	Povertyweed, Lakewood) ¹	Carolina	Sowthistle, Perennial ¹	Thistle, Plumeless
Bindweed, Field	Dandelion, Common ¹	Knapweed, Diffuse	Spurge, Leafy	Thistle, Scotch
Bindweed, Hedge	Dock, Curly ¹	Knapweed, Spotted	Thistle, Bull	Trumpet creeper (Buckvine)
Blueweed, Texas	Dogbane, Hemp	Nightshade, Silver	Thistle, Canada ²	
	Garlic, Wild ²	Redvine	Thistle, Milk	

¹ Perennials may be controlled using HELMBA HERBICIDE at rates lower than those recommended for other listed perennial weeds. (See RATES AND TIMINGS under this heading).

² See the SPECIAL TANK MIX TREATMENTS section under this heading for specific control program for these weeds.

Rates and Timings

Apply HELMBA HERBICIDE as a broadcast or spot treatment to emerged and actively growing weeds after crop harvest (post harvest) and before a killing frost or in the fallow cropland or cropland or crop stubble the following spring or summer. Agriculturally approved spray additives, such as surfactants or oils, may be used to enhance spray coverage and the herbicides penetration of weed foliage. See CROPPING RESTRICTIONS for recommended interval between application and planting to prevent crop injury.

For best performance, make application when ANNUAL weeds are less than 6 inches 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. Most effective control of upright PERENNIAL broadleaf weeds, such as Canada thistle and Jerusalem artichoke, occurs if application is made when the majority of weeds, such as field bindweed and hedge bindweed, are in or beyond the full bloom stage.

Avoid disturbing treated areas following application. Treatments may not kill weeds which develop from seed or underground plant parts, such as rhizomes or bulbets, after the effective period for HELMBA HERBICIDE. For seedling control, a follow-up program or other cultural practices could be instituted. For small grain in-crop uses of HELMBA HERBICIDE see the RATES AND TIMINGS section under the SMALL GRAINS heading for details.

HELMBA HERBICIDE Rates Per Treated Acre

Weed Type	Amount of Product Per Treated Acre
Annual	1/2 - 1 pt. (8 to 16 fl oz)
Biennial	1 - 2 pts. (16 to 32 fl oz)
Perennial	1 - 4 pts. (16 to 64 fl oz)
Perennial suppression	1 - 2 pts. (16 to 32 fl oz)
Noted ⁽¹⁾ perennials	2 - 4 pts. (32 to 64 fl oz)
Other perennials	4 pts. (64 fl oz)

Retreatments may be made as needed; however, do not exceed a total of 4 pints of HELMBA HERBICIDE per treated acre during any given fallow period.

Tank Mix Treatments

HELMBA HERBICIDE may be tank mixed with one or more of, but not limited to, 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 and geographic or other restrictions.

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HELMBA HERBICIDE Broadcast Rate Per Treated Acre for Annual Weed Control:
Annual Weed Control

Apply 1/4 to 1 pint of HELMBA HERBICIDE with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
Aatrex [®] 4L ¹	atrazine	4 lb/gal	0.5 - 6 pts.
Aatrex [®] Nine-O ¹	atrazine	90% DF	0.5 - 3.3 lbs.
Amber ^{®2}	trisulfuron	75% DF	0.28 - 0.35 oz.
Ally ^{®2}	metsulfuron-methyl	75% DF	0.1 oz.
Fallowmaster [®]	glyphosate + dicamba	1.6 lb/gal	22 - 44 fl. oz.
Finesse ^{®2}	chlorsulfuron + metsulfuron-methyl	75% DF	0.2 oz.
Gramoxone [®] Extra	paraquat	2.5 lb/gal	1.5 pts.
Kerb ^{®1}	pronamide	50-W	0.5 - 1.0 lb.
Landmaster [®] BW	glyphosate + 2,4-D	2.4 lb/gal	27 - 54 fl oz.
Roundup [®] or Roundup [®] RT	glyphosate	3 lb/gal	8 - 48 fl oz.
Sencor [®] DF ¹	metribuzin	75% DF	0.5 - 1 lb.
Sencor [®] 4 ¹	metribuzin	4 lb/gal	0.75 - 1 1/2 pts.
2,4-D	2,4-D	4 lb/gal	1 -2 pts. (0.5 - 1 lb ai/A) ³

¹ Tank mixes of HELMBA HERBICIDE with these products may be subject to special restrictions. See the Product Label of the tank mix partner for intended use rates, restrictions and other precautions.

² When tank mixing with sulfonylurea herbicides refer to the product label for rates and restrictions. Use a surfactant of at least 80% active ingredient at the rate of 1 - 2 quarts/100 gallons of spray or not more than 0.25 - 0.5% by volume. Use the highest rate of surfactant when using the lower rate ranges of the tank mix and/or when treating more mature weeds or dense vegetative growth. Sulfonylurea resistant weeds may not be controlled by tank mixes of HELMBA HERBICIDE and a sulfonylurea. Refer to the HELMBA HERBICIDE tank mix section for alternative tank mixes.

³ When using formulations other than 4 lb/gal, use pounds active/acre listed.

HELMBA HERBICIDE Broadcast Rate Per Treated Acre for Biennial and Perennial Weed Control:

Apply 1 to 4 pints of HELMBA HERBICIDE with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
Curtail [®]	clopyralid + 2,4-D	2.38 lb/gal	2 - 4 pts.
2,4-D	2,4-D	4 lb/gal	2 - 6 pts.(1.0 - 3 lb ai/A) ¹
Landmaster [®] BW	glyphosate + 2,4-D	2.4 lb/gal	54 fl oz.
Roundup [®]	glyphosate	3 lb/gal	1 - 5 qts.
Tordon [®] 22K	picloram	2 lb/gal	1/2 - 1 pt.

¹ When using formulations other than 4 lb/gal use pounds active/acre listed.

Special Tank Mix Treatments

For suppression of perennial weeds, apply 1/2 - 1 pint of HELMBA HERBICIDE with 8 to 16 fluid ounces of Roundup Herbicide or Roundup RT per treated acre.

For wild garlic control, apply 1 pint HELMBA HERBICIDE with 3 pints of 2,4-D LV Ester (4 lb/gal) per treated acre. Apply when wild garlic is 4 to 8 inches tall.

For Canada thistle control, use HELMBA HERBICIDE, HELMBA HERBICIDE plus Curtail®, or HELMBA HERBICIDE plus Roundup® Herbicide or Roundup® RT tank mix treatments.

Application may be made during fallow periods for control of volunteer barley, bulbous bluegrass, downy brome, jointed goatgrass, common rye and volunteer wheat when they are actively growing. Use 1 pint HELMBA HERBICIDE with 1/2 to 1 lb Kerb® 50W. Fall seeded wheat may be planted 9 months or more after application. For best performance, make application between mid-October and mid-December, prior to soil freeze up.

During fallow periods, apply HELMBA HERBICIDE plus Landmaster® BW or Fallowmaster® Herbicide to give improved control of kochia, wild buckwheat, prickly lettuce, field bindweed and Canada thistle. Use 1/8 - 1/4 pint HELMBA HERBICIDE plus 22 - 54 fluid ounces of Landmaster® BW or Fallowmaster® Herbicide for annual weed control or 1/4 - 1/2 pint HELMBA HERBICIDE plus 22 - 54 fluid ounces of Landmaster® BW or Fallowmaster® Herbicide for perennial weed suppression.

Cropping Restrictions

The following recommendations are based on HELMBA HERBICIDE use rates up to 4 pints per treated acre.

CORN, SORGHUM and SOYBEANS may be planted in the spring following applications made during the previous year. If less than 1 inch of rainfall occurs between application and first killing frost, treated areas should be cultivated to allow herbicide to come in contact with moist soil. Cultivation may take place before or immediately after ground thaw.

Soybean injury may occur if the interval between application and planting is less than specified. In areas with greater than 30 inches of rainfall, delay planting for 30 days per pint of HELMBA HERBICIDE per treated acre. In areas with less than 30 inches of rainfall, delay planting for 45 days per pint of HELMBA HERBICIDE per treated acre. Exclude days when ground is frozen.

WHEAT may be planted in the fall or spring following applications. Also, spot applications may be made any time prior to crop emergence if crop injury can be tolerated in treated areas. Wheat injury may occur if the interval between application and planting is less than specified.

East of the Mississippi River, the interval is 20 days per pint of HELMBA HERBICIDE per treated acre or 1.25 days per 1 ounce. Moisture is essential for HELMBA HERBICIDE degradation. Exclude days when ground is frozen.

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West of the Mississippi River, the interval is 45 days per pint of HELMBA HERBICIDE per treated acre or 3 days per ounce. Moisture is essential for HELMBA HERBICIDE degradation. Exclude days when ground is frozen.

Following a normal harvest of barley, oats, or wheat, any rotational crop may be planted. If the interval before harvest is shortened, such as when cover crops will be plowed under, do not follow up with the planting of a sensitive crop.

**CONTROL OF PERENNIAL BROADLEAF WEEDS IN CROPLAND (SPOT APPLICATION ONLY)
FOR USE ONLY IN THE STATES OF IDAHO, MONTANA, NEVADA, OREGON, UTAH, AND WASHINGTON**

IMPORTANT

Observe all PRECAUTIONS on page 3. Read and follow MIXING AND APPLICATION instructions on page 4. Do not treat subirrigated cropland or areas where the soil remains saturated with water throughout the year. Make only one application of HELMBA HERBICIDE per year.

Weeds Controlled

HELMBA HERBICIDE, when applied at recommended rates, will control many broadleaf weeds including:

- | | | |
|-----------------|-------------------|-----------------|
| Bindweed, Field | Dock, Curly | Ragwort, Tansy |
| Dock, Broadleaf | Knapweed, Black | Spurge, Leafy |
| (Bitterdock) | Knapweed, Russian | Thistle, Canada |

Rates and Timings

HELMBA HERBICIDE may be applied at any time following a crop harvest to stubble fallow or other cropland. Application should be made when weeds are actively growing and prior to a killing frost.

Apply 2 qts. (2 lbs. ai) of HELMBA HERBICIDE per treated acre. Application may be made up to one month prior to the planting of wheat.

NOTE: Do not use unless injury to wheat or rotated barley will be acceptable.

Barley, oats, corn, sorghum (milo), annual or perennial grass crops may be planted into treated areas one year after application. Crops grown for seed (other than perennial grass seed) should not be planted into treated areas until three years after application. Do not plant broadleaf crops such as alfalfa, beans, peas, potatoes, or sugarbeets into treated areas until two years after application.

In most cases, treatments will not kill perennial weed seedlings which germinate from seed one or two years after treatment. Once the effect of the chemical has been lost, a follow-up program for seedling control or other cultural practices should be instituted.

WIPER APPLICATION USES

IMPORTANT: Observe all PRECAUTIONS on page 3.

HELMBA HERBICIDE may be applied through wiper application equipment to control or suppress actively growing broadleaf weeds, brush and vines. Use a solution containing 1 part HELMBA HERBICIDE to 1 part water. Do not contact desirable vegetation with herbicide solution. Wiper application should only be made to crops (including pastures) and non-cropland areas described in this label with the exception of Grain Sorghum (Milo).

STORAGE AND DISPOSAL

Prohibitions

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

Storage

Store in original container in a well-ventilated area separately from fertilizer, feed and foodstuffs. Avoid cross-contamination with other pesticides. Spillage or leakage should be contained and absorbed with clay granules, sawdust, or equivalent material for disposal.

Pesticide Disposal

Triple rinse pesticide from containers and use rinsates in the pesticide application. Wastes which cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Plastic or Metal: After triple rinsing (or equivalent) offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities, such as burning of plastic containers. If burned, stay out of smoke.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

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