# 74530-34

# 03/20/2008

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U.S. ENVIRONMENTAL PROTECTION AGENCY

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

Washington, D.C. 20460

74530-34

EPA Reg. Number:

Date of Issuance:

MAR 2.0 2008

NOTICE OF PESTICIDE:

X Registration
Reregistration

(under FIFRA, as amended)

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Conditional

Name of Pesticide Product:

Helm Halo 75

Name and Address of Registrant (include ZIP Code):

Helm Agro, US, Inc. 8295 Tournament Drive, Suite #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/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

- 1. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
- 2. Make the labeling changes listed below before you release the product for shipment:
- a. Add the phrase "EPA Registration No.74530-34".

Signature of Approving Official:

Vuku Kwalters

James A. Tompkins, Product Manager (25)

Herbicide Branch, Registration Division (7505P)

Date:

3/20/08

EPA Form 8570-6

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- b. On page 11, first paragraph, second sentence and the third paragraph, first sentence, revise "Canyon" to read "Helm Agro".
- c. In your "Notice of Conditions of Sale and Warranty and Liability Limitations", the last paragraph, revise "To the fullest extent permitted by law" to read "To the extent consistent with applicable law".
- 3. Submit one (1) copy of your final printed label before you release the product for shipment.

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

A stamped copy of the label is enclosed for your records.

Enclosure

ACCEPTED with COMMEN'TS In EPA Letter Dated: MAR 20 2008

FOR SALE AND USE ONLY IN THE STATES OF AR, CO, IA, IL, IN, KS, KY, LA, MI, MN, MS, MO, NE, ND, NY, OH, OK, PA, SD, TN, TX, WI Under the Federal Insectionics,

Helm Agro US, Inc.

# **HELM HALO 75**

Tungicide, and Redenticide Act, as amended, for the pesticide registered under EPA Reg. Ho.

HELM HALO 75 is a selective herbicide for the control of listed annual broadleaf weeds and nutsedge in field corn, field corn grown for seed, grain sorghum (milo), rice, sugarcane, fallow ground, cotton, and dry beans

Active Ingredient:	% By Wt.
*Halosulfuron-methyl	75.0%
Other Ingredients:	<u>25.0%</u>
Total	400.00/
EPA Reg. No. 74530-	

## **KEEP OUT OF REACH OF CHILDREN CAUTION!**

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

CAUSES MODERATE EYE IRRITATION. HARMFUL IF SWALLOWED. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

	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 5 minutes, then continue rinsing eye.     Call poison control center or physician for treatment advice.	
If swallowed:	Call poison control center or physician immediately for treatment advice. Remove visible particles from mouth. Have person rinse mouth thoroughly with water, spit out rinse water. 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.	

## Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- · long-sleeved shirt and long pants, and
- · shoes plus socks.

Follow 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.

When handlers use closed systems, or 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.

#### **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This chemical demonstrates the 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.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Gowan Supplemental 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.



Helm Agro US, Inc. 8295 Tournament Drive Suite 310 Memphis, Tennessee 38125

## 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 12 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
- · shoes plus socks
- chemical-resistant gloves, such as nitrile rubber, neoprene rubber or polyethylene. For more options, follow instructions for category A (dry and water-based formulations) on an EPA chemical resistant category selection chart.

#### **GENERAL INFORMATION**

#### **Biological Information**

The level of weed control following HELM HALO 75 application is dependent upon application rate, weed species and size at application time, and growing conditions. For best results, applications should be made to actively growing weeds at the heights defined in the "USE RATE GUIDE" sections of this label. Heavy infestations should be treated early before the weeds become too competitive with the crop. When early post-emergence treatments are used (in corn), sequential applications may be required to control later weed flushes. Soon after HELM HALO 75 is applied, growth of susceptible weeds is inhibited, and susceptible weeds are no longer competitive with the crop. Following growth inhibition, the leaves and growing point begin to discolor. Complete control typically occurs within 7 to 14 days depending on the weed size, species and growing conditions.

## **MIXING INSTRUCTIONS**

Fill the spray tank to about three-fourths of the desired volume with water or carrier. Add the recommended amount of this product as listed in the "WEEDS CONTROLLED" sections. Complete the filling process while maintaining agitation. Remove the hose from the mixing tank immediately after filling to avoid siphoning back into the carrier source. Add nonionic surfactant and other adjuvants as the last ingredients in the tank

Spray solutions should be applied within 24 hours after mixing.

Adjuvants: A nonionic surfactant (NIS) is the only adjuvant required in the spray solution. Use only nonionic surfactants which are approved by EPA for use on food crops and which contain at least 80 percent active ingredient. Use 0.25 to 0.5 percent nonionic surfactant concentration (1 to 2 quarts per 100 gallons of spray solution).

Crop oil concentrate (COC) may be used with HELM HALO 75 instead of nonionic surfactants. Do not use both NIS and COC in the spray mixture. Add COC to the spray mixture at 1% vol./vol. (1 gallon per 100 gallons of spray mixture). Use only good quality petroleum or vegetable-based crop oil concentrates which contain at least 14 percent emulsifiers.

Nonionic surfactant or COC are the only additives necessary for HELM HALO 75 applications. Liquid nitrogen fertilizer solution (e.g., 28-0-0) may be added to the spray solution to improve the control of certain species, particularly if HELM HALO 75 is being tank mixed with a companion herbicide which requires use of a liquid nitrogen additive. However, a nonionic surfactant or COC will still be necessary. Refer to the companion product label for specific additive requirements. Otherwise, add liquid nitrogen fertilizer at a rate of 2 to 4 quarts per acre. Do not use liquid nitrogen fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur. A high quality, spray grade ammonium sulfate (e.g., 21-0-0) may be applied at a rate of 2 to 4 pounds per acre in place of the liquid nitrogen fertilizer.

## **APPLICATION EQUIPMENT AND INSTRUCTIONS**

Applications may be made by ground [or aerial if corn, sorghum, or rice] equipment to healthy, actively growing weeds. For best results, avoid applications when weeds are under drought, stress, disease, or insect damage. Rainfall or irrigation occurring within 4 hours after application may also reduce effectiveness.

## **Ground Applications**

Apply HELM HALO 75 uniformly with properly calibrated ground equipment in 10 or more gallons of water per acre. Other water based spray carriers may be used for directed applications, avoiding contact with crop foliage. Select spray volumes that ensure thorough and uniform weed coverage. Choose nozzles which provide optimum spray distribution and coverage at the appropriate pressure (psi). Use only ground application equipment. Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps, and spray drift during applications.

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

Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following application.

Thoroughly clean application equipment immediately after HELM HALO 75 use and prior to spraying a crop other than corn or grain sorghum. Prepare a tank cleaning solution which consists of a 1 percent solution of household ammonia (one quart of ammonia for every 25 gallons of water). Use sufficient cleaning solution to thoroughly rinse all surface and to flush all hoses. Repeat the procedure with the ammonia solution. Complete the cleaning process by rinsing with clean water.

**Aerial Applications** - Apply this product or approved tank mixtures with properly calibrated equipment in 3 to 15 gallons of water per acre. Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps, and spray drift during applications.

## SPRAY DRIFT MANAGEMENT

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment – and weather – related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

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

## The importance of spray droplet size:

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

#### Controlling initial droplet size:

- · Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher flow rates produce larger droplets.
- Pressure Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation Orienting nozzles so the spray stream is released backwards, parallel to the air stream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

## Controlling placement of spray droplets:

- Boom length For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- Application height Applications should not be greater than 10 feet above the top of the tallest plants unless a greater height is required for aircraft safety. Greater application heights result in greater droplet size reduction through evaporation and greater movement in air currents. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- Application speed- Slower aircraft speeds within a safe range will produce less air turbulence and fewer small droplets.
- Swath adjustment When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distances should increase with increasing drift potential (wind speed, droplet size, etc.).

#### Key environmental factors:

- Wind Drift potential is the lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided when wind speeds are below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Applicators should be familiar with local wind patterns and how they affect drift.
- Temperature and humidity When making applications in low relative humidity set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.
- Temperature inversions Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable air currents that are common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke detector. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### Sensitive areas

Pesticides should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas). Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following application.

Thoroughly clean application equipment immediately after the use of HELM HALO 75. Prepare a tank cleaning solution that consists of a 1 percent solution of household ammonia (one quart of ammonia for every 25 gallons of water). Use sufficient cleaning solution to thoroughly rinse all surfaces and to flush all hoses. Repeat the procedure with the ammonia solution. Complete the cleaning process by rinsing with clean water.

## TANK MIXTURES

This product may be applied in combination with other products that are registered for the same crop and application.

Refer to the companion product label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

Before mixing in the spray tank, it is recommended that compatibility be tested by mixing all components in a small container in proportionate quantities. For tank mixtures, add individual formulations to a spray tank in the following sequence: water soluble bags, dry flowables, emulsifiable concentrates, drift control additive, water soluble liquids followed by nonionic surfactant or crop oil concentrate.

Tank mixtures should not be applied if the crop is under severe stress due to drought, water-saturated soils, poor fertility (especially low nitrogen levels), hail, frost, insects or when the maximum daytime temperature is above 92° F. Tank-mix applications under these conditions may cause temporary crop injury.

## **ROTATIONAL CROP INFORMATION**

Labeled crops may be planted at specified time intervals following application of approved rates of HELM HALO 75. Use the time intervals listed below to determine the required time interval before planting.

## TIME INTERVAL BEFORE PLANTING (Months after treatment with HELM HALO 75)

Crop	Months
IR/IMR Field corn	0
Sugarcane	0
IT Field com	1 .
Normal Field corn	1
Barley (winter)	2
Forage Grasses	2
Oats	2 2
Proso Millet	2
Rice	2
Rye (winter)	2
Seed corn	2
Sorghums	2 2 2 2 2 2 2 2
Spring cereal crops	2
Wheat (winter)	2
Popcom, Sweetcorn*	3
Cotton	4
Peanuts	6
Tomato (transplant)	8
Alfalfa	9
Clovers	9
Dry Beans	9
Field Peas	9
Peas	9
Potatoes	9
Cucumbers, Pumpkins, Squash	9
Snap Beans	9
Soybeans	9
Peppers	10
Eggplant	12
Radish	12
Cabbage	15
Canola	15
Carrot	15
Mint	15
Broccoli, Cauliflower, Collards	18
Leeks, Onions	18
Lettuce crops	18
Sunflowers	18
Sugar beet (Michigan only)	21
Sugar beet and Red Beet	24
Spinach	24
Sugar beet (ND, MN, Red River Valley)**	36

<sup>\*</sup> In-crop and preplant applications of HELM HALO 75 to sweet corn and popcorn are based on application rates and timings specific for use in those crops. Rotational interval must be adhered to for planting subsequent sweet corn or popcorn crops after HELM HALO 75 applications in sweetcom or popcorn crops that are lost, terminated, or harvested.
\*\*\* Also includes other regions where rainfall is sparse or irrigation is required.

Refer to individual product labels to determine rotational crop restrictions when tank mixtures are used.

# WEED CONTROLLED BY HELM HALO 75 ALONE OR IN TANK MIX COMBINATIONS (see Footnotes) C = Control, S = Suppression, NA = No Activity

	SPECIFOCENT	C - Control, 5 - Supp
WEED SPECIES	PREEMERGENT ACTIVITY	POSTEMERGENT ACTIVITY
Amaranth, Spiny <sup>3</sup> Amaranth spinosus	C <sub>3</sub>	C <sub>3</sub>
Barnyardgrass <sup>7</sup> / Echinochloa	NA	C <sup>7</sup>
crusgalli Bindweed <sup>5</sup>	NA	C <sup>5</sup>
Calystegia sepium Burcucumber	NA	S C <sup>6</sup>
Sicyas angulatus California	NA NA	C <sup>4</sup>
Arrowhead <sup>4</sup> Sagittaria montevidensis	NA L	C
Cocklebur, common Xanthium strumarium	С	С
Corn Spurry Spergula arvensis	C	С
Cupgrass, Woolly <sup>7</sup> Eriochloa villosa	NA	C'
Dayflower / Commelina erecta	С	S
Dogbane Hemp <sup>5</sup> Apocynum  cannabinum	NA	S <sup>5</sup>
Eclipta Ecilpta prostrata	C 1	S
Flatsedge, Rice Cyperus iria	s,	С
Fleabane, Philadelphia Erigeron philadelphicus	NA	С
Foxtail, giant, yellow, green, bristly <sup>7</sup>	NA	C'
Galinsoga Galinsoga	С	С
Golden Crownbeard Verbesina encliodes	NA	С
Goosefoot	С	С
Groundsel, common	С	NA NA
Senecio vulgaris Horsenettle Solanum carolinense	NA NA	С
Horseweed/Marestail Erigeron canadensis	С	NA
Horsetail Equisetum	NA	S
Jimsonweed Datura stramonium	С	NA
Itchgrass <sup>7</sup> Rottboellia cochinchinensis	NA	c <sup>7</sup>
Jointvetch Aeschynomene	NA	С
Johnsongrass rhizome, seedling <sup>7,8</sup> Sorghum halepense	NA	C <sup>7,8</sup>
Kochia <sup>3</sup> Kochia scoparia	C <sup>3</sup>	S³

WEED SPECIES	PREEMERGENT ACTIVITY	POSTEMERGENT ACTIVITY
Ladysthumb Polygonum persicaria	С	С
Lambsquarter, common Chenoposium album	С	NA
Mallow, Venice Hibiscus trionum	NA	С
Milkweed, common Asclepias syriaca	NA	S
Milkweed, honeyvine Ampelamus albidus	NA	S
Millet, Wild Proso <sup>7</sup> Paniucum miliaceum	NA	C <sup>7</sup>
Morningglory, Ivyleaf <sup>1,5</sup> Ipomoea hederacea	NA	S¹ C⁵
Morningglory, Tall <sup>1,5</sup> Ipomoea purppurea	NA	S¹ C⁵
Mustard, wild Sinapis arevensis	С	С
Nightshade, Black <sup>5</sup> Solanum americanum	NA	C <sub>e</sub>
Nutsedge, Yellow <sup>1,2</sup> Cyperus exculentus	S¹	C <sup>2</sup>
Nutsedge, Purple <sup>1,2</sup> Cyperus rotundus	S¹	C²
Oats <sup>7</sup>	NA	C <sup>7</sup>
Panicum, Fall <sup>7, 8</sup> Paniucm dichotomiflorum	NA	C <sup>7,8</sup>
Panicum, Texas <sup>7</sup> Panicum texanum	NA	C'
Passionflower, Maypop Passiflora incarnata	NA	С
Pigweed, redroot <sup>3</sup> Amarunthus retroffiexus	C <sup>3</sup>	C³
Pigweed, smooth <sup>3</sup> Amaranthus hybridus	C³	C³
Pokeweed, common Phytolacca Americana	NA	С
Purslane Portulaca oleracea	S	NA
Quackgrass <sup>7,8</sup> Elytrigia repense	NA	C <sup>7, 8</sup>
Radish, wild Rapharius raphanistrum	С	С
Ragweed, common Ambrosia artemisiifolia	С	С

# WEEDS CONTROLLED BY HELM HALO 75 ALONE OR IN TANK MIX COMBINATIONS (see Footnotes) continued C = Control, S = Suppression, NA = No Activity

WEED SPECIES	PREEMERGENT ACTIVITY	POSTEMERGENT ACTIVITY
Ragweed, giant Ambrosia trifida	NA	С
Redstem <sup>4</sup> Ammania auriculata	NA	C <sup>4</sup>
Ricefield Bulrush <sup>3</sup> Scirpus mucronatus	NA	Ċ³
Ryegrass, Italian <sup>7</sup> Lollum multiflorum	NA	c'
Sandbur <sup>7</sup>	NA NA	C'
Sesbania, Hemp Sesbania exaltata	NA	С
Shattercane <sup>7, 8</sup> Sorghum bilcolor	NA	C <sup>7,8</sup>
Signalgrass, broadleaf <sup>7</sup>	NA	C'

WEED SPECIES	PREEMERGENT ACTIVITY	POSTEMERGENT ACTIVITY
Shepherdspurse Capsella bursa-pastoris (L.) medicus	С	S
Sida, prickly	NA	C
Smallflower Umbrellaplant⁴	NA	C <sup>4</sup>
Smartweed, Pennsylvania Polyfonum pensylvanisum	С	C
Sorghum Almum <sup>7,8</sup>	NA	C <sup>7, 8</sup>
Thistle, Canada <sup>5</sup> Cirsium arvense	NA	C <sup>5</sup>
Sunflower Helianthus annuus	С	С
Velvetleaf Abutilan theophrasti	C	C

- 1. Higher rates required for suppression.
- 2. Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.
- Certain biotypes of this weed species are known to be resistant to ALS herbicides. Where these ALS-resistant biotypes are known to exist, an appropriate registered herbicide, active against the weed and with another mode of action, should be used alone or in tank mixtures with HELM HALO 75 to control these biotypes.
- 4. Higher Rates 1 1 1/3 ounce required for control.
- 5. Tank Mix with 2,4-D on sorghum and corn.
- 6. Tank Mix with Banvel on sorghum and corn.
- 7. Tank Mix with Accent on corn.
- 8. Tank mix with Beacon on corn.

## FIELD CORN AND FIELD CORN GROWN FOR SEED

Corn Growth Stage: When used alone, HELM HALO 75 can be applied over-the-top or with drop nozzles from the spike through lay-by stage of field corn.

HELM HALO 75 may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

## WEEDS CONTROLLED HELM HALO 75 CORN USE RATE GUIDE

Use Rate – 2/3 ounce of product by weight per acre (0.031 pound active ingredient per acre)

	Size Range	
Weed Species	Height (inches)	
Cocklebur, common	1 to 9	
Fleabane, Philadelphia	1 to 3	
Kochia	1 to 3	
Mallow, Venice	1 to 3	
Passionflower, maypop	1 to 3	
Pigweed, redroot	1 to 3	
Pokeweed, common	1 to 6	
Ragweed, common	1 to 9	
giant	1 to 3	
Smartweed, Pennsylvania	1 to 2	
Sunflower, common	1 to 12	
Velvetleaf	1 to 9	

Use Rate – 1 to 1 1/3 ounces of product by weight per acre (0.047 to 0.062 pound active ingredient per acre)

	Size Range	
Weed Species	Height (inches)	
Cocklebur, common	9 to 14	
Mallow, Venice	4 to 12	
Milkweed, honeyvine	1 to 6	
Mustard, wild	4 to 6	
Nutsedge, yellow <sup>1</sup>	4 to 12	
purple	4 to 12	
Pigweed, redroot <sup>2</sup>	4 to 6	
Radish, wild	4 to 6	
Ragweed: common	9 to 12	
giant	4 to 6	
Sunflower, common	12 to 15	
Velvetleaf <sup>2</sup>	9 to 12	

<sup>&</sup>lt;sup>1</sup>Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

## **WEEDS SUPPRESSED**

Use Rate – 2/3 to 1 1/3 ounces of product by weight per acre (0.031 to 0.062 pound active ingredient per acre)

ounces	by	weight	per	a	Çre	9	
ounce			1	to	1	1/:	ì

Weed Species	2/3 ounce Height (in.)	1 to 1 1/3 ounce Height (in.)	
Burcucumber	1 to 3	4 to 12	
Kochia	*	3 to 6	
Lambsquarters, common	1 to 2		
Milkweed, common	3 to 5	6 to 12	
Milkweed, honeyvin	1 to 3	******	
Morningglory		1 to 3	
Nutsedge: yellow	4 to 12	*	
purple	4 to 12	*	

<sup>\*</sup> Refer to "WEEDS CONTROLLED" section of this label.

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

<sup>&</sup>lt;sup>2</sup>For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

## TANK MIXTURES FOR CORN ONLY

Ensure that spray equipment is set up to avoid applying an excessive rate directly over the rows and into the whorl of the cornstalk. To insure good spray coverage of weeds and to reduce the risk of spraying directly into the whorl, tank-mix applications made after corn is 24 inches tall should be directed or semi-directed using drop nozzles.

Tank Mix Partners	Rate per Acre	Additives	Application Method	Comments
Banvel or Clarity™	2 to 8 fl. ounces	NIS	Broadcast up to 36" tail corn.     Use lower Banvel rates or directed sprays on corn taller	COC may cause crop injury, especially with higher Banvel/Clarity rates.     For large corn, avoid direct spraying into whorl of cornstalk.
Marksman™	1/2 to 2 pints	NIS	Broadcast up to 8" tall corn.	COC may cause crop injury.
2,4-D (4 pounds/gal)	4 to 8 fl. ounces	NIS	Broadcast up to 8" tall corn.	If corn exceeds 8" directed sprays with drop nozzles are required.
Buctril™	1/2 to 1 pint	NIS	Broadcast to corn up to tassel emergence.	Leaf burn may occur.     COC or 28 percent may cause additional leaf burn
BUCTRIL+ Atrazine	1 to 2 pints	NIS	Broadcast to corn up to 12" tall.	Leaf burn may occur.     COC or 28 percent may cause additional leaf burn
Atrazine 4L	1 1/2 to 3 pints	coc	Broadcast to corn up to 12" tall.	Control is best when weeds are small. Effective for burn down of grass weed escapes. Antagonism may occur on larger broadleaf weeds.
Accent	2/3 ounce	COC or NIS	<ul> <li>Broadcast or apply with drop nozzles to corn up to 24" tall.</li> <li>For com 24" to 36" tall, apply with drop nozzles only.</li> </ul>	Ammonium nitrogen fertilizer (e.g., 28 percent) is also recommended as an additive.     Avoid spraying directly into whorls of larger cornstalks.     Refer to Accent label for soil insecticide interaction information.
Beacon	0.76 ounce (1/2 packet)	COC or NIS	Broadcast or apply with drop nozzles to corn up to 20" tall. For corn 20" to pre-tassel, apply with drop nozzles only.  Broadcast or apply with drop nozzles.	Ammonium nitrogen fertilizer (e.g., 28 percent) is also recommended as an additive.     Avoid spraying directly into whorls of larger com.     Refer to Beacon label for soil insecticide interaction restrictions.     Consult your dealer, seed supplier, or Syngenta representative for a list of susceptible hybrids.
Accent Gold	2.9 ounces	COC	Broadcast to com up to 12" tall.	Ammonium nitrogen fertilizer (e.g. 28 percent) is also recommended as an additive.     Do not apply to seed corn.     Refer to Accent Gold label for soil insecticide interactions.
Basis Gold	14 ounces	COC or NIS	Broadcast to corn up to 12" tail.	Ammonium nitrogen fertilizer (e.g. 28 percent) is also recommended as an additive.     Do not apply to seed corn.     Refer to Basis Gold label for soil insecticide.

NIS = Nonionic surfactant. COC = Crop oil concentrate.

Refer to "MIXING INSTRUCTIONS," "TANK MIXTURES" and "USE RATE GUIDES" sections of this label for detailed information.

Refer to the specific product labels and observe all precautions, mixing and application instructions for all products used in tank mixtures.

## HELM HALO 75 plus ACCENT™

A tank mixture of HELM HALO 75 plus Accent may be used for the post-emergence control of annual broadleaf weeds and annual grasses in corn only. HELM HALO 75 plus Accent may be applied over-the-top or with drop nozzles to field corn up to 24 inches tall (free standing). For corn 24 to 36 inches tall, refer to the Accent label for application restrictions. Banvel, Marksman, Clarity, Buctril or BUCTRIL+atrazine may also be added to the tank mixtures for improved control of certain weed species.

Refer to the Accent label for use instructions and restrictions on corn varieties and insecticides.



## HELM HALO 75 plus BEACON™

A tank mixture of HELM HALO 75 plus Beacon may be used for the post-emergence control of annual broadleaf weeds and annual grasses in corn only. HELM HALO 75 plus Beacon may be applied over-the-top or directed to field corn when corn height is between 4 and 20 inches tall. Drop nozzles are required with the Beacon mixture when corn is between 20 inches tall and tassel emergence. Banvel, Marksman, Clarity, Buctril or BUCTRIL+atrazine may also be added to the tank mixtures for improved control of certain weed species.

Refer to the Beacon label for use instructions and restrictions on corn varieties and insecticides.

Additional grass species controlled by tank mixing with Accent or Beacon.

	Size Range I	<u>leight (inches)</u>	
Grasses	HELM HALO 75 + Accent	HELM HALO 75 + Beacon	
	(2/3-1 oz)+(2/3 oz)	(2/3-1 oz)+(1/2 packet)	
Barnyardgrass	2 to 4		
Cupgrass, wooly	2 to 4		
Foxtails: giant, yellow	2 to 4		
green, bristly	2 to 4		
Itchgrass	2 to 6		
Johnsongrass, rhizome	8 to 18	8 to 16	
seedling	4 to 12	4 to 12	
Millet, wild proso	1 to 4		
Oats, wild	2 to 4		
Panicum, browntop	1 to 3		
Panicum, fall	2 to 4	Less than 2	
Panicum, Texas	1 to 3		
Quackgrass	4 to 10	4 to 8	
Ryegrass, Italian	2 to 6		
Sandbur	1 to 3		
Shattercane	4 to 12	4 to 12	
Signalgrass, broadleaf	1 to 2		
Sorghum-almum	4 to 12	4 to 12	

#### **HELM HALO 75 plus SOIL RESIDUALS**

Micro-Tech® or Bullet or Harness® Xtra or Harness® Xtra 5.6L or Degree™ or Degree Xtra™ plus HELM HALO 75 may be applied early post-emergence for control of additional broadleaf weeds and nutsedge in field corn (including seed corn).

These tank mixtures will provide post-emergence control of small emerged grasses and broadleaf weeds as well as residual pre-emergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtra, Harness Xtra, Education of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtr

Apply these tank-mixtures to emerged grasses at the 2-leaf stage or less and to corn less than 11 inches tall (5 inch corn for Micro-Tech and Bullet). Include 28 percent nitrogen fertilizer at a rate of 4 gallons per 100 gallons of spray solution plus NIS at 1 quart per 100 gallons of spray solution in 15 to 30 gallons of water per acre. The addition of Banvel or Clarity at 2 ounces of product per acre is recommended to these mixtures to control emerged lambsquarters less than 4 inches tall.

## RECOMMENDED RATES/ACRE:

Soil Residual	<u>Plus</u>	HELM HALO 7
(quarts)		(ounces)
Labeled rate		2/3

#### **HELM HALO 75 plus ACCENT plus SOIL RESIDUALS**

Micro-Tech® or Bullet or Harness® or Harness® Xtra or Harness® Xtra 5.6L or Degree™ or Degree Xtra™ plus HELM HALO 75 plus Accent may be applied early post-emergence for control of additional broadleaf weeds and nutsedge in field corn (including seed corn).

These tank mixtures will provide post-emergence control of emerged foxtails as well as residual pre-emergence control or reduced competition of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the Micro-Tech, Bullet, Harness, Harness Xtra, Harness Xtra 5.6L, Degree, Degree Xtra herbicide labels.

Apply these tank-mixtures to emerged foxtails less than 2 inches tall and to corn less than 11 inches tall (5 inch corn for Micro-Tech and Bullet). Include 28 percent nitrogen fertilizer at a rate of 4 gallons per 100 gallons of spray solution plus NIS at 1 quart per 100 gallons of spray solution in 15 to 30 gallons of water per acre. The addition of Banvel or Clarity at 2 ounces of product per acre is recommended to these mixtures to control emerged lambsquarters less than 4 inches tall.

## RECOMMENDED RATES/ACRE:

		41.4E.		
Soil Residual	<u>Plus</u>	HELM HALO 75	<u>Plus</u>	Accent
(Quarts)		(Ounces)		(Ounces)
Labeled rate		2/3		1/3 to 1/2

## HELM HALO 75 plus GLYPHOSATE AGRICULTURAL HERBICIDES plus NONIONIC SURFACTANT

HELM HALO 75 may be applied at 2/3 ounce by weight per acre in combination with glyphosate herbicides labeled for agricultural uses for pre-plant burn down of emerged annual grasses, broadleaf weeds and nutsedge with **Pioneer IR** corn hybrids only. **Pioneer IR** hybrids are required to ensure crop safety due to the pre-plant application. Banvel or 2,4-D may also be applied in this tank mixture for enhanced pre-plant burn down of broadleaf weeds.

## **HELM HALO 75 SOIL APPLICATIONS**

When used exclusively with **Pioneer IR field corn hybrids**, HELM HALO 75 may be soil applied at the rate of 1 1/3 to 2 ounces by weight per acre (0.062 to 0.094 pound of active ingredient per acre) for residual control of velvetleaf, common cocklebur, common lambsquarters, common ragweed, pigweed, smartweed, sunflower and other difficult to control weeds.

This product is recommended as an early pre-plant surface-applied, pre-plant incorporated, or pre-emergence treatment. HELM HALO 75 offers effective broadleaf control across all tillage systems and is intended for use in tank mixtures with pre-emergence grass herbicides, including but not limited to: Harness Xtra, Harness Xtra, Harness Xtra, Degree, Degree Xtra, Micro-Tech, Bullet, Lariet and Lasso.

Refer to the labels for these products, or any other grass pre-emergence herbicide used for use instructions, weeds controlled, and application restrictions.



## **HELM HALO 75 plus BANVEL plus NONIONIC SURFACTANT**

For the control of additional broadleaf weeds, HELM HALO 75 may be applied in tank mixtures with Banvel. A HELM HALO 75 tank mixture with low rates of Banvel may be applied during the period beginning at corn emergence and continuing until corn is 36 inches in height. Applications should not be made after corn exceeds 36 inches or 15 days before tassel emergence, whichever comes first. Clarity or Marksman may be substituted in this tank mixture.

Refer to the labels for Banvel, Clarity, and Marksman products for label restrictions.

#### **HELM HALO 75 plus 2,4-D plus NONIONIC SURFACTANT**

For the control of additional broadleaf weeds, HELM HALO 75 may be applied in tank mixtures with 2,4-D. Avoid spraying just after corn leaves unfold, as injury may occur. A HELM HALO 75 tank mixture with 2,4-D may be applied during the period from corn emergence through the 5 leaf stage or 8 inches tall, whichever comes first. If corn exceeds 8 inches, directed spray applications with drop nozzles must be used for tank mixtures with 2,4-D.

Refer to the labels for 2,4-D products for label restrictions.

#### **HELM HALO 75 USE RATE GUIDE**

## HELM HALO 75 plus BANVEL plus NONIONIC SURFACTANT HELM HALO 75 plus 2,4-D plus NONIONIC SURFACTANT

HELM HALO 75 Use Rate - 2/3 ounce of product by weight per acre

- 1/4 to 1/2 pint per acre Banvel Use Rate 2,4-D Use Rate

- 1/4 to 1/2 pint per acre

(0.125 to 0.25 pound active ingredient per acre)

Size Range		
Weed Species	Height (inches)	
Bindweed	1 to 6	
Burcucumber <sup>1</sup>	4 to 2	
Cocklebur, common	1 to 12	
Dogbane, hemp <sup>3</sup>	1 to 6	
Horsenettie	1 to 8	
Jimsonweed	1 to 4	
Kochia <sup>1</sup>	1 to 6	
Lambsquarters, common <sup>2</sup>	1 to 6	
Mallow, Venice	1 to 3	
Milkweed, common	1 to 6	
Morningglory, ivyleaf	1 to 6	
Morningglory, tall	1 to 6	
Nightshade, black <sup>1</sup>	1 to 6	
Pigweed, redroot	1 to 12	
Pokeweed, common <sup>1</sup>	1 to 18	
Ragweed: common	1 to 12	
giant <sup>1</sup>	1 to 6	
Smartweed, Pennsylvania	1 to 3	
Sunflower, common	1 to 12	
Thistle, Canada <sup>1</sup>	1 to 6	
Velvetleaf	1 to 12	

<sup>&</sup>lt;sup>1</sup>Banvel tank mixture only

## **HELM HALO 75 plus BUCTRIL plus NONIONIC SURFACTANT**

HELM HALO 75 may be applied in combination with Buctril or BUCTRIL + atrazine herbicides for post-emergence control of many annual broadleaf weeds in corn. Use 2/3 ounce of HELM HALO 75 by weight plus surfactant in combination with 1/2 to 1 pint of Buctril and 1 to 2 1/2 pints of BUCTRIL + atrazine herbicide.

Refer to Buctril and Buctril + atrazine labels for use instructions, weeds controlled and application restrictions.

## **HELM HALO 75 plus ATRAZINE**

HELM HALO 75 may be applied in combination with atrazine for post-emergence control of labeled broadleaf weeds. The addition of atrazine will also aid in the burn down and control of many grass weeds (1.5 inches or less) which have escaped pre-emergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less).

Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds. Use the labeled rate for HELM HALO 75 plus Atrazine 4L at 1 1/2 to 3 pints per acre (3/4 to 1 1/2 pounds active ingredient per acre). The addition of crop oil concentrate (COC) is recommended for this mixture.

Refer to the Atrazine 4L label for use instructions, additive requirements, weeds controlled and application restrictions.

## SWEET CORN AND POPCORN

Corn Growth Stage: When used alone, this product may be applied over-the-top or with drop nozzles from the spike through lay-by stage of

Apply 2/3 ounce by weight (0.031 pound active ingredient) of this product per acre broadcast over the top or with drop nozzles in sweet corn and popcorn. Mechanical cultivation may be required to control weeds species not on the label. Avoid cultivation for at least 7 days following application. If necessary, a sequential treatment of this product at 2/3 ounce by weight per acre may be applied only with drop nozzles semidirected or directed to avoid application into the corn plant whorl. No more than 2 applications of this product may be made per year in sweet corn and popcorn. (Any single application must not exceed 2/3 ounce by weight per acre).

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

<sup>&</sup>lt;sup>2</sup> A tank mixture of HELM HALO 75 (2/3 ounce by weight per acre) plus Banvel at 2 fluid ounces per acre (1/8 pint) is recommended for the control of common lambsquarters less than 4 inches in height.

<sup>&</sup>lt;sup>3</sup> Provides suppression of this weed.

This product may be applied to sweet corn and popcorn, however, the user assumes responsibility for such use. All hybrids/varieties have not been tested for sensitivity to HELM HALO 75 nor does Canyon have access to all seed company or processor data. Consequently, any injury arising from the use of this product on sweet corn and popcorn is the responsibility of the user. Do not apply this product to sweet corn or popcorn unless the seed company, processor or State Agricultural Extension service has tested this product on the particular hybrid/variety and specifically approves and recommends the use. Do not apply this product to sweet corn or popcorn if the crop is under severe stress due to drought, water-saturated soils, low fertility (especially low nitrogen levels) or other poor growing conditions. Refer to the following "WEEDS CONTROLLED" section for use rate recommendations. Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

This product is not recommended for use on 'Jubilee' sweet corn.

Canyon does not recommend application of this product to sweet corn or popcorn previously treated with soil applied organophosphate insecticides. Do not apply an organophosphate insecticide within 7 days before or 3 days after any application of this product.

## **WEEDS CONTROLLED SWEET CORN AND POPCORN USE RATE GUIDE**

Use Rate - 2/3 ounce of product by weight per acre (0.031 pound active ingredient per acre)

	Size Range	
Weed Species	Height (inches)	
Cocklebur, common	1 to 9	
Fleabane, Philadelphia	1 to 3	
Kochia	1 to 3	
Mallow, Venice	1 to 3	
Passionflower, maypop	1 to 3	
Pigweed, redroot	1 to 3	
Pokeweed, common	1 to 6	
Ragweed: common	1 to 9	
giant	1 to 3	
Smartweed, Pennsylvania	1 to 2	
Sunflower, common	1 to 12	
Velvetleaf	1 to 9	

#### **WEEDS SUPPRESSED**

Use Rate - 2/3 to ounces of product by weight per acre (0.031 pound active ingredient per acre)

## ounces by weight per acre

	z/3 ounce	
Weed Species	Height (In.)	
Burcucumber	1 to 3	
Kochia	*	
Lambsquarters, common	1 to 2	
Milkweed, common	3 to 5	
Milkweed, honeyvine	1 to 3	
Morningglory		
Nutsedge, yellow	4 to 12	
purple	4 to 12	

## **GRAIN SORGHUM (MILO)**

Grain Sorghum Growth Stage: HELM HALO 75 alone, can be applied from the 2-leaf through lay-by stage (before grain head emergence). Only apply HELM HALO 75 in a single application with the total application rate not to exceed 1.0 ounce of product by weight (0.047 pound active ingredient) per acre per use season.

Temporary stature reduction may occur to the crop following application of HELM HALO 75 if the grain sorghum is under stress. This effect will be most evident 7 to 10 days after application. The crop will quickly recover under normal growing conditions.

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

## **WEEDS CONTROLLED HELM HALO 75** SORGHUM USE RATE GUIDE

Use rate - 2/3 ounce of product by weight per acre (0.031 pound active ingredient per acre)

Weed Species	Size Range Height (inches)	
Cocklebur, common	1 to 9	
Fleabane, Philadelphia	1 to 3	
Kochia	1 to 3	
Mallow, Venice	1 to 3	
Passionflower, maypop	1 to 3	
Pigweed, redroot	1 to 3	
Pokeweed, common	1 to 6	
Ragweed: common	1 to 9	
giant	1 to 3	
Smartweed, Pennsylvania	1 to 2	
Sunflower, common	1 to 12	
Velvetleaf	1 to 9	

## Use Rate – 1.0 ounce of product by weight per acre (0.047 pound active ingredient per acre)

	Size Range	
Weed Species	Height (inches)	
Nutsedge: yellow	4 to 12	
purple	4 to 12	

#### **WEEDS SUPPRESSED**

Use rate – 2/3 ounce of product by weight per acre (0.031 pound active ingredient per acre)

Weed Species	Size Range Height (Inches)	
Burcucumber	1 to 3	
Lambsquarters, common	1 to 2	
Milkweed, common	3 to 5	
Milkweed, honeyvine	1 to 3	
Nutsedge: yellow	4 to 12	
purple	4 to 12	

Refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

#### TANK MIXTURES FOR GRAIN SORGHUM

**HELM HALO 75 plus 2,4-D plus NONIONIC SURFACTANT** 

A HELM HALO 75 tank mixture with 2,4-D may be applied to grain sorghum when the crop is 6 to 15 inches tall. If sorghum exceeds 8 inches, use drop nozzles and keep the spray off foliage. Do not treat during the boot, flowering or dough stage.

Applications should not be made when grain sorghum exceeds 15 inches. Do not treat grain sorghum during the boot, flowering, or dough stage. Clarity or Marksman may be substituted in this tank mixture.

Refer to the labels for 2,4-D, Clarity and Marksman products for label restrictions.

#### HELM HALO 75 USE RATE GUIDE

## HELM HALO 75 plus 2,4-D plus NONIONIC SURFACTANT

Size Range

HELM HALO 75 Use Rate - 2/3 ounce of product by weight per acre

2,4-D Use Rate

- 1/4 to 1/2 pint per acre

- (0.125 to 0.25 pound active ingredient per acre)

Weed Species	Height (inches)
Bindweed	1 to 6
Burcucumber <sup>1</sup>	4 to 12
Cocklebur, common	1 to 12
Dogbane, hemp <sup>3</sup>	1 to 6
Horsenettle	1 to 8
Jimsonweed	1 to 4
Kochia <sup>1</sup>	1 to 6
Lambsquarters, common <sup>2</sup>	1 to 6
Mallow, Venice	1 to 3
Milkweed, common	1 to 6
Morningglory, ivyleaf	1 to 6
Morningglory, tall	1 to 6
Nightshade, black <sup>1</sup>	1 to 6
Pigweed, redroot	1 to 12
Pokeweed, common <sup>1</sup>	1 to 18
Ragweed: common	1 to 12
giant <sup>1</sup>	1 to 6
Smartweed, Pennsylvania	1 to 3
Sunflower, common	1 to 12
Thistle, Canada¹	1 to 6
Velvetleaf	1 to 12

Banvel tank mixture only.

<sup>3</sup> Provides suppression of this weed.

## HELM HALO 75 plus BUCTRIL plus NONIONIC SURFACTANT

HELM HALO 75 may be applied in combination with Buctril or BUCTRIL + atrazine herbicides for post-emergence control of many annual broadleaf weeds in grain sorghum. Use 2/3 ounce of HELM HALO 75 by weight plus surfactant in combination with 1/2 to 1 pint of Buctril and 1 to 2 1/2 pints of BUCTRIL + atrazine herbicide.

Refer to Buctril and BUCTRIL + atrazine labels for use instructions, weeds controlled and application restrictions.

<sup>&</sup>lt;sup>2</sup> A tank mixture of HELM HALO 75 (2/3 ounce by weight per acre) plus Banvel at 2 fluid ounces per acre (1/8 pint per acre) is recommended for the control of common lambsquarters less than 4 inches in height.



## **HELM HALO 75 plus ATRAZINE**

HELM HALO 75 may be applied in combination with atrazine for post-emergence control of labeled broadleaf weeds. The addition of atrazine will also aid in the burn down and control of many grass weeds (1.5 inches or less) which have escaped pre-emergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less).

Mixtures with atrazine may result in reduced control (antagonism) of larger broadleaf weeds. Use the labeled rate for HELM HALO 75 plus Atrazine 4L at 1 1/2 to 3 pints per acre (0.75 to 1 1/2 pounds active ingredient per acre). The addition of crop oil concentrate (COC) is recommended for this mixture.

Refer to the Atrazine 4L label for use instructions, additive requirements, weeds controlled and application restrictions.

#### RICE

## PRE-EMERGENCE AND POST-EMERGENCE APPLICATIONS TO RICE

HELM HALO 75 may be applied at 2/3 to 1 1/3 ounce by weight per acre, with the total application rate not to exceed 1 1/3 ounce of product by weight (0.062 lb. active ingredient) per acre per use season.

HELM HALO 75 can be applied as a foliar spray or dry broadcast.

HELM HALO 75 may be applied at 2/3 ounce by weight per acre in combination with Glyphosate agricultural herbicides for pre-plant burn down of emerged annual grasses, broadleaf weeds and nutsedge. If this product is applied pre-plant burn down, refer to "TIME INTERVAL BEFORE PLANTING" table in complete Directions for Use.

This product may be tank-mixed with propanil containing rice herbicides (e.g. Stam M4 and Propanil 4E) at 2/3 to 1 1/3 ounce per acre of this herbicide and labeled rates of the tank mix products.

Foliar applications of HELM HALO 75 may be made at the 3-5 leaf stage of rice when weeds have 2-4 leaves. Dry broadcast applications may be made at the 1-2 leaf stage of rice when weeds have two leaves or less.

This product may also be applied post flood with dry broadcast applications of HELM HALO 75 herbicide at 1 to 1 1/3 ounce by weight per acre, with the total application rate not to exceed 1 1/3 ounce product by weight per acre per use season.

It is best to use 0.25 to 0.5 percent nonionic surfactant which contains at least 80% active ingredient with foliar applications of HELM HALO 75.

With all foliar applications of HELM HALO 75 use a minimum 3-15 gallons of water per acre for aerial equipment and a minimum of 10 gallons of water per acre for ground equipment. It is best to apply spray solutions the day they are mixed. **Note:** See "APPLICATION EQUIPMENT AND INSTRUCTIONS" section for spray drift management techniques.

Water levels in rice fields and checks should remain static (3 inch to 6 inch depth) following dry broadcast applications of HELM HALO 75. Do not reintroduce water into rice fields or checks for at least five days following dry broadcast applications of HELM HALO 75. Rice fields and checks may be irrigated to maintain water level, but this may reduce weed control.

Control of emerged weeds with foliar applications is best when 70% - 80% of the weed foliage is exposed. Control of submerged weeds is best when weeds have 2 leaves or less. Do not reintroduce water into rice fields or checks for at least 24 hours following foliar applications of HELM HALO 75.

Do not apply within 48 days of harvest. Do not apply within 69 days of harvest in California.

CAUTION: To ensure product effectiveness avoid using HELM HALO 75 on rice fields which have a history of weed biotypes resistant to Londax.

#### **SEQUENTIAL APPLICATIONS**

HELM HALO 75 Herbicide may be applied sequentially with Ordram, Bolero, Clincher, Regiment and Shark. Read the Ordram, Bolero, Clincher, Regiment and Shark labels for application information, restrictions and precautions.

## **WEEDS CONTROLLED BY HELM HALO 75** RICE USE RATE

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre (0.031 to 0.062 pound active ingredient per acre)

ounces by weight per acre		
2/3 ounce	1 to 1 1/3 oz.	
Height (inches)	Height (inches)	
1 to 9	9 to 14	
1 to 2	3 to 4	
1 to 4	4 to 8	
1 to 9	9 to 12	
1 to 3		
1 to 2	3 to 4	
1 to 3	v	
1 to 3	4 to 12	
	1 to 6	
dien es	4 to 6	
1 to 6	6 to 12	
	6 to 12	
	*****	
	4 to 6	
1 · · · · · · · · · · · · · · · · · · ·		
777	4 to 6	
1 to 9	9 to 12	
	4 to 6	
	3 to 6	
	12 to 15	
	9 to 12	
	2/3 ounce Height (inches)  1 to 9 1 to 2 1 to 4 1 to 9 1 to 3 1 to 2 1 to 3 1 to 3 1 to 6 1 to 6 1 to 6 1 to 3 1 to 3 1 to 3	Height (inches)  1 to 9 9 to 14 1 to 2 3 to 4 1 to 4 4 to 8 1 to 9 9 to 12 1 to 3 1 to 2 3 to 4 1 to 3 4 to 12 1 to 6 1 to 6 6 to 12 1 to 6 6 to 12 1 to 3 1 to 3 4 to 6  1 to 6 1 to 6 1 to 6 1 to 6 1 to 6 1 to 6 1 to 6 1 to 6 1 to 6 1 to 6 1 to 3 1 to 6 1 to 7 4 to 6

<sup>&</sup>lt;sup>1</sup> Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

## **WEEDS CONTROLLED**

Use Rate - 1 to 1 1/3 ounces of product by weight per acre (0.047 to 0.062 pound active ingredient per acre)

Ricefield Bulrush Smallflower Umbrellaplant

Redstem

California Arrowhead

## **WEEDS SUPPRESSED**

Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre (0.031 to 0.062 pound active ingredient per acre)

	ounces by weight per acre		
	2/3 ounce	1 to 1 1/3 oz.	
Weed Species	Height (Inches	Height (inches)	
Burcucumber	1 to 3	4 to 12	
Kochia	*	3 to 6	
Lambsquarters, common	1 to 2		
Milkweed, common	3 to 5	6 to 12	
Milkweed, honeyvine	1 to 3		
Morningglory		1 to 3	
Nutsedge:			
yellow	4 to 12	*	
purple	4 to 12	•	

<sup>\*</sup> Refer to "WEEDS CONTROLLED" section of the label booklet.

## **SUGARCANE**

When used alone, this product may be applied prior to planting, prior to emergence or after the emergence of the sugarcane, and until row closure. Apply 2/3 to 1 1/3 ounces by weight (0.031 to 0.062 pound active ingredient) of this product per acre. Mechanical cultivation may be required to control weed species not on the label. If so, a sequential treatment may be required to control weeds in areas of disturbed soil. No more than 3 applications (including pre-plant applications) may be made with the total use rate not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per year.

Following application to foliage allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage.

This product may be applied at 2/3 to 1 1/3 ounces by weight per acre (0.031 to 0.062 pound active ingredient per acre) in combination with Glyphosate agricultural herbicides for pre-plant burn down of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane.

<sup>&</sup>lt;sup>2</sup> For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.

## WEEDS CONTROLLED SUGARCANE

Use Rate – 2/3 to 1 1/3 ounces of product by weight per acre (0.031 to 0.062 pound active ingredient per acre)

	ounces by weight per acre		
Weed Consider	2/3 ounce	1 to 1 1/3 oz.	
Weed Species	Height (inches)	Height (Inches)	
Cocklebur, common	1 to 9	9 to 14	
Fleabane, Philadelphia	1 to 3		
Kochia	1 to 3	****	
Mallow, Venice	1 to 3	4 to 12	
Milkweed, honeyvine		1 to 6	
Mustard, wild		4 to 6	
Nutsedge <sup>1</sup> :			
yellow		4 to 12	
purple		4 to 12	
Passionflower, maypop	1 to 3		
Pigweed, redroot <sup>2</sup>	1 to 3	4 to 6	
Pokeweed, common	1 to 6		
Radish, Wild	Andrew W	4 to 6	
Ragweed:			
common	1 to 9	9 to 12	
giant	1 to 3	4 to 6	
Smartweed, Pennsylvania	1 to 2		
Sunflower, common	1 to 12	12 to 15	

<sup>&</sup>lt;sup>1</sup>Heavy infestations of nutsedge may require sequential applications. An earlier treatment may be required to prevent nutsedge from competing with the crop.

1 to 9

9 to 12

## **WEEDS SUPPRESSED**

Use Rate – 2/3 to 1 1/3 ounces of product by weight per acre (0.031 to 0.062 pound active ingredient per acre)

	ourices by weight per acre		
Weed Species	2/3 ounce Height (inches)	1 to 1 1/3 oz. Height (inches)	
Burcucumber	1 to 3	4 to 12	
Kochia	* *	3 to 6	
Lambsquarters, common	1 to 2	****	
Milkweed, common	3 to 5	6 to 12	
Milkweed, honeyvine	1 to 3		
Morningglory		1 to 3	
Nutsedge, yellow	4 to 12	*	
purple	4 to 12	*	

<sup>\*</sup> Refer to "WEEDS CONTROLLED" section of this label.

#### TANK MIXTURES FOR SUGARCANE

HELM HALO 75 may be tank mixed with Asulox™, Atrazine 4L, Evik™ or 2,4-D for application in sugarcane.

## HELM HALO 75 plus GLYPHOSATE AGRICULTURAL HERBICIDES plus NONIONIC SURFACTANT

HELM HALO 75 may be applied at 2/3 to 1 1/3 ounces by weight per acre (0.031 to 0.062 pound a.i/acre) in combination with recommended rates of glyphosate agricultural herbicides for pre-plant burn down of emerged annual grasses, broadleaf weeds and nutsedge in sugarcane.

Refer to the glyphosate agricultural herbicide label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

## HELM HALO 75 plus ASULOX plus NONIONIC SURFACTANT or CROP OIL CONCENTRATE

HELM HALO 75 may be applied in tank mixtures with Asulox for the control of labeled grasses. A HELM HALO 75 tank mixture with Asulox may be applied to sugarcane before crop emergence or post-emergence until 90 days before harvest. Up to 2 applications per year may be made in accordance with label recommendations.

HELM HALO 75 Use Rate

2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight per acre per year.

ounces by weight per acre

Asulox Use Rate

Velvetleaf<sup>2</sup>

6 to 8 pints of product per acre. Up to 2 treatments per year may be applied.

Refer to the Asulox label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

## HELM HALO 75 plus ATRAZINE 4L plus NONIONIC SURFACTANT or CROP OIL CONCENTRATE

HELM HALO 75 may be applied in combination with Atrazine 4L for post-emergence control of labeled broadleaf weeds in sugarcane. The addition of Atrazine will also aid in the burn down and control of many grass weeds (1.5 inches or less) which have escaped pre-emergence herbicide treatments. Applications should be made when broadleaf weeds are small (3 inches or less). Mixtures with Atrazine may result in reduced control (antagonism) of larger broadleaf weeds.

HELM HALO 75 Use Rate - 2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied not exceeding 2 2/3 ounces of product by weight per acre per year.

Atrazine Use Rate - 4 to 8 pints per acre (1 to 2 pounds active ingredient). Follow the specific recommendations on the Atrazine label for number and timing of applications and for the maximum number of applications per year.

<sup>&</sup>lt;sup>2</sup>For large velvetleaf and pigweed, the addition of liquid nitrogen fertilizer (2 to 4 quarts per acre) plus crop oil concentrate or nonionic surfactant is recommended.



Refer to the Atrazine 4L label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated and application restrictions.

## **HELM HALO 75 plus EVIK plus NONIONIC SURFACTANT**

HELM HALO 75 may be applied in tank mixtures with Evik for the control of additional broadleaf weeds and grasses. A HELM HALO 75 tank mixture with Evik may be applied to sugarcane before crop emergence or post-emergence until row closure.

HELM HALO 75 Use Rate

2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not

exceeding 2 2/3 ounces of product by weight.

Evik Use Rate

- 1/2 to 1 1/2 pounds of product per acre. Follow the specific recommendations on the Evik label for number

and timing of applications and for maximum number of applications per year.

Refer to the Evik label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

## HELM HALO 75 plus 2,4-D AMINE plus NONIONIC SURFACTANT

HELM HALO 75 may be applied in tank mixtures with 2,4-D amine for the control of additional broadleaf weeds. A HELM HALO 75 tank mixture with 2,4-D may be applied to sugarcane before crop emergence or post-emergence until 6 weeks before harvest.

HELM HALO 75 Use Rate

2/3 to 1 1/3 ounces of product by weight per acre. Up to 3 treatments per year may be applied, not exceeding 2 2/3 ounces of product by weight.

2 4-D Use Rate

2 to 4 pints per acre (1 to 2 pounds active ingredient per acre). Up to 4 treatments per year may be applied.

Refer to the 2,4-D amine label for use instructions, additive requirements, weeds controlled, the size range of weeds that should be treated, and application restrictions.

Refer to the companion product labels for use rates, restrictions and other important application information. See the companion labels for additional weeds controlled by these tank mixtures. Always follow the directions for use provided on the companion product label, including any state restrictions.

Refer to the "TIME INTERVAL BEFORE PLANTING" section of this label for applicable rotational crop restrictions.

#### COTTON

HELM HALO 75 may be applied as a directed spray in hooded equipment for post-emergent weed control in emerged cotton. Applications may be made anytime after cotton emergence until row closure inhibits use of hooded spray equipment. The applicator is responsible for maintaining proper spray speed and equipment position so spray mist does not contact cotton plants.

HELM HALO 75 alone, may be applied at 2/3 to 1 1/3 ounce by weight per acre, with the total application rate not to exceed 1 1/3 ounce of product by weight (0.062 lb. active ingredient) per acre per use season. Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

Do not apply within 28 days of harvest.

Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

## **FALLOW GROUND**

Applications of HELM HALO 75 may be made to fallow ground at use rates ranging between 2/3 to 1 1/3 ounces of product by weight per acre. HELM HALO 75 may be applied up to 2 applications with a total application not to exceed 2 2/3 ounces of product by weight (0.125 pound active ingredient) per acre per use season.

Refer to the "FIELD CORN" section of this label for weed control recommendations. Also refer to the "ROTATIONAL CROP INFORMATION" section of this label for applicable rotational crop restrictions.

## **DRY BEANS**

## HELM HALO 75 can be applied to direct seeded dry beans either pre-emergence, or as a row middle/furrow application.

For pre-emergence applications, apply after planting but prior to soil cracking. Apply a rate of 1/2 - 2/3 ounces uniformly with ground equipment in a minimum of 15 gallons of water per acre. Use the lower rate on lighter textured soils with low organic matter.

HELM HALO 75 may be applied at a rate of 1/2 - 1 ounce between rows of crop for the control of nutsedge and listed broadleaf weeds. Avoid contact of the herbicide with the planted crop. If plastic is used on the planted row, adjust equipment to keep the application off the plastic. Reduce rate and spray volume in proportion to area actually sprayed.

Do not apply more than 1 ounce HELM HALO 75 per acre per crop-cycle, not to exceed 2 ounces per acre per 12-month period (includes applications to the crop and to Row Middles/Furrows).

## TANK MIXTURES FOR DRY BEANS HELM HALO 75 and EPTAM 7E

A tank-mix combination of HELM HALO 75 plus EPTAM 7-E will give a broader spectrum of weed control than either product used separately. Read both labels carefully before using. Observe all cautions and limitations on labeling of both products.

Apply and incorporate 1/2 to 2/3 ounce HELM HALO 75 and 3-1/2 to 4-1/2 pints EPTAM 7-E per acre to a depth of approximately 2 inches just before planting. Use lower rate on lighter textured soils with low organic matter. Refer to EPTAM 7-E label for specific incorporation directions. Rotary hoe lightly during or shortly after emergence of the beans to break any crust which occurs.

Do not apply more than 2/3 ounce HELM HALO 75 per acre per crop-cycle, not to exceed 2 ounces per acre per 12-month period (includes applications to the crop and to Row Middles/Furrows).

Do not use EPTAM 7-E on Adzuki beans, cowpeas (black-eyed peas, black-eyed beans), soybeans, lima beans, Mung beans, Garbanzo beans or other flat-podded beans except Romano. Under abnormal weather conditions, stunting may occur on Gratiot, Michilite, Sanilac, Seafarer, and Seaway varieties. Do not exceed 9 pints EPTAM 7-E per acre per crop.

Do not exceed 3-1/2 pints EPTAM 7-E per acre on small white beans or green beans grown on coarse textured soils.

Do not exceed 7 pints per acre per crop of Eptam in the Southwestern and Southeastern regions. Do not exceed 8 pints per acre per crop of Eptam in the Western Region. Do not exceed 9 pints per acre per crop of Eptam in the Pacific Northwestern Region. Do not exceed 9 3/4 pints of Eptam in the Northern Region.

## STORAGE AND CONTAINER DISPOSAL

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

PESTICIDE STORAGE: Store under cool, dry conditions (below 120° F). Do not store under moist conditions.

#### Water Soluble Packaging [HELM HALO 75]

Keep outer pouch TIGHTLY sealed to prevent moisture from damaging any unused water soluble bags.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal in accordance with applicable Federal, state or local procedures, or in such other method as is approved under those procedures.

<u>Water Soluble Packaging [HELM HALO 75]:</u> Emptied foil pouch and cardboard box retain vapor and product residue. Observe all labeled safeguards until containers are destroyed. Do not reuse foil pouch or box.

Completely use water soluble bags in application equipment. Then dispose of empty foil pouch and cardboard box in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned stay out of smoke.

<u>Plastic Bottle Packaging [HELM HALO 75]:</u> Do not reuse container. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

**DISPOSAL AUTHORITIES:** If none of the foregoing procedures is permitted by state and local authorities, then contact your State Pesticide or Environmental Control Agency, or your local Hazardous Waste Disposal office, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

## FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK OR FIRE), CALL CHEMTREC® (800) 424-9300.

## NOTICE OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS

Important: Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our recommendations for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Helm Agro US, Inc.. To the extent consistent with applicable law, all such risks are assumed by the Buyer and User.

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HELM

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