

5905-565

6-21-2007

1/35



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Registration Division (H7505C)  
 401 "M" St., S.W.  
 Washington, D.C. 20460

EPA Reg. Number:

5905-565

Date of Issuance:

JUN 21 2007

Term of Issuance:

Conditional

Name of Pesticide Product:

HM-0339

## NOTICE OF PESTICIDE:

Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Helena Chemical Company  
 225 Schilling Boulevard, Suite 300  
 Collierville, Tennessee 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/cite all data required for the registration/reregistration review of your product when the Agency requires all registrants of similar products to submit such data.

2. Make the following label changes:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 5905-565."

b. Under the "Precautionary Statements" add the following statements: "Harmful if swallowed. Avoid breathing spray mist."

Signature of Approving Official:

/s/

JUN 21 2007

2/  
35

c. Under the "User Safety Recommendations" section of the label, add the following: "If pesticide gets on skin, wash immediately with soap and water."

d. Under the "Environmental Hazards" section of the labeling, revise the first statement to read: "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 except as noted on appropriate labels. 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."

e. In the "Groundwater Contamination" statement, revise the first statement to read: 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."

f. On page 9 of the labeling, under the table for "Asparagus" correct the spelling of "Application".

g. On page 9 of the labeling, under the table for Low Bush Blueberries, correct the spelling of "Blueberries".

h. On page 16 of the labeling, take the statements for "Grapes" and place it on page 13 where the table for "Grapes" is located.

i. On page 17, in the statement on grazing or feeding cover crops, replace the word "of" with "or" so that it reads: "Do not graze or feed cover crops..."

3. Submit storage stability and corrosion characteristics studies (830.6317 and 830.6320, respectively) within one year of the date of this registration notice.

4. Submit two copies of the revised final printed label for the record.

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

3/  
35

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

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.

Joanne I. Miller  
Product Manger (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

# HM-0339

## ACTIVE INGREDIENT:

2,4-Dichlorophenoxyacetic Acid .....29.70%

INERT INGREDIENTS: .....70.30%

TOTAL.....100.0%

Equivalent to 29.70% 2,4-D Acid or 2.8 lb./gal.

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

Patent No. 6,232,272

Other Patents Pending

4/35  
**ACCEPTED**  
with **COMMENTS**  
In EPA Letter Dated:  
JUN 21 2009

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

5905-565

**KEEP OUT OF REACH OF CHILDREN**

## DANGER-PELIGRO

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

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## DANGER - PELIGRO

Irritant. Causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### FIRST AID

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

### IF ON SKIN OR

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

### IF SWALLOWED:

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

### IF INHALED:

- Move victim 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 immediately for further treatment advice.

### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency assistance call toll-free, 1-800-424-9300 (ChemTrec).

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

EPA REG. NO. 5905-

NET CONTENTS:

EPA EST. NO.: First Letters of Product Batch Code Indicate Producing  
Establishment. 5905-AR-1=WA • 5905-GA-1=CG •  
5905-IA-1=DI • 5905-CA-1=KC

SN 043003/0204

MANUFACTURED BY  
HELENA CHEMICAL COMPANY  
225 SCHILLING BOULEVARD, SUITE 300  
COLLIERVILLE, TENNESSEE 38017

5/35

### 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 F on an EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

- Long-Sleeved shirt and long pants
- Chemical-resistant gloves, such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton
- Shoes plus socks
- Protective Eyewear
- Chemical-resistant apron when cleaning equipment, mixing or loading

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be re-used until it has been cleaned.

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

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

### Engineering Control Statements

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

### USER SAFETY RECOMMENDATIONS

#### Users should:

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

### ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target area. Spray equipment used in applying this product should be thoroughly cleaned before using for any other purpose. Use repeated flushing with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides. Do not contaminate water by cleaning of equipment or disposal of washwaters.

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants.

**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

6/35  
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.

This product may cause injury to desirable plants by contacting foliage, stems or roots. Use care in all applications to avoid surface water or soil transport to non-target plant areas. Avoid contamination of irrigation or domestic water supplies. Avoid applications in the vicinity of susceptible plants or when winds are blowing toward nearby susceptible plants or when temperature inversions are expected. Avoid direct application or spray drift to susceptible plants since very small quantities of this herbicide can cause severe injury in the growing or dormant period. Plants contacted may be killed or suffer significant injury resulting in grade or yield losses. Do not apply in greenhouses.

The following steps may be helpful in reducing possible spray drift from ground or aerial applications:

- 1) keep the spray discharge as near to the target as possible while getting good coverage,
- 2) increase the volume of spray mixture per acre,
- 3) use low spraying pressures (as measured at the nozzle tips),
- 4) use nozzles which produce coarse spray droplets while still providing adequate weed coverage,
- 5) limit applications when wind is blowing toward nearby susceptible crops or valuable plants,
- 6) make applications when wind velocity is more favorable for on-target deposition - a general guide for application would be a) wind velocity of 0-2 mph may indicate a temperature inversion which can permit drift; b) wind velocity of 3-7 mph usually indicates good conditions, but check wind direction relative to nearby susceptible crops always allowing for wind shift; c) wind velocity 7-10 mph is acceptable if wind direction is favorable and no susceptible crops are in the vicinity always allowing for wind shift; d) wind velocity of 10-15 mph is usually not desirable except in areas of stronger prevailing winds when direction is favorable and no susceptible crops are in the vicinity always allowing for wind shift; an agriculturally accepted drift retardant is suggested; and e) if wind velocity is over 15 mph do not spray,
- 7) properly maintain and calibrate all spray equipment,
- 8) for aerial applications, use an effective spray boom length that is no more than 75% of the wingspan or 90% of rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. So 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.
- 9) When applications are made with as crosswind, the swath will be displaced downwind. This applicator must compensate for this by adjusting the path of the aircraft upwind.
- 10) use an agriculturally accepted drift retardant designed to increase droplet size.

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#### IRRIGATION PROHIBITION

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

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#### 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.

#### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

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

- Coveralls
- Chemical-resistant gloves such as Barrier
- Laminate, Nitrile Rubber, Neoprene Rubber, or Viton
- Shoes plus socks
- Protective Eyewear

**NON-AGRICULTURAL USE REQUIREMENTS**

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

**USE REQUIREMENTS FOR PASTURES, PERENNIAL GRASSLANDS, RANGELAND, FALLOW LAND AND NONCROP AREAS:** Do not enter treated areas until spray has dried. For early entry to treated areas, wear eye protection, chemical-resistant gloves, long-sleeved shirt, long pants, shoes and socks.

**TURF USE REQUIREMENTS:** Do not allow persons (other than applicator) or pets on treated area during application. Do not enter treated areas until spray has dried. NOTE: For application to turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes, follow AGRICULTURAL USE REQUIREMENTS on this label.

**STORAGE AND DISPOSAL**

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

**STORAGE:** Do not store below temperature of 0°F. If frozen, warm to 40°F and re-dissolve before using by rolling or shaking container. This product can be stored in an unheated building. Store in a safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. 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:**

**Metal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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

**Returnable-Refillable Container (Drum):** After use, return the container to the point of purchase or designated locations. This container must only be filled with HM-0339. **DO NOT RE-USE THIS CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions, and damaged or worn out threads on closure devices. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. If the container is not being refilled, return to the point of purchase.

**GENERAL INFORMATION**

Local conditions, crop varieties, and application method may affect performance of this product. User should consult local extension service, agricultural experiment station, or university weed specialists, and state regulatory agencies for recommendations in your area.

Best results are obtained when product is applied to young succulent weeds that are actively growing. Application rates lower than recommended will not be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry areas of the western states, where control is difficult, the higher recommended rates should be used. When product is used for weed control in crops, the growth stage of the crop must be considered. Some plants and weeds, especially woody varieties, are hard to control and may require repeat applications. Application rates should be 1 to 5 gallons of total spray by air or 5 to 25 gallons by ground equipment unless otherwise directed. In either case, use the same amount of **HM-0339** per acre. **HM-0339** should not be allowed to come into contact with desirable, susceptible plants such as beans, cotton, fruit trees, grapes, legumes, ornamentals, peas, tomatoes and other vegetables. **HM-0339** should not be used in greenhouses. If stored below freezing, it may be necessary to warm product to 40°F and agitate before using. This does not affect the efficiency of the product. Spray equipment used to apply **HM-0339** or other products containing 2,4-D should not be used for any other purpose until thoroughly cleaned with a suitable chemical cleaner.

**WEEDS CONTROLLED**

**HM-0339** will control or partially control the following as well as many other noxious plants susceptible to 2,4-D:

- |  |                                |
|--|--------------------------------|
| Alders                                     | Alligatorweed                  |
| American Lotus                             | Arrowhead                      |
| Artichoke                                  | Austrian Fieldcress            |
| Biden                                      | Bittersweet                    |
| Bittercress, smallflower                   | Black-eyed Susan               |
| Bitterweed                                 | Bitter wintercress             |
| Blessed Thistle                            | Blue lettuce                   |
| Blue Thistle                               | Blueweed, Texas                |
| Box elder                                  | Broomweed, common              |
| Buckhorn                                   | Bull nettle                    |
| Bull Thistle                               | Bulrush                        |
| Burdock, common                            | Bur ragweed                    |
| Buttercup, smallflowered                   | Burhead                        |
| Carpetweed                                 | Carolina geranium              |
| Chickweed                                  | Catnip                         |
| Chicory                                    | Cinquefoil, common & rough     |
| Cockle                                     | Cocklebur, common              |
| Coffeebean                                 | Coffeeweed                     |
| Creeping jenny                             | Cornflower                     |
| Croton (Texas, woolly)                     | Curly indigo                   |
| Dandelion                                  | Devil's Claw                   |
|  | <i>Proboscidea louisianica</i> |
| Dogfennel (mayweed)                        | Duckweed                       |
| Evening primrose, common                   | Elderberry                     |
| Fanweed                                    | Evening primrose, cutleaf      |
| Fleabane                                   | Fixweed                        |
| Florida Pusley                             | Figwort                        |
| Four o'clock                               | Goosefoot                      |
| Frenchweed                                 | Galinsoga (elderberry, hairy)  |
| Goatsbeard                                 | Gumweed                        |
| Hemp                                       | Healall                        |
| Henbit                                     | Horsetail                      |
| Honeysuckle                                | Indian Mallow                  |
| Indigo                                     | Jewelweed                      |
| Jerusalem artichoke                        | Klamathweed                    |
| Jimsonweed                                 | Lambsquarters, common          |
| Ladysthumb                                 | Marijuana                      |
| Loco, Bigbend                              | Mallow (Venice, dwarf, little) |
| Marestail                                  | Marshelder                     |
| Mexican weed                               | Milk vetch                     |
| Morningglory (annual, common, ivy, woolly) | Mousetail                      |
| Mustards (except blue), prior to bolting   | Nutgrass                       |
| Parrotfeather                              | Parsnip                        |
| Pennywort                                  | Pennycress (fanweed)           |
| Plantains                                  | Pepperweeds (except perennial) |
| Peppergrass                                | Poison ivy                     |
| Pokeweed                                   | Poorjoe                        |
| Poverty weed                               | Primrose                       |
| Prickly lettuce                            | Puncture vine                  |
| Purslane, common                           | Quickweed                      |



9/35

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|--------------------------|----------------------------|
| Radish                   | Redstem                    |
| Ragweeds (common, giant) | Rush                       |
| Rough fleabane           | Saltcedar                  |
|                          | Sicklepod                  |
| Shepherdspurse           | Sowthistle (annual, spiny) |
| Sneezeweed, bitter       | Spatterdock                |
| Spanish Needles          | Speedwell                  |
| Stinging Nettles         | St. John's Wort            |
| Stinkweed                | Sumacs                     |
| Sunflower                | Tanweed                    |
| Sweetclover (annual)     | Velvetleaf                 |
| Tarweed                  | Venicemallow               |
| Thistles                 | Virginia copperleaf        |
| Toadflax                 | Water hyacinth             |
| Tumbleweed               | Water plantain             |
| Vetches, except hairy    | Water primrose             |
| Virginia creeper         | Water shield               |
| Water lily               | Wild lettuce               |
| Wild carrot              | Wild parsnip               |
| Wild hemp                | Wild rape                  |
| Wild mustard             | Wild strawberry            |
| Wild radish              | Willow                     |
| Wild sweet potato        | Wormwood                   |
| Witchweed                | Yellow rocket              |
| Yellow goatsbeard        |                            |
| Yellow starthistle       |                            |

**Weeds Partially Controlled (Higher rates and/or repeated applications may be needed):**

- |                                     |                           |
|-------------------------------------|---------------------------|
| Alfalfa                             | Beggarticks               |
| Bindweeds (hedge, European)         | Buckbrush                 |
| Bull thistle                        | Canada thistle            |
| Chamise                             | Clover, red               |
| Corn gromwell                       | Coyotebrush               |
| Dandelion                           | Docks                     |
| Dogbanes                            | Goldenrod                 |
| Ground ivy                          | Hawkweed                  |
| Henbit                              | Hoary cress               |
| Ironweed                            | Mallow                    |
| Knotweed                            | Many-flowered aster       |
| Manzanita                           | Musk thistle              |
| Nettles                             | Orange Hawkweed           |
| Prickly lettuce                     | Peppergrass               |
| Russian thistle                     | Rabbitbrush               |
| Sagebrush (big, sand)               | Sage, coastal             |
| Salt Cedar ( <i>T. ramosissim</i> ) |                           |
| Sand shinnery oak                   | Salsify (western, common) |
| Smartweed, Pennsylvania             | Smartweed, annual         |
| Vervains                            | Tansyragwort              |
| Western ironweed                    | Vetch, hairy              |
| Wild garlic                         | Wild carrot               |
|                                     | Wild onion                |

**Weeds Partially Controlled And For Which Locally Resistant Biotypes May Occur:**

- Pigweed

**Weeds Suppressed When Another Labeled Herbicide Is Also Applied:**

- |                  |                  |
|------------------|------------------|
| Bindweed (field) | Russian knapweed |
|------------------|------------------|

**MIXING INSTRUCTIONS**

HM-0339 is an emulsifiable concentrate formulation intended for dilution in water for many applications. 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.

10/35

For best results, thoroughly clean sprayer immediately after use by flushing system with water and heavy duty detergent such as Wipe Out®.

**Water Spray:** To prepare a water spray mixture, fill clean spray tank about 1/2 to 2/3 full with clean water. With agitation turned on, add the required amount of **HM-0339**. Continue agitation while adding balance of water and during spray operations. NOTE: In water this product forms a macro-emulsion and can separate upon prolonged standing. If spray mixture is allowed to stand, agitate again to assure uniformity.

**Liquid Fertilizer Spray:** Due to increased risk of crop foliage burn with fertilizer, use only as recommended on this label or supplemental labeling distributed for **HM-0339**. Use fertilizer rate recommended locally. Fill clean spray tank about 1/2 to 2/3 full with liquid nitrogen fertilizer (UAN or urea) solution. Add required amount of product with vigorous agitation running. Continue agitation while adding balance of liquid fertilizer and during spray operations. Application should be made immediately. Overnight storage of mixture is not recommended. Application during very cold (near freezing) temperatures is not advisable because of the likelihood of crop injury. This product is formulated to be compatible with most liquid nitrogen solutions; however, due to variability in fertilizers, users may wish to perform a jar compatibility test before large scale mixing.

**Oil Spray:** Use only as recommended on this label or supplemental labeling distributed for **HM-0339**. Fill clean spray tank about 1/2 to 2/3 full with an oil approved for agricultural use (diesel oil, fuel oil, stove oil, etc.). Add required amount of product with agitation turned on. Continue agitation while adding balance of oil. The resulting mixture is a solution and will generally remain uniform without agitation once mixed. However, agitation is suggested if available. Do not allow any water to get into the spray mixture to avoid formation of an invert emulsion (mayonnaise consistency).

**Water Spray With Oil:** Use only as recommended on this label or supplemental labeling distributed for **HM-0339**. Where a combination of water and oil diluent is recommended, the use of emulsifiable crop oil or crop oil concentrate is suggested since mild agitation will be sufficient. Mix in the sequence of water, product, and oil. If diesel or other non-emulsified oils listed above under "Oil Spray" are desired for use with water, add no more than 1 quart of such oil per 1 gallon of water and agitate vigorously until tank is emptied. If possible, premix non-emulsified oil with this product and add this premix to a mostly filled spray tank with agitation on. Follow these procedures carefully to avoid formation of an invert emulsion (mayonnaise consistency).

**APPLICATION PROCEDURES**

Use calibrated spray equipment for all types of applications to assure applying the recommended amount of spray mixture per acre. Use sufficient spray volume within the ranges specified to obtain good coverage of weeds. **HM-0339** is absorbed sufficiently within 1 hour after application to provide adequate weed control.

**Ground Broadcast Spray:** Unless otherwise specified in the appropriate crop or non-crop directions, apply in 5 or more gallons of spray solution per acre. Use enough spray volume to provide uniform coverage of weeds, taking into account the amount of vegetation present and the type of application equipment to be used. As crop canopy and weed density increase, a higher spray volume may be needed for equivalent coverage and weed control. Typical crop applications utilize 10 to 50 gallons of spray solution per acre, while certain high volume non-crop applications may utilize more than 100 gallons per acre. Use coarse sprays to minimize potential spray drift. Do not apply with hollow cone nozzles or other nozzles that produce fine spray droplets. Boom spraying with flat fan or low volume nozzles is generally most suitable for ground broadcast applications. Do not apply with a nozzle greater than 4 (four) feet above the crop canopy.

**Band Treatments:** If only bands or rows are treated, leaving middles untreated, the dosage (and spray volume (if applicable)) per crop acres is reduced proportionately. For example: If treating a 12 inch band where the row spacing is 36 inches, this would require 1/3 of the recommended broadcast rate per acre ( 12 inches divided by 36 inches= 1/3):

**Ground Band Spray:** Determine band equivalents to broadcast rates and volumes by the following formulas:

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

Band width in inches x Broadcast = Band volume

Row width in inches      volume per acre      per acre

11/35

**Aerial Broadcast Spray:** Unless otherwise specified in the appropriate crop or non-crop directions, apply in 1 to 5 gallons of spray solution per acre. For best coverage and weed control, as well as reduced potential for spray drift, a minimum of 3 gallons per acre is suggested. Avoid using nozzles or nozzle configurations that generate fine droplets. One configuration usually found to be suitable includes straight stream nozzles (such as disk with no swirl plate) directed straight back along the wind stream. Mechanical flagging or GPS (Global Positioning Systems) is suggested to obtain more uniform application.

With fixed-wing or helicopter application, an exactly even swath deposition may not be achieved, and consequently, crop injury or pesticide nonperformance may result wholly or in part. Do not apply by air during periods of thermal inversion. Avoid application if potential for drift is excessive and/or susceptible crops are growing in the vicinity.

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### TANK MIXES

Unless otherwise prohibited on this label or the label of an intended tank mix product, this product may be applied in combination with any herbicide registered for the same crop, timing, and method of application. Observe the most restrictive label statements of various tank mix products used. **LIABILITY FOR CROP INJURY RESULTING FROM A TANK MIXTURE NOT SPECIFIED ON THIS LABEL, OR SUPPLEMENTAL LABELING DISTRIBUTED FOR HM-0339, IS SPECIFICALLY DISCLAIMED BY HELENA CHEMICAL COMPANY.**

#### HM-0339 + Glyphosate (various formulations):

HM-0339 + Glyphosate (various formulations) may be used on all approved crops, use sites and use patterns, approved on both labels. HM-0339 should be used at the rate of 0.27 lb -0.75 lb active ingredient per acre in combination with the appropriate rate of Glyphosate per acre to provide best control of weed pest species. Consult the Glyphosate label to determine the use sites and the proper rate of Glyphosate to be used in combination with HM-0339.

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### COMPATIBILITY

Before full-scale mixing of this product with other herbicides, fertilizer solutions and adjuvants, it is advisable to determine the compatibility of the proposed mixture. Use proportionate quantities of each ingredient and mix in a small container. Always mix one product thoroughly with the diluent before adding another product. If no incompatibility is evident after 30 minutes, the mixture is generally compatible for spraying.

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### PLANTING IN TREATED AREAS

**Labeled Crops:** Within 29 days following an application of this product, plant only those crops named as use sites on this or other registered 2, 4-D labels. Follow more specific limitations, if any, provided in the directions for individual crops. Labeled crops may be at risk for crop injury or loss when planted soon after application, especially in the first 14 days. Degradation factors described below should be considered in weighing this risk.

**Other Crops:** All other crops may be planted 30 or more days following an application without concern for illegal residues in the planted crop. However, under certain conditions, there may be a risk of injury to susceptible crops. Degradation factors described below should be considered in weighing this risk. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.

**Degradation Factors:** When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid degradation of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application. Consult your local Agricultural Extension Service for information about susceptible crops and typical soil conditions in your area.

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### APPLICATIONS

**READ ALL PROCEEDING GENERAL SECTIONS OF LABEL AND WARRANTY BEFORE USE.**

12/35

Unless otherwise specified, applications may be made by ground or air equipment. Ground applications may provide more thorough coverage and better weed control. For selective postemergent weed control in crops, do not add oil, surfactant, fertilizer or other additives unless specifically recommended on this label or supplemental labeling.

### ASPARAGUS

CROP STAGE	APPLICATION RATE/ACRE	DIRECTIONS/TIMING
After cutting	5 -5.75 pints (1.75-2.0 lbs. acid equivalent)	Apply on actively growing weeds

#### RESTRICTIONS AND LIMITATIONS FOR USE ON ASPERAGUS

- PHI: Do not harvest within 3 days of application
- Max application rate/acre: 2.0 lbs acid equivalent
- Max seasonal rate: 4.0 lbs acid equivalent per acre
- Do not exceed two applications per crop
- Do not apply within 30 days of previous application

### LOW BUSH BLUBERRIES

CROP STAGE	APPLICATION RATE /ACRE	DIRECTIONS/TIMING
Postemergence	Wiper solution containing 0.03-0.0375 lbs/gallon (3.6-4.5 g/l) acid eq.	Make directed wipe or spot applications when tips are above the crop
Postharvest	Solution containing .75-1.0 lb acid equivalent per 10 gallons of oil	Make directed application to cut hardwoods in row middles in summer or fall after harvest.

#### RESTRICTIONS AND LIMITATIONS FOR USE IN BLUEBERRIES:

- Max seasonal rate: Not applicable-spot treatment
- Avoid herbicide contact with blueberry foliage.
- Apply only in the nonbearing year.

### HIGH BUSH BLUBERRIES:

CROP STAGE	APPLICATION RATE/ACRE	DIRECTIONS/TIMING
POSTEMERGENCE	3.5-4.0 pints	Make directed or shielded application in the spring.
POSTHARVEST	3.5-4.0 pints	Make directed application to row middles in summer or fall after harvest

#### RESTRICTIONS AND LIMITATIONS FOR USE IN BLUEBERRIES;

- PHI: Do not harvest within 30 days of application
- Max seasonal rate: 2.8 lbs acid equivalent per acre
- Avoid herbicide contact with blueberry plant foliage.

### CERAL GRAINS:

(Barley, Millet, Oats, Rye, Triticale, Wheat,)

Apply as directed below.

13/35

### Spring Applications

**Onset of Tillering Stage:** Grains are generally tolerant of these treatments, but risk of crop injury is greater than at full tillering stage. Do not make application if the risk of injury is unacceptable. The onset of tillering stage is defined as grain having 1 or more tillers as well as 3 or more leaves.

Apply 3/4 – 1.25 pints per acre in the spring when grain has 1 or more tillers as well as 3 or more leaves. Do not apply from boot to dough stage.

**Full Tillering Stage:** For these applications, full tillering stage is defined as grain that has 3 or more tillers and the flag leaf should not be visible.

Apply 3/4 – 2.25 pints of product per acre when grain is in the full tiller stage (usually 4 to 8 inches tall). Do not apply from boot to dough stage.

**Emergency Weed Control:** To control difficult weed problems in certain areas, such as under dry conditions especially in Western areas, higher rates, up to 3.0 pints per acre, may be needed. Higher rates increase the risk of crop injury. The severity of the weed problem should be balanced against the possibility of crop injury. Do not apply before the tiller stage or from boot to dough stage.

### Winter Wheat, Barley, Millet, Oats, and Rye

**Onset of Tillering Stage:** Grains are generally tolerant of these treatments, but risk of crop injury is greater than at full tillering stage. Do not make application if the risk of injury is unacceptable.

Apply 3/4 - 2.25 pints per acre in the spring when grain has 1 or more tillers as well as 3 or more leaves. Do not apply from boot to dough stage.

**Full Tillering Stage:** For these applications, grain should have 3 or more tillers and the flag should not be visible.

Apply 3/4 – 2.25 pints per acre when grain is in the full tiller stage (usually 4 to 8 inches tall). Do not apply from boot to dough stage.

**Emergency Weed Control:** For improved control of difficult weeds and heavy weed infestations, apply up to 3.0 pints per acre. Higher rates increase the risk of crop injury. The severity of the weed problem should be balanced against the possibility of crop injury. Do not apply before the tiller stage or from boot to dough stage.

### Spring Seeded Oats

**Full Tillering Stage:** Grains should have 3 or more tillers and the flag leaf should not be visible. Oats are less tolerant to **HM-0339** than wheat or barley and present a greater risk of crop injury. The severity of the weed problem should be balanced against the possibility of crop injury. Larger weeds and hard-to-kill weeds may be poorly controlled, especially under dry conditions.

Apply 3/4 pint per acre when grain is in the full tiller stage as specified above. Do not apply before the tiller stage nor from boot to dough stage.

### Fall Seeded Oats (Southern) Grown for Grain

Apply 3/4 to 2 pints per acre after full tillering, but prior to joints forming in the stem. Do not apply until after full tillering nor from jointing to dough stage. Oats are less tolerant to **HM-0339** than wheat or barley and present a greater risk of crop injury. The severity of the weed problem should be balanced against the possibility of crop injury, especially at higher rates. Avoid spraying during or immediately following cold weather.

### Preharvest Treatment (Wheat, Oats, Millet, Barley, Rye,)

Apply 1.0 – 3.0 pints per acre when grains are in the hard dough stage to control large weeds that may interfere with harvest. In tank mixtures with other herbicides registered for preharvest application, a rate of 3/4 - 1.25 pints per acre may be desired. Best results will be obtained when soil moisture is sufficient to cause succulent weed growth. Addition of a nonionic surfactant, such as **INDUCE®** or **DYNE-AMIC®**, usually improves weed control.

14/35

**Postharvest (Wheat, Oats, Millet, Barley, Rye)**

Following harvest, a flush of new weed growth may occur. For control of many annual broadleaf species, apply at up to 1.50 pints per acre. Certain perennial or biennial weeds may produce new fall growth in stubble grain fields. To aid in suppressing these weeds, product may be applied at the rate of 1.50 – 3.0 pints per acre either alone or in combination with other registered herbicides such as Dicamba, Picloram or Glyphosate. See "Planting In Treated Areas" section. Follow most restrictive limitations for tank mix products used.

**Liquid Nitrogen Fertilizers:** At full tiller, product may be combined with liquid nitrogen fertilizers suitable for foliar application to small grains. Refer to "Mixing Instructions" section of this label for further information. Fertilizers can increase foliage contact burn of herbicides. Reducing the fertilizer rate and concentration will reduce the hazard of foliage burn.

**Tank Mixtures:** HM-0339 may be tank mixed with other herbicides for control of certain weeds in small grains. Use tank mix directions appearing on the labels of the specific herbicides when tank mixing with this product. Observe all precautions and limitations on labeling of product used in a particular tank mix.

Suggested 2-way tank mix combinations are listed below:

**Use on all approved crops and use sites.**

- HM-0339+ Ally® (Use on Wheat & Barley only)
- HM-0339+ Amber® (Use on Wheat & Barley only)
- HM-0339+ Canvas® (Use on Wheat & Barley only)
- HM-0339+ Express® (Use on Wheat & Barley only)
- HM-0339+ Finesse® (Use on Wheat & Barley only)
- HM-0339+ Glean® (Use on Wheat, Oats & Barley only)
- HM-0339+Harmony® Extra (Use on Wheat, Oats & Barley only)
- HM-0339 + Peak® (Use on Wheat, Oats, Barley & Rye)
- HM-0339 + Bromoxynil (Use on Wheat, Oats, Barley & Rye)
- HM-0339 + Dicamba (Use on Wheat, Oats & Barley only)
- HM-0339 + Diuron (Use on Wheat, Oats & Barley only)
- HM-0339 + Metribuzin (Use on Wheat & Barley only)

Suggested 3-way tank mixes include\*:

- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin+ Ally®
- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin+ Amber®
- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin + Canvas®
- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin + Express®
- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin + Finesse®
- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin+ Glean®
- HM-0339+Bromoxynil or Dicamba or Diuron or Metribuzin + Harmony® Extra
- HM-0339 + Bromoxynil or Dicamba or Diuron or Metribuzin + Peak®
- HM-0339 + Diuron + Metribuzin
- HM-0339 + Diuron + Dicamba
- HM-0339 + Diuron + Bromoxynil
- HM-0339 + Dicamba + Metribuzin
- HM-0339 + Dicamba + Bromoxynil
- HM-0339 + Metribuzin + Bromoxynil

\*Refer to the previous section (Suggested 2-way tank mix combinations) and the registered product labels to determine the specific small grain crops that may be treated.

**Restrictions and Limitations For Use On Cereal Grains:**

15/35

- For aerial applications on grain, apply HM-0339A in 3 to 10 gallons of water per acre
- For ground applications a minimum of 10 to 15 gallons of water per acre is recommended for proper spray coverage

**CRANEberries**

CROP STAGE	APPLICATION RATE/ACRE	DIRECTIONS/TIMING
Dormant	1-1.4 gallons	Make broadcast application in the dormant season
Postemergence	3-3.25 pints	Make directed wipe or spot applications when weed tops are above crop

**RESTRICTIONS AND LIMITATIONS FOR USE IN CRANEberries;**

PHI: Do not harvest within 30 days of application.

**Max. seasonal rate:** 4 lbs. acid equivalent per acres in the dormant season and 2.4 lbs acid equivalent in the growing season

**Dormant:** Make only one dormant application per crop

**Postemergence:** Do not exceed two Postemergence applications per crop.

**CITRUS**

CROP STAGE	APPLICATION RATE/ACRE	DIRECTIONS/TIMING
Growing Navel oranges, Valencia oranges and grapefruit-To increase size	2.25-4.5 ounces based on fruit size at time of application	Approximate fruit diameter less than 0.75 inch for oranges and 1 inch for grapefruit
Growing Navel oranges and Valencia oranges-reduce pre-harvest fruit drip	Up to 200 ppm for aerial and ground concentrate applications	Apply in September through January
Fall sprays on lemons, Navel oranges, Valencia oranges and Tangelos-To prevent pre-harvest drop of mature fruit and leaves following spring	4 to 24 ppm depending on specific application	Apply in fall oil, water or whitewash sprays according to local recommendations.
Postharvest packing house application to lemons-To retain buttons	500 ppm	Apply in water or water-wax emulsion after the final fresh water rinse of fruit. Incompatible with nitrogen trichloride treatment.

**RESTRICTIONS AND LIMITATIONS FOR USE IN CITRUS:**

PHI: Do not harvest within 7days of application to growing fruit.

**CORN (Field, Sweet and Pop)**

This product may be applied to corn at several different timings. In all cases, plant corn to a uniform depth of at least 1½ inch. Avoid applying this product with Accent® SP Herbicide because severe grass control antagonism may occur. Apply this product at least 7 days before or 3 days after Accent® SP Herbicide.

**Preplant:** To control existing broadleaf weed seedlings or burn down susceptible cover crops, prior to planting, apply from 7 to 14 days before planting. To control grasses and certain other problem weeds, it may be desirable to use a tank mixture with other herbicides. Liquid fertilizers and agriculturally approved surfactants may be added. Observe the most restrictive label statements of various tank mix products used.

**Corn Preplant Application Rates:** Do not apply on fine or medium textured soils (silt & clay loams) with less than 1% organic matter or on coarse textured soils (sand, sandy loam, loamy sand) with less than 2% organic matter. For fine or medium textured

soils with 1% or more organic matter, apply at a rate of 3/4 – 2.5 pints per acre. On coarse\* textured soils with 2% or more organic matter, apply 3/4- 2.0 pints per acre.

**Preemergence:** To control small broadleaf weeds, apply after planting, but before corn emerges. Liquid fertilizers and agriculturally approved surfactants may be added. Do not apply preemergence if a preplant application of this product was made.

**Corn Preemergence Application Rates:** Do not apply on fine or medium textured soils (silt & clay loams) with less than 1% organic matter or on coarse textured soils (sand, sandy loam, loamy sand) with less than 2% organic matter. For fine or medium textured soils with 1% or more organic matter, apply at a rate of 3/4– 3.0 pints per acre. On coarse\* textured soils with 2% or more organic matter, apply 3/4 pint per acre.

\*Due to the lower rate, partial weed control may result on coarse soils.

**Postemergence:** Do not apply with liquid fertilizer or oil. Many types of adjuvants will increase risk of crop injury. Where an adjuvant is required because of tank mixing with another herbicide, use the lowest recommended concentration of a nonionic surfactant (often 0.25% vol. /vol. or less) to minimize such risk. Treated crop may be brittle and subject to breaking by wind and/or cultivation, especially in the 2 weeks following application.

**Early Postemergence:** To control small broadleaf weeds, apply broadcast from spike to 4-leaf stage of crop or up to 8 inches tall, whichever comes first. Avoid spraying just after corn leaves unfold. Postemergence application should not follow a preplant or preemergence application by less than 3 weeks. Use rates stipulated under "Corn Postemergence Application Rates" below.

**Late Postemergence:** Typical timing for this application is when most broadleaf weeds are no more than 4 to 6 inches tall and corn is between 8 and 16 inches tall. The timing can extend until corn is 36 inches tall or to tasseling, whichever comes first, but weeds usually become too large and hard to control. Perennial weeds should be in the bud to bloom stage for best results. Apply as a directed spray using drop nozzles to keep spray off crop foliage. Do not apply from tasseling to hard dough stage. Use the following rates.

**Corn Postemergence Application Rates:** Spike to 4-leaf or up to 8 inches tall apply by ground or aerially as an early postemergence over-the-top broadcast spray at 0.3 – 1.25 pints per acre. When corn is 8 - 36 inches tall, before tasseling, apply by ground only as a late postemergence directed spray using drop nozzles at 14 to 18 fluid ounces per acre. Lowest rates may not provide adequate weed control unless used in a tank mix with another registered herbicide.

**Preharvest: (Field Corn and PopCorn):** After the hard dough (or denting) stage when silks have turned brown, apply 1.25 – 3.0 pints per acre to suppress perennial weeds such as hemp dogbane or field bindweed, and many tall weeds such as cocklebur, pigweed, and sunflower that interfere with harvest. Weed seed production will also be suppressed if application is prior to the flowering stage of weeds. The high rate is recommended under dry conditions. Do not forage or feed corn fodder for 7 days following application.

**Postharvest:** Following the harvest of corn, perennial or biennial weeds produce new fall growth. To aid in suppressing these weeds before a hard freeze, product may be applied at the rate of 1.25 – 3.0 pints per acre either alone or in a combination with other registered herbicides such as certain formulations of dicamba and picloram. See "Planting in Treated Areas" section. If products to be tank mixed have more restrictive limitations, these limitations should be followed.

**GRAPES**

CROP STAGE	APPLICATION RATE/ACRE	DIRECTIONS/TIMING
Apply after shatter following bloom and before grape shoots reach the ground, or during dormant season	3.5 – 3.75 pints	Use hooded boom sprayer or equivalent to direct coarse spray to weeds and minimize potential contact with grape foliage, shoots or stems

RESTRICTIONS AND LIMITATIONS FOR USE IN GRAPES:



PHI: Do not harvest grapes within 100 days of application  
 Max seasonal rate: 1.36 lbs acid equivalent  
 Do not apply to grape foliage, shoots or stems.

17/  
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**HOPS**

CROP STAGE	APPLICATION RAE/ACRE	DIRECTIONS/TIMING
Post Emergence	1.25-1.5 pints	Make application as a directed treatment to the row middles( directed to ground

**RESTRICTIONS AND LIMITATIONS FOR UE IN HOPS:**

PHI: Do not harvest within 28 days of application  
 Limited to 3 application per crop cycle.  
 Max seasonal rate: 1.5 lbs. acid equivalent per acre  
 Do not apply within 30 days of previous application.

**POTATOES**  
 Fresh Market Only

CROP STAGE	APPLICATION RATE	DIRECTIONS / Timing
Postemergence	3 to 3.25 ounces per acre (Max. rate: 07 lbs acid equivalent acre)	Make first application when potatoes are in pre-bud stage (about 7 to 10 inches) and Make a second application about 10 to 14 days later.

**RESTRICTIONS AND LIMITATIONS FOR USE IN POTATOES**

PHI: Do not harvest within 45 days of application.  
 Max seasonal rate: 0.14 lbs. acid equivalent per acre.  
 Do not exceed two applications per crop.

**SORGHUM (Milo-Grain)**

**Postemergence:** To control small broadleaf weeds, apply when sorghum is 6 to 15 inches tall to top of canopy. If sorghum is taller than 8 inches to top of canopy, use drop nozzles to keep spray off crop foliage. Do not treat during the boot, flowering or early dough stages. Do not forage or feed fodder for 7 days following application. Use rates that follow.

**Sorghum (Milo) Postemergence Application Rates:** When crop is 6 to 8 inches tall use as an over-the-top broadcast spray by ground or air at 6.0 – 18 ounces per acre. When sorghum reaches 8 to 15 inches tall, use as a directed spray using drop nozzles with application by ground only at 0.50 – 1.25 pints per acre. The lowest rates may not provide adequate weed control unless used in a tank mixture with another registered herbicide. Highest rates may increase risk of injury.

**SORGHUM-SUDAN GRASS HYBRIDS (Forage Crop Only)**

**Postemergence:** To control small broadleaf weeds, apply when sorghum-sudan has at least 6 leaves, is well established, and is 5 to 10 inches tall at the rate of 3/4 to 1.5 pints per acre. Do not treat crop over 10 inches tall through maturity.

**Plant Response:** Even when sprayed at the proper stage, some crop injury is likely, including reduced seed production. If risk of crop injury is unacceptable, do not use this product. The lower rate may reduce the risk of crop injury, but will result in reduced weed control.

**Livestock Feeding Restrictions:** Do not feed fodder for 7 days following application. Do not graze meat animals on treated areas within 3 days before slaughter. Do not graze dairy animals on treated areas within 7 days after application.

**SOYBEANS  
(Preplant Only)**

Crop Stage:	Maximum Application Rate/Acre	Directions/Timing
Preplant	16-24 ounces	To control emerged broadleaf weed seedlings or existing cover crops. Apply not less than 15 days prior to planting soybeans.
Preplant	24-46 ounces	To control emerged broadleaf weed seedlings or existing cover crops. Apply not less than 30 days prior to planting soybeans.

**RESTRICTIONS AND LIMITATIONS FOR USE IN SOYBEANS( PREPLANT)**

Max seasonal rate: Apply no more than 1.0lb acid equivalent per acre per use season  
Use 2 or more gallons of spray solution per acre.

**RICE:**

**Preplant:** Apply 1.25 – 3.0 pints of **HM-0339** 2-4 weeks prior to planting.

**Postemergent:** Apply 1.25-4.25 pints in the late tillering stage of development, at the time of first joint development (first to second green ring), usually 6 to 9 weeks after emergence.

**Note:** Do not apply after panicle initiation, after rice internodes exceed 1/2 inch, at early seedling, early panicle, boot, flowering, or early heading growth stages. Do not harvest within 60 days of application. Maximum allowable use rate per acre per season is 1.5 pounds acid equivalent. Use 2 or more gallons of spray solution per acre. 2,4-D can injure some rice varieties. Before spraying, consult local Extension Service or University specialists for appropriate rates and timing of sprays.

**WILD RICE  
(For Use in Minnesota Only)**

CROP STAGE	MAXIMUM APPLICATION RATE/ACRE	DIRECTIONS/TIMING
Postemergence	10-12 ounces	For use only on wild rice grown in commercial paddies Apply to rice in the 1 to 2 aerial leaf through early tillering stage. Do not spray after wild rice has reached the boot stage. For best coverage, apply 4 to 10 gallons total spray solution per acre

**RESTRICTIONS AND LIMITATIONS FOR USE ON WILD RICE**

PHI: Do not harvest within 60 days of application  
Max seasonal rate: Apply no more than 0.25 lb acid equivalent per acre use season  
Use 2 or more gallons of spray solution per acre.

19/  
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### STRAWBERRIES

CROP STAGE	APPLICATION RATE/ACRE	DIRECTIONS/TIMING
Dormant or after last picking	3-4.25 PINTS	Apply to established plantings when strawberries have gone into dormancy or soon after the last picking.

#### RESTRICTIONS AND LIMITATIONS AND FOR USE IN STRAWBERRIES;

Maximum seasonal rate: 1.5 lbs acid equivalent per acre  
State Restrictions: Not registered for use in California.

### SUGARCANE :

**Preemergence:** Apply 1.25 pints (20 ounces) to 5.5 pints (88 ounces) of **HM-0339** as a preemergent spray before canes appear for control of emerged broadleaf weeds.

**Postemergence:** Apply 1.25 pints (20 ounces) to 5.5 pints (88 ounces) of **HM-0339** after cane emerges through canopy closure. Consult local Agricultural Experiment or Extension Service Weed Specialists on specific use of this product

**Note:** Do not harvest cane prior to crop maturation. Do not apply more than 4.0 lbs acid equivalent per acre per use season. Always use more than 2 gallons of spray solution per acre. Not registered for use in California.

### GRAPES

**Application Timing:** At least 3 year old established vineyards. Apply after shatter following bloom and before grapes shoots reach the ground, or during dormant season.

Apply **HM-0339** at the rate of 1.25-4 pints per acre using hooded sprayers or equivalent to direct coarse spray to weeds and minimize potential contact with grape foliage, shoots or stems.

**Note:** Do not use more than 1.36 lbs. acid equivalent per season. Do not apply to grape foliage, shoots or stems.

### PISTACHIOS, FILBERTS, POME FRUITS, STONE FRUITS, AND TREE NUT ORCHARDS :

**HM-0339** is comprised of a 2,4-D acid formulation that may be used in low volume ground application equipment. The product is used in directed applications to control broadleaf weeds in established pistachio, pome fruits, stone fruits and tree nut plantings and orchards. **HM-0339** is to be applied as a broadcast treatment in the row middles of established trees as well as a band application to control many broadleaf weeds in the tree rows and the orchard floor.

**Note:** Established and transplanted stock must be a least (1) one year old and in good growing conditions.

### APPLICATION METHOD

The precise and uniform application of **HM-0339** is essential to obtain satisfactory economic control while minimizing the potential injury to the trees. Avoid direct contact with the fruit, foliage, lower limbs, stems, tree trunks and any exposed roots.

20/35

It is best to use a fixed boom with flat fan nozzles at not more than 25 psi. For small concentrated infestations, small areas, individual weeds, or as a follow up application, spot treating is recommended with hand held nozzle sprayer. Do not apply HM-0339 when conditions favorable to drift are present.

**APPLICATION TIMING**

Most annuals will best controlled when they are actively growing either in the spring or fall. Most biennials are best controlled when they are in the seedling to rosette stage. Sequential applications may have to be utilized to obtain the best results. Perennials that are either in the early bud to bloom stage or during fall regrowth have to best chance of being controlled at this time.

**TANK MIXTURES**

For improved broadleaf control, HM-0339 may be applied in combination with other approved products. The combination must be used in accordance to the most restrictive label limitations of the product in the tank mix. Both products must be labeled for the site of application. Dosages of the tank mix must not cause either product to exceed the tolerance established for that active ingredient on the use site to be applied on. All applications of the tank mix must be in accordance with Federal, State, and local use limitations.

**IRRIGATION RESTRICTIONS**

HM-0339 is not to be applied to sandy or shallow soils or to dry soils without vegetation in Pistachio, Pome Fruit, Stone Fruit or Tree Nut Orchards. Best results with HM-0339 can be obtained when the product is applied 1 - 2 days following irrigation.

Do not apply the product immediately prior to irrigation or irrigate immediately following an application.

**DO NOT APPLY HM-0339 THROUGH ANY TYPE OF IRRIGATION SYSTEM.**

**DOSAGE RATES FOR BROADLEAF WEED CONTROL**

The following dosage rate recommendations are for broadcast applications. The proper amount of HM-0339 to be used in banded or row applications must be determined by using the following formula:

Dosage Rate per  
Treated acre =  $\frac{\text{Spray Band Width} \times \text{Broadcast rate per Acre}}{\text{Tree Row Width}}$

**Recommended Spray Volumes:** Generally 1 - 10 gallons per acre is sufficient, but in many cases 10 - 25 gallons may be needed to obtain adequate coverage.

**Note:** Do not graze or feed cover crops from treated orchards to livestock. Do not apply during windy conditions or extremely high temperatures.

**PISTACHIOS**

HM-0339 is to be applied at the broadcast rate of 2-6 pints per acre per application to the orchard floor. Two broadcast applications 30 days apart are permitted.

**Note:** Do not harvest pistachios within sixty (60) days of application. Do not cut orchard floor forage for hay within 7 days of application. Do not make more than 2 applications per year.

**POME FRUITS (APPLES AND PEARS)**

HM-0339 is being applied at the broadcast rate of 2-6 pints per acre per application for the control of unwanted vegetation on the orchard floors. It is important to avoid contact with the fruit, fruit foliage, and tree trunks, lowers limbs and exposed brace roots. Two applications 75 days apart are permitted.

21/35

**Note:** Do not harvest apples or pears within 14 days of application. Do not cut orchard floor forage for hay within 7 days of application. Do not make more than 2 applications per year.

**STONE FRUITS (CHERRIES, PEACHES, PLUMS)**

HM-0339 is to be applied at the broadcast rate of 2-6 pints per acre per application for the control of unwanted vegetation on the orchard floors. It is important to avoid contact with the fruit, foliage, tree trunks, lower limbs and exposed brace roots. Two applications 75 days apart are permitted per year.

**Note:** Do not harvest stone fruits within 40 days of application. Do not cut orchard floor forage for hay within 7 days of application. Do not make more than 2 applications per year.

**TREE NUTS (ALMOND, FILBERT OR HAZLENUT, PECAN, BLACK AND ENGLISH WALNUT)**

HM-0339 is to be applied at the broadcast rate of 2-6 pints per acre for the control of unwanted vegetation on the orchard floors. It is important to avoid contact with the fruit, foliage, tree trunks, lower limbs and exposed brace roots. Two applications 30 days apart are permitted per year.

**Note:** Do not harvest tree nuts within 60 days of application. Do not cut orchard floor forage for hay within 7 days of application. Do not make more than 2 applications per year.

**FILBERTS:**

**FOR SUCKER CONTROL:** For control of suckers, spray to wet leaves and stems of suckers that are 6 to 8 inches in height during April through August

**Restrictions And Limitations For Use In Filberts:**

PHI: Do not harvest nuts within days of application  
Allow at least 30 days between applications. Do not make more than 4 applications per year.

**SPOT TREATMENT PROCEDURES FOR PISTACHIOS, POME FRUITS, STONE FRUITS, AND TREE NUT CROPS**

In many cases spot treatment applications are necessary for sparse infestations of broadleaf weeds, especially in small areas for a follow up treatment. High volume wands, spray guns or similar equipment may be used for this application. Care must be taken to use nozzles that deliver a coarse spray pattern to reduce the potential for nontarget drift exposure. The amount of spray volume will be directly proportionate to the height, density, weed species and type of equipment used.

**Rate:** Mix 1.5 – 2.5 gallons of HM-0339 per 100 gallons of water or a .75% - 1.5% vol./vol. solution.

For one gallon of water, mix in 1.75 – 3.5 ounces. Apply dilute sprays to the foliage of the broadleaf to be controlled until entire foliage is sufficiently wet.

**Note:** Do not use spray guns for spot treatment applications around or near the base of stone fruits and nut trees.

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**FALLOW LAND AND CROP STUBBLE**

Fallow land or land idle between crops may be subject to unwanted weed growth. For control of many annual broadleaf species, apply at the rate of 3/4 – 2.75 pints per acre. To aid in suppressing certain perennial or biennial broadleaf weeds (including cotton regrowth), this product may be applied at the rate of 1.50 – 5.5 pints per acre either alone or in combination with other registered herbicides such as Dicamba, Picloram and or Glyphosate. Use the high rate on older plants, drought stressed plants or for hard to kill species. See "Planting In Treated Areas" section. Follow more restrictive limitations for tank mix products used.

**PLANTING IN TREATED AREAS Labeled Crops:** Within 29 days following an application of this product, plant only those crops named as use sites on this or other registered 2,4-D labels. Follow more specific limitations, if any, provided in the

directions for individual crops. Labeled crops may be at risk for crop injury or loss when planted soon after application, especially in the first 14 days. Degradation factors described below should be considered in weighing this risk.

**Other Crops:** All other crops may be planted 30 or more days following an application without concern for illegal residues in the planted crop. However, under certain conditions, there may be a risk of injury to susceptible crops. Degradation factors described below should be considered in weighing this risk. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.

**Degradation Factors:** When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid degradation of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application. EPA Chemical Number Chemical Formulation Reentry Interval Application Method Applic

**HM-0339 + Glyphosate (various formulations): g**

HM-0339 + Glyphosate (various formulations) may be used on all approved crops, use sites and use patterns, approved on both labels. HM-0339 should be used at the rate of 0.27 lb -0.75 lb active ingredient per acre in combination with the appropriate rate of Glyphosate per acre to provide best control of weed pest species. Consult the Glyphosate label to determine the use sites and the proper rate of Glyphosate to be used in combination with HM-0339.

**RESTRICTIONS AND LIMITATION FOR USE IN FALLOWLAND AND CROP STUBBLE:**

PHI: Do not cut forage for hay within 7 days of application  
Max seasonal rate: 1.33 gallons of HM-0339A (4.0Lbs acid equivalent) per acre  
Do not apply within 30 days of previous application.

**Planting In Treated Areas:**

HM-0339 may be used to kill fall alfalfa stands in preparation for spring planting of row crops under conservation tillage. The treated alfalfa crop cannot be grazed, fed to livestock or cut for hay.

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**GRASS PASTURES**

To control many emerged broadleaf weeds, apply 3/4 - 2.75 pints **HM-0339** per acre. Addition of a nonionic surfactant, such as INDUCE® or DYNE-AMIC®, usually improves weed control. Preferred timing is in the early spring when sufficient weeds have emerged, and when weeds are small and actively growing, but before weeds are too mature. Summer applications to older, drought-stressed weeds are less effective. However, weeds are more susceptible again in the fall when cooler, wetter conditions support active growth before a killing frost. For fall treatment of mature weeds or perennial weed regrowth, use 2.25 - 5.5 pints per acre. Several seasons of spring plus fall treatments may be necessary to control certain perennials.

**Plant Response:** Injury may result to bent grass, other warm season or southern grasses, and alfalfa, clover or other legumes. Do not use if this risk of injury is unacceptable. Clovers may recover from early spring applications. If grass seed production is desired, do not apply when grass is in boot to milk stage or after heading begins. Do not apply to newly seeded areas until grass is well established. Reseeding is not recommended for at least 30 days following application. Addition of a surfactant may increase the risk of injury to newly seeded grasses.

**Livestock Feeding Restrictions:** Do not graze dairy animals on treated areas within 7 days after application. Do not graze meat animals on treated areas within 3 days before slaughter. Do not cut treated grass for hay within 30 days of application.

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**GRASS SEED CROPS**

To control many emerged broadleaf weeds, apply 3/4 - 2.25 pints per acre. Use on established stands of cool season grass seed crops, such as bentgrass, bluegrass, fine fescue, tall fescues, orchard grass, annual ryegrass, and perennial ryegrass.

Make applications in the spring from the tiller to early boot stage. Do not spray in boot stage. New spring seedlings may be treated after the grasses have more than 5 true leaves. On established stands that have had the seed crop removed, perennial weed regrowth may be treated in the fall at up to 3.0 pints per acre. Refer to "Plant Response" and "Livestock Feeding Restrictions" under **GRASS PASTURES** section above.

**SOD FARMS**

**HM-0339** is intended for use on Sod Farms to provide selective control of certain broadleaf weeds in cool season and warm season turfgrass established for commercial sod production. Apply **HM-0339** to actively growing broadleaf weeds. Follow up may be required for dense infestations of perennial and biennial weeds. For best results, do not mow turf 1 to 2 days before or after application. Turf watering should be delayed until two days after application. Do not apply to newly seeded areas until grass is well established and has been mowed at least twice.

**Reseeding Grass areas:** Do not reseed until at least 30 days after application of **HM-0339**. Seeding a small area and observing response is recommended before a large scale seeding is accomplished.

**Application Rates:**

**HM-0339** application rates and spray volumes will vary with the growth stage and population of broadleaf weeds to be controlled. In general the smaller the weed the lower use of the recommended rate range will provide satisfactory control. The larger the weed, the population and environmental conditions will require the higher end of the rate range to achieve satisfactory control especially for many of the perennial broadleaf weeds.

Rate Recommendations For Sod Farms		
Species	Amount of Product Pints/acre	Spray Volume Gallons/Acre
<b>Cool Season Turf</b>		
Kentucky Bluegrass	1.25 to 2.25	20 to 100
Perennial Ryegrass	1.25 to 2.25	20 to 100
Fescue spp.	1.25 to 2.25	20 to 100
Creeping Bentgrass	1.0	20 to 100
<b>Warm Season Turf</b>		
Centipede grass	1.0 to 1.75	20 to 100
Common Bermudagrass	1.0 to 1.75	20 to 100
Hybrid Bermudagrass	1.0 to 1.75	20 to 100
Bahiagrass	1.0 to 1.75	20 to 100
Zoysiagrass	1.0 to 1.75	

**Restrictions and Limitations for SOD FARMS:**

1. Do not apply this **HM-0339** to any variety of St Augustine grass. Do not use **HM-0339** on carpet grass, Dichondra or where desirable clovers are present.
2. Do not apply this product through any type of irrigation system
3. Avoid drift or spray mist onto vegetables, flowers, ornamental plants, shrubs, trees, and other desirable plants. Do not pour spray solution or rinsate near any desirable plants.
4. Do not apply **HM-0339** immediately before rainfall or irrigation. Do not water the turfgrass for 24 hours after application.
5. Application to Bermuda grass can be during dormancy or when actively growing. Do not apply during periods of semi-dormancy or transition.

24/35

**ESTABLISHED GRASS PASTURES, RANGELAND AND PERENNIAL GRASSLANDS NOT IN AGRICULTURAL PRODUCTION**

HM-0339 can be used to control or suppress a number of susceptible broadleaf weeds in rangeland or perennial grasslands that are set aside from agricultural use such as in the Conservation Reserve Program (CRP) or similar government programs. Consult program rules to determine whether grass and hay may be used. For best results, apply when broadleaf weeds are small. Adequate moisture is needed for best grass tolerance and weed control. Addition of a nonionic surfactant, such as **INDUCE®** or **DYNE-AMIC®**, usually improves weed control.

**Plant Response:** Injury to legumes, bent grass, and other warm season grasses is likely to occur. Grasses may be discolored following treatment. If grass seed production is desired, do not apply when grass is in boot to milk stage or after heading begins.

**New Stands:** Preseeding applications should be made at least 30 days prior to seeding. Newly seeded stands should only be treated after they are well established (more than 5 true leaves) or injury may occur. Apply 3/4 – 2.66 pints per acre when Susceptible Annual and Biennial Broadleaf weeds are small and actively growing. Addition of a surfactant may increase the risk of injury at this stage of growth.

**Established Stands:** For optimum results, weeds must be actively growing. Apply 1.5 - 2.25 pints per acre for Annual weeds and up to 3.0 pints per acre for moderately susceptible biennial or perennial weeds. Treat biennial weeds when they are in the seedling to rosette stage and before flower stalks become apparent. Treat perennial weeds in the bud to bloom stage. For brush species in rangeland, apply up to 5.5 pints per acre in an oil spray (see "Mixing Instructions"). Another option is to add 1 gallon of oil per acre to a **HM-0339** water spray (see "Mixing Instructions"). Repeat applications in the same or subsequent year may be needed to control brush species.

**Restrictions and Limitations For Use In Pastures, Rangeland, And Perennial Grasslands Not in Agricultural Production**

- **Pre-harvest Interval (PHI):** Do not cut forage for hay within 7 days of application
- **Pre-harvest Interval for program lands, such as CRP;** consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.
- **Maximum Season Rate:** Apply no more than 4.0 lbs acid equivalent per acre per use season.
- **Spray volume:** Use 2 or more gallons of spray solution per acre.
- **Do not apply within 30 days of previous application**

**ORNAMENTAL TURF**

**ORNAMENTAL AND RECREATIONAL TURFGRASSES, LAWNS, GOLF COURSES (Fairways, Aprons, Tees, and Roughs), PARKS AND CEMETERIES**

Refer to "Turf Use Requirements" in the "Non-Agricultural Use Requirements" section. The maximum number of broadcast applications per treatment site is 2 per year. For best results, do not mow turf 1 to 2 days before or after application. Turf watering should be delayed for at least 1 hour after application. Avoid contacting desirable trees, shrubs, flowers or vegetables since plant injury may result. Do not apply to newly seeded areas until grass is well established and has been mowed several times. A period of about 30 days after application is usually a sufficient interval before reseeding grasses (or other plants). Seeding a small area and observing response is recommended before large scale seeding.

**Cool Season Grasses:** To control many emerged broadleaf weeds in cool season Turfgrasses such as tall fescue, bluegrass, or perennial ryegrass, apply 1.25 – 2.75 pints per acre (0.50 - 1.0 fluid ounces per 1,000 square feet). Preferred application timing for broadcast treatment is in the early spring when small weeds have emerged and are actively growing under good moisture conditions. For very weedy turf, a follow-up broadcast or spot application may be needed from 2 to 4 weeks later. Summer applications are typically spot treatments of individual weeds that have emerged after a spring broadcast treatment. In the fall when cooler, wetter conditions favor active weed growth, broadcast application may be appropriate for very weedy turf, such as an area that had no spring broadcast treatment.



Application Rates			
Species	Amount of Product		Spray Volume
	Oz/1,000 SQ.FT	Pints/acre	Gallons/Acre
<b>Cool Season Turf</b>			
Kentucky Bluegrass	.5 to 1 oz.	1.5 to 2.75	20 to 100
Perennial Ryegrass	.5 to 1.0	1.5 to 2.75	20 to 100
Fescue spp.	.5 to 1.0	1.5 to 2.75	20 to 100
Creeping Bentgrass	.5 to .75	1.35 to 2.0	20 to 100
<b>Warm Season Turf</b>			
Centipede grass	.50 to 1.0	1.5 to 2.75	20 to 100
Common Bermudagrass	.50 to 1.0	1.5 to 2.75	20 to 100
Hybrid Bermudagrass	.50 to 1.0	1.5 to 2.75	20 to 100
Bahiagrass	.50 to 1.0	1.5 to 2.75	20 to 100
Zoysiagrass	.50 to 1.0	1.5 to 2.75	20 to 100

**Precautions and Limitations:**

1. Avoid mist to vegetables, flowers, ornamentals, shrubs, trees, and other desirable plants
2. Do not spray on Carpetgrass, Dichondra or where desirable clovers are present
3. The maximum number of broadcast applications is per treatment site is two (2) per year.
4. Do not apply to newly seeded areas until well established and preferably after the second mowing.
5. Reduced rates of **HM-0339** must be used grass is stressed from heat or drought.
6. Do not apply through any type of irrigation system.
7. Avoid drift, spray mist, or excessive overlapping during application as undesirable injury may occur.
8. Use only lawn type sprayers. Use coarse spray droplets as they are less likely to drift.

**Special Note:** Care should be taken to avoid over dosing Bentgrass, Bermuda grass, and Centipedegrass or unacceptable injury may occur. Higher volumes of spray water will aid in obtaining uniform coverage if hand-type sprayers are used, it recommended using a single nozzle sprayer than a booms containing multiple nozzles as overspray can occur.

**Note: Plant Response:** Bent grass, other warm season or southern grasses, alfalfa, clover or other legumes may be killed or injured. Do not apply when grass is in boot to milk stage, or after heading begins, if grass production is desired. Do not apply to newly seeded areas until grass is well established. Reseeding is not recommended for at least 30 days following application. Do not make repeat applications within 30 days of the previous application. Apply no more than **1.5 lbs acid equivalent** per acre per use season. **Turf Reentry:** Do not allow people or pets to enter the treated area until sprays have dried

**FOREST MANAGEMENT (INCLUDING SITE PREP, FOREST ROADSIDES, BRUSH CONTROL, ESTABLISHED CONIFER RELEASE)**

**For the general control of annual, biennial and perennial broadleaf weeds and brush:** Apply to emerged weeds and brush. For best results, treat when weeds and brush are young and actively growing. For broadcast applications apply no more than **4.0 lbs acid equivalent** per acre per 12 months.

**For specific use-site applications and restrictions see the appropriate site-specific instructions as follows:**

**Forest Site Preparation**

**Bud break Spray:** For control of alder, susceptible broadleaf weeds, and susceptible woody plants before planting forest seedlings, apply up to 1.3 gallons per acre in a minimum of 10 gallons spray mixture per acre. Apply as an oil spray (see "Mixing Instructions") after alder buds break, but before foliage is 1/4 full size. A water spray including 2 to 4 quarts per acre of diesel oil, fuel oil, stove oil, or crop oil concentrate may also be used.

**Annual, Biennial, Perennial Broadleaf Weeds And General Brush Control:**

**Foliage Spray:** To control seedlings and susceptible woody plants before planting forest, apply up to 1.3 gallons of HM-0339A per acre in a minimum of 10 gallons spray mixture per acre. If desired, apply as a water spray including up to 1 quart of diesel oil,

fuel oil, stove oil, or crop oil concentrate per gallon of water (see "Mixing Instructions"). For best results, apply after alder foliage has reached full size.

**Conifer Release:** To control alder, susceptible broadleaf weeds, and susceptible woody plants in young conifer stands, apply up to 1 gallon per acre in a minimum of 10 gallons spray mixture per acre. This spring foliage treatment should be applied as a water spray when 3/4 of the brush foliage has full size leaves and before new conifer growth reaches 2 inches in length. Such stages usually occur between early May and mid-June, but application timing should be based on growth stages of brush and conifers. Application may cause leader deformation and other conifer injury, but trees should overcome it during the next growing season.

To control tanoak, madrone, ceanothus, canyon live oak, and manzanita, and to release Douglas fir, hemlock, Sitka spruce or grand fir, apply up to 1.5 gallons per acre in a minimum of 10 gallons spray mixture per acre. This spring foliage treatment should be applied as a water spray including, if desired, up to 1 quart of diesel oil, fuel oil, stove oil, or crop oil concentrate per gallon of water (see "Mixing Instructions"). Make application before new growth on Douglas fir is 2 inches long. To release ponderosa pine from the same species, treat before new pine growth begins in the spring. Addition of oil or oil concentrate may cause unacceptable injury to pines. For dormant applications in late winter or early spring for control of susceptible woody species such as alder, willow, poplars, cherry, vine maple, ceanothus, tanoak, madrone, and manzanita, apply up to 1.0 gallons per acre in a minimum of 10 gallons spray mixture per acre. This dormant treatment should be applied in diesel oil, fuel oil, stove oil, or other suitable diluent such as water plus crop oil concentrate (see "Mixing Instructions"). Do not use in plantations where pine and larch are among the desired crop species.

To control hazel brush in the Lake states, apply up to .75 gallon per acre in a minimum of 10 gallons spray mixture per acre. Apply as a water spray when new shoot growth of hazel is complete (usually mid-July).

After conifer species such as white pine, ponderosa pine, jack pine, red pine, black spruce, white spruce, red spruce, and balsam fir cease growth and harden off and brush is still actively growing in late summer, apply up to 1.0 gallons per acre in a minimum of 10 gallons spray mixture per acre. Apply as a water spray to control certain competing hardwoods such as alder, aspen, birch, hazel and willow. However, if possible injury cannot be tolerated, do not use since this treatment may cause conifer injury.

**Forest Roadsides:** To control susceptible broadleaf weeds and woody plants on forest roadsides, apply 2.75 – 8 pints per acre in a minimum of 10 gallons spray mixture per acre. Apply as a water spray and, if desired, include up to 3 quarts per acre of diesel oil, fuel oil, stove oil, or crop oil concentrate (see "Mixing Instructions"). Apply when sufficient foliage is present for absorption.

**Established Conifers (including Christmas trees):**

**Directed Spray or Spot Spray:** To control susceptible broadleaf weeds, mix up to .75 gallon per 100 gallons of water and apply to emerged weeds in the spring with ground equipment. Avoid contacting conifer foliage with spray or drift as injury may result. For brush, mix 1.5 gallons per 100 gallons of water. Thoroughly spray brush in full foliage, but avoid contacting conifer foliage with spray or drift. Do not apply more than the equivalent of 1.5 gallons per acre.

**Over-the-Top Broadcast Application:** To control susceptible broadleaf weeds, apply 2.75 pints per acre in a minimum of 10 gallons spray mixture per acre. To decrease the potential for injury to firs, apply only before bud break in the spring and/or after complete bud set and hardening in the late summer or fall. Avoid treatment during the year of intended harvest.

**TREE AND BRUSH CONTROL (i.e., alder, ash, aspen, birch, black gum, cherry, elm, oak, sweet gum, tulip poplar, willow, and others)**

**Basal Spray Treatment:** Mix 1.5 – 2.66 gallons of HM-0339 per 100 gallons of diluent (may contain oil). Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root collar at the ground line. Also wetting stems with HM-0339A mixture may aid control.

**Cut Surface Stumps:** Mix 1.5-2.66 gallons of HM-0339 per 100 gallons of diluent (may contain oil). Apply as soon as possible after cutting trees. Thoroughly soak the entire stump with product mixture. Also treat exposed roots and bark.

**Frill:** Mix 1.5 – 2.66 gallons of **HM-0339** per 100 gallons of diluent (may contain oil). Make frills with an axe or other tool that can cut overlapping v-shaped notches through the bark in a continuous ring around the base of the tree. Treat freshly cut frills with as much **HM-0339** mixture as they will hold.

**Injection:** Make injections as near to the root collar as possible, using one injection per inch of trunk dbh (4 ½ feet). For resistant species such as hickory. Injections should overlap. For best results, injections should be made during the growing season (May 15<sup>th</sup> through October 15<sup>th</sup> in many areas). The injection bit must penetrate the bark. Apply 1.5-2.5 ml of **HM-0339** per injection site.

### NON-CROPLAND

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

For the control of many broadleaf weeds and small woody plants, applications may be as broadcast sprays, small areas or spot treatments. Regardless of the method of application, use adequate spray volume for full coverage of weeds. Preferred application timing is in the early spring when sufficient weeds have emerged, and are still small and actively growing and before weeds are too mature.

Summer applications to older, drought-stressed weeds are less effective. However, weeds and small woody plants are more susceptible again in the fall when cooler, wetter conditions support active growth before a killing frost.

**Postemergence Control of Annual and Perennial Weeds:** Apply 2.5 – 5.25 pints of **HM-0339** to emerged weeds. For best results treat when weeds are young and actively growing.

**Postemergence Control of Woody Plants:** Apply 2.5 pints – 1.3 gallons of **HM-0339** to trees and brush when foliage is fully expanded and plants are actively growing.

**Restrictions And Limitations For Use In Non-Cropland:**

- Maximum seasonal rate: Apply no more than 4.0 acid equivalent per acre use season
  - Use 2 or More gallons of spray solution per acre
  - When multiple applications of up to 2.0 lbs acid equivalent per acre are utilized to reach the maximum seasonal use rate, do not make a repeat application within 30 days of the previous application.
1. **Woody Plants:** Up to 4 lbs acid equivalent per acre of **HM-0339A** may be applied in a single application to rights-of-way, including electrical power lines, communication line, pipelines, highways and railroads that intersect wooded areas or strands of trees, bruchs and woody plants. Usage under this section is not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.
  2. **High volume and low volume applications:**
    - a. **For high spray volumes of 100-400 gallons per acre:**  
For broadcast applications, the maximum seasonal rate is 4.0 pounds of acid equivalent per acre per 12 months. Use 4.0 lbs acid equivalent of **HM-0339A** in 100-400 gallons of water.

The total spray volume per acre should be based upon the size and density of the woody plants and the

spray equipment

28/35

The maximum spray concentration is 0.48% acid equivalent on a weight to weight basis at the minimum spray volume of 100 gpa. See Table 1. below for the relationship between the spray volume and the maximum application rate.

For the spray preparation of all end use products, registrants will convert the amounts expressed as pounds of 2,4-d acid equivalent in Table 1. to volumes of formulated product and prepare their dilution tables for high volume applications ( 100-400 gpa)

3. For low spray volumes of 10-100 gallons per acre

For broadcast applications, the maximum seasonal rate is 4.0 pounds acid equivalent of HM-0339A Per acre per 12 months. Use 4.0 pounds of acid equivalent of HM-0339A in 10-100 gallons of water.

Apply HM-0339A in a minimum spray volume of 10 gallons per acre. Larger plants will require the higher spray volumes ( 50 -100 gallons per acre) to obtain sufficient coverage.

The maximum spray concentration is 4.8% 2,4-D acid equivalent on a weight to weight basis at the minimum spray volume of 10 gpa. See Table 1. below for the relationship between the spray volume and the maximum application rate.

Table 1. Amounts ( Pounds) of 2,4-D acid equivalents needed to prepare the spray concentrations of 0.12% to 4.8% wt/wt with spray volumes of 10-400 gallons per acre.

SPRAY VOLUME (Gallons Water per Acre)	(POUNDS) 2,4-D ACID EQUIVALENT NEEDED FOR THESE SPRAY CONCENTRATIONS						
	0.12%	0.16%	0.24%	0.48%	0.96%	2.40%	4.80%
10	0.10	0.13	0.20	0.40	0.80	2.00	4.00
20	0.20	0.27	0.40	0.80	1.60	4.00	
50	0.50	0.67	1.00	2.00	4.00		
100	1.00	1.33	2.00	4.00			
200	2.00	2.67	4.00				
300	3.00	4.00					
400	4.00						

**AQUATIC WEED CONTROL**  
(irrigation ditchbank application)

WEEDS AND BRUSH ON IRRIGATION CANAL DITCHBANKS	RATE/ACRE	DIRECTIONS/TIMING

29/35

Postemergence	1.25 -5.25	For best results, treat when weeds are young and actively growing
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**Restrictions and Limitations For Use Irrigation Canal Ditchbanks**

- **Maximum seasonal rate:** Apply no more than 4.0 lbs acid equivalent per acre per use season
- **Maximum applications rate:** Apply no more than 2.0 lbs acid equivalent per acre per application
- **Maximum Applications per season:** Apply no more than two treatments per season.
- **Do not make a broadcast application within 30 days of previous broadcast application. Spot treatments are permitted. Use 2 or more gallons spray solution per acre.**
- **Do not use on small canals with a flow rate less than 10 cubic feet per second( CFS) where water will be use for drinking purposes. CFS may be estimated by using the formula below. The approximate velocity needed for the calculation can be determined by observing the length of time that it takes a floating object to travel a defined distance. Divide the distance ( ft) by the time ( sec) to estimate velocity (ft. per sec). Repeat three times and use the average to calculate the CFS**

$$\text{Average Width (ft) x Average depth ( ft) x Average velocity ( ft. per sec) = CFS}$$

- **For Ditchbank Weeds:** Do not spray cross-stream to opposite bank. Do not allow boom spay to be directed into the water
- **Notice to Applicators:** Before application, coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.
- **Ground or Surface Application:** Do not apply when wind speeds are at or above 10 mph.
- **Air Application:** Do not apply when wind speeds are at or above 5 mph. The restrictions do not apply to subsurface applications used in weed control programs. Applications can be made by Fixed winged or Helicopter equipment.

**Note:** The maximum use rate per acre per application is 2.0 lbs acid equivalent. The maximum use rate per season is 4.0 lbs acid equivalent per acre. Apply no more than 2 treatments per season. Always allow at least 30 days in-between applications

Use power sprayers operated with a boom or spray gun mounted on a boat, tractor, or truck. Thorough wetting of foliage is essential for maximum control. Use 100 to 400 GPA of spray mixture. Special precautions such as the use of low pressure, large nozzles and thickening agents should be taken to avoid spray drift in areas of sensitive crops. For DIRECTASPRAY™ operation, use with 1 pint of drift control agent in 50 to 100 gallons of water. For other applications, follow the drift control agent label for mixing directions.

**AQUATIC WEED CONTROL**

(surface application for floating and emergent weeds)

**FOR AQUATIC WEEDS IN LAKES, PONDS, RESERVOIRS, MARSHES, BAYOUS, DRAINAGE DITCHES, CANALS, AND RIVERS AND STREAMS THAT ARE QUIESCENT OR SLOW MOVING INCLUDING PROGRAMS OF THE TENNESSEE VALLEY AUTHORITY:** Use 5.5 Pints – 1.25gallons of **HM-0339** per acre foot. For best results, apply in spring or early summer. A second treatment may be needed when weeds show signs of recovery, but no later than September in most areas. Spray to wet foliage thoroughly. Application should be made when leaves are fully developed above water line and plants are actively growing. Apply to attain a concentration of 2 to 4 ppm.

**RESTRICTIONS AND LIMITATIONS FOR SURFACE APPLICATIONS TO EMERGENT AQUATIC WEEDS:**

Do not exceed 4.0 lbs acid equivalent per surface acre per application.  
Do not make a broadcast application within 21 days of previous broadcast application. Spot treatments are permitted.

Fish breath dissolved oxygen in the water and decaying weeds also use oxygen. When treating continuous, dense weed masses, it may be appropriate to treat only part of the infestation at a time. For example, apply the product in lanes separated by untreated strips that can be treated after vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. Waters having limited and less dense weed infestations may not require partial treatments. Other local factors such as water exchange and sediment load can also influence the dissolved oxygen level.

Coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for aquatic applications.

**Water Use:**

**1. Water for irrigation or sprays:**

- A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites at anytime after the 2,4-D aquatic application.
- B. Due to potential phytotoxicity considerations, the following restrictions are applicable: If treated water is intended to be used to irrigate or mix sprays for plants grown in commercial nurseries and greenhouses; and other plants or crops that are not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:
  - i. A setback distance from functional water intake(s) of  $\geq 600$  ft. was used for the application, or,
  - ii. A waiting period of 7 days from the time of application has elapsed, or,
  - iii. An approved assay indicates that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. Wait at least 3 days after application before initial sampling at water intake.

**2. Drinking water (potable water):**

- A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

- B. For floating and emergent weed applications, the drinking water setback distance from functioning Potable  $\geq 600$  ft.
- C. If no setback distance of  $\geq 600$  ft. is used for the application, applicators or the authorizing organization must provide a drinking water notification prior to a 2, 4-D application to the party responsible for a public water supply or to individual private water users. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of a water use restrictions when this product is applied to potable water.

The following is an example of an example of notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

Example: Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting must include the day and time of application. Posting may be removed if analysis of a sample collected at the intake 3 or more days following application shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 7 days following application, whichever occurs first.

**Text of notification:** Wait 7 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested at least 3 days after application and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays).

Application Date: \_\_\_\_\_ Time: \_\_\_\_\_

D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

i. A setback distance from functional water intake(s) of  $\geq 600$  ft. was used for the application, or,

ii. A waiting period of at least 7 days from the time of application has elapsed, or,

iii. An approved assay indicates that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than 3 days after 2,4-D application. Analysis of samples must be completed by a laboratory that is certified under the Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515, 555, other methods for 2,4-D as may be listed in Title 40CFR, Part 141.24, or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

E. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

**3. Swimming (2, 4-D butoxyethanol ester only):**

A. Do not swim in treated water for a minimum of 24 hours after application.

B. Users must provide the following notification prior to performing a 2, 4-D BEE application. Notification to the party responsible for the public swimming area or to individual private users must be done in a manner to assure that the party is aware of the swimming restrictions when this product is applied to water. The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit. Example: Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points.

Text of Notification: Do not swim in treated water for a minimum of 24 hours after application. Application Date:

\_\_\_\_\_ Time: \_\_\_\_\_

4. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

**AQUATIC WEED CONTROL**  
**(Surface application or subsurface injection for submersed weeds)**

**Aquatic Sites With Submersed Weeds:** (Aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, rivers, and streams that are quiescent or slow moving)

**Directions/Timing:** For best results, apply in spring or early summer. A second treatment may be needed when weeds show signs of recovery but not later than September in most areas.

**Amount to Apply to Attain Concentration of 2 to 4 ppm.**

Surface Area	Average Depth	2,4-D Acid
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		Equivalent to Apply
1 acre	1 ft.	5.4 to 10.8 lbs
	2 ft.	10.8 to 21.6 lbs
	3 ft.	16.2 to 32.4 lbs
	4 ft.	21.6 to 43.2 lbs
	5 ft.	27 to 54 lbs

32/35

**WATER HYACINTH (*Eichornia crassipe*):** For control of actively growing plants with surface and air applications, use 2.75 – 5.5 pints per acre. **Spray the weed mass only.** Use 5.5 pints when plants are matured or when the weed mass is dense. Repeat as necessary to kill regrowth and hyacinth plants missed in the previous application.

**WATER MILFOIL (*Myriophyllum spicatum*):** For Eurasian Water Milfoil **HM-0339** will control Water Milfoil with surface, subsurface and air applications.

To control water milfoil when less than 5 gallons of concentrate per acre is recommended, dilute the concentrate with water to apply a minimum of 5 gallons of spray mix per acre. Do not treat within ½ mile of potable water intakes. Shoreline areas should be treated by sub-surface injection applied by boat to avoid aerial drift. Do not apply when weather conditions favor drift from target area.

**Restrictions and Limitations for Aquatic Use:**

Do not exceed 10.8 Lbs acid equivalent per acre foot. Do not reapply less than 10 days after prior application. Do not apply within 1,500 feet of active potable water intakes.

Fish breathe oxygen in the water and a water-oxygen ratio must be maintained. Decaying weeds use up oxygen, but during the period when applications should be made, the weed mass is fairly sparse and the weed decomposition rate is slow enough that the water-oxygen ratio is not disturbed by treating the entire area at one time. If treatments must be applied later in the season when the weed mass is dense and repeat treatments are needed, apply product in lanes, leaving buffer strips which can then be treated when vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment.

Do not apply within 10 days of previous application.

When treating moving bodies of water, applications must be made while traveling upstream to prevent concentration of 2, 4-D downstream from the application.

Coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.

**Water Use:**

**1. Water for irrigation or sprays:**

A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites at anytime after the 2,4-D aquatic application.

B. Due to potential phytotoxicity and/or residue considerations, the following restrictions are applicable: If treated water is intended to be used to irrigate or mix sprays for unlabeled crops, non-crop areas or other plants not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:



- 33 / 35
- i. A setback distance described in the Drinking Water Setback Table was used for the application, or,
  - ii. A waiting period of 21 days from the time of application has elapsed, or,
  - iii. An approved assay indicates that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. See Table 3 for the waiting period after application but before taking the initial sampling at water intake.

## 2. Drinking water (potable water):

A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits. The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

B. For submersed weed applications, the drinking water setback distances from functioning potable water intakes are provided in Table 2 Drinking Water Setback Distance (below).

C. If no setback distance from the Drinking Water Setback Table (Table 2) is to be used for the application, applicators or the authorizing organization must provide a drinking water notification and an advisory to shut off all potable water intakes prior to a 2,4-D application. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of the water use restrictions when this product is applied to potable water. The following is an example of an example of notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

### Example:

Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting should include the day and time of application. Posting may be removed if analysis of a sample collected at the intake no sooner than stated in Table 3 (below) shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 21 days following application, whichever occurs first.

**Text of notification:** Wait 21 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested no sooner than (insert days from Table 3) and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays). Application Date: \_\_\_\_\_ Time: \_\_\_\_\_

D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

- i. A setback distance described in the Drinking Water Setback Distance Table was used for the application, or,
- ii. A waiting period of at least 21 days from the time of application has elapsed, or,
- iii. An approved assay indicates that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than stated in Table 3. Analysis of samples must be completed by a laboratory that is certified under The Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515, 555, other methods for 2,4-D as may be listed in Title 40CFR, Part 141.24, or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

34/  
35

E. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

**3. Swimming (2,4-D butoxyethanol ester only):**

A. Do not swim in treated water for a minimum of 24 hours after application.

B. Users must provide the following notification prior to performing a 2,4-D BEE application. Notification to the party responsible for the public swimming area or to individual private users must be done in a manner to assure that the party is aware of the swimming restrictions when this product is applied to water. The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

**Example:**

Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points.

**Text of Notification:** Do not swim in treated water for a minimum of 24 hours after application. Application

Date: \_\_\_\_\_ Time: \_\_\_\_\_

4. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

**Table 2 Drinking Water Setback Distance For Submersed Weed Applications**

Application Rate and Minimum Setback Distance (feet)				
from functioning potable water intake				
1 ppm*	2 ppm	* 3 ppm*	4 ppm	
* 600	1200	1800	2400	

\* ppm acid equivalent target water concentration

**Table 3 Sampling for Drinking Water Analysis After 2,4-D Application For Submersed Weed Applications**

Minimum Days After Application Before Initial Water Sampling				
at the functioning potable water intake				
1 ppm*	2 ppm*	3 ppm*	4 ppm*	
5	10	10	14	

\* ppm acid equivalent target water concentration

• For EPA chemical numbers, reentry, application method and application equipment: See Aquatic Weed Control (ditchbank application).

35/35

**CONDITIONS OF SALE - LIMITED WARRANTY  
AND LIMITATIONS OF LIABILITY AND REMEDIES**

Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind; express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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