

71368-66

12.7.2006

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

December 7, 2006

Theodore D. Head
Product Registration Manager
Nufarm Americas, Inc.
1333 Burr Ridge Pkwy., Suite 125A
Burr Ridge, IL 60521

SUBJECT: Application for Pesticide Notification –OR Statements
Garrison™ Herbicide
EPA Reg. No. 71368-66
Application Dated November 27, 2006

Dear Mr. Head:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above product. The Registration Division (RD) has conducted a preliminary screen of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please me directly at 703-305-6249 or Terri Stowe of my staff at 703-305-6117.

Sincerely,

A handwritten signature in cursive script that reads "Rachel C. Holloman".

Handwritten initials in cursive script that appear to be "for".

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs



Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060

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 United States Environmental Protection Agency Washington, DC 20460	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"><input type="checkbox"/></td> <td style="width:30%;">Registration</td> <td rowspan="3" style="width:40%; vertical-align: top;">OPP Identifier Number</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Amendment</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Other</td> </tr> </table>	<input type="checkbox"/>	Registration	OPP Identifier Number	<input type="checkbox"/>	Amendment	<input checked="" type="checkbox"/>	Other
<input type="checkbox"/>	Registration	OPP Identifier Number						
<input type="checkbox"/>	Amendment							
<input checked="" type="checkbox"/>	Other							

Application for Pesticide - Section I

1. Company/Product Number 71368-66	2. EPA Product Manager J. Miller	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Garrison Herbicide	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas Inc 1333 Burr Ridge Parkway, Suite 125A Burr Ridge, IL 60521 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(ii), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Other - Explain below.
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Explanation: Use additional page(s) if necessary. (For section I and Section II.)

State requested additions to the label

NOTIFICATION
 DEC 07 2006

Section - III

1. Material This Product Will Be Packaged In:					
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt No. per container		
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 2.5, 5, 30,55 gallons - totes		5. Location of Label Directions <input checked="" type="checkbox"/>	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input checked="" type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Theodore Head	Title Registration Manager	Telephone No. (Include Area Code) 708-754-3330
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		8. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager	
4. Typed Name Theodore Head	5. Date 11-27-06	



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Nufarm Americas, Inc.
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527
Telephone: (630) 455.2000 Facsimile: (630) 455.2001
www.us.nufarm.com

November 27, 2006

NOTIFICATION

DEC 07 2006

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Attention: Miller, PM 23
Herbicide Branch

Subject: Minor label changes for Garrison Herbicide EPA Reg. No. 71368-66

Dear Joanne:

The state Oregon has requested that we add some minor state language to this label.

Oregon has requested that we add, " Use of this product in Oregon is limited to the sites stated on this label which are agriculture, forest, right-of-way, golf course or cemetery sites."

Accordingly we have made the corrections as indicated by the underlined text on the attached label.

Should you have any questions or the need for additional information please do not hesitate to contact me at 630-455-2000 or via e-mail ted.head@us.nufarm.com.

Best regards,

A handwritten signature in black ink, appearing to read 'Ted Head', written over the printed name.

Theodore D. Head
Product Registration Manager

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NOTIFICATION
DEC 07 2006

GARRISON™ HERBICIDE

For selective post-emergence control of broadleaf weeds in canola, Christmas tree plantations, tree plantations, fallow cropland, field corn, garden beet, grasses grown for seed, mint, popcorn, spinach, stone fruits, sugarbeet, sweet corn, turnip, barley, oats and wheat not underseeded with a legume, conservation reserve program (CRP) acres, non-cropland, and rangeland and permanent grass pastures

ACTIVE INGREDIENT:

clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt 40.9%

OTHER INGREDIENTS: 59.1%

TOTAL 100.0%

Acid Equivalent:

clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid 31%, 3 lbs./gal.

Use of this product in Oregon is limited to the sites stated on this label which are agriculture, forest, right-of-way, golf course or cemetery sites.

**KEEP OUT OF REACH OF CHILDREN
CAUTION – PRECAUCION**

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

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 71368-66
EPA EST. NO. 228-IL-1

MANUFACTURED BY
NUFARM INC.
BURR RIDGE, IL 60527



NET CONTENTS

071368-00066.20061120. OR

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION - PRECAUCION**

Avoid contact with eyes, skin, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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.

USER SAFETY RECOMMENDATIONS

Users Should:

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

FIRST AID

**IF ON SKIN
OR CLOTHING**

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

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

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

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read the "Conditions of Sale and Limitation of Warranty and Liability" elsewhere on this label. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call CHEMTREC (800) 424-9300. If you wish to obtain additional product information, visit our web site at www.nufarm.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Not for Sale, Use or Distribution in Nassau and Suffolk Counties in New York State.

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 12 hours.

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

- Coveralls,
- Chemical-resistant gloves made of any waterproof material
- 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 pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: For applications to fallow cropland, rangeland, pasture, and non-crop areas, do not enter treated areas until sprays have dried. For early entry to treated areas, wear eye protection, chemical-resistant gloves made of any waterproof material, long-sleeved shirt, long pants, shoes and socks.

GENERAL INFORMATION

This product is recommended for selective, post-emergence control of broadleaf weeds in barley, oats and wheat not underseeded with a legume, canola, Christmas tree plantations, fallow cropland, field corn, garden beet, grasses grown for seed, mint (spearmint and peppermint), popcorn, spinach, stone fruits, sugarbeet, sweet corn, turnip, cottonwood/poplar and eucalyptus tree plantations, rangeland and permanent grass pastures, conservation reserve program (CRP) acres, and non-cropland areas including fence rows, around farm buildings, and equipment pathways.

Precautions and Restrictions

- In California and New York, the maximum application rate for this product is 2/3 pint per acre per growing season. Do not exceed a cumulative amount of 2/3 pint [0.25 lb acid equivalent (a.e.)] of clopyralid per acre per crop year.
- Not for Sale, Use or Distribution in Nassau and Suffolk Counties in New York State.
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- This product may be applied by aircraft on the following crops: spinach, canola (rapeseed), and crambe. Do not apply this product by aircraft to other labeled crops unless otherwise permitted by supplemental labeling or product bulletins.
- Do not use in greenhouses.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Re-treatment is allowed, but do not apply more than the maximum allowable rate per crop growing season. An application to fallow cropland preceding or following an application to dryland small grains (Wheat, barley or oats) is allowed, but is not allowed preceding or following an application to irrigated small grains.
- **Do not transfer livestock** from treated grazing areas (or feeding of treated hay) to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture (or feeding of treated hay). If livestock are transferred within less than 7 days of grazing untreated pasture or eating untreated hay, urine and manure may contain enough clopyralid to cause injury to sensitive broadleaf plants.
- **Field Bioassay Instructions:** In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop. The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the intended rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination) chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the test rotational crop; plant only a labeled crop or crop listed in the table below for which the rotational interval has clearly been met.

Crop Rotation Intervals

Residues of this product in treated plant tissues, including the treated crop or weeds, which have not completely decayed may affect succeeding susceptible crops.

Crop Rotation Intervals for All States Except California, Idaho, Nevada, Oregon, Utah and Washington

Note: Numbers in parenthesis and ¹ refer to footnotes following tables.

Rotation Crops (1)	Rotation interval [†] (Soils greater than 2% organic matter AND rainfall more than 15 inches during 12 months following application)	Rotation interval [†] (Soils less than 2% organic matter AND rainfall less than 15 inches during 12 months following application)
barley, canola (rapeseed), cole crops (<i>Brassica</i> species), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugarbeet, sweet corn, turnip wheat	Anytime	Anytime
alfalfa, asparagus, grain sorghum, mint, onions, safflower, strawberry	10.5 months	10.5 months
dry beans, soybean, sunflower	10.5 months	18 months (2)
lentils, peas, potatoes (including potatoes grown for seed), and broadleaf crops grown for seed (excluding <i>Brassica</i> species)	18 months (2)	18 months (2, 3)

1. A field bioassay is recommended prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 10.5 months following application.
2. An 18-month crop rotation is recommended due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 10.5 month rotation interval. Note: For these crops, a minimum 10.5 month rotation interval must be observed to avoid illegal residues in the harvested crop.
3. A field bioassay is also recommended prior to planting these sensitive crops. See instructions above.

Crop Rotation Intervals for California, Idaho, Nevada, Oregon, Utah and Washington Only

Rotation Crops (1)	Rotation interval [†] (Areas receiving greater than 18 inches of rainfall – not including irrigation)	Rotation interval [†] (Areas receiving less than 18 inches of rainfall – not including irrigation)
barley, canola (rapeseed), cole crops (includes <i>Brassica</i> species grown for seed), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugarbeet, sweet corn, turnip, wheat	Anytime	Anytime
asparagus, grain sorghum, mint, onions, strawberry	12 months	12 months
alfalfa, dry beans, soybean, sunflower	12 months	18 months (2, 3)
broadleaf crops grown for seed (excluding <i>Bassica</i> species), carrot (2), celery (2), cotton (2), lentils, lettuce (2), melons (2), peas, potatoes (including potatoes grown for seed) safflower and tomato (2)	18 months (2)	18 months (2, 3)

1. A field bioassay is recommended prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 12 months following application.
2. An 18-month crop rotation is recommended due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 12 month rotation interval. Note: For these crops, a minimum 12 month rotation interval must be observed to avoid illegal residues in the harvested crop.
3. Crop injury and/or yield loss may occur up to 4 years after application. A field bioassay is also recommended prior to planting these sensitive crops. See instructions above.

[†]NOTE: The above intervals are based on average annual precipitation, regardless of irrigation practices. Observance of recommended crop rotation intervals should result in adequate safety to rotational crops. However, this product is dissipated in the soil by microbial activity and the rate of microbial activity is dependent on several interrelating factors including soil moisture, temperature and organic matter. Therefore, accurate prediction of rotational crop safety is not possible. In areas of low organic matter (<2.0%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by burning or removal of plant residues, supplemental fall irrigation and deep moldboard plowing prior to planting the sensitive crop.

AVOIDING INJURY TO NON-TARGET PLANTS

This product can affect susceptible broadleaf plants directly through foliage and indirectly by root uptake from treated soil. Therefore, do not apply this product directly to, or allow spray drift to come in contact with, vegetables, flowers, tomatoes, potatoes, beans, lentils, peas, alfalfa, sunflowers, soybeans, safflower, or other desirable broadleaf crops or ornamental plants or soil where sensitive crops will be planted the same season. (See guidance on Crop Rotation Restrictions.)

Residues in Plants or Manure: Do not use plant residues, including hay or straw from treated areas, or manure or bedding straw from animals that have grazed or consumed forage from treated areas, for composting or mulching, where susceptible plants may be grown the following season. Do not spread manure from animals that have grazed or consumed forage or hay from treated areas on land used for growing susceptible broadleaf crops. To promote herbicidal decomposition, plant residues should be evenly incorporated or burned. Breakdown of clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

Avoid Movement of Treated Soil

Avoid conditions under which soil from treated areas may be moved or blown to areas containing susceptible plants. Wind-blown dust containing clopyralid may produce visible symptoms, such as epinasty (downward curving or twisting of leaf petioles or stems) when deposited on susceptible plants; however, serious injury is unlikely. To minimize potential movement of clopyralid on wind-blown dust, avoid treatment of powdery dry or light sandy soils until soil is settled by rainfall or irrigation or irrigate shortly after application.

Avoid Spray Drift

Avoid spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible crops during active growth or dormant periods. Use coarse sprays to minimize drift. To aid in further reducing drift, a drift control or deposition agent suitable for agricultural use may be used with this product. If used, follow all use recommendations and precautions on the product label.

Ground Application: With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible, by applying 10 gallons or more of spray per acre, by keeping the operating spray pressures at the manufacturer's minimum recommended pressures for the specified nozzle type used (low pressure nozzles are available from spray equipment manufacturers), and by spraying when the wind velocity is low (follow state regulations). Avoid application under completely calm conditions which may be conducive to air inversion. In hand-gun applications, select the minimum pressure required to obtain adequate plant coverage without forming a mist. Do not apply with a mist blower.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

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

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory Information:**

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

Controlling Droplet Size:

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

Pressure – Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation – Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length – For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

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

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

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

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

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

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

Sprayer Clean-Out

To avoid injury to desirable plants, equipment used to apply this product should be thoroughly cleaned before re-using to apply any other chemicals.

1. Rinse and flush application equipment thoroughly at least 3 times with water after use. Dispose of rinse water by application to treatment area or in non-cropland area away from water supplies.
2. During the second rinse, add 1 qt of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Remove nozzles and screens and clean separately.

MIXING INSTRUCTIONS

1. Add 3/4 of the required spray volume to the spray tank and start agitation.
2. Add the required amount of this product.
3. Add any surfactants, adjuvants or drift control agents according to manufacturer's label.
4. Agitate during final filling of the spray tank and maintain sufficient agitation during application to ensure uniformity of the spray mixture.

Note: Allow time for thorough mixing of each spray ingredient before adding the next. If allowed to stand after mixing agitate spray mixture before use.

Tank Mixing

This product may be applied in tank mix combination with labeled rates of other products provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product.

Tank Mixing-Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed recommended application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.
- For products packaged, in water soluble packaging, do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been adequately cleaned. (See instructions for Sprayer Clean-Out.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in the required order and their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

APPLICATION DIRECTIONS

Application Timing

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at, or following application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds that have emerged at the time of application will be affected. If foliage is wet at the time of application, control may be decreased. Applications of this product are rainfast within 6 hours after application.

Application Rates

Generally, application rates at the lower end of the recommended rate range will be satisfactory for young, succulent growth of susceptible weed species. For less sensitive species, perennials, and under conditions where control is more difficult (plant stress conditions such as drought or extreme temperatures, dense weed stands and/or larger weeds), the higher rates within the rate range

will be needed. Weeds in fallow land or other areas where competition from crops is not present will generally require higher rates for control or suppression.

Crop Use Site	Rate Range (pt/acre)	Maximum Use Rate† (pt/acre/growing season)
spinach	1/6 to 1/3	1/2
barley, oats, wheat	1/4 to 1/3	1/3
Christmas tree and cottonwood/poplar and eucalyptus tree plantations, fallow cropland, field corn, grasses grown for seed, sugar beet	1/4 to 2/3	2/3
garden beet, canola (rapeseed), crambe	1/4 to 1/2	1/2
mint, stone fruits, popcorn, sweet corn	1/3 to 2/3	2/3
turnip	1/3 to 1/2	1/2
permanent grasses on CRP land, noncropland, non-leguminous trees, rangeland and permanent grass pastures	1/3 to 1-1/3	1-1/3

†Do not exceed maximum rate in rate range per growing season.

Use of Adjuvants

Addition of surfactants, crop oils, or other adjuvants is not usually necessary when using this product. Adding a surfactant to the spray mixture may increase effectiveness on weeds but may reduce selectivity to the crop, particularly under conditions of plant stress. If an adjuvant is added to the spray solution, follow all manufacturer use guidelines.

Spray Coverage

Use sufficient spray Volume to provide thorough coverage and a uniform spray pattern. Do not broadcast apply in less than 2 gallons of total spray volume per acre. For best results and to minimize spray drift, apply in a spray volume of 10 gallons or more per acre. As vegetative canopy and weed density increase, spray volume should be increased to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift, follow precautions under Avoiding Injury to Non-Target Plants.

Spot Treatments

To prevent misapplication, it is recommended that spot treatments be applied only with a calibrated boom or with hand sprayers according to directions provided below.

Hand-Held Sprayers: Hand held sprayers may be used for spot applications. Care should be taken to apply the spray uniformly and at a equivalent to a broadcast application. Application rates in the table are based on an area of 1,000 sq ft. Mix the amount of this product (fl oz or mL) corresponding to the desired broadcast rate in 1 or more gallons of spray. To calculate the amount of this product required for larger areas, multiply the table value (fl oz or mL) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3,500 sq ft, multiply the table value by 3.5 (calc. 3,500 ÷ 1,000 = 3.5). An area of 1,000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

Amount of this product per Gallon of Spray to Equal Specified Broadcast Rate					
1/4 pt/acre	1/3 pt/acre	1/2 pt/acre	2/3 pt/acre	1 pt/acre	1 1/3 pt/acre
1/10 fl oz† (2.7 mL)	1/8 fl oz (3.6 mL)	1/5 fl oz (5.4 mL)	1/4 fl oz (7.3 mL)	3/8 fl oz (11 mL)	0.5 fl oz (15 mL)

†1 fl oz = 29.6 (30 mL)

Use the following table for converting pints to fluid ounces.

Conversion Chart – Pints to Fluid Ounces	
Pints	Fluid Ounces
1/3	5
1/4	4
1/2	8
2/3	11

Band Application

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

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

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast volume} = \text{Band volume}$$

Row width in inches per treated acre per treated acre

BROADLEAF WEEDS CONTROLLED†

Note: Letter in parentheses (-) after listed weed indicates if life cycle is annual (a), biennial (b), or perennial (p).

Artichoke, Jerusalem (p)	Hawkweed, orange (p)	Salsify, meadow (goatsbeard)(b)
Buckwheat, wild (a)	Hawkweed, yellow (p)	Sicklepod (a)
Buffalobur (a)††	Horseweed (a)	Smartweed, green (a)††
Burdock, common (b)	Jimsonweed (a)	Sorrel, red (p)
Chamomile, false (scentless)(a)	Knapweed, diffuse (b)	Sowthistle, annual (a)
Chamomile, mayweed (dogfennel)(a)	Knapweed, Russian (p)††	Sowthistle, perennial (p)††
Clover, black medic (a)	Knapweed, spotted (b)	Starthistle, yellow (a)
Clover, hop (a)	Ladythumb(a)††	Sunflower (a)
Clover, sweet (b)	Lettuce prickly (a)	Seasel, common (b)
Clover, red (p)	Locoweed, Lambert (p)	Thistle, bull (b)
Clover, white (p)	Locoweed, white (p)	Thistle, Canada (p)
Cocklebur, common (a)	Marshelder (a)	Thistle, musk (b)
Coffeeweed (a)	Nightshade, black	Vetch (a)
Cornflower (bachelor button)(a)	Nightshade, Eastern black (a)	Volunteer alfalfa (p) (from seed only)
Dandelion, (p)	Nightshade, cutleaf (a)	Volunteer beans (a)
Dock, curly (p)	Nightshade, hairy (a)	Volunteer lentils (a)
Galinsoga (a)	Oxeye daisy (p)	Volunteer peas (a)
Groundsel, common (b)	Pineappleweed (a)	Wormwood, biennial (a,b)†††
Hawksbeard, narrowleaf (a)	Ragweed, common (a)	
	Ragweed, giant (a)	

† See Guidelines for Control of Specific Weeds for additional information on application timing and application rates.

†† These weeds may only be suppressed. Suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during, and after treatment. For **perennial weeds** such as Russian knapweed and perennial sowthistle, this product will control the top growth and inhibit regrowth during the season of application (season-long control). At higher use rates shown on this label, this product may cause a reduction in shoot regrowth in the season following application; however, plant response may be inconsistent due to inherent variability in shoot regrowth from perennial root systems.

††† Not a proved for use in California.

GUIDELINES FOR CONTROL OF SPECIFIC WEEDS†

Weed Species	Stage of Growth	Rate Range to Control†† (pt/acre)
Clover Cocklebur Jerusalem artichoke Jimsonweed Marshelder other annual and biennial weeds Ragweeds Sunflower Vetch Volunteer soybean	Up to 5 leaf	1/4 to 1/2
Wild buckwheat	1 to 3 leaf stage, but before vining	1/2
Buffalobur Nightshade sp. Smartweeds (suppression)	2 to 4 leaf 2 to 4 leaf 2 to 3 leaf	
Canada thistle Sowthistle (suppression)	Rosette up to bud stage	Degree of infestation: Light to 1/3 Moderate to heavy to 1/2 to 2/3
Knapweeds, spotted/diffuse	Up to bud stage	1/2 to 2/3
Knapweed, Russian†††		2/3 to 1-1/3

† This table is provided as a general reference only. Refer to use directions for specific crop or use site for recommended application rates.

†† Where rate range is provided, use the lower rate for light to moderate infestations under good growing conditions and the higher rate for dense infestations or under less favorable growing conditions such as drought.
 ††† Provides suppression only.

CROP USES

Agricultural Use Requirements for Crops: For the following crop uses, follow PPE and Reentry instructions in the Agricultural Use Requirements section of this label.

BARLEY, OATS AND WHEAT

Application Rate

Apply 1/4 to 1/3 pint per acre of this product when crop is from the 3-leaf stage up to early boot stage of growth. For control of perennial weeds such as Canada thistle, 1/3 pint per acre of this product should be used. Russian knapweed will only be suppressed at this rate.

Specific Use Restrictions

Do not permit lactating dairy animals or meat animals being finished for slaughter to forage or graze treated grain fields within 1 week after treatment. Do not harvest hay from treated grain fields.

Tank Mixtures for Barley, oats and Wheat

This product may be applied in tank mix combination with labeled rates of other products registered for post-emergence application in wheat, barley and oats. See Tank Mixing Precautions under Mixing instructions. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

POST-EMERGENCE BROADLEAF WEED CONTROL IN BRASSICA (COLE) LEAFY VEGETABLES[†]

For Use and Distribution Only in the States of Arizona, Georgia, New York, North Carolina, South Carolina, Texas and Wisconsin

(Not for Sale, Use or Distribution in Nassau and Suffolk Counties in the State of New York)

[†] *Brassica (Cole) Leafy Vegetables*, including: Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Cauliflower, Cavalo Broccolo, Chinese (Bok Choy) Cabbage, Chinese Broccoli, Chinese Mustard Cabbage, Chinese (Napa) Cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens

Target Broadleaf Weeds	Application Rate (pint/acre)	Use Restrictions
Buckwheat, wild Chamomile Clover Cocklebur, common Dandelion Galinsoga Lettuce, prickly Pineappleweed Ragweed Smartweed	1/4 to 1/2 (0.09375 to 0.187 lb ai/acre)	<ul style="list-style-type: none"> • Make 1 to 2 broadcast applications per crop per year, not to exceed a total of 1/2 pint per acre (0.187 lb ai/acre) per year. • Preharvest interval: Do not apply within 30 days of harvest. • In New York and California, the maximum application rate for this product is 2/3 pint per acre per growing season. Do not exceed the cumulative amount of 2/3 pint [0.25 lb acid equivalent (a.e.)] of clopyralid per acre per crop year.
Sowthistle annual [†] Thistle, Canada [†]	1/3 to 1/2 (0.125 to 0.187 lb ai/acre)	

[†]Suppression only.

Broadcast Application Rates: Apply uniformly with ground equipment in a minimum of 10 to 40 gallons of water per acre. For suppression of Canada thistle, apply after the majority of basal leaves have emerged but prior to bud stage and at least 30 days prior to harvest.

Tank Mixtures: This product may be tank mixed with other herbicides labeled for use on mustard greens. Follow the Directions for Use of the labeling for any tank mix partner used in tank mixture with this product.

Specific Use Restrictions:

- Do not permit lactating dairy animals or meat animals being finished for slaughter to forage or graze treated grain fields within 1 week after treatment.
- Do not harvest hay from treated grain fields.

**CANOLA (RAPESEED) AND CRAMBE
(Not registered for use in California)**

Application Timing

Apply to canola or crambe in the 2 to 6 leaf stage of crop growth. Apply uniformly with ground equipment in 10 to 20 gallons of water

per acre or in a minimum of 5 gallons per acre by air. For control of Canada thistle, apply this product after the majority of basal leaves have emerged but prior to bud stage. Use the higher rate in the rate range for heavy infestations or when greater residual control is desired.

Target Broadleaf Weeds and Application Rates

Target Broadleaf Weeds	Application Rate (pint/acre)
Thistle, Canada	1/3 for top growth suppression
Thistle, Canada Sowthistle, perennial	1/2 for season long control
Buckwheat, wild Chamomile, false Chamomile, mayweed Dandelion Dock, curly Nightshade species Smartweed, green Sowthistle, annual Sunflower Wormwood, biennial	1/4 to 1/2

Specific Use Precautions:

- **Preharvest Interval:** Do not apply within 50 days of harvest
- Make 1 broadcast application per crop per year.

Tank Mixtures for Canola (Rapeseed) and Crambe

This product may be tank mixed with other herbicides labeled for use on canola and crambe. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

CHRISTMAS TREE PLANTATIONS

Application Timing

This product is recommended for over the top application to actively growing balsam fir, blue spruce, Douglas fir, Fraser fir, grand fir, lodgepole pine, noble fir, ponderosa pine, and white pine. In the Pacific Northwest, do not apply in the first year of transplanting. (Some needle curling has been observed on first year transplants.) Apply to actively growing weeds. For control of annual weeds apply this product from weed emergence up to the 5-leaf stage of growth (for wild buckwheat, application at 3 to 5 leaf stage of growth, before vining, is recommended). For control of weeds such as Canada thistle and knapweeds, apply after the majority of the basal leaves have emerged up to bud stage. Later application may result in less consistent control.

Application Rate

Apply 1/4 to 1/2 pint per acre of this product for control of annual weeds. Apply 1/2 to 2/3 pint per acre of this product for difficult to control weeds such as Canada thistle and knapweeds. Apply as a broadcast or band application in a minimum of 10 gallons per acre by ground application. Use the formulas under Band Application to determine the appropriate rate and volume per treated acre.

This product may be applied as a spot treatment using a hand-held sprayer at an equivalent broadcast rate of 1/2 to 2/3 pint per acre. Refer to instructions for Spot Treatment and Hand-held Sprayers under Application Directions in the General Information section.

Specific Use Precautions:

- Re-treat as necessary, but do not exceed 2/3 pint per acre of this product per annual growing season.
- **Blue spruce:** Do not exceed 1/2 pint per acre per annual growing season.
- Tree injury may occur with the addition of a surfactant or crop oil with this product. Do not use unless previous experience shows injury is tolerable
- Do not apply with an air blast sprayer.

CORN (FIELD, POP AND SWEET)

This product is recommended for post-emergence control of Canada, thistle, Jerusalem artichoke, annual sowthistle, common sunflower, common cocklebur, giant and common ragweed, jimsonweed and other broadleaf weeds infesting field corn. Apply this product at suggested timing and rates for field, pop and sweet corn as indicated below.

General Weed Control

For control of common cocklebur, giant ragweed, common ragweed, sunflower, other annual weeds and Jerusalem artichoke, apply 1/4 to 1/2 pint per acre of this product from weed emergence up to the 5 leaf stage of growth. Use a higher rate listed for heavy infestations or when greater residual control is desired. Consult the table entitled Guidelines for Control of Specific Weeds for additional information.

Control of Canada Thistle

For effective control of Canada thistle, apply 1/3 to 2/3 pint per acre of this product as a broadcast treatment to the entire infested area. Apply when the majority of thistle plants have emerged (rosette to 8 inches) and thistles are at least 6 to 8 inches in diameter or height up to bud stage. Cultivation can disrupt translocation to the roots of Canada thistle. For best long-term control, do not cultivate before or after application. If cultivation is necessary, wait 14 to 20 days after application before cultivating to allow for thorough translocation.

Control of Canada thistle is influenced by growing conditions, density and size of thistle plant at application, tillage practices used, etc. Light infestations (less than 10 plants per square yard) will generally be adequately controlled with a rate of 1/3 pint per acre. For medium to heavy infestations (more than 10 plants per square yard), rates of 1/2 to 2/3 pint per acre are generally more effective since these Canada thistle stands involve an extensive rhizome system.

The following are general descriptions of control to be expected from each rate of application given a medium to heavy population of Canada thistle. Control of lighter infestations may be better than that described.

- A rate of 1/3 pint per acre will suppress top growth of Canada thistle for 6 to 8 weeks. Some regrowth may occur by the end of the season, but this will not interfere with harvesting of the crop.
- A rate of 1/2 pint per acre will generally provide season long control of Canada thistle. Not all rhizomes will be killed and some regrowth may occur by the end of the growing season.
- A rate of 2/3 pint per acre will provide season long control of Canada thistle plus suppression into the following season, resulting in a reduction of the total number of Canada thistle plants in the treated area.

FIELD CORN

Application Timing

Apply this product to actively growing broadleaf weeds any time after corn emergence through 24 inch tall corn. Apply with ground equipment as a post-emergence broadcast or directed spray in 10 gallons or more of spray volume per acre to ensure uniform and thorough spray coverage of the weed foliage. Use only spray nozzles designed for herbicide application. The use of flat fan nozzles provides the best coverage and distribution of chemical on the plant foliage. Use spray pressures (at the boom) recommended by nozzle manufacturers to obtain desired spray volume. Use higher spray volumes when weed foliage is dense.

Specific Use Restrictions for Field Corn

- Re-treat as necessary, but do not apply more than 2/3 pint per acre of this product per year.
- Do not apply to field corn greater than 24 inches tall.
- Do not allow livestock to graze treated areas or harvest treated corn silage as feed within 40 days after last treatment.

Tank Mixtures or Sequential Applications for Field Corn

See Tank Mixing Precautions under Mixing Instructions. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels. If this product is applied sequentially or in combination with Hornet* or Scorpion* III herbicides to the current corn crop, the maximum application rate for this product is indicated in the following tables:

Rate of Hornet Applied to Current Corn Crop (oz/acre)	Maximum Application Rate for This Product (fl oz/acre)
1.6	8.1
2.4	6.8
3.2	5.4
4.0	4.0

Rate of Scorpion III Applied to Current Corn Crop (lb/acre)	Maximum Application Rate for This Product (fl oz/acre)
0.25	8.1

Note: Maximum use rate for clopyralid is 0.25 lb a.e. per acre. One ounce of Hornet contains 0.039 lb of clopyralid. One-fourth pound of Scorpion III contains 0.0625 lb of clopyralid. One ounce of this product contains 0.023 lb of clopyralid.

Corn Inbred Lines or Breeding Stock

Susceptibility of corn to injury from this product is highly related to varietal response. Inbred lines or any breeding stock may be injured by this product. Contact your seed production agronomist for advice before applying this product to inbred lines or breeding stock.

Hand-Held Sprayers

This product may be applied as a spot treatment using a hand-held sprayer at an equivalent broadcast rate of 2/3 pint per acre. Refer to instructions for Spot Treatment and Hand-held Sprayers under Application Directions in the General Information section. Applications should be made on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff.

**POPCORN AND SWEET CORN
(Not registered for use in California)**

Application Timing

Popcorn: Apply this product any time after popcorn emergence through 24 inch tall popcorn

Sweet corn: Apply this product any time after sweet corn emergence through 18-inch tall sweet corn.

Application Rate

Apply 1/3 to 2/3 pint per acre of this product uniformly with ground equipment as a broadcast or directed spray in 10 to 20 gallons total spray volume per acre. For control of Canada thistle, apply this product when the majority of thistle plants have emerged and

thistles are at least 6 to 8 inches in diameter or height, but before bud stage. For control of Jerusalem artichoke, common cocklebur, jimsonweed, ragweed (common and giant), annual sowthistle and sunflower, apply this product from weed emergence up to the 5 leaf stage of growth. Use a higher rate listed for heavy infestations or when greater residual control is desired. Consult the table entitled Guidelines for Control of Specific Weeds for additional information.

Specific Use Precautions for Popcorn and Sweet Corn:

- **Preharvest Interval:** Do not apply within 30 days of harvest for **ears and forage** and 60 days of harvest for **stover**.
- Make up to 2 broadcast applications per crop per year, not to exceed a total of 2/3 pint per acre.
- **Re-treatment Interval:** 21 days.
- Do not apply to popcorn greater than 24 inches tall or sweet corn greater than 18 inches tall.

Tank Mixtures for Popcorn and Sweet Corn

This product may be tank mixed with other herbicides labeled for use on popcorn and sweet corn. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

COTTONWOOD/POPLAR AND EUCALYPTUS TREE PLANTATIONS

This product may be used for selective post-emergence control of labeled broadleaf weeds in new and established plantings of cottonwood/poplar and eucalyptus tree plantations. Apply as a broadcast foliar spray over trees or as a banded or directed spray at a rate of 1/3 to 2/3 pint per acre. Apply in 10 gallons or more per acre total spray volume using ground equipment only. Multiple applications of this product may be made as long as the total rate per growing season does not exceed 1 1/3 pints per acre. Apply to new plantings only after they are well established as indicated by several inches of new healthy growth.

See Guidelines for Control of Specific Weeds for recommended rates and timing for specific susceptible annual, biennial, and perennial weeds.

Hand-Held Sprayers

Spot applications using hand held equipment are also allowed, but contact with tree foliage should be avoided or limited to lower branches. Apply to weeds on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff. Prepare a spray solution by adding 1/4 fl oz of this product per gallon of water. When applied at 1 gallon of spray per 1,000 sq ft, this spray concentration is equivalent to a broadcast rate of 2/3 pint per acre.

Specific Use Precautions:

- Do not tank mix this product with other herbicides labeled for this use unless spray avoids all contact with tree foliage.
- This product will not control certain broadleaf weeds, including mustards, henbit, chickweed, kochia, lambsquarters, Russian thistle and bindweed.

FALLOW CROPLAND

Application Timing

This product can be applied either postharvest, in the spring/summer (during fallow period), or to set-aside acres to control or suppress listed weeds (refer to rotation restrictions). Apply to young, emerged weeds under conditions that promote active growth. For best results on perennial weeds such as Canada thistle, apply after the majority of the basal leaves have emerged up to bud stage. Later applications may result in less consistent control. Extreme growing conditions (such as drought or near freezing temperatures) prior to, at, or following application may reduce weed control.

For best results, wait 14 to 20 days after application before cultivating or fertilizing with shank-type applicators to allow for thorough translocation.

Application Rate

Apply 1/4 to 2/3 pint per acre of this product. Use the higher rate on perennial weeds or when the condition of weeds at treatment may prevent optimum control.

Tank Mixtures for Fallow Cropland

To improve control of certain broadleaf weeds, this product may be applied with 0.5 to 2.0 lb acid equivalent (a.e.) per acre of 2,4-D. See Tank Mixing Precautions under Mixing Instructions. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

GARDEN BEET

(Not registered for use in California)

This product is recommended for post-emergence control of wild buckwheat, sweet clover, prickly lettuce, common ragweed, nightshade (black, cutleaf, Eastern black and hairy), Galinsoga, and sowthistle, infesting garden beet.

Application Timing

Apply to garden beet in the 2 to 8 leaf stage of crop growth when weeds are young and actively growing. Apply this product to wild buckwheat at the 1 to 3 leaf stage of growth, before vining begins. Apply this product to common ragweed and sweet clover from weed emergence up to the 5 leaf stage of growth. Apply this product to all species of nightshade at the 2 to 4 leaf stage of growth. Apply this product to sowthistle from rosette up to bud stage. Apply in 10 gallons or more total spray volume per acre with ground equipment.

Application Rate

Apply 1/2 pint per acre of this product with ground equipment in 10 gallons or more total spray volume per acre. Use a higher rate listed for heavy infestations or when greater residual control is desired.

Specific Use Precautions:

- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Make 1 broadcast application per crop year.

Tank Mixtures for Garden Beet

This product may be tank mixed with other herbicides labeled for use on garden beet. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

GRASSES GROWN FOR SEED

Application Timing

Apply only to established grasses before the boot stage of growth. Applications in the boot stage and beyond can result in increased potential for injury. Do not apply to bentgrass unless injury can be tolerated. For control of late emerging Canada thistle, a preharvest treatment may be made after grass seed is fully developed. Treatment of Canada thistle at the bud stage or later may result in less consistent control. Post-harvest fall treatments may be made to actively growing Canada thistle after the majority of basal leaves have emerged.

Application Rate

Use 1/4 to 2/3 pint per acre of this product for control of annual weeds and Canada thistle. Re-treat as necessary, but do not exceed 2/3 pint per acre of this product per season.

Tank Mixtures for Grasses Grown for Seed

This product may be tank mixed with 2,4-D, MCPA, dicamba, or bromoxynil to control additional broadleaf weeds. Refer to the manufacturer's label for use rates and tank mix guidelines. See Tank Mixing Precautions under Mixing Instructions. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels. **Note:** Dicamba or bromoxynil tank mixes may be useful in broadening the annual weed control spectrum, but may reduce long-term control of perennials such as Canada thistle. Do not tank mix this product with 2,4-D, MCPA, or dicamba unless the risk to crop injury is acceptable.

MINT (SPEARMINT AND PEPPERMINT)

This product may be used for selective post-emergence control of specific annual and perennial broadleaf weeds infesting mint.

Application Timing

Treat annual weeds when they are small and actively growing before they send up a flower stalk. For Canada thistle, apply this product after the majority of basal leaves have emerged but prior to bud stage.

Application Rate

Apply as a broadcast foliar spray in 10 gallons or more per acre total spray volume using ground equipment only. A nonionic surfactant of at least 80% active ingredient may be added at a rate of 1 pint per 100 gallons of spray solution.

Broadcast Application Rates, Timing and Weeds Controlled:

Application Timing and Weeds Controlled	Application Rate (pint/acre)
fall treatment only (Sept. 15 to first frost)	
annuals	1/2
perennials	2/3
hard-to-kill perennials (Canada thistle, dandelion)	1
spring treatment only	
annuals	1/3
perennials	1/2
fall plus spring treatment	Maximum of 2/3 in fall plus 1/3 in spring

Specific Use Precautions,

- **Preharvest interval:** Do not apply within 45 days of harvest.
- Do not apply more than 1 pint per acre per growing season.
- Treated mint may be used for distillation (oil extraction) only.
- Do not feed spent mint hay slugs to livestock.
- Mint straw, hay or spent hay (slugs) from treated areas cannot be used for composting or mulching. If hay slugs are disposed of on cropland, distribute in a thin layer and incorporate. Do not dispose of hay slugs on land to be rotated to a susceptible crop. (See Residues in Plants or Manure section.)

- Discoloration or malformation of mint leaves may occur following treatment. This effect is generally temporary and does not reduce oil yields.
- This product will not control many broadleaf weeds such as mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian Thistle and field bindweed.

SPINACH
(Not registered for use in California)

Target Broadleaf Weeds	Application Rate (pint/acre)	Use Restrictions
Sowthistle, annual Thistle, Canada	1/3 (0.125 lb ai/acre) for top growth suppression	<ul style="list-style-type: none"> • Make 1 to 2 broadcast applications per crop per year, not to exceed a total of 1/3 pint/acre (0.125 lb ai/acre). • Preharvest interval: Do not apply within 21 days of harvest.
Nightshade, black; hairy Sowthistle, annual Thistle, Canada	1/3 (0.125 lb ai/acre) for season long control	
Clover Cocklebur, common Groundsel, common Jimsonweed Lettuce, prickly Pineappleweed Ragweed	1/4 to 1/3 (0.09375 to 0.125 lb ai/acre)	

Application Timing

Apply this product to spinach in the 2 to 5 leaf stage of crop growth. Apply this product to clover, common cocklebur, jimsonweed, and ragweed from weed emergence up to the 5 leaf stage of growth. For suppression of annual sowthistle and Canada thistle, apply this product from rosette up to bud stage.

Broadcast Application Rates: Apply to spinach in the 2 to 5 leaf stage of crop growth. Apply uniformly with ground or aerial equipment in 10 to 20 gallons of water per acre (minimum of 5 gallons per acre by air). For control of Canada thistle, apply after the majority of basal leaves have emerged but prior to bud stage and at least 21 days prior to harvest.

Tank Mixtures for Spinach

This product may be tank mixed with other herbicides labeled for use on spinach. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

STONE FRUITS

Including but not limited to: **Apricot, Chickasaw Plum, Damson Plum, Fresh Prune, Japanese Plum, Nectarine, Peach, Plum, Plumcot, Sweet Cherry, Tart Cherry**
(Not registered for use in California)

This product is recommended for post-emergence control of clover, dandelion, horseweed, nightshade (black and hairy), annual sowthistle, Canada thistle, musk thistle, and vetch infesting stone fruits.

Application Timing

Apply this product to clover and vetch from weed emergence up to the 5 leaf stage of growth. Apply this product to nightshade (black and hairy) at the 2 to 4 leaf stage of growth. For control of Canada thistle, apply this product after the majority of basal leaves have emerged but prior to bud stage and at least 30 days prior to harvest.

Application Rate

Apply 1/3 to 2/3 pint per acre of this product with ground equipment in 10 gallons or more total spray volume per acre. Use a higher rate listed for heavy infestations or when greater residual control is desired.

Specific Use Precautions:

- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Make 1 to 4 broadcast applications per crop per year, not to exceed a total of 2/3 pint per acre.

Tank Mixtures for Stone Fruits

This product may be tank mixed with other herbicides labeled for use on stone fruits. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

SUGARBEET

This product is recommended for the control of various annual and perennial broadleaf weeds infesting sugarbeet.

Application Rate

Apply 1/4 to 2/3 pint per acre of this product with ground equipment as a broadcast foliar spray or band treatment. See instructions for band application under Application Directions in the General Information section. Apply in 10 gallons or more total spray volume per acre when the sugarbeets are in the cotyledon to 8-leaf stage of growth and the weeds are young and actively growing.

For annual weed control apply 1/4 to 1/2 pint per acre of this product from weed emergence up to the 5-leaf stage of growth.

18/20

Application to wild buckwheat should be made at the 1 to 3 leaf stage of growth, before vining begins.

For the most effective control of perennials such as Canada thistle and sowthistle, apply 1/2 to 2/3 pint per acre of this product as a broadcast treatment to the entire infested area. Apply when the majority of basal leaves have emerged up to the bud stage. Cultivation can disrupt translocation to the roots of perennials such as Canada thistle. For best results do not cultivate thistle patches.

To promote herbicidal efficacy, wait a minimum of 7 days after application before flood or furrow irrigation.

Specific Use Precautions

- **Preharvest Interval:** Do not apply within 45 days before harvest of beet roots and tops.
- Re-treat as necessary but do not exceed 2/3 pint per acre of this product per season.

Tank Mixtures for Sugarbeet

To control additional broadleaf weeds and provide consistent control of difficult to control weeds such as wild buckwheat, this product may be applied in combination with labeled rates of Betamix, Betanex, UpBeet, or other products registered for post-emergence application in sugar beets. For best results, tank mix 1/4 pint per acre of this product with Betamix or Betanex followed 1 to 2 weeks later by a second application of 1/4 to 1/3 pint per acre of this product tank mixed with Betamix or Betanex. This product may also be tank mixed with grass herbicides such as Poast. Crop oil or Dash surfactant may be added to the tank mixture to optimize grass weed control. See Tank Mixing Precautions under-Mixing Instructions. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

Aerial Broadcast Application of This Product in Sugar Beets

(For Distribution and Use Only in the States of Colorado, Idaho, Michigan, Minnesota, Montana, Nebraska, North Dakota, Oregon, Washington, and Wyoming)

This product may be aerially applied to sugar beets in the states of Colorado, Idaho, Michigan, Minnesota, Montana, Nebraska, North Dakota, Oregon, Washington, and Wyoming. Supplemental labeling may be obtained at point of purchase, by visiting our web site at www.nufarm.com, or from your local Nufarm representative.

Refer to the product label for this product for specific weeds controlled, application rates and recommended tank mixes. When tank mixing with a companion herbicide, read and follow each manufacturer's label for weeds controlled, applicable use directions, precautions and limitations before use.

Aerial Application: Apply the recommended rate of this product in 5 or more gallons of total spray volume per acre when weeds are at the recommend stage of growth for control.

Note: Before aerially applying this product, read and understand Spray Drift Management and Aerial Drift Reduction Advisory information.

**TURNIP ROOTS AND TOPS
(Not registered for use in California)**

This product is recommended for post-emergence control of wild buckwheat, sweet clover, prickly lettuce, common ragweed, and Galinsoga, and post-emergence suppression of sowthistle, infesting turnip harvested for roots and tops.

Application Timing

Apply this product to wild buckwheat at the 1 to 3 leaf stage of growth, before vining begins. Apply this product to common ragweed, prickly lettuce and sweet clover from weed emergence up to the 5 leaf stage of growth. For suppression of sowthistle, apply this product from rosette up to bud stage.

Application Rate

Apply 1/2 pint per acre of this product with ground equipment in 10 gallons or more total spray volume per acre. Use a higher rate listed for heavy infestations or when greater residual control is desired.

Specific Use Precautions

- **Preharvest Interval:** Do not apply within 30 days of harvest of turnip roots or within 15 days of turnip tops.
- Make 1 broadcast application per crop per year.

Tank Mixtures for Turnip

This product may be tank mixed with other herbicides labeled for use on turnip roots and tops. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

RANGELAND, PASTURE, CRP AND NON-CROP USES

Rotation to Broadleaf Crops: Do not plant broadleaf crops in treated areas until an adequately sensitive bioassay shows that no detectable clopyralid is present in the soil. (See Crop Rotation Restrictions in General Information section.)

RANGELAND AND PERMANENT GRASS PASTURES

Apply 1/2 to 1 1/3 pint per acre of this product when weeds are young and actively growing. Established grasses are tolerant to this product, but new grass seedlings may be injured to varying degrees until the grass has become well established as indicated by vigorous growth and development of tillers and secondary roots.

Note: Some forbs (desirable broadleaf forage plants) are susceptible to this product. Do not spray pastures containing desirable forbs, especially legumes, unless injury can be tolerated. However, the stand and growth of established perennial grasses is improved after spraying, especially when rainfall is adequate and grazing is deferred.

Do not use hay or straw from treated areas for composting or mulching on susceptible broadleaf crops. (See Residues in Plants or Manure section.)

There are no restrictions on grazing or hay harvest following application of this product at labeled rates.

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CONSERVATION RESERVE PROGRAM (CRP) FOR SEEDING TO PERMANENT GRASSES ONLY

Do not use this product if legumes or bentgrass are a desired cover during CRP.

Conditions of plant stress, such as drought, will increase potential for injury to grasses at all stages of growth. Do not apply to newly seeded areas until grass is established.

Application Timing

This product should be applied when perennial grasses are well established as indicated by vigorous growth and development of tillers and secondary roots. At this stage, most perennial grasses have shown adequate tolerance to this product. Application prior to the flowering stage is recommended (still in the bud stage).

Application Rate

For control of actively growing weeds such as musk thistle, Canada thistle, and knapweed (spotted, diffuse, and Russian), apply 2/3 to 1-1/3 pint per acre of this product after the majority of basal leaves have emerged up to bud stage. For control of wild buckwheat, volunteer sunflower, and musk thistle rosettes, apply 2/3 pint per acre of this product. For best results, use in 10 gallons or more of water per acre by ground. Increasing the rate of application can increase the risk of injury.

Tank Mixtures for CRP for Seeding to Permanent Grasses Only

This product can also be tank mixed with 1/2 to 1 lb per acre of 2,4-D where species present are sensitive to 2,4-D. See Tank Mixing Precautions under Mixing Instructions.

NON-CROPLAND

This product may be applied in non-cropland areas such as fencerows, around farm buildings and equipment pathways. **Note:** This product is not registered for use in landscaping or on turfgrass or lawns.

Application Rate

For control of broadleaf weeds, apply 1/4 to 1-1/3 pint per acre of this product. The lower rate of 1/4 pint per acre provides acceptable control of weeds only under highly favorable growing conditions and when plants are 1 to 3 inches tall. Apply 1/2 pint per acre when weeds are 3 to 6 inches tall or under dry conditions. Where Canada thistle or knapweeds are the primary pest, best results are obtained by applying 2/3 to 1-1/3 pint per acre of this product.

Tank Mixtures for Non-Cropland

To improve spectrum of weed control or to increase control of more mature weeds, this product may be tank mixed with 0.5 to 2.0 lb a.e. per acre of 2,4-D amine or low volatile ester herbicide or other herbicides registered for this use site. See Tank Mixing Precautions under Mixing Instructions. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

CONTROL OF SICKLEPOD AND OTHER SUSCEPTIBLE BROADLEAF WEEDS IN SOUTHERN PINE SEEDBEDS IN FOREST NURSERIES

For Distribution and Use Only in the States of Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and Virginia

This product may be applied over-the-top of loblolly pine, slash pine, and longleaf pine to control sicklepod and other susceptible broadleaf weeds in southern pine seedbeds in forest nurseries. Apply as a broadcast or spot treatment from May through July when weeds are actively growing. Refer to the product label for this product for a complete listing of weeds controlled.

Application Timing

General broadleaf weed control: For best results, apply when weeds are small and actively growing.

Sicklepod: For best results, apply after the majority of basal leaves have emerged.

Application Rate

Apply at a broadcast rate of 1/4 to 1/2 pt per acre in a spray volume of 20 or more gallons per acre. Application may be made any time after May 1, but some needle curling may occur if applied during active conifer growth. When making spot applications, use a calibrated boom, or if a hand-held sprayer is used, care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application (See guidelines in the label for this product for use of hand-held sprayers). Otherwise, do not use more than 1/5 fl oz (1 tsp.) of this product per gallon of spray and direct spray onto weeds and avoid spraying pine seedlings whenever possible.

Precautions:

- Application of this product during active growth of conifers may cause some needle curling.
- Do not use surfactants or crop oils in spray mixtures as the potential for tree injury in the form of needle curling may be increased.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store above 28°F or warm to 40°F and agitate before use.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

METAL CONTAINER DISPOSAL: Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PLASTIC CONTAINER DISPOSAL: Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Desirable plant injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of Nufarm or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Nufarm and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. NUFARM MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or Nufarm, and buyer assumes the risk of any such use.

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