

34704 - 891

2/5/2010

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

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

FEB 5 2010

Mr. Chris Mason  
Registrations Manager  
Loveland Products, Inc.  
P.O. Box 1286  
Greeley, Colorado 80632-1286

SUBJECT: Notification to update Medical Emergency Number and Warranty Statement  
per PR Notice 98-10  
EPA Registration Number: 34704-891  
Date of Submission: January 18, 2010

Dear Mr. Mason:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated, January 18, 2010, for the above mentioned product. The Registration Division (RD) has conducted a review 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 call me directly at 703-305-6249 or Joyce Edwards of my staff at 703-308-5479.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

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



United States  
Environmental Protection Agency  
Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 34704-891	2. EPA Product Manager Jim Tompkins	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Broclean	PM# Team 25	
5. Name and Address of Applicant (Include ZIP Code) Loveland Products, Inc. P.O. Box 1286 Greeley, Colorado 80632-1286 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), 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"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

NOTIFICATION

FEB - 5 2010

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of Bromac (EPA Reg No 34704-886) for the following revisions: warranty statement; medical emergency number. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes" Unit Packaging wgt. No. per 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" Package wgt No. per container			
3. Location of Net Contents Information <input type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 2.5 lbs, 30 lbs, bulk		5. Location of Label Directions <input checked="" type="checkbox"/> Label Booklet	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input checked="" type="checkbox"/> Other Pressure sensitive - self adhering	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Chris Mason	Title Registration Manager	Telephone No. (Include Area Code) 970-347-3415
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.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager	
4. Typed Name Chris Mason	5. Date January 18, 2010	

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Performance

Quality

Value

January 18, 2010

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504C)  
U.S. Environmental Protection Agency  
Room S4900, One Potomac Yard  
2777 S Crystal Drive  
Arlington VA 22202

Subject: Broclean herbicide, EPA Reg. No. 34704-891

Loveland Products, Inc. is submitting this notification in accordance with PR Notice 98-10 to accomplish these label updates:

- 1. **Update Medical Emergency Number per PR Notice 98-10**
- 2. **Update Warranty Statement per PR Notice 98-10**

Please find the following supporting documentation enclosed:

- 1. Form 8570-1 Application for Registration
- 2. 2 copies of revised label
- 3. Copy of EPA letter dated May 11, 2009 approving our warranty statement
- 4. E-Label Certification Statements
- 5. CD ROM Containing Searchable PDF Files

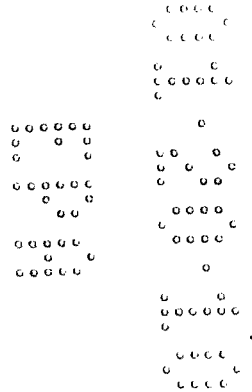
**Update Medical Emergency Number, Update Warranty Statement:**

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Please contact me at 970-534-3415 or by e-mail ([chris.mason@cpsagu.com](mailto:chris.mason@cpsagu.com)) if there are any questions or comments concerning this submission.

Sincerely,

Chris Mason  
Registration Manager  
Enclosures




# Certification with Respect to Label Integrity

version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
34704-00891	2010/01/18	034704.00891.20100118120905V10D01B10.pdf

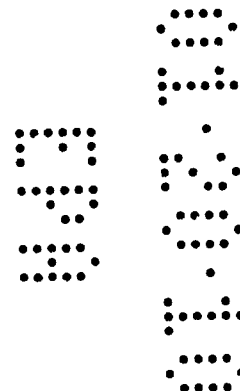
I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

  
 \_\_\_\_\_  
 Signature

01/18/2010  
 \_\_\_\_\_  
 Date

Christopher J. Mason  
 \_\_\_\_\_  
 Name (typed)

Manager Registrations, Loveland Products, Inc.  
 \_\_\_\_\_  
 Title



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NOTIFICATION

FEB - 5 2010



# BROCLEAN®

**HERBICIDE FOR THE CONTROL OF CERTAIN BROADLEAF WEEDS IN CORN (FIELD AND POP), SORGHUM (GRAIN AND FORAGE), SUDANGRASS, BARLEY, OATS, RYE, TRITICALE, WHEAT, SEEDLING ALFALFA, FLAX, GARLIC, ONIONS, MINT, GRASSES GROWN FOR SEED AND SOD PRODUCTION, CONSERVATION RESERVE PROGRAM (CRP) AREAS, NON-RESIDENTIAL TURFGRASS, AND NON-CROPLAND/INDUSTRIAL SITES.**

**ACTIVE INGREDIENT:**

Octanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzotrile)	33.4%
<b>INERT INGREDIENTS**:</b>	66.6%
<b>TOTAL</b>	<b>100.0%</b>

\*\* Contains xylene range/petroleum distillates.  
\* Bromoxynil octanoate equivalent to 22.9% of bromoxynil or not less than 2.0 pounds of bromoxynil per gallon.

## KEEP OUT OF REACH OF CHILDREN WARNING—AVISO

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

### FIRST AID

<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>Immediately call a poison control center or doctor.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give any liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:**  
1-866-944-8656.

**Note to Physician:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

EPA REG. NO. 34704-891

EPA EST. NO. 51036-GA-1

NET CONTENTS 2½ GALS. (9.46 L)

IHT

120905 V10D 01B10

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## WARNING

Harmful if swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want options, follow the instructions for category G on EPA chemical resistance category selection chart. Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants,
- Chemical resistant gloves such as barrier laminate or viton gloves,
- Chemical resistant apron when cleaning equipment,
- Protective eyewear,
- Chemical resistant headgear for overhead exposure,
- Chemical resistant footwear plus socks.

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

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

If you will handle a total of 60 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

To reduce exposure to residues, wash the spray rig, tractor, and all other equipment used to handle or apply this product with water daily or before using the equipment for any other purpose.

APPLICATION BY CHEMIGATION must be done by fixed pipe, overhead sprinkler systems or hand moved pipe. If hand moved pipe is used for chemigation, the pipe must not be handled in any way until 24 hours after chemigation has been completed and residues have been flushed from the system. When applying by chemigation, no person may enter the application site unless in an enclosed vehicle.

DURING AERIAL APPLICATION, human flaggers are prohibited unless in enclosed vehicles. Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, hospitals, shopping areas, etc.).

### 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. Remove PPE immediately after handling this product.
- Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. 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 areas. Do not contaminate water when disposing of equipment washwaters.

### PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

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

Read entire label before using this product.

**BROCLEAN®**  
EPA REG. NO. 34704-891

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 intervals. 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 over long-sleeved shirt and long pants,
- Chemical resistant gloves such as barrier laminate or viton gloves,
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear for overhead exposure,
- Protective eyewear.

**RETURNABLE — REFILLABLE CONTAINERS**

After use, return the container to the point of purchase or designated locations. This container must only be refilled with BROCLEAN® Herbicide. DO NOT REUSE THE 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 it to the point of purchase.

**GENERAL INFORMATION**

BROCLEAN is formulated as an emulsifiable concentrate of octanoic acid ester of bromoxynil containing the equivalent of 2 pounds of bromoxynil per gallon.

BROCLEAN is a selective postemergence herbicide for control of important broadleaf weeds infesting field corn, popcorn, sorghum (grain and forage), barley, oats, rye, triticale, wheat, seedling alfalfa, flax, onions, garlic, mint (established peppermint and spearmint), Conservation Reserve Program (CRP) areas, grasses grown for seed or sod production, non-residential turfgrass, and non-cropland and industrial sites. Optimum weed control is obtained when BROCLEAN is applied to actively growing weed seedlings. BROCLEAN is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control. BROCLEAN has little residual activity. Therefore subsequent flushes of weeds will not be controlled by the initial treatment. Generally crops that form a good canopy will help shade subsequent weed flushes. However, certain crops or short-straw varieties, for example Yaccora Rojo wheat, may not develop the crop canopy fast enough to shade the subsequent flushes of weeds. Occasional transitory leaf burn may occur. The temporary leaf burn is similar to that seen with liquid fertilizer. Because the activity of BROCLEAN is not systemic, recovery of the crop is generally rapid with no lasting effect. Frequency and amount of leaf burn may be greater when crops are stressed by abrasive winds, cool to cold evening temperatures or mechanical injury, such as that caused by hail, sleet or insect feeding. To reduce the potential for temporary leaf burn, applications should be made to dry foliage in the recommended spray volumes per acre when weather conditions are not extreme.

**MIXING, LOADING AND HANDLING INSTRUCTIONS**

**2.5 Gallon Containers**

It is strongly recommended that special care be taken in mixing and loading this product. Hands should be placed on the container in such a way as to avoid possible drip or splash.

**30 Gallon and Bulk Containers**

If you will handle a total of 60 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

**BROCLEAN ALONE:** Fill the spray tank 1/2 to 3/4 full with clean water. Begin agitation and add the recommended amount of BROCLEAN. Add water to the spray tank to the desired level. Maintain sufficient agitation to ensure a uniform spray mixture during application.

**TANK MIXTURES:** BROCLEAN can be applied in tank mixture with many other herbicides and insecticides registered for use on approved crops. Refer to the specific crop section for rate recommendations and other restrictions. To apply BROCLEAN in mixture with another product, fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. If tankmixing with wettable powder, soluble powder, flowable or dry flowable products, add the powder or flowable product first. After the other herbicide is thoroughly mixed

with water add the recommended amount of BROCLEAN and add water to the spray tank to the desired level. If tankmixing with other product types, add the BROCLEAN first before adding the other product. Always mix one product in water thoroughly before adding another product or compatibility problems may occur. Never mix two products together without first mixing in water.

Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application.

**COMPATIBILITY OF INSECTICIDES WITH BROCLEAN**

The following foliar insecticides are compatible with BROCLEAN as tank mixtures.

INSECTICIDE		
COMMON NAME	TRADE NAME	FORMULATION
Diazinon	Various	Emulsifiable Concentrate
Dimethoate	Various	Emulsifiable Concentrate
Trichlorfon	Dylox®	Soluble Powder
Carbofuran	Furadan®	Flowable
Chlorpyrifos	Warhawk®	Emulsifiable Concentrate
Malathion	Various	Emulsifiable Concentrate
Oxydemeton-methyl	MSR®	Sprayable Concentrate
Permethrin	Pounce®	Emulsifiable Concentrate
Carbaryl	Carbaryl 4L	Sprayable wettable powder or Flowable

If tank mixing with products other than listed above or within each crop section, a compatibility test is recommended to ensure satisfactory spray preparation. To test for compatibility, use a small container and mix a small amount (0.5 to 1 quart) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5 to 15 minutes after mixing. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in the tank mixture with BROCLEAN.

**SPRAYABLE LIQUID FERTILIZERS AND SPRAY ADDITIVES**

BROCLEAN can be applied in combination with sprayable liquid fertilizer or spray additives such as surfactants or crop oil concentrate.

When tankmixing with liquid fertilizer always add the fertilizer to the spray tank first and agitate thoroughly before adding BROCLEAN. Always predetermine the compatibility with liquid fertilizer by mixing small proportional quantities in advance. Agitation must be maintained during filling and application operations to ensure that BROCLEAN is evenly mixed with the fertilizer. Leaf burn may occur when BROCLEAN is applied with liquid fertilizer, but new leaves are not adversely affected.

**CAUTION:** Fertilizers and spray additives can increase foliage leaf burn when applied with BROCLEAN. Do not apply fertilizers or spray additives with BROCLEAN if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to BROCLEAN. Do not apply BROCLEAN in combination with fertilizer or spray additives if restricted under the individual crop use directions.

**APPLICATION PROCEDURES**

BROCLEAN can be applied to registered use areas by ground, aerial and sprinkler irrigation equipment. The following provides recommended methods of application for each crop.

CROP	TYPE OF APPLICATION EQUIPMENT		
	GROUND	AERIAL	SPRINKLER IRRIGATION
Corn (field and pop)	X	X	X
Sorghum (grain and forage) and Sudangrass	X	X	X
Small grains	X	X	X
Seedling alfalfa	X	X	X
Flax	X	X	X
Garlic	X	X	X
Onions	X		X
Mint	X		X
Grass grown for seed or sod production	X	X	X
Conservation Reserve Program (CRP) areas	X	X	X
Non-residential turfgrass	X	X	
Non-cropland/Industrial sites	X	X	

(X) Indicates recommended application use

**GROUND APPLICATION**

Use a standard herbicide boom sprayer that provides uniform and accurate application. Sprayer should be equipped with screens no finer than 50 mesh in the nozzle tips and in-line strainers.

Select a spray volume and delivery system that will ensure thorough and uniform spray coverage. For optimum spray distribution and thorough coverage, use of flat fan nozzles (maximum tip size 8008) with a minimum spray pressure of 40-60 psi are recommended. Other nozzle types and lower spray pressures that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop® nozzles are not recommended as weed control with BROCLEAN may be reduced. In general a spray volume of 10 to 20 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi and a maximum ground speed of 10 mph may be used with higher speed, low volume ground application if ground terrain, crop and weed density allow effective spray distribution.

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**BROCLEAN®**  
**EPA REG. NO. 34704-891**

When using higher speed equipment a maximum speed of 10 mph is suggested if field conditions cause excessive boom movement during application which results in poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas. Applications using less than 10 gallons per acre may result in reduced weed control.

When weed infestations are heavy, use of higher spray volumes and spray pressure will be helpful in obtaining uniform weed coverage. When corn or grain sorghum are large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform weed coverage. If you are unsure of the infestation level or the size of the crop, consult your local extension service.

Do not apply when winds are gusty or when other conditions favor poor spray coverage and/or off-target spray movement.

#### AERIAL APPLICATION

Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage. In general a minimum spray volume of 5 GPA and a maximum pressure of 40 psi are recommended.

Do not apply during inversion conditions, when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement. Off target spray movement can be minimized by increasing the spray volume per acre and not applying when winds exceed 10 mph.

#### SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and 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  $\frac{3}{4}$  the length of the wingspan or rotor.

2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory 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 protection. 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  $\frac{3}{4}$  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 cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment 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

Application should not occur during a temperature inversion, because drift potential is

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

Ensure uniform application - to avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills.

#### Boom Equipment

For control of weed or brush species listed in this label using conventional boom equipment - Use the recommended rates of this product and surfactant in 3 to 30 gallons of water per acre as a broadcast spray, unless otherwise specified. See the "WEEDS CONTROLLED" section of this label for specific rates. As density of vegetation increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select correct nozzle to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

#### SPRINKLER IRRIGATION APPLICATION

BROCLEAN can be applied through sprinkler irrigation systems to barley, oats, rye, triticale, wheat, field corn, popcorn, and grain sorghum, onions, mint, grasses grown for seed or sod production, garlic, Conservation Reserve Program (CRP) areas and seedling alfalfa.

Apply BROCLEAN through sprinkler systems including center pivot, lateral move, side (wheel) roll, solid set or hand move irrigation systems only. If hand moved pipe is used for chemigation, the pipe must not be handled in any way until 24 hours after chemigation has been completed and residues have been flushed from the system. When applying by chemigation, no person may enter the application site unless in an enclosed vehicle. Do not apply this product through any other type of irrigation system.

#### Specific Requirements For Application Through Automated Sprinkler Irrigation System

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Agitation is recommended in the pesticide supply tank when applying the BROCLEAN.
9. BROCLEAN should be applied continuously for the duration of the water application with center pivot and continuous lateral move systems. Application of BROCLEAN should be made during the last 30-45 minutes of the irrigation set with other overhead sprinkler systems.
10. For best performance, set the sprinkler system to deliver approximately 0.5 inch or less of water per acre.
11. Remove scale, pesticide residues and other foreign matter from the supply tank and entire injector system. Flush with clean water.
12. If BROCLEAN is diluted in the supply tank, fill the tank with half of the water amount desired, add the BROCLEAN and then add remaining water amount with agitation. Always dilute with at least 4 parts water to 1 part BROCLEAN.
13. Start the sprinklers and then inject BROCLEAN into the irrigation line. BROCLEAN should be injected with a positive displacement pump into the main line at least 8 feet ahead of a right angle turn to insure adequate mixing. Refer to the BROCLEAN label for detailed information on application rates and timings.

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Venice Mallow (*Portulaca trionum*)  
Wild Mustard (*Sinapis arvensis*)  
Wild Radish (*Raphanus raphanistrum*)  
Yellow Starthistle (*Centaurea solstitialis*)

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**CHEMIGATION USER PRECAUTIONS**

Application of more than 0.5 inch/acre of irrigation water may result in decreased product performance on certain soils.

Do not apply when conditions favor drift, when system connections or fittings leak, or when nozzles do not provide uniform distribution.

Allow sufficient time for pesticide to be flushed through all the lines and nozzles before turning off irrigation water.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

Do not connect an irrigation system used for pesticide application to a public water system.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

A person knowledgeable of the chemigation system and responsible for its operations, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**CULTIVATION**

When properly utilized, timely cultivations of row crops may aid overall weed control efforts as well as crop growth. However, cultivation BEFORE or DURING BROCLEAN applications may place target weeds under stress, resulting in erratic weed control. Whenever BROCLEAN is being utilized in an overall weed control program, plan to postpone any anticipated cultivations until 5-7 days after application to ensure best performance.

**GENERAL WEED LIST**

Postemergence application of BROCLEAN will control the following weeds when sprayed in the seedling stage. Maximum weed stage of growth is listed under RECOMMENDED USES for each crop.

**MOST SUSCEPTIBLE BROADLEAF WEED SPECIES**

- Annual Sowthistle (*Sonchus oleraceus*)
- Black Nightshade (*Solanum nigrum*)
- Blue Mustard (*Chorispora tenella*)
- Bristly Starbur (*Acanthospermum hispidum*)
- Coast Fiddleneck (*Amsinckia intermedia*)
- Common Cocklebur (*Xanthium strumarium*)
- Common Lambsquarters (*Chenopodium album*)
- Common Tarweed (*Hemizonia congesta*)
- Cutleaf Nightshade (*Solanum triflorum*)
- Eastern Black Nightshade (*Solanum ptycanthum*)
- Field Pennygrass (*Thlaspi arvense*)
- Green Smartweed (*Polygonum scabrum*)
- Hairy Nightshade (*Solanum sarachoides*)
- Jimsonweed (*Datura stramonium*)
- Ladysthumb (*Polygonum persicaria*)
- Lanceleaf sage (*Salvia reflexa*)
- Pennsylvania Smartweed (*Polygonum pennsylvanicum*)
- Pepperweed spp. (annual) (*Lepidium* spp.)
- Shepherdspurse (*Capsella bursa-pastoris*)
- Silverleaf Nightshade (*Solanum elaeagnifolium*)
- Tartary Buckwheat (*Fagopyrum tataricum*)
- <sup>1</sup>Sunflower (*Helianthus annuus*)
- Wild Buckwheat (*Polygonum convolvulus*)

<sup>1</sup>For control of sunflower, delay application until first emerging sunflower seedlings are 4 inches in height.

**SUSCEPTIBLE BROADLEAF WEED SPECIES**

- Buffalobur (*Solanum rostratum*)
- Burcucumber (*Sicyos angulatus*)
- Common Groundsel (*Senecio vulgaris*)
- Common ragweed (*Ambrosia artemisiifolia*)
- Corn Chamomile (*Anthemis arvensis*)
- Corn Gromwell (*Lithospermum arvense*)
- Cow Cockle (*Saponaria vaccaria*)
- Giant Ragweed (*Ambrosia trifida*)
- Hemp Sesbania (*Sesbania exaltata*)
- Ivyleaf morningglory (*Ipomoea hederacea*)
- Knawel (*Scleranthus annuus*)
- <sup>2</sup>Kochia (*Kochia scoparia*)
- London Rocket (*Sisymbrium irio*)
- Mayweed (*Anthemis cotula*)
- Pitted morningglory (*Ipomoea lacunosa*)
- Prostrate Knotweed (*Polygonum aviculare*)
- Puncturevine (*Tribulus terrestris*)
- <sup>2</sup>Redroot Pigweed (*Amaranthus retroflexus*)
- Russian Thistle (*Salsola kali*)
- <sup>2</sup>Spiny Pigweed (*Amaranthus spinosus*)
- Tall Morningglory (*Pomoea purpurea*)
- <sup>2</sup>Tall Waterhemp (*Amaranthus tuberculatus*)
- Tumble mustard (*Sisymbrium altissimum*)
- Velvetleaf (*Abutilon theophrasti*)

<sup>2</sup>For effective control, these weeds should not exceed the 4 leaf stage or 2 inches in height, whichever comes first.

**WEED SUPPRESSION**

BROCLEAN suppresses the growth of Canada thistle (*Cirsium arvense*) by burning down top growth. Regrowth may occur.

**CALIFORNIA REGISTRATIONS**

Only the following recommendations referenced in this label are registered for use in California: seedling alfalfa, small grains (wheat, barley, oats, rye and triticale), flax, corn (post emergence application only), sorghum (post emergence application only), onions, garlic; chemigation in seedling alfalfa, barley, oats, rye, triticale, wheat, onions and garlic; 2,4-D and MCPA tank mixtures in barley, oats, rye, triticale, wheat; 2,4-D and atrazine tank mixtures in corn and sorghum; 2,4-DB tank mixture in seedling alfalfa; grass for seed and sod production, non-residential turfgrass; and non-cropland and industrial sites. All applications must be made with a minimum spray volume of 10 GPA by ground or 5 GPA by air equipment.

**SPECIFIC CROP RECOMMENDATIONS**

**CEREAL GRAIN CROPS**

Corn (Field and Pop), Sorghum (Grain and Forage) and Sudangrass  
Wheat, Barley, Oats, Rye and Triticale

**FORAGE, FIBER AND SPECIALTY CROPS**

Alfalfa (Seedling)  
Flax  
Garlic  
Mint (Established Peppermint and Spearmint)  
Onions

**GRASS CROPS**

Conservation Reserve Program (CRP) Areas  
Grass Grown for Seed or Sod Production  
Non-Residential Turfgrass

**NON-CROPLAND**

Noncropland and Industrial Sites

**CEREAL GRAIN CROPS  
CORN (FIELD AND POP), SORGHUM (GRAIN AND FORAGE)  
AND SUDANGRASS**

**BROCLEAN RECOMMENDATIONS**

**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	Preemergence	Apply to corn or sorghum before planting until just prior to crop emergence.	See CORN AND SORGHUM APPLICATION RATE TABLE - BROCLEAN for list of weeds and corresponding stages of growth that are controlled by BROCLEAN at recommended rates of application. For control of additional weeds not listed in the rate table see the General Weed List.
	1-1 1/2 pints/A	Apply to corn after emergence but prior to tassel emergence.	
	1 pint/A	Apply to sorghum and sudangrass between the 3 leaf stage but prior to the preboot stage (growth stage 4).	
	1 1/2 pints/A	Apply to corn between the 4 leaf stage and prior to tassel emergence.  Apply to sorghum and sudangrass between the 4 leaf stage and prior to preboot stage (growth stage 4).	
2 pints/A	Apply to field corn only between the 4 leaf stage but prior to tassel emergence. WARNING: DO NOT APPLY THE 2 PINTS/A RATE OF BROCLEAN ALONE OR IN TANK MIXTURES TO SORGHUM.	Use the 2 pints/A rate on corn to control susceptible weeds that are growing under less than optimum conditions and where BROCLEAN + atrazine tank mixtures cannot be used.	



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PRODUCT	RATE	CROP	WEEDS
BROCLEAN	Chemigation 2 pints/A only	Apply to corn after emergence but prior to tassel emergence.  Apply to sorghum and sudangrass after emergence but prior to preboot stage (growth stage 4).  Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details.	Apply to MOST SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage or 4 inches in height or 2 inches in diameter, whichever comes first. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever ever comes first. Do not use chemigation for control of weeds that exceed 4 inches in height because control may be unacceptable.

**CORN AND SORGHUM APPLICATION RATE TABLE - BROCLEAN**

WEED SPECIES <sup>1</sup>	1 Pint/A		1½ to 2 Pints/A <sup>4</sup>	
	Max. Leaf Stage	Max. Weed Height (inches)	Max. Leaf Stage	Max. Weed Height (inches)
When determining leaf stage, count all leaves except cotyledonary leaves				
Black Nightshade ( <i>Solanum nigrum</i> )	6	6	6	6
Buffalobur ( <i>Solanum rostratum</i> )	4	2	6	4
Burcucumber ( <i>Sicyos angulatus</i> )	-	-	4	4
Common Cocklebur ( <i>Xanthium strumarium</i> )	6	8	8	10
Common Lambsquarters ( <i>Chenopodium album</i> )	-	6	-	8
Common Ragweed ( <i>Ambrosia artemisiifolia</i> )	6	4	8	6
Eastern Black Nightshade ( <i>Solanum pycnanthum</i> )	6	6	6	6
Giant Ragweed ( <i>Ambrosia trifida</i> )	6	4	6	6
Hemp Sesbania ( <i>Sesbania exaltata</i> )	-	-	4	4
Ivyleaf Morningglory ( <i>Ipomoea hederacea</i> )	3	3	4	4
Jimsonweed ( <i>Datura stramonium</i> )	4	4	6	6
Kochia ( <i>Kochia scoparia</i> )	-	-	-	2
Ladysthumb ( <i>Polygonum persicaria</i> )	4	4	6	6
Pennsylvania Smartweed ( <i>Polygonum pennsylvanicum</i> )	4	4	6	6
Pitted Morningglory ( <i>Ipomoea lacunosa</i> )	3	3	4	4
Redroot Pigweed <sup>3</sup> ( <i>Amaranthus retroflexus</i> )	-	-	4	2
Spiny Pigweed <sup>3</sup> ( <i>Amaranthus spinosus</i> )	-	-	4	2
Sunflower ( <i>Helianthus annuus</i> )	4	6	6	8
Tall Morningglory ( <i>Ipomoea purpurea</i> )	3	3	4	4
Tall Waterhemp <sup>3</sup> ( <i>Amaranthus tuberculatus</i> )	-	-	4	2
Velvetleaf ( <i>Abutilon theophrasti</i> )	4	3	6	5
Venice Mallow ( <i>Hibiscus trionum</i> )	-	-	4	2
Wild Buckwheat ( <i>Polygonum convolvulus</i> )	4	6	6	8
Wild Mustard ( <i>Sinapis arvensis</i> )	-	-	4	4

**WEEDS SUPPRESSED<sup>2</sup>**

Canada Thistle ( <i>Cirsium arvense</i> )	Not Recommended	8 inch to bud stage
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<sup>1</sup> When determining leaf stage, count all leaves except cotyledonary leaves.

<sup>2</sup> BROCLEAN suppresses the growth by burning down of top growth. Regrowth may occur.

<sup>3</sup> Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BROCLEAN. Repeat applications may be necessary to achieve satisfactory control.

<sup>4</sup> Do not apply BROCLEAN at the 2 pints/A rate to sorghum.

**BROCLEAN TANK MIXTURE RECOMMENDATIONS**  
APPLICATION TIMING AND SPECIFIC COMMENTS

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + atrazine	Preemergence ¾-1½ pints/A + ½-1½ lb ai/A	Apply to corn or sorghum before planting until just prior to crop emergence.	See CORN AND SORGHUM APPLICATION RATE TABLE - BROCLEAN + ATRAZINE TANK MIXTURES for list of weeds and corresponding stages of growth that are controlled by BROCLEAN + Atrazine tank mixtures at recommended rates of application. For control of additional weeds not listed in the rate table see the General Weed List.
	¾-1 pint/A + ½-1½ lb ai/A	Apply to corn after emergence but before corn is 12 inches tall.  Apply to sorghum after the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first.	
	1½ pints/A + ½-1½ lb ai/A	Apply to corn between the 4 leaf stage and before corn is 12 inches tall.  Apply to sorghum between the 4 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first.	

**ATRAZINE TANK MIX RESTRICTIONS**

Atrazine is a Restricted Use Herbicide. Due to ground water concerns, users must read and follow all precautionary statements and instructions on the atrazine label in order to minimize the potential for atrazine to reach ground water.

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**CORN AND SORGHUM APPLICATION RATE TABLE -  
BROCLEAN + ATRAZINE TANK MIXTURES**

WEED SPECIES <sup>1</sup>	BROCLEAN AND ATRAZINE RATE (TANK MIX)											
	¼ Pint/A		¼ Pint/A		1 Pint/A		1 Pint/A		1½ Pints/A		1½ Pints/A	
	½ lb ai/A	+	½ lb ai/A	+	½ lb ai/A	+	½ lb ai/A	+	½ lb ai/A	+	½ lb ai/A	+
When determining leaf stage, count all leaves except cotyledonary leaves.	MAX LEAF STAGE	MAX WEED HGT.	MAX LEAF STAGE	MAX WEED HGT.	MAX LEAF STAGE	MAX WEED HGT.	MAX LEAF STAGE	MAX WEED HGT.	MAX LEAF STAGE	MAX WEED HGT.	MAX LEAF STAGE	MAX WEED HGT.
Black Nightshade ( <i>Solanum nigrum</i> )	4	4	4	4	6	6	6	6	6	6	6	6
Buffalobur ( <i>Solanum rostratum</i> )	4	4	4	4	6	4	6	4	6	4	6	4
Burcucumber ( <i>Sicyos angulatus</i> )	4	4	4	4	4	4	6	6	6	6	6	6
Common Cocklebur ( <i>Xanthium strumarium</i> )	6	8	8	10	8	10	10	12	10	12	10	12
Common Lambsquarters ( <i>Chenopodium album</i> )	-	6	-	10	-	10	-	12	-	12	-	12
Common Ragweed ( <i>Ambrosia artemisiifolia</i> )	6	4	8	6	8	6	8	6	8	6	8	6
Eastern Black Nightshade ( <i>Solanum ptycanthum</i> )	4	4	4	4	6	6	6	6	6	6	6	6
Entireleaf Mominggory ( <i>Ipomoea hederacea</i> )	-	-	4	3	4	3	4	3	4	3	4	3
Giant Ragweed ( <i>Ambrosia trifida</i> )	4	6	6	8	6	8	6	8	8	10	8	10
Hemp Sesbania ( <i>Sesbania exaltata</i> )	4	4	4	4	4	4	4	4	4	4	4	4
Ivyleaf Mominggory ( <i>Ipomoea hederacea</i> )	3	3	4	4	4	4	4	4	4	4	4	4
Jimsonweed ( <i>Datura stramonium</i> )	4	4	4	4	6	6	6	6	6	6	6	6
Kochia ( <i>Kochia scoparia</i> )	-	2	-	2	-	2	-	2	-	4	-	4
Ladythumb ( <i>Polygonum persicaria</i> )	4	4	4	4	6	6	8	8	8	8	8	8
Marestail ( <i>Conyza canadensis</i> )	-	-	-	3	-	5	-	5	-	5	-	5
Palmleaf Mominggory ( <i>Ipomoea wrightii</i> )	-	-	-	3	4	3	4	3	4	8	4	3
Pitted Mominggory ( <i>Ipomoea lacunosa</i> )	3	3	4	4	4	4	4	4	4	3	4	4
Pennsylvania Smartweed ( <i>Polygonum pensylvanicum</i> )	4	4	4	4	6	6	8	8	8	4	8	8
Pokeweed ( <i>Phytolacca americana</i> )	-	-	4	4	6	6	6	6	6	6	6	6
Prickly Sida ( <i>Sida spinosa</i> )	-	-	6	2	4	1	6	2	4	1	6	2
Puncturevine ( <i>Tribulus terrestris</i> )	-	-	-	-	-	-	6	4	6	4	6	4
Purple Mominggory ( <i>Ipomoea muricata</i> )	-	-	2	3	2	3	2	3	2	3	2	3
Redroot Pigweed <sup>3</sup> ( <i>Amaranthus retroflexus</i> )	4	2	8	6	6	4	8	6	6	4	8	6
Smallflower Mominggory ( <i>Jacquemontia tamnifolia</i> )	-	-	4	3	4	3	4	3	4	3	4	3
Smooth Pigweed <sup>3</sup> ( <i>Amaranthus hybridus</i> )	4	2	6	4	4	2	6	4	6	4	6	4
Spiny Pigweed <sup>3</sup> ( <i>Amaranthus spinosus</i> )	4	2	8	6	6	4	8	6	6	4	8	6
Sunflower ( <i>Helianthus annuus</i> )	6	8	8	10	8	10	10	12	10	12	10	12
Tall Mominggory ( <i>Ipomoea purpurea</i> )	3	3	4	4	4	4	4	4	4	4	4	4
Tall Waterhemp ( <i>Amaranthus tuberculatus</i> )	4	2	8	6	6	4	8	6	6	4	8	6
Toothed Spurge ( <i>Euphorbia dentata</i> )	2	2	2	2	4	4	4	4	4	4	4	4
Velvetleaf ( <i>Abutilon theophrasti</i> )	4	3	4	3	6	5	6	5	8	6	8	6
Venice Mallow ( <i>Hibiscus trionum</i> )	4	2	4	2	4	2	4	2	4	2	4	2
Wild Buckwheat ( <i>Polygonum convolvulus</i> )	6	8	8	10	8	10	10	12	10	12	10	12
Wild Mustard ( <i>Sinapis arvensis</i> )	4	4	4	4	4	4	4	4	4	4	4	4

**WEEDS SUPPRESSED <sup>2</sup>**

Canada thistle ( <i>Cirsium arvense</i> )	Not Recommended	Not Recommended	8"-bud	8"-bud	8"-bud	8"-bud
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<sup>1</sup> When determining leaf stage, count all leaves except cotyledon leaves.

<sup>2</sup> Selected rates of BROCLEAN + atrazine tank mixtures suppress the growth by burning down of top growth. Regrowth may occur.

<sup>3</sup> If pigweeds (*Amaranthus* sp.) present in the field to be treated have been identified as triazine resistant biotypes, use BROCLEAN at 1½ pints/A in a tank mixture with atrazine at ½ or 1½ lb ai/A. Applications should be made when pigweeds do not exceed the 4-leaf stage and 2 inches in height. Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BROCLEAN + atrazine tank mixtures. Repeat applications may be necessary to achieve satisfactory control.

**ATRAZINE CONVERSION TABLE <sup>1/</sup>**

ATRAZINE FORMULATION	ATRAZINE RATE POUNDS OF ACTIVE INGREDIENT PER ACRE	ATRAZINE FORMULATION RATE PER ACRE
Atrazine 4L	½	1 Pint
	1½	2½ Pints
Atrazine 80WP	½	5½ Pound
	1½	1½ Pounds
Atrazine 90	½	¾ Pound
	1½	1½ Pounds

<sup>1/</sup>Follow all precautions and limitations on the labels of products used in tank mixture with BROCLEAN.

**SPECIAL USE DIRECTIONS FOR OTHER WEED PROBLEMS IN CORN AND SORGHUM**

**Large Common Cocklebur, Common Lambsquarters and Sunflower**

For control of common cocklebur and common lambsquarters up to 14 inches in height and sunflower up to 18 inches in height, use a postemergence application of BROCLEAN at 1 pint/A. Make a second application of BROCLEAN at the same rate 7 to 10 days later.

**Large Velvetleaf**

For control of velvetleaf up to 14 inches in height, use postemergence application of BROCLEAN at 1½ to 2 pints/A or BROCLEAN + atrazine tank mixture at 1 pint/A + 1½ lb ai/A. Make a second application of BROCLEAN at 1 pint/A 7 to 10 days later, but do not exceed a total of 2 pints/A of BROCLEAN per season on field corn or popcorn.

**Canada Thistle Management**

For effective management of Canada thistle, the following BROCLEAN treatments should be applied to thistle from 8" to the bud stage for in-season burndown of top growth:

BROCLEAN at 1½ - 2 pints/A  
BROCLEAN at 1 - 1½ pints/A + atrazine at ½ - 1½ lbs ai/A

BROCLEAN at 1 - 1½ pints/A + Rifle® or Clarity® at ¼ - ½ pint/A  
BROCLEAN at 1 - 1½ pints/A + atrazine at ½ - 1½ lbs ai/A + Rifle or Clarity at ¼ - ½ pint/A  
BROCLEAN at 1 - 1½ pints/A + 2,4-D at ¼ - ½ lb ai/A  
BROCLEAN at 1 - 1½ pints/A + atrazine at ½ - 1½ lbs ai/A + 2,4-D at ¼ - ½ lb ai/A

If possible follow with cultivation 14-21 days after treatment. In the fall apply 2,4-D (such as Weedone® 638), Rifle, Clarity or glyphosate (Makaze®) at recommended rates to Canada thistle 4-8 inches tall prior to killing frost. Follow with a similar control program in next year's rotational crop.

**ADDITIONAL BROCLEAN TANK MIXTURE RECOMMENDATIONS  
APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1 pint/A	Apply to field corn after emergence and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first.  Apply to sorghum between the 3 leaf stage and prior to the preboot stage (growth stage 4) or 15 inches in height, whichever comes first. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BROCLEAN at recommended rates of application plus improved control of pigweed. For Canada thistle burndown and field bindweed suppression up to the mid-bloom stage, use ¼-½ pint/A of Rifle with BROCLEAN.
+ Rifle	½-½ pint/A		

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APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Rifle	1½ pints/A + ¼-½ pint/A	Apply to field corn between the 4 leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first.  Apply to sorghum between the 4 leaf stage and prior to the preboot stage (growth stage 4) or 15 inches in height, whichever comes first. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BROCLEAN + atrazine + Rifle	1 pint/A + ½ to 1½ lb ai/A + ¼-½ pint/A	Apply to field corn after emergence and before corn is 12 inches tall.  Apply to sorghum between the 3 leaf stage and prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BROCLEAN + atrazine tank mixtures at recommended rates of application plus improved control of pigweed. For field bindweed suppression, use ¼ pint/A of Rifle/Clarity with BROCLEAN.
	1½ pints/A + ½ - 1½ lb ai/A + ¼ - ½ pint/A	Apply to field corn between the 4 leaf stage and before corn is 12 inches tall.  Apply to sorghum between the 4 leaf stage and prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
		Clarity may be used at the same rates as Rifle in a tank mixture on corn. These mixtures must be applied before corn exceeds 8 inches in height. Do not use Clarity in a tank mixture with BROCLEAN or BROCLEAN + atrazine on sorghum.	
BROCLEAN + 2,4-D (such as WEEDONE® and WEEDAR® Brand HERBICIDE)	1 pint/A + ¼-½ lb ai/A	Apply to field corn after emergence and prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches.  Apply to sorghum between the 3 leaf stage and prior to the preboot stage (growth stage 4) or 15 inches in height. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BROCLEAN at recommended rates plus improved pigweed and kochia control. For Canada thistle burn-down and field bindweed suppression up to the midbloom stage, use ¼ - ½ lb ai/A of 2,4-D with BROCLEAN.
	1½ pints/A + ¼-½ lb ai/A	Apply to field corn between the 4 leaf stage and prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches.  Apply to sorghum between the 4 leaf stage and prior to the preboot stage (growth stage 4) or 15 inches in height. Use drop nozzles if crop is taller than 8 inches.	

APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN + atrazine + 2,4-D (such as WEEDONE and WEEDAR Brand HERBICIDE)	1 pint/A + ½-1½ lb ai/A + ¼-½ lb ai/A	Apply to field corn after emergence and before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches.  Apply to sorghum between the 3 leaf stage and prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BROCLEAN + atrazine tank mixtures at recommended rates of application plus improved devils claw control. For Canada thistle burn-down and field bindweed suppression, use ¼ - ½ lb ai/A of 2,4-D with BROCLEAN.
	1½ pints/A + ½-1½ lb ai/A + ¼-½ lb ai/A	Apply to field corn between the 4 leaf stage and before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches.  Apply to sorghum between the 4 leaf stage and prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	
BROCLEAN + Accent® + non-ionic surfactant	1 pint/A + ⅔ oz/A + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn pre-emergence or post-emergence up to 36 inches tall. Use drop nozzles when corn is 24-36 inches tall. Do not apply this tank mix to sorghum.	All broadleaf weeds controlled by BROCLEAN at 1 or ½ pt/A plus grasses and broadleaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guideline on the BROCLEAN or Accent labels that are least restrictive.
	1½ pint/A + ⅔ oz/A + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn between the 4 leaf stage up to 36 inches in height. Use drop nozzles when corn is 24-36 inches tall. Do not apply this tank mix to sorghum.	
BROCLEAN + atrazine + Accent + non-ionic surfactant	1 pint/A + ½-1½ lb ai/A + ⅔ oz/A + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn pre-emergence or post-emergence but before the corn is 12 inches tall. Do not apply this tank mix to sorghum.	All broadleaf weeds controlled by BROCLEAN + atrazine plus grasses and broad leaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guideline on the BROCLEAN or Accent labels that are least restrictive.
	1½ pint/A + ½ - 1½ lb ai/A + ⅔ oz/A + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn between the 4 leaf stage of corn growth and before the corn is 12 inches tall. Do not apply this tank mix to sorghum.	
BROCLEAN + Beacon® + non-ionic surfactant	1 pint/A + 0.38-0.76 oz/A (1-2 packets/4 acres) + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn from 4 to 20 inches in height. Do not apply this tank mix to sorghum.	All broadleaf weeds controlled by BROCLEAN at 1 pt/A plus grasses and broad leaves controlled by Beacon. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guide lines on the BROCLEAN or Beacon labels that are least restrictive.

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APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Exceed® + non-ionic surfactant	¾-1 pint/A + 0.5-1.0 oz/A + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn from 4 to 48 inches in height and before tasseling, whichever comes first. Do not apply this tank mix to sorghum.	Addition of Exceed at 0.5 ounce/A to BROCLEAN at ¾-1 pint/A will control all weeds on the BROCLEAN label at 1 pint/A plus improved control of velvetleaf and pigweed species. Addition of Exceed at 1.0 oz./A to BROCLEAN at ¾-1 pint/A will control all weeds on both the BROCLEAN and Exceed labels. Follow the weed size guidelines on the BROCLEAN and Exceed labels that are least restrictive.
BROCLEAN + Permit® + non-ionic surfactant	¾-1 pint/A + ½- 2/3 oz/A + 1 qt/100 gal. of water (0.25% v/v)	Apply to field corn from the 3 leaf stage to layby. Do not apply this tank mix to sorghum.	Addition of Permit at ½ oz./A to BROCLEAN at ¾-1 pint/A will control all weeds on the BROCLEAN label at 1 pint/A plus improved control of velvet-leaf and pigweed species. Addition of Permit at 2/3 oz./A to BROCLEAN at ¾-1 pint/A will control all weeds on both the BROCLEAN and Permit labels. Follow the weed size guidelines on the BROCLEAN and Permit labels that are least restrictive.
BROCLEAN + Stinger®	1 pint/A + ½- 2/3 pint/A	Apply to field corn after emergence up to 24 inches in height. Do not apply this tank mix to sorghum.	All weeds controlled by BROCLEAN at recommended rates of application plus improved Canada thistle burndown.
	1 ½ pints/A + ½- 2/3 pint/A	Apply to field corn from 4 leaf stage up to 24 inches in height. Do not apply this tank mix to sorghum.	For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
BROCLEAN + atrazine + Stinger®	1 pint/A + ½-1½ lb ai/A + ½- 2/3 pint/A	Apply to field corn after emergence and before corn is 12 inches tall. Do not apply this tank mix to sorghum.	All weeds controlled by BROCLEAN + atrazine tank mixtures at recommended rates of application plus improved Canada thistle burndown.
	1½ pints/A + ½-1½ lb ai/A + ½- 2/3 pint/A	Apply to field corn from 4 leaf stage and before corn is 12 inches tall. Do not apply this tank mix to sorghum.	For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
BROCLEAN + Pursuit® + nonionic surfactant + UAN fertilizer solution	¾-1 pint/A + 4 ounces/A + 1 qt/100 gals. + 1-2 qts./A	Apply this tank mix only on field corn hybrids possessing resistance to Pursuit herbicide. Contact your seed supplier for further information. Apply this tank mix to corn between the 3 leaf to 8 leaf stage of growth. Do not use crop oil concentrates when applying BROCLEAN + Pursuit tank mixtures.	This tank mix will control all broadleaf weeds listed as controlled by BROCLEAN at ¾-1 pint/A plus giant foxtail, redroot pigweed, and other grass and broadleaf weeds listed on the Pursuit label.

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APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN + glyphosate (Makaze)	Preemergence 1-1½ pints/A + ½-3 pints/A	Apply to corn or sorghum before planting time up until just prior to crop emergence.  Refer to glyphosate label for rate to use depending on weeds present at time of application.	All weeds controlled by BROCLEAN at recommended rates of application plus control of certain grass and perennial weeds.

**RESTRICTIONS AND PRECAUTIONS: Corn (Field and Pop), Sorghum (Grain and Forage) and Sudangrass**

- BROCLEAN does not control grasses. Therefore, it is recommended that a suitable grass control program be used to provide any required grass control.
- Addition of a spray additive or mixture with liquid fertilizers may cause excessive crop leaf burn.
- Seed corn producers should consult the respective seed corn company regarding tolerance of certain seed production inbred lines to BROCLEAN.
- Do not apply BROCLEAN postemergence to seed corn inbreds or popcorn prior to the 3 leaf stage of crop growth as excessive crop leaf burn may occur.
- Do not plant rotational crops until the following season.
- Do not cut crop for feed, fodder or graze within 30 days of application.
- The total cumulative rate may not exceed 0.5 lb ai bromoxynil/A (2 pints Broclean/A).
- Postemergence application prior to the 3 leaf growth stage of corn or sorghum may result in increased crop leaf burn.
- Tank mixtures with Accent/nonionic surfactant or Beacon/nonionic surfactant may result in increased initial crop leaf burn. Use of crop oil concentrate, nitrogen fertilizer solution or other adjuvants in BROCLEAN + Accent or BROCLEAN + Beacon tank mixtures may result in a further increase in crop leaf burn.
- Special care should be taken when using BROCLEAN, Rifle, Clarity or 2,4-D tank mixtures to avoid off target drift to sensitive crops.
- Tank mixtures with 2,4-D, Rifle, or Clarity can cause stalk brittleness to field corn. Tank mixtures with 2,4-D and Rifle can cause stalk brittleness to sorghum. Winds or cultivation may cause breakage while crop is brittle.
- Follow all restrictions and precautions on the label of all products used in tank mixture with BROCLEAN.
- Do not apply BROCLEAN at any rate to sorghum after the preboot stage of growth (growth stage 4) as severe crop injury, including loss of crop yield may result.
- Do not apply the 2 pints/A rate of BROCLEAN to sorghum.
- Do not apply the BROCLEAN + Pursuit tankmix except to field corn hybrids known to possess resistance to Pursuit, or severe crop injury may result.

**WHEAT, BARLEY, OATS, RYE AND TRITICALE  
BROCLEAN RECOMMENDATIONS**

APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1 - 2 pints/A	Spring seeded wheat, barley, oats, rye and triticale. Use in all states except Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply from emergence up and prior to the boot stage.	Apply 1 pint/A to MOST SUSCEPTIBLE and 1½-2 pints/A to SUSCEPTIBLE weeds that do not exceed the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 1 inch in diameter.
	1½-2 pints/A	Fall seeded wheat, barley, oats, rye and triticale throughout the United States. Apply from emergence to the boot stage.  Spring seeded wheat, barley, oats, rye and triticale in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply from emergence up and prior to the boot stage.	Use BROCLEAN at 1½-2 pints/A for control of kochia that is 2-4 inches in height and pigweed that does not exceed the 4 leaf stage or 2 inches in height, whichever comes first.  Apply to MOST SUSCEPTIBLE weeds (see General Weed List) up to the 8 leaf stage or 4 inches in height, whichever comes first. If weed forms rosette apply before weeds exceed 2 inches in diameter. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

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APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN	Chemigation Only  2 pints/A	Apply to wheat, barley, oats, rye and triticale from emergence to the boot stage. Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details.	Apply to MOST SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage or 4 inches in height or 2 inches in diameter, whichever comes first. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. Do not use chemigation for control of weeds that exceed 4 inches in height because control may be unacceptable.
	Barley, oats, rye, triticale, and wheat underseeded with alfalfa	Apply to barley, oats, rye, triticale, and wheat underseeded with alfalfa after barley, oats, rye, triticale, and wheat emerge up to the boot stage and when underseeded alfalfa has a minimum of 4 trifoliate leaves. Follow all precautions and restrictions listed under the barley, oats, rye, triticale, wheat and seedling alfalfa sections.	Apply 1 pint/A to MOST SUSCEPTIBLE and 1½ pints/A to SUSCEPTIBLE broadleaf weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	1-1½ pints/A		

**BROCLEAN TANK MIXTURE RECOMMENDATIONS**  
**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + 2,4-D (such as WEEDONE or WEEDAR brand HERBICIDE)	1-2 pints/A + ¼-½ lb ai/A	Apply to wheat, barley, oats and rye from the fully tillered and before jointing stage.	This tank mix improves control of mustards and pigweed. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	¾-1 pint/A + ¼-½ lb ai/A	Apply to wheat and barley in Minnesota, North and South Dakota from the fully tillered and before the jointing stage.	This tank mix improves control of wild buckwheat, redroot pigweed and wild mustard. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BROCLEAN + MCPA (such as RHONOX® or RHOMENE®)	1-2 pints/A + ¼-½ lb ai/A	Apply to wheat, barley, oats and rye from the 4 leaf stage and before jointing.	This tank mix improves control of mustards, pigweed and kochia. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BROCLEAN + Rifle	1-1½ pints/A + ¼-½ pint/A	Fall seeded wheat apply prior to the jointing stage. Spring seeded wheat apply up to the 5 leaf stage.	This tank mix improves control of broadleaves such as prostrate knotweed. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BROCLEAN + Glean® + nonionic surfactant	¾-1½ pints/A + ⅙-⅓ oz/A + 1 qt/100 gal. of water	Apply to wheat and barley from the 2 leaf stage and before boot stage. Refer to Glean label for crop rotation and other restrictions.	This tank mix improves control of broadleaves such as henbit, tansy mustard and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BROCLEAN + Ally® + nonionic surfactant	¾-1½ pints/A + ⅓ oz/A + 1 qt/100 gal. of water	Apply to wheat and barley from the 2 leaf stage and before the boot stage. Refer to Ally label for crop rotation and other restrictions.	This tank mix improves control of broadleaves such as tansy mustard and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.

**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Finesse® + nonionic surfactant	¾-1½ pints/A + ⅙-⅓ oz/A + 1 qt/100 gal. of water	Apply to wheat and barley from the 2 leaf stage and before the boot stage. Refer to Finesse label for crop rotation and other restrictions.	This tank mix improves control of broadleaves such as tansy mustard, henbit, chickweed and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BROCLEAN + Amber® + nonionic surfactant	¾-1½ pints/A + 0.28-0.56 oz/A + 0.25-0.5% v/v	Apply to wheat and barley after the 3 leaf stage and before the flag leaf is visible. Refer to the Amber label for crop rotation and other restrictions.	This tank mix improves control of broadleaves such as tansy mustard, henbit, and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BROCLEAN + Express® + nonionic surfactant	1-1½ pints/A + ⅙-⅓ oz/A + 1 qt/100 gal. of water	Winter wheat. Apply after crop is in the 2 leaf stage and before the flag leaf is visible. Refer to Express label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as redroot pigweed, tansy mustard and suppression of Canada thistle. Apply to annual weeds up to the 4 leaf stage, 4 inches tall or across and to Canada thistle 4 to 8 inches tall with 2 to 6 inches of new growth.
	¾-1½ pints/A + ⅙-⅓ oz/A + 1 qt/100 gal. of water	Spring wheat and barley. Apply after crop is in the 2 leaf stage and before the flag leaf is visible. Refer to Express label for crop rotation and other restrictions.	
BROCLEAN + Harmony® Extra + nonionic surfactant	¾-1½ pints/A + ⅓-½ oz/A + 1 qt/100 gal. of water	Winter wheat. Apply after the 2 leaf stage and before the 3rd node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as henbit, chickweed and redroot pigweed. Apply to weeds up to 4 leaf stage, 4 inches in height or across whichever comes first.
		Spring wheat and barley. Apply after the 2 leaf stage and before the 1st node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions.	
BROCLEAN + Curtail® or Curtail M	1-1½ pints/A + 2 pints/A	Apply to wheat and barley after the crop begins to tiller up to the 1st node detectable.	This tank mix improves control of kochia, wild buckwheat and Canada thistle. Apply to annual broadleaf weeds up to the 8 leaf stage up to 4 inches in height or 2 inches in diameter and Canada thistle in the rosette to prebud stage.
BROCLEAN + metribuzin (Metribuzin 75)	1-1½ pints/A + ⅙-⅓ lb ai/A	Winter wheat in Idaho, Montana, Oregon and Washington. Apply in spring after growth has started and secondary roots with a minimum of 3 to 4 tillers have been established and before boot stage. Avoid application when crop has experienced winter kill, frost damage, disease or drought.	This tank mix improves control of broadleaves such as chickweed, filaree, henbit and dogfennel. Apply to weeds that do not exceed 2 inches tall or rosettes of 2 inches in diameter. The higher use rates of both products should be used only in emergency weed situations and if some minor crop injury is acceptable. A recognized authority should be consulted concerning the use of this mixture in your area.
BROCLEAN + diuron	1 pint/A + ⅓ lb ai/A	Winter wheat and winter barley in Idaho, Oregon and Washington. Use only in areas where annual rainfall exceeds 16 inches. One fall application after emergence and before soil freezes or in spring as soon as soil thaws.	This tank mix improves control of broadleaves such as henbit and gromwell. Apply to weeds before they are 2 inches tall or 2 inches in diameter.

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**BROCLEAN TANK MIXTURE RECOMMENDATIONS  
APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Tiller®	1 pint/A + 1 pint/A	Spring wheat. Apply when crop begins to tiller (3-4 leaf stage) up to the 6 leaf stage. Refer to the Tiller label for complete use directions and restrictions.	In addition to broadleaf weeds controlled by BROCLEAN, this tankmix will control green foxtail from the 2-leaf to 2-tiller stage of growth.
BROCLEAN + Hoelon®	1 -2 pints/A + 2 <sup>2</sup> / <sub>3</sub> pints/A	Spring Barley. After emergence and before jointing. Avoid using this tank mixture on barley exposed to cold (lower than 40 degrees F) and/or prolonged wet weather conditions as crop injury may result.	This tank mix will provide wild oat, green foxtail and annual ryegrass control in addition to broadleaves. Apply to grasses 1-3 leaf stage and broadleaves no larger than 4 leaf stage or rosettes of 1.5 inches in diameter.
BROCLEAN + Hoelon + crop oil concentrate	1-2 pints/A + 2-2 <sup>2</sup> / <sub>3</sub> pints/A + 1-2 pints/A	Winter wheat and spring wheat. After emergence and before jointing. Use a minimum of 10 gallons of spray volume per acre.  DO NOT USE ON BARLEY	
BROCLEAN + Avenge™	1-2 pints/A + 2 <sup>1</sup> / <sub>2</sub> -4 pints/A	Winter Wheat. Four leaf to tillering stage. Refer to Avenge label for varietal and other restrictions. Spring Wheat. Five to 6 leaf stage. Refer to Avenge label for varietal and other restrictions. Barley. Two to 7 leaf stage.	This tank mix will provide wild oat control in addition to broadleaves. Apply to wild oats in the 3-5 leaf stage and broadleaves that do not exceed the 4 leaf stage or rosettes of 1.5 inches in diameter.  Avenge use rates per acre are 2.5 pints (1-10 oats per sq. ft.), 3 pints (11-25 oats per sq. ft.) or 4 pints (more than 25 oats per sq. ft.).

**RESTRICTIONS AND PRECAUTIONS: Small Grains (Wheat, Barley, Oats, Rye and Triticale)**

- Do not graze treated fields within 45 days following treatment.
- Do not apply when crops are under moisture stress.
- Do not apply when crop canopy covers the weeds as poor weed control will result.
- Do not apply when underseeded alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.
- Do not add a surfactant or crop oil when applying to underseeded alfalfa or increased injury will occur.
- Do not cut for feed or graze spring treated underseeded alfalfa within 30 days following treatment.
- Do not cut for feed or graze fall or winter treated underseeded alfalfa until spring, at least 60 days following treatment.
- Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures.
- Refer to labels of products used in tank mixture of additional restrictions and precautions.
- Do not plant rotational crops until the following use season.
- The total cumulative rate must not exceed 0.5 lb. ai bromoxynil/A (2 pints Broclean/A).

FOR FIBER AND SPECIALTY CROPS  
ALFALFA (SEEDLING)

**BROCLEAN RECOMMENDATIONS  
APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1-1 <sup>1</sup> / <sub>2</sub> pints/A	In the states of California, Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas: Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliates. Unacceptable crop injury may occur to alfalfa seedlings less than the 2 trifoliolate stage. BROCLEAN applications made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury. In the remaining states apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. If you are unsure of growth stage conditions, contact your local extension service. BROCLEAN applications made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury. Follow all other use directions listed on the BROCLEAN label.	Apply 1 pint/A to MOST SUSCEPTIBLE broadleaf weeds and 1 <sup>1</sup> / <sub>2</sub> pints/A for SUSCEPTIBLE broadleaf weeds (See General Weed List) when weeds do not exceed 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. BROCLEAN will not adequately control over-wintered penny-cress, henbit and mustards.
BROCLEAN	1-1 <sup>1</sup> / <sub>2</sub> pints/A		
BROCLEAN	Chemigation Only  2 pints/A	Apply to seedling alfalfa with a minimum of 2 trifoliolate leaves. Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING LOADING AND HANDLING INSTRUCTIONS Section for complete details. BROCLEAN applications made when temperatures are expected to exceed 85°F at and 3 days following application can result in unacceptable crop injury.	Apply to MOST SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

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APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN + BUTYRAC® 200 (2,4-DB)	1 pint/A + 1 quart/A	Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leaf burn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. If you are unsure of growth stage conditions, contact your local extension service. In the states of California, Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas, BROCLEAN applications made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury. In the remaining states BROCLEAN application made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury. Rainfall or over head irrigation within 7-10 days following a BUTYRAC® application can cause unacceptable crop injury.	This tank mix improves control of pigweed (sp), kochia, and tansy mustard. Apply when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. BROCLEAN + BUTYRAC 200 tank mixtures will not adequately control over-wintered pennycress, henbit and mustards.
BROCLEAN + Pursuit® + non-ionic surfactant	¾ - 1 pint/A + 3-6 ounces/A + 1 qt/100 gals.	In the states of California, Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas: Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa treated prior to the 2nd trifoliolate stage of growth. If you are unsure of growth stage conditions, contact your local extension service. BROCLEAN + Pursuit applications made when temperatures are expected to exceed 80° F at and 3 days following application can result in unacceptable crop injury.	This tank mix will control MOST SUSCEPTIBLE broadleaf weeds (See General Weed List) when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, which ever comes first; and other grass and broad-leaf weeds listed on the Pursuit label. Weeds should be 1-3 inches tall for optimum control.

**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Pursuit + non-ionic surfactant	½-¾ pint/A + 3-6 oz./A + 1 qt/100 gals.	In all states except California, Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas: Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa treated prior to the 2nd trifoliolate stage of growth. If you are unsure of growth stage conditions, contact your local extension service. BROCLEAN + Pursuit applications made when temperatures are expected to exceed 70° F at and 3 days following applications can result in unacceptable crop injury.	BROCLEAN at ½ pint/A tank mixed with Pursuit will control common lambsquarters up to 2 inches in height plus weeds listed on the Pursuit label. BROCLEAN at ¾ pint/A + Pursuit will control the MOST SUSCEPTIBLE annual broadleaf weeds (See General Weed List) when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first plus weeds listed on the Pursuit label. Applications should be made when the majority of the weeds are 1-3 inches tall and when common lambsquarters do not exceed 4 inches in height. For low growing weeds (such as mustards) apply before the rosette exceeds 3 inches in diameter. Refer to the Pursuit label for a list of susceptible weeds at each of the recommended rates.

**RESTRICTIONS AND PRECAUTIONS: Alfalfa (Seedling)**

- Crop leaf burn can occur following BROCLEAN application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected. Alfalfa yield should not be reduced although total biomass tonnage may decrease compared to a weedy field due to weed removal.
- Do not apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.
- Do not add a surfactant or crop oil unless specified in the use directions because increased alfalfa injury will occur.
- Do not cut for feed or graze spring treated alfalfa within 30 days following treatment.
- Do not cut for feed or graze fall or winter treated alfalfa until spring, at least 60 days following treatment.
- The total cumulative rate of BROCLEAN may not exceed 0.5 lb ai bromoxynil/A (2 pints Broclean/A).
- The use of Eptam® preemergence may enhance crop leaf burn from postemergence application of BROCLEAN and should be considered prior to using BROCLEAN.
- Follow all restrictions and precautions on the tank mixture product label when a BROCLEAN tank mixture is used.
- Tank mixture with 2,4-DB may result in unacceptable crop leaf burn especially under warm, humid weather conditions.
- BROCLEAN alone can be applied to seedling alfalfa that has been underseeded into barley, oats, rye, triticale, wheat that include wheat, barley, oats, rye and triticale. See application restrictions under the BARLEY, OATS, RYE, TRITICALE, WHEAT SECTION.
- Rainfall or overhead irrigation within 7-10 days following BUTYRAC 200 application can cause unacceptable crop injury.

**FLAX (*Linum usitatissimum* only)**

**BROCLEAN RECOMMENDATIONS**

**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1 pint/A	Apply to flax that is 2 to 8 inches in height. Do not apply BROCLEAN to flax during or after the bud stage.	Apply to MOST SUSCEPTIBLE weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

**BROCLEAN TANK MIXTURE RECOMMENDATIONS**

**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Poast + Crop oil Concentrate or Dash®	1 pint/A + 1-1½ pints/A + 2 pints/A or 2 pints/A	Apply to flax that is 2 to 8 inches in height. Do not apply this tank mix to flax during or after the bud stage, or within 75 days of flax harvest.	This tank mix will control broadleaf weeds plus grassy weeds listed on the Poast label. Apply to MOST SUSCEPTIBLE broadleaf weeds (see list on the BROCLEAN label) that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

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**BROCLEAN®**  
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**RESTRICTIONS AND PRECAUTIONS: Flax (*Linum usitatissimum* only)**

- Do not apply if temperatures are expected to exceed 85°F at or 3 days following application or crop injury may occur.
- Unacceptable crop injury may occur following BROCLEAN application to flax grown on high organic, peat type soils.
- Application under high humidity conditions can injure flax.
- Unless otherwise instructed, do not apply BROCLEAN with crop oil concentrate, surfactants or nitrogen solutions.
- Do not use on ornamental flax.
- Follow all precautions, directions and restrictions on the Poast® label when using this tank mixture with BROCLEAN.
- Maximum 0.5 lb ai/A per season.
- Observe a minimum 30 day preharvest interval.

**GARLIC**  
**BROCLEAN RECOMMENDATIONS**  
**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1½-2 pints/A	Apply to garlic after emergence and before 12 inches in height.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BROCLEAN (Only for garlic grown in muck soils in Northeastern* United States)	1½-2 pints/A	Apply to garlic after emergence and before 12 inches in height.  *May be harvested 60 days after treatment.	

**PRECAUTIONS AND RESTRICTIONS: Garlic**

- Use a minimum of 20 gallons per acre for ground application.
- BROCLEAN can be applied through automated sprinkler irrigation application.
- Do not harvest within 112 days following treatment (except garlic grown in muck soils in Northeastern United States).
- Maximum 0.5 lb ai/A per season.

**MINT**  
**ESTABLISHED PEPPERMINT AND SPEARMINT ONLY**  
**BROCLEAN RECOMMENDATIONS**  
**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1-1½ pints/A	Apply to dormant or actively growing established peppermint or spearmint crops that exhibit good vigor.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	Chemigation 2 pints/A only	Apply to dormant or actively growing established peppermint or spearmint crops that exhibit good vigor. Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details.	

**RESTRICTIONS AND PRECAUTIONS: Mint**

- Application made to mint when temperatures are expected to exceed 70°F at or 5 days following application may result in unacceptable crop injury. This injury is more likely to occur following BROCLEAN application in the spring.
- Do not apply to mint growing under adverse conditions including diseases, insects, nematodes, high salt content soil, drought, excessive moisture, winter damage or other environmental stress.
- Application of BROCLEAN to mint should not be made within two weeks of a Sinbar® application or unacceptable crop injury may result.
- Do not use in spring on newly established mint. Fall applications to spring planted mint should be acceptable if the crop is well established.
- BROCLEAN can cause temporary stunting and discoloration of the mint particularly from the spring application. However, the injury symptoms are only temporary and have not caused yield reduction.
- Use of BROCLEAN in combination with other products may increase temporary stunting and discoloration.
- Do not harvest within 70 days following treatment.
- Do not apply more than 0.5 lb ai of bromoxynil per acre to mint in a single growing season.

**ONIONS**  
**BROCLEAN RECOMMENDATIONS**

**APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN	Preemergence 1-1 ½ pints/A	Preemergence use restricted to onions east of the Mississippi River only on muck soils containing greater than 10% organic matter. Apply at least 3 to 4 days prior to emergence. Rainfall or irrigation within 2 days following pre-emergence applications or 3 days prior to crop emergence may result in unacceptable crop injury. Preemergence applications can be applied using either ground or aerial equipment.	Apply BROCLEAN at 1 pint/A to control MOST SUSCEPTIBLE weeds and 1½ pints/A for SUSCEPTIBLE weeds. Weeds should not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	Postemergence 1-1½ pints/A	Apply only to onions which have 2 to 5 true leaves.  Use at least 50-70 gallons of water per acre and apply by ground equipment or chemigation only. Water volume is important - <b>CONCENTRATED SPRAYS KILL ONIONS.</b> Thorough and uniform coverage is necessary for good weed control.  In onion-producing areas, certain environmental conditions reduce development of waxy coating on the onion leaves, thus increasing the possibility of injury. Dry soil, dry onion foliage, high light intensity, low humidity, and high temperatures tend to increase the waxy coating on onion leaves and thus reducing chances for injury. It is essential that the soil and onion foliage be dry at the time of application. Humidity should be low and dew should be off the plants.	

**RESTRICTIONS AND PRECAUTIONS: Onions**

- The sensitivity of onions to BROCLEAN varies with the variety and environmental conditions. Therefore, even if all the label directions are followed, BROCLEAN application still may cause injury to onions under certain circumstances.
- Do not irrigate onions that have received a preemergence application of BROCLEAN for 2 days following application or within 3 days of crop emergence.
- Do not use BROCLEAN preemergence to onions grown west of the Mississippi River.
- Do not use BROCLEAN on onions grown under low light intensity, in areas such as Oregon, west of the Cascades.
- Do not treat onions damaged by sand, insects, or diseases.
- Do not apply postemergence applications of BROCLEAN to onions with aerial equipment.
- Do not add surfactant.
- Maximum 0.5 lb ai/A per season.
- Observe a minimum 30 day preharvest interval.

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**GRASS CROPS  
CONSERVATION RESERVE PROGRAM (CRP) AREAS  
BROCLEAN RECOMMENDATIONS**

APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BROCLEAN	1-2 pints/A	Apply to grasses after emergence. If alfalfa is planted, apply after the 4 trifoliate leaf stage.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	Chemigation 2 pints/A only	Apply to grasses after emergence. If alfalfa is planted apply after the 4 trifoliate leaf stage. Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details.	

**BROCLEAN TANK MIXTURE RECOMMENDATIONS  
APPLICATION TIMING AND SPECIFIC COMMENTS**

PRODUCT	RATE	CROP	WEEDS
BROCLEAN + Rhomene or Rhonox (MCPA)	1-2 pints/A + ¼ -½ pint/A	Apply to CRP areas after grasses have reached the 3 leaf stage. Do not use this tank mixture in areas where alfalfa or other legumes have been planted.	This tank mix improves control of mustards, pigweed, and kochia. Apply up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

**RESTRICTIONS AND PRECAUTIONS: CRP AREAS**

- Do not allow livestock to graze in treated areas or feed treated grass and forage to livestock.
- Do not add spray adjuvants or fluid fertilizers when applying BROCLEAN to CRP areas planted with alfalfa or other legumes.
- Do not apply BROCLEAN to CRP areas planted with alfalfa if temperatures are expected to exceed 80°F or severe crop injury may occur. If legumes other than alfalfa have been planted, severe crop injury may occur at any application temperature.
- Do not apply more than 1½ pints/A of BROCLEAN to CRP areas that are underseeded with alfalfa.
- Maximum 0.5 lb ai/A per season.
- Maximum rate for areas underseeded with alfalfa is 0.375 lb ai bromoxynil (1.5 pints/A Broclean) per year.

**GRASSES GROWN FOR SEED OR SOD PRODUCTION  
BROCLEAN RECOMMENDATIONS  
Seedling and Established Grasses**

APPLICATION TIMING AND SPECIFIC COMMENTS				
Product	RATE Per ACRE	RATE Per 1000 SQ.FT.	CROP	WEEDS
BROCLEAN	1 to 2 pints	0.375 to 0.75 fl. oz.	Apply to established and newly seeded grasses for seed or sod production before the boot stage. Established grasses tolerant to BROCLEAN include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermuda-grass, St. Augustine-grass and Zoysiagrass. BROCLEAN may also be used on seedling grasses such as Merion, Park, Delta, or common Kentucky Bluegrasses, Pennlawn, Chewings, Illahee or Alta Fescues, Orchardgrass, Highland, Seaside or Astoria Bent-grasses, perennial Ryegrasses, Bahiagrass and Zoysiagrass.	Refer to the General Weed List for a listing of susceptible broadleaf weeds.  Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

**APPLICATION TIMING AND SPECIFIC COMMENTS**

Product	RATE Per ACRE	RATE Per 1000 SQ.FT.	CROP	WEEDS
BROCLEAN cont'd.	Chemigation 2 pints only	0.75 fl. oz.	Apply to established and newly seeded grasses grown for seed or sod production before the boot stage. Apply through automated sprinkler irrigation systems with mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details. Refer to the list of established grasses that are tolerant to BROCLEAN.	

**RESTRICTIONS AND PRECAUTIONS: Grasses grown for seed or sod production.**

- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BROCLEAN to grasses grown for seed or sod production with backpack or hand-held application equipment.
- Maximum 0.5 lb ai/A per season.

**NON-RESIDENTIAL TURFGRASS  
BROCLEAN RECOMMENDATIONS**

**Seedling and Established Non-Residential Turfgrass  
APPLICATION TIMING AND SPECIFIC COMMENTS**

Product	RATE Per ACRE	RATE Per 1000 SQ.FT.	CROP	WEEDS
BROCLEAN	1 to 2 pints	.0375 to 0.75 fl. oz.	Apply to established and newly seeded non-residential turfgrass when weeds are small and actively growing. Established turfgrasses that are tolerant to BROCLEAN include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermuda-grass, St. Augustine-grass and Zoysiagrass. BROCLEAN may also be used on seedling grasses such as Merion, Park, Delta, or common Kentucky Bluegrasses, Pennlawn, Chewings, Illahee or Alta Fescues, Orchardgrass, Highland, Seaside or Astoria Bent-grasses, perennial Ryegrasses, Bahiagrass and Zoysiagrass.	Refer to the General Weed List for a listing of susceptible broadleaf weeds.  Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

**RESTRICTIONS AND PRECAUTIONS: Non-residential turfgrasses**

- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BROCLEAN to non-residential turf with backpack or hand-held application equipment.
- Maximum 0.5 lb ai/A per season.

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**NON-RESIDENTIAL TURFGRASS  
BROCLEAN TANK MIXTURE RECOMMENDATIONS  
Established Non-Residential Turfgrass**

APPLICATION TIMING AND SPECIFIC COMMENTS				
RATE Product	RATE Per ACRE	Per 1000 SQ. FT.	CROP	WEEDS
BROCLEAN + Weedone DPC Ester	2 Pints + 3 to 4 Pints	0.75 fl. oz. + 1.125 to 1.5 fl. oz.	Apply to established non-residential turf grass only. This treatment may cause injury to bentgrasses, St. Augustinegrass, centipedegrass, and carpetgrass.	All weed species previously listed in the General Weed List for BROCLEAN plus the following species: Dandelion ( <i>Taraxacum officinale</i> ) Plantains ( <i>Plantago</i> spp.) Ground Ivy ( <i>Glechoma hederacea</i> ) Red Clover ( <i>Tribolium pratense</i> ) White Clover ( <i>Tribolium repens</i> ) Hop Clover ( <i>Tribolium agrarium</i> ) Common Chickweed ( <i>Stellaria media</i> ) Prostrate Spurge ( <i>Euphorbia supina</i> ) Oxalis ( <i>Oxalis europaea</i> ) Knotweed ( <i>Polygonum aviculare</i> ) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).
BROCLEAN + MCPP	2 Pints + 1.0 lb ai	0.75 fl. oz. + 0.025 lb ai	Apply to established non-residential turfgrass only. This treatment is not recommended for use on St. Augustinegrass or centipedegrass.	All weed species previously listed in the General Weed List for BROCLEAN plus the following species: Red Clover ( <i>Tribolium pratense</i> ) White Clover ( <i>Tribolium repens</i> ) Common Chickweed ( <i>Stellaria media</i> ) Mouseear Chickweed ( <i>Cerastium vulgatum</i> ) Ground Ivy ( <i>Glechoma hederacea</i> ) Stitchwort ( <i>Stellaria gramminea</i> ) Knotweed ( <i>Polygonum aviculare</i> ) Prostrate Spurge ( <i>Euphorbia supina</i> ) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).
BROCLEAN + Dicamba	2 Pints + 0.125 to 0.25 lb ai	0.75 fl. oz. + 0.006 to 0.012 lb ai	Apply to established non-residential turfgrass only. This treatment may cause injury to bentgrasses, St. Augustinegrass, centipedegrass, and carpetgrass.	All weed species previously listed in the General Weed List for BROCLEAN and the following species: Red Clover ( <i>Tribolium pratense</i> ) White Clover ( <i>Tribolium repens</i> ) Common Chickweed ( <i>Stellaria media</i> ) Mouseear Chickweed ( <i>Cerastium vulgatum</i> ) Pepperweed ( <i>Lepidium</i> spp.) Knotweed ( <i>Polygonum aviculare</i> ) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

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Product	RATE Per ACRE	RATE Per 1000 SQ. FT.	CROP	WEEDS
BROCLEAN + MCPP + Dicamba	2 Pints + 0.5 to 1.0 lb ai + 0.125 to 0.25 lb ai	0.75 fl. oz. + 0.0125 to 0.025 lb ai + 0.003 to 0.006 lb ai	Apply to established non-residential turfgrass only. This treatment is not recommended for use on St. Augustinegrass or centipedegrass.	All weed species previously listed in the General Weed List for BROCLEAN and BROCLEAN/ Dicamba tank mixtures plus the following species: Dandelion ( <i>Taraxacum officinale</i> ) Plantains ( <i>Plantago</i> spp.) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).
BROCLEAN + MCPP + 2,4-D	2 Pints + 0.5 to 1.0 lb ai + 0.5 to 1.0 lb ai	0.75 fl. oz. + 0.0125 to 0.025 lb ai + 0.0125 to 0.025 lb ai	Apply to established non-residential turfgrass only. This treatment is not recommended for use on St. Augustinegrass or centipedegrass.	All weed species previously listed in the General Weed List for BROCLEAN and BROCLEAN/2,4-D tank mixtures plus the following species: Dandelion ( <i>Taraxacum officinale</i> ) Plantains ( <i>Plantago</i> spp.) Red Sorrel ( <i>Rumex acetosella</i> ) Knotweed ( <i>Polygonum aviculare</i> ) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter). Optimal control of red sorrell will require the high use rate of 2,4-D or MCPP.

**RESTRICTIONS AND PRECAUTIONS: Tank Mixture Recommendations Non-residential turfgrasses**

- BROCLEAN/WEEDONE DPC tankmixes are not allowed in California.
- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BROCLEAN to non-residential turf with backpack or hand-held application equipment.
- Maximum 0.5 lb ai/A per season.

**NON-CROPLAND  
NON-CROPLAND AND INDUSTRIAL SITES  
BROCLEAN RECOMMENDATIONS  
APPLICATION TIMING AND SPECIFIC COMMENTS**

Product	RATE Per ACRE	RATE Per 1000 SQ. FT.	CROP	WEEDS
BROCLEAN	1 to 2 Pints	0.375 to 0.75 fl. oz.	Apply to non-cropland and industrial sites when weeds have emerged and are actively growing.	Refer to the General Weed List for a listing of susceptible broadleaf weeds. Use adequate spray volumes to ensure thorough coverage. Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

**RESTRICTIONS AND PRECAUTIONS: Non-Cropland and Industrial Sites**

- Do not allow livestock to graze in treated areas or feed treated plant material to livestock.
- Addition of surfactant or crop oil concentrate may improve burndown of broadleaf weeds under cool, dry conditions.
- Do not apply BROCLEAN to non-cropland and industrial sites with backpack or hand-held application equipment.
- Maximum 0.5 lb ai/A per season.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.  
**PESTICIDE STORAGE:** Do not store near fertilizers or seeds. Store at temperatures above 30°F. If allowed to freeze, remix before using.  
**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.  
**CONTAINER DISPOSAL: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural

**Storage & Disposal cont'd.**

plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then 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.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY BEFORE BUYING OR USING THIS PRODUCT.** read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING

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BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING: AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

**Atrazine 90, Furadan, Hoelon, MSR Spray Concentrate, Pounce and Warhawk are restricted use pesticides.**

FORMULATED FOR



P.O. BOX 1286, GREELEY, COLORADO 80632-1286