

5905-583

11/4/2010

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U.S. ENVIRONMENTAL PROTECTION AGENCY

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

Reg. Number:  
5905-583

Date of Issuance:  
NOV - 4 2010

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:  
Conditional

Name of Pesticide Product:  
HM-0739

Name and Address of Registrant (include ZIP Code):

Helena Chemical Company  
225 Schilling Boulevard, Suite 300  
Collierville, TN 38017

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

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

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

- 1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data. If required, failure to submit acceptable data to fulfill these requirements may result in registration cancellation in accordance with FIFRA section 6(e).
- 2) Add the phrase "EPA Reg. No. 5905-583" to the labeling and assure that the EPA Establishment Number and Net Contents are also on the label.
- 3) Generate one-year storage stability (830.6317) and corrosion characteristics (830.6320) data on the product. The observations should be made at 0, 3, 6, 9, and 12 month intervals. The results must be submitted to the Agency in electronic and hard copy format within 15 months of the date on this notice.
- 4) Assure the type point is appropriate for the signal word and the Keep out of Reach of Children statement meets the standards outlined in Chapter 3 of the Label Review Manual. NOTE: The size of the type used for the signal word and the KEEP OUT OF REACH OF CHILDREN must be appropriately sized for the product label. For additional information consult "<http://www.epa.gov/oppfead1/labeling/lrm/chap-03.pdf>".

SEE NEXT PAGE FOR ADDITIONAL COMMENTS

Signature of Approving Official:  
Kathryn V. Montague  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)

Date:  
NOV - 4 2010

5) The statement in the Hazards to Humans and Domestic Animals header must read "Corrosive. Causes irreversible eye damage. Harmful if inhaled. Harmful if swallowed. Do not get in eyes or on clothing. Avoid breathing spray mist."

6) You must select the appropriate chemical-resistant material and one (1) category on the EPA chemical-resistant selection chart appropriate for your product in the first section under the Personal Protective Equipment header. Include the appropriate material and select one category to appear in the required text below. Assure this text appears under the Personal Protective Equipment header. Note: The italicized text below is intended as a guide for registrants.

"Some materials that are chemical-resistant to this product are" [*as the registrant must insert the appropriate chemical-resistant material here in place of this italicized text*].  
"If you want more options, follow the instructions for category" [*as the registrant must insert A or B or C or D or E or F or G or H here in place of this italicized text*] "on an EPA chemical-resistance category selection chart."

7) Protective eyewear must be added to the Personal Protective Equipment requirements for the requirements to read:

"All mixers, loaders, applicators, flaggers, and other handlers must wear:  
- long-sleeved shirt and long pants  
- shoes and socks  
- chemical resistant gloves (except for applicators using groundboom equipment, pilots, and flaggers)  
- protective eyewear (goggles, face shield, or safety glasses)  
- chemical resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

See engineering controls for additional requirements."

8) Delete the following text from page 2 of the label that reads:

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

If this container contains 5 gallons or more in capacity, do not open pour. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal."

9) Personal Protective Equipment required in the Agricultural Use Requirements box for early-entry must read as follows:

- coveralls worn over short-sleeve shirt and short pants  
- chemical-resistant footwear plus socks  
- chemical-resistant gloves made of any water-proof material  
- protective eyewear

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10) The text in the User Safety Recommendations box must be changed to read

**“USER SAFETY RECOMMENDATIONS**

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- 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.”

11) NOTE: Because of its importance, the Agency recommends that First Aid information be in a box.

12) The First Aid statements for IF IN EYES, IF INHALED, and IF SWALLOWED must contain the following information and must appear in the order below. NOTE: The IF ON SKIN OR CLOTHING statement on the label and included below is not required for this product. This optional IF ON SKIN text may appear as seen below or it may be removed from the label.

**FIRST AID**

**If IN EYES:**

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

**If INHALED:**

- Move the person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

**If SWALLOWED:**

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

**IF ON SKIN OR CLOTHING:**

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

**HOT LINE NUMBER:** Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact X-XXX-XXX-XXXX for emergency medical treatment information.

**NOTE TO PHYSICIAN:** Probably mucosal damage may contraindicate the use of gastric lavage.

13) **NOTE:** The **NOTE TO PHYSICIAN** in the First Aid box should also include a statement or statements addressing primary eye irritant toxicity. The following statements are suggested types of information that may be included, if applicable:

- Technical information on symptomatology;
- Use of supportive treatments to maintain life functions;
- Medicine that will counteract the specific physiological effects of the pesticide;
- Company telephone number to specific medical personnel who can provide specialized medical advice.

14) Per the RED label table, the information appearing below the ENVIRONMENTAL HAZARDS header on page 3 must be replaced with the following:

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

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.”

**NOTE:** The paragraphs in the ENVIRONMENTAL HAZARDS section addressing “Groundwater Contamination” and “Endangered Species Concerns” are not required. This text may remain on the label as additional environmental protection and safety information or it may be removed from the label.

15) Replace “GENERAL” with “PRODUCT” for the header at the bottom of page 4 to read “PRODUCT INFORMATION”.

16) The statement at the top of page 5 must be updated to read as follows:

“Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et.al. v. EPA, C01-0132C, (W.D. WA)”. For further information, please refer to <http://www.epa.gov/espp/litstatus/wtc/index.htm>”.

17) Per the RED label table, the SPRAY DRIFT MANAGEMENT, INFORMATION ON DROPLET SIZE, CONTROLLING DROPLET SIZE, BOOM LENGTH, APPLICATION HEIGHT, SWATH ADJUSTMENT, WIND, TEMPERATURE AND HUMIDITY, AND TEMPERATURE INVERSIONS of the label must be replaced with the information below.

NOTE: The information regarding SENSITIVE AREAS as well as charts 1 and 2 must remain on the label.

#### **“SPRAY DRIFT MANAGEMENT”**

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

#### **Droplet Size**

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

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

#### **Wind Speed**

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

#### **Temperature Inversions**

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

#### **Susceptible Plants**

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

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**Other State and Local Requirements**

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

**Equipment**

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

*Additional requirements for aerial applications:*

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

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

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

*Additional requirements for ground boom application:*

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

18) Correct the “postharvestnt” typographical error in the Product Information section at the bottom of page 4 to read “postharvest”. Note: If “postharvest” is not the intended term, make the appropriate edit and submit the amended label to the Agency for review.

19) Remove the term “uniquely” from the Mode of Action statement on page 5 for the sentence to read “HM-0739 contains three active ingredients formulated to be used alone or tank mixed with other listed products as well as liquid fertilizer solutions.”

20) Correct the “Postharvestnce” typographical error on page 5 under Application Instructions by replacing the typographical error with “Postharvest”. Note: If “Postharvest” is not the intended term, make the appropriate edit and submit the amended label to the Agency for review.

21) Delete the term “wheat” from the APPLICATION INSTRUCTIONS on page 5.

22) The term “GENERAL” must be removed from the header on tank mixing information on page 13 for it to read “TANK MIXING INFORMATION”.

23) Delete the following use sites and associate directions for CONSERVATION RESERVE PROGRAMS AND GENERAL FARMSTEAD and FOR CUT SURFACE TREATMENTS.

24) The following 2,4-D restrictions must be added to the Directions for Use under restrictions with any conflicting information removed.

“The maximum rate per crop cycle is 1.0 lb ae/acre.  
Preplant:  
Limited to 2 preplant applications per crop cycle.  
Maximum of 0.5 lb ae/acre per preplant application.  
Apply not less than 15 days prior to planting soybeans.”  
Or  
“Preplant:  
Limited to 1 application per crop cycle.  
Maximum of 1.0 ae/acre per preplant application.  
Apply not less than 30 days prior to planting soybeans.”

25) The 2 pint application rate must be reduced to comply with the established rates for Imazaquin on soybeans with a maximum of 0.25 lb. acid equivalent (ae)/acre per year and a maximum single application rate is 0.125 lb. ae/acre.

26) A 90 day preharvest (PHI) is must be added as a restriction to the Directions for Use with any conflicting information being removed.

27) Under MINIMUM DAYS PLANTBACK INTERVAL on page 15, correct the “mons” typo and replace it with “months”.

28) Under MINIMUM DAYS PLANTBACK INTERVAL on page 15, the following phrases must be clarified and the term “Region” and “region” must be clearly defined:

Wheat	4-18 months depending on Region
Oats, other small grains	11-18 months depending on region
All other crops	12-18 months depending on crop and region

29) Remove the reference “Maximum seasonal use rate: Refer to Table 5.” at the top of page 15. NOTE: No such Table could be located on the label.

30) Remove the reference to “Preharvest Interval (PHI): Refer to “Food/Feed Crop Specific Information”. NOTE: No such header could be located on the label.

31) The Container Handling statements in the Storage and Disposal box on page 4 must be updated to meet the guidelines established in Pesticide Registration (PR) Notice 2007-4. For further information, please consult document can be located at “[http://www.epa.gov/PR\\_Notices/pr2007-4.pdf](http://www.epa.gov/PR_Notices/pr2007-4.pdf)”.

32) The following changes must be made to the CONDITIONS OF SALE AND WARRANTY section of the label:

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- a) At the beginning of the last sentence in the first paragraph, replace the term "To the extent allowed by law" with "To the extent consistent with applicable law".
- b) Add "TO THE EXTENT CONSISTENT WITH APPLICABLE LAW" at the beginning of the first sentence in the third paragraph for the sentence to read ""TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS....."
- c) Add ""TO THE EXTENT CONSISTENT WITH APPLICABLE LAW" at the beginning of third sentence in the third paragraph for the statement to read "TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO CASE SHALL HELENA CHEMICAL COMPANY OR THE SELLER BE LIABLE FOR CONSQUENTIAL, SPECIAL OR INDIRECT DAMAGES....."

33) NOTE: While no additional data is being requested at this time, any marketing claims made on the pesticide label must be substantiated by data maintained in your files. If data supporting marketing claims made on the product label is not available then those claims must be removed.

34) NOTE: Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

35) Submit one (1) copy of the revised final printed label before the product is released for shipment.

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



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# HM-0739

For control of a wide-spectrum of annual, biennial, and perennial broadleaf weeds and grasses in  
Soybeans

**ACTIVE INGREDIENT(S):**

Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid.....	23.07%
Diethanolamine salt of Dicamba.....	17.52%
Ammonium salt of Imazaquin.....	5.56%
<b>INERT INGREDIENTS:</b> .....	<b>53.85%</b>
<b>TOTAL</b> .....	<b>100.00%</b>

**Equivalent to:**

2,4-D Acid: 1.55 lbs./gal  
 Dicamba Acid; 1.18 lbs./gal  
 Imazaquin Acid :0.523 lbs/gal

**ACCEPTED  
 with COMMENTS  
 In EPA Letter Dated:  
 NOV - 4 2010**

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

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

**KEEP OUT OF REACH OF CHILDREN**

**DANGER/PELIGRO**

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

**FIRST AID**

**IF IN EYES:**

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

**IF SWALLOWED:**

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

**IF ON SKIN OR CLOTHING:**

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

**HOT LINE NUMBER** - Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

EPA REG. NO. 5905-  
 EPA EST. NO.  
 SN:

**NET CONTENTS:**

- 1 Gallon (3.785 Liters)
- 2.5 Gallons (9.46 Liters)
- 55 Gallons (208.18 Liters)
- 250 Gallons (946.1 Liters)

**Manufactured For:  
 Helena Chemical Company  
 225 Schilling Boulevard, Suite 300  
 Collierville, TN 38017**

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER**

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

**PERSONAL PROTECTIVE EQUIPMENT**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A, B, C, D, E, F, G, or H on an EPA chemical resistance category selection chart.

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

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

See engineering controls for additional requirement and exceptions.

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.

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

If this container contains 5 gallons or more in capacity, do not open pour. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

Pilots must use cockpits in a manner that meets the requirement listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)).

**ENGINEERING CONTROL STATEMENTS**

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

**USER SAFETY RECOMMENDATIONS**

Users should:

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

### ENVIRONMENTAL HAZARDS

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

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

#### Endangered Species Concerns:

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

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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

### AGRICULTURAL USE REQUIREMENTS

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 worn over short-sleeve shirt and short pants,
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material

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- Chemical-resistant headgear for overhead exposure

### STORAGE AND DISPOSAL

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

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

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

#### CONTAINER DISPOSAL:

**Plastic/Metal Containers:** Triple rinse (or equivalent) and add rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Returnable-Refillable Container (Drum/Bulk/Mini-bulk):**

When this container is empty, replace the cap and seal all openings that have been opened during use; and return the container to the point of purchase or to a designated location named at the time of purchase of this product in a bulk container. This container may only be refilled with this herbicide. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact CHEMTREC at 1-800-424-9300 or Helena Chemical Company at 901-761-0050. If not returned to the point of purchase or to the designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

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

**Steps to be taken in case material is released or spilled:**

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

### I. GENERAL INFORMATION

**HM-0739™** is a unique broad spectrum pre-plant (burndown), pre-emergence, postharvest( following crop) herbicide for controlling a wide annual, biennial, and perennial weeds and grasses in **Soybeans**. When HM-0739 is applied pre-plant or pre-emergence susceptible weeds emerge, growth stops, and the weeds either die or are not competitive with the crop. When HM-0739 is applied postharvest, absorption of the product occurs through the foliage and roots. Susceptible weeds cease to be competitive with crop as they die.

In many cases a light shallow cultivation may aid in the control of certain weeds or improve general weed control when adequate moisture is not received after application. In postharvest applications, wait approximately 10 days after application before cultivating.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order of Injunctive Relief in Washington Toxics Coalition et al vs. EPA CO1-132C (W.D.WA.). For information, please refer to [www.epa.gov/espp/wtc/](http://www.epa.gov/espp/wtc/).

**Mode of Action**

**HM-0739™** contains three active ingredients uniquely formulated to be used alone or tank mixed with other listed products as well as liquid fertilizer solutions. **HM-0739™** is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. **HM-0739™** interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds and grasses.

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

**II. APPLICATION INSTRUCTIONS**

Apply **HM-0739™** at the rates and growth stages listed in Tables 1 and 2 as follows unless instructed differently. **HM-0739™** may be applied using water or sprayable fluid fertilizer as a carrier. Sprayable fluid fertilizer may be used as the carrier in preplant or pre-emergence use for all crops listed on this label. Postharvest uses with sprayable fluid fertilizer may be made on Soybeans wheat crops only. The most effective application rate and timing varies based on the target weed species (refer to Table I). In mixed populations of weeds the correct rate is determined by the weed species requiring the highest rate. Delaying application permits weeds to exceed the maximum size and will prevent adequate control. For certain specified applications liquid fertilizer or oil may replace part or all of the water as diluent. If dry flowable (DF), wettable powder (WP) or flowable (F) tank mix products are to be used, these should generally be added to the spray tank first. Refer to the mixing directions on the labels of the tank mix products.

**Irrigation:**

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

**CHEMIGATION PROHIBITION**

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

**Spray Coverage:**

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

**Sensitive Crop Precautions:**

**HM-0739™** 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 **HM-0739™** during their development or growing stage. Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of **HM-0739™** with the roots of desirable trees and shrubs.

**Drift Reduction Information:**

The following information may be helpful in reducing possible spray drift from ground or aerial applications. Avoid making applications when spray particle may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if the wind is gusty or in excess of 5 mph and moving in the direction of nearby sensitive crops or if a temperature inversion exists. Always determine the direction and distance

of possible spray drift prior to application. Leave an adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays. Properly maintain and calibrate all spray equipment. The use of agriculturally accepted drift retardants are acceptable and advised. Avoid applications within the vicinity of susceptible plants when at all possible. Do not apply in greenhouses.

### **AERIAL APPLICATION METHODS AND EQUIPMENT**

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

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

### **SPRAY DRIFT MANAGEMENT**

**AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.**

The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  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 applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

### **AERIAL DRIFT REDUCTION ADVISORY**

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

### **INFORMATION ON DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

### **CONTROLLING DROPLET SIZE**

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

### **APPLICATION HEIGHT**

Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### **SWATH ADJUSTMENT**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

### **WIND**

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

### **TEMPERATURE AND HUMIDITY**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### **TEMPERATURE INVERSIONS**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **SENSITIVE AREAS**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Table 1. Application Rate and Timing – Annual Weeds

(For use in non-food/feed crops only: the addition of liquid fertilizer (28-0-0,32-0-0) solutions at ½ the GPA spray solution has shown to give increased efficacy.)

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



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

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

Table 2. Application Rate and Timing – Biennial and Perennial Weeds.  
(The addition of liquid fertilizer (28-0-0,32-0-0) at 1/2 the GPA of the spray solution has proven to give increase suppression or control on certain species of weeds.)

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

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

<sup>1</sup> May require repeat applications  
<sup>2</sup> Recommended rate will provide top growth suppression only.  
<sup>3</sup> For improved root kill or woody species such as mesquite and eastern persimmon spray 2 pints of per acre **HM-0739™** each year for 3 consecutive years.  
<sup>4</sup> Under dense populations, a second application may be needed the following growing season.  
For increased control of weeds such as blackberry and dewberry, **HM-0739™** may be tank mixed with .....(..... ounces per acre), if labeled for the use site.

**Weeds Contolled ( continued)  
WEED**

**LEVEL OF CONTROL**

	<b>GRASSES</b>	
Barnyard grass		<b>Suppression</b>
Corn, volunteer		<b>Suppression</b>
Foxtail, giant		<b>Control to Suppression</b>
Green and Yellow Foxtail		<b>Control to Suppression</b>
Goosegrass		<b>Suppression</b>
Johnsongrass, seedling		<b>Control to Suppression</b>
Shattercane		<b>Suppression</b>
Signalgrass		<b>Suppression</b>
	<b>Sedges</b>	
Yellow, Nutsedge		<b>Contol to Suppression</b>

**Ground Application (Banding)**

When applying **HM-0739™** herbicide by banding, determine the amount of herbicide and water volume needed using the following formula:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$$

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate volume per acre} = \text{Banding water volume per acre}$$

**Ground Application (Broadcast)**

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

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

**Spot or Small Area Application**

**HM-0739™** may be applied to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems. For knapsack or other small capacity sprayers, prepare a solution of **HM-0739™** in water according to Table 3 (assuming that the spot treatment rate equates to 40 gallons pre acre on the broadcast basis.) Adding a surfactant (0.5% by volume) can help improve control.

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

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

Table 3. – Knapsack Sprayer Dilution Instructions

Sprayer Capacity (gallons of water)	Amount of <b>HM-0739™</b> to add to the spray tank
1 gallon	2/3 fluid ounce*
3 gallons	2 fluid ounces
5 gallons	3 fluid ounces

\* 1 fluid ounce = 2 tablespoons

### III. ADDITIVES

To improve burndown of emerged weeds, surfactants and/or low use rates of liquid fertilizers (28-0-0; 32-0-0), or crop oil concentrate may be used with **HM-0739™** herbicide or **HM-0739™** tank mixes applied after the weeds have emerged. Crop oil concentrate is for non-food/feed crop uses only. Do not apply tank mixes that include Ammonium Sulfate or Crop Oil Concentrate to any food/feed crop use listed on this label. For food/feed crop use, do not use liquid fertilizers that contain Ammonium Sulfate (AMS) as a source of nitrogen as tolerances in commodities derived from the crop may contain residues that exceed established tolerances.

#### Oil Concentrate

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

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

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

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

#### Nitrogen Source

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

#### Non-ionic Surfactant

The standard label recommendation is 1-2 pints of an 80% active non-ionic spray surfactant per 100 gallons of water. (Rate will vary with the size and condition of weeds to be controlled. Use lowest rate per 100 gallons when weeds are small and actively growing. As weeds increase in size and or become hardened off, the rate of non-ionic surfactant will have to be increased to give optimum coverage and control.)

Table 4. Additive Rate Per Acre.

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

<sup>1</sup> See manufacturer's label for specific rate recommendations.

<sup>2</sup> Use lowest rate per 100 gallons when weeds are small and actively growing. As weeds increase in size and or become hardened off, the rate of non-ionic surfactant will have to be increased to give optimum coverage and control.

#### IV. GENERAL TANK MIXING INFORMATION

##### Tank Mix Partners/Components

Do not tank mix **HM-0739™** with any other product that contains 2,4-D, dicamba or imazaquin.

The following products may be tank mixed with **HM-0739™** according to the specific tank mixing instructions in this label and respective product labels if registered and labeled for use on **Soybeans**.

- ☐ Aim™ (carfentrazone-ethyl)
- ☐ Ally® (metsulfuron-methyl)
- ☐ Amber® (triasulfuron)
- ☐ Asulox® (asulam)
- ☐ Atrazine
- ☐ Basagran® (bentazon)
- ☐ Bronate® (bromoxynil + MCPA)
- ☐ Buctril® (bromoxynil)
- ☐ Canvas® (thifensulfuron-methyl + tribenuron-methyl + metsulfuron-methyl)
- ☐ Cyclone® (paraquat)
- ☐ Dakota® (fenoxaprop-p-ethyl + MCPA)
- ☐ Evik® (ametryn)
- ☐ Express® (tribenuron-methyl)
- ☐ Finesse® (chlorsulfuron + metsulfuron-methyl)
- ☐ Glean® (chlorsulfuron)
- ☐ Gly Star™ Plus (glyphosate)
- ☐ Gramoxone® Extra (paraquat)
- ☐ Harmony® Extra (thifensulfuron-methyl + tribenuron-methyl)
- ☐ Karmex® (diuron)
- ☐ Kerb™ (pronamide)
- ☐ Laddok® S-12 (bentazon + atrazine)
- ☐ MCPA
- ☐ Paramount® (quinclorac)
- ☐ Peak® (prosulfuron)
- ☐ Permit® (halosulfuron-methyl)
- ☐ Roundup® Ultra (glyphosate)
- ☐ Sencor® (metribuzin)
- ☐ Sinbar® (terbacil)
- ☐ Stinger™ (clopyralid)
- ☐ Tordon™ (picloram)
- ☐ Touchdown® (glyphosate)

See "VI. Food/Feed Crop Specific Information" section for more information for more details. Read and follow the applicable Restrictions and Limitations and Directions for Use on all products involved in tank mixing. The most restrictive labeling applies to tank mixes. Physical incompatibility, reduced weed control, or crop injury may result from mixing **HM-0739™** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

##### Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

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

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

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

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

**Mixing Order**

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

1. Water Begin by agitating a thoroughly clean sprayer tank half full of clean water.
2. Agitation. Maintain constant agitation throughout mixing and application.
3. Products in PVA bags. Place any product contained in water-soluble bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. Water-dispersible products (such as dry flowables, wettable powders, suspension concentrates, and suspo-emulsions)
5. Water-soluble products (such as **HM-0739™**).
6. Emulsifiable concentrates (such as oil concentrate, when applicable).
7. Water-soluble additives (such as liquid fertilizers (28-0-0; 32-0-0), when applicable).\*
8. Remaining quantity of water.

\* If sprayable fluid fertilizer is used as the carrier.

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

**Tank Mixtures with Glyphosate herbicides:**

When applied preplant or pre-emergent burndown or postharvest, Glyphosate may be mixed with HM-0739 for increased control of weeds common to minimum, conventional or no-till production such as marehail and prickly lettuce. Always include a CPDA certified adjuvant in the spray solution. Glyphosate will aid in the burndown of existing weeds while the imazaquin component of HM-0739 will help control or suppress non-emerged weeds.

All refer to the Glyphosate label for recommended rate of timing of Glyphosate.

Observe all precautions and limitations on the Glyphosate product label.

V. RESTRICTIONS AND LIMITATIONS

- Maximum seasonal use rate: Refer to Table 5.
- Preharvest Interval (PHI): Refer to "Food/Feed Crop Specific Information"
- Restricted entry Interval (REI): 48 Hours
- Crop Rotational Restrictions:

CROP	MINIMUM DAYS PLANT BACK INTERVAL (Areas > 1/2" rainfall or irrigation after application)*	
	2/3 - 1 pints/A	> 1 - 2 pints/A
Corn	11mons	11 months
Cotton	18 months	18 months
Barley, Wheat	11 months	11 months
	4-18 months depending on Region	
Oats, other small grains	11-18 months depending on region	
Soybean	30 days	45 days
Sugar Beets and Red Table Beets:	40 months	
All other crops	12-18 months depending on crop and region	

\*NOTE: A cumulative 1/2 inches of rainfall or irrigation must occur in 2 or less rainfalls and/or irrigations before calculating plantback interval.

- Arid (dry) conditions: it is extremely important that the addition of a suitable Nonionic Surfactant, Oil, or sprayable fertilizer be used when applying **HM-0739™**. Higher rates of **HM-0739™** may be needed to control susceptible weeds in this environment.
- Rainfast Period: Rainfall or irrigation occurring within 4 hours after postharvestnce applications may reduce effectiveness of **HM-0739™**.
- Stress: Do not apply to crops under stress such as stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, as unsatisfactory control may result.
- Do not apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced or prolonged.
- Do not apply this product through any type of irrigation equipment. Do not contaminate irrigation ditches or water used for domestic purposes.
- This product cannot be used to formulate or reformulate another pesticide product.

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

**Grazing and Feeding Non-Lactating Animals: Do not graze or feed treated forage ( soybean or likewise), hay or straw to livestock Do not permit meat animals being finished for slaughter to graze treated fields.**

**Grazing and Feeding Lactating Animals: Do not graze lactating dairy animals**

Avoid disturbing treated areas following application. Treatments may not kill weeds that develop from seed or underground plant parts such as rhizomes or bulbets, after the effective period for **HM-0739™**. For seedling control, a follow-up program or other cultural practices could be instituted.

**Between Crop Tank Mixes:**

In tank mixes with one or more of the following herbicides, apply 1.0 - 1.25 pints of **HM-0739™** per acre for control of annual weeds, or 1.25 - 2 pints of **HM-0739™** per acre for control of biennial and perennial weeds if registered for use in Soybeans.

Aim	Gramoxone Extra
Ally	Kerb
Amber	Paramount
Atrazine	Sencor
Cyclone	Tordon 22K
Finesse	Touchdown
Gly Star Plus	

**CONSERVATION RESERVE PROGRAMS AND GENERAL FARMSTEAD**

**HM-0739™** is recommended for use for Conservation Reserve Programs, general farmstead (non-cropland only), weed and brush control, or use in State Recognized Noxious Weed areas (non-cropland areas).

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

Rates above 2 1/2 pints of **HM-0739™** per acre are for spot treatments only.

Retreatments may be made as needed; however, do not exceed a total of .....pints of **HM-0739™** per treated acre during a growing season.

**Farmstead and Fence-row Treatment Application Instructions**

**HM-0739™** may be applied using water or oil and water emulsions in spot application to control undesirable vegetation using handgun or similar types of application equipment. In addition to weed species listed in Tables 1 and 2, these treatments may be used to control or suppress woody plant species listed in Table 7.

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

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

Do not exceed 40 gallons of spray solution per treated acre per application. .... pints of **HM-0739™** in forty gallons of spray solution contains ..... pounds acid equivalent of dicamba and.....pounds acid equivalent of 2,4-D and ..... pounds acid equivalent imazaquin.. Spray plants to wet. Do not allow this spray mix to contact desirable vegetation.

To control brush, briars, and weeds along fence-rows surrounding pasture and ranch lands, and fallow fields, use a tank mix of 1.5% **HM-0739™**, 88.5% water, 10% diesel oil, and sufficient emulsifier (to mix the diesel and



emulsifier). The diesel oil in this tank mix will damage or kill desirable grasses and should not be used in pastures or where damage to desirable species cannot be tolerated.

1. Water: Begin by agitating a thoroughly clean sprayer tank with the desired quantity of clean water. Maintain constant agitation during complete mixing procedure.
2. Emulsifier: Add 0.5% volume to volume of water.
3. **HM-0739™**: add 1.5 gallons per 100 gallons of total intended solution.
4. Diesel Oil: Add 10 gallons per 100 gallons of total intended solution.

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

#### FOR SPRAYING FOLIAR APPLICATIONS:

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

#### FOR DORMANT BASAL APPLICATIONS:

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

#### FOR CUT SURFACE TREATMENTS:

Apply **HM-0739™** in an undiluted state as a cut surface treatment to control unwanted trees and prevent sprouts of cut trees.

- Frill or Girdle Treatments: Make a continuous cut or a series of overlapping cuts using an axe to girdle tree trunk. Spray or paint the cut surface with **HM-0739™**.

Stump Treatments: Spray or paint freshly cut surface with **HM-0739™**. The cambium layer (the area adjacent to the bark) should be thoroughly wet. Treat stumps within 6 hours after cutting.

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

Alder	Cherry	Greenbriar
Ash	Chinquapin	Hawthorn (Thornapple)
Aspen	Cottonwood	Hemlock
Basswood	Creosotebush	Hickory
Beech	Dewberry	Honeylocust
Blackberry	Dogwood	Honeysuckle
Blackgum	Elm	Hornbeam
Cedar	Grape	Huckleberry

Huisache  
Ivy, Poison  
Kudzu  
Locust, Black  
Maple  
Mesquite  
Oak  
Oak, Poison  
Olive, Russian  
Persimmon, Eastern  
Pine  
Plum, Sand (Wild Plum)  
Poplar  
Rabbitbrush  
Redcedar, Eastern  
Rose, McCartney  
Rose, Multiflora  
Sagebrush, Fringe  
Sassafras  
Spruce  
Sumac  
Sweetgum  
Sycamore  
Tarbrush  
Willow  
Witchhazel  
Yaupon  
Yucca

## Weeds listed in this label:

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

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

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