



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 21, 2022

Marcia Trostle  
Senior Advisor – Chemistry Registration  
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P.O. Box 1286  
Greeley, CO 80632-1286

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decisions for Bromoxynil and MCPA and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of Bromoxynil on Pacific Salmonids  
*Product Name:* BROMAC  
*EPA Registration Number:* 34704-886  
*Application Dates:* 3/23/2020, 12/7/2020, and 9/2/2021  
*Decision Numbers:* 560944, 568639, and 588754

Dear Marcia Trostle:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Bromoxynil and MCPA Interim Decisions. The Agency has concluded that your submission is acceptable.

This letter also addresses the label mitigation resulting from the NMFS' Biological Opinion on the effects of Bromoxynil on Pacific salmonids. The Agency has concluded that your submission is also acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

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A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Quinn Gavin at [gavin.quinn@epa.gov](mailto:gavin.quinn@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure



Bromoxynil	GROUP	6	HERBICIDE
MCPA	GROUP	4	HERBICIDE

# BROMAC®

FOR CONTROL OF CERTAIN BROADLEAF WEEDS IN WHEAT, BARLEY, OATS AND RYE, CONSERVATION RESERVE PROGRAM (CRP) AREAS, GRASSES GROWN FOR SEED PRODUCTION AND FLAX.

**ACTIVE INGREDIENT:**

Octanoic acid ester of bromoxynil*(3,5-dibromo-4-hydroxybenzotrile) .....	31.7%
Isooctyl (2-ethylhexyl ester) ester of 2-methyl-chlorophenoxyacetic acid** .....	34.0%
OTHER INGREDIENTS: .....	34.3%
<b>TOTAL</b>	<b>100.0%</b>

\* Bromoxynil octanoate equivalent to 21.8% of bromoxynil or not less than 2.0 pounds of bromoxynil per gallon.

\*\*Equivalent to 21.8% 2-methyl-chlorophenoxyacetic acid or not less than 2.0 pounds MCPA acid per gallon. Contains Petroleum Distillates

## KEEP OUT OF REACH OF CHILDREN CAUTION

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

For Additional Precautionary Statements, Complete First Aid, Directions for Use, Storage and Disposal and Other Use Information, See Inside This Label Booklet.

### FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</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 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for immediate advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably 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: 1-866-944-8565.**

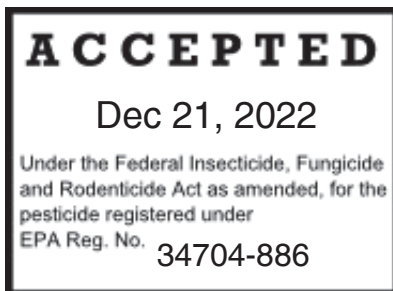
**Note to Physician:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

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EPA EST. NO. 37507-MT-001

NET CONTENTS 2.5 GALS. (9.46 L)

RR 2010025



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

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing.

**Personal Protective Equipment (PPE)**

**Mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Protective eyewear,
- Chemical-resistant apron for cleaning equipment, mixing, and loading
- Chemical resistant gloves made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, polyvinyl chloride (PVC) and Viton  $\geq$  14 mils

**Additional PPE requirements for mixers and loaders supporting aerial application to rangelands, pasture lands, or non-crop land. These mixers/loaders must also wear:**

- Chemical-resistant apron, and
- NIOSH-approved particulate filtering respirator equipped with R, or P class filter media. The respirator should have a NIOSH approval number prefix TC84A. It is recommended that you require the respirator wearer be fit tested, and trained in the use maintenance, and limitations of the respirator.

See engineering controls for additional requirements.

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 exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:**

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. Application from a tractor with a completely enclosed cab or aerial application is required whenever this product is applied to 360 or more acres in a day.

Handlers must use closed mixing loading systems during mixing/loading liquids for aerial applications to fallow land and high-acreage field crops.

The closed systems and enclosed cabs must be used 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. 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 RESTRICTIONS**

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, playgrounds, hospitals, shopping areas, etc.) Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR

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170.240(d)(6)].

- Apply to non-residential turf only. Do not apply to residential, playground, or schoolyard turf.
- Do not apply this product to golf course turf.
- Do not apply with backpack or hand-held application equipment

**USER SAFETY RECOMMENDATIONS**

Users should

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

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present, or to inter tidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Do not contaminate water when disposing of equipment wash waters or rinsate.

Drift or run-off may adversely affect nontarget plants.

Do not contaminate water when disposing of equipment washwaters.

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

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water.

This product is classified as having high potential for reaching surface water via runoff for several months or more after application.

A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of MCPA from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call **1-800-222-1222**.

**PHYSICAL AND CHEMICAL HAZARDS**

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

**NOTICE**

BROMAC Herbicide contains low volatile isooctyl (2-ethylhexyl ester) ester of MCPA. At high air or ground surface temperatures, vapors from this product may cause injury to susceptible plants. This fact should be considered when applying BROMAC.

**DIRECTIONS FOR USE**

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

**Endangered Species Protection Requirements:** It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered

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Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

Read entire label before using this product. 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. Do not allow people or pets to enter the treated area until sprays have dried.

**RESTRICTIONS:**

- Handlers must use closed mixing loading systems during mixing/loading liquids for aerial applications to fallow land and high-acreage field crops.
- Aerial application to fallow land is prohibited within 25 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc.).

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**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 crops during the restricted entry interval (REI).

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 2 days for grass.**

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours for sod.**

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 made of barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, polyvinyl chloride (PVC) and viton  $\geq$  14 mils
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear for overhead exposure, and
- Protective eyewear.

For uses on turf grown for transplanting: Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

**PRODUCT INFORMATION**

BROMAC is formulated as an emulsifiable concentrate containing the equivalent of 2 lbs. per gallon of octanoic acid ester of bromoxynil and 2 pounds per gallon of isooctyl (2-ethylhexyl ester) ester of MCPA. BROMAC is a selective postemergence herbicide for control of important broadleaf weeds infesting small grains (wheat, barley, oats, rye), and conservation reserve program areas, and grass grown for seed and flax. Optimum weed control is obtained when BROMAC is applied to actively growing weed seedlings. BROMAC is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

BROMAC 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 BROMAC is mainly contact, 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.

**WEED RESISTANCE MANAGEMENT**

**MODE OF ACTION (MOA)**

Bromac Advanced herbicide is a mixture of the active ingredients bromoxynil and MCPA.

- Bromoxynil is a nitrile herbicide (Group 6 mode of action) inhibiting photosynthesis.
- MCPA is a synthetic auxin (Group 4 mode of action).

Contact your local extension agent, crop advisor, or sales representative to find out if suspected resistant weeds to these MOAs have been found in your region. Do not assume that each listed weed is being controlled by multiple

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mechanisms of action. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.

A given weed population may contain or develop resistance to an herbicide or herbicide MOA after repeated use. Appropriate resistance-management strategies should be followed to mitigate or delay resistance. If levels of control provided by applications of this product is reduced, and cannot be accounted for by factors such as misapplication, abnormal levels of target species or extremes of weather, it may be the case that target species have developed a strain resistant to applications of this product.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

If resistance develops, this product may not provide sufficient control of target species. Where you suspect target species are developing resistance, contact State/local agricultural advisors. Integrated weed management guidelines promote an economically viable, environmentally sustainable, and socially acceptable weed control program regardless of the herbicide(s) used. The highlights of successful integrated weed management include:

1. Correctly identify weeds and look for trouble areas within field to identify resistance indicators.
2. Rotate crops.
3. Start the growing season with clean fields.
4. Rotate herbicide modes of action by using multiple modes of action during the growing season and apply no more than 2 applications of a single herbicide mode of action to the same field in a 2-year period. One method to accomplish this is to rotate herbicide tolerant trait systems.
5. Apply listed rates of herbicides to actively growing weeds at the correct time with the right application techniques.
6. Control any weeds that may have escaped the herbicide application.
7. Thoroughly clean field equipment between fields.
8. Scout before and after application.

Contact your local agronomic advisor for more specific information on integrated weed management for your area. Users should report lack of performance to registrant or their representative. For mixtures including this herbicide note that each listed weed may not be controlled by multiple mechanisms of action. Refer to crop specific directions (below) for maximum application rates and number of applications.

### **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.

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

**TANK MIXTURES:** BROMAC may be tank-mixed with other pesticide products provided that these other products are registered for use on the crop/use site to be treated. The tank mix must be used in accordance with the more restrictive pesticide label limitations and precautions. No label dosage rates may be exceeded. BROMAC cannot be mixed with any product containing a label prohibition against such mixing. BROMAC can be applied in tank mixture



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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 BROMAC in mixture with another product, fill the spray tank  $\frac{1}{2}$  to  $\frac{3}{4}$  full with clean water and begin agitation. If tank mixing 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 BRO MAC and add water to the spray tank to the desired level. If tank mixing with other product types, add the BROMAC 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.

If tank mixing with products other than those listed 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 BROMAC.

#### **SPRAYABLE LIQUID FERTILIZERS AND SPRAY ADDITIVES**

BROMAC can be applied in combination with sprayable liquid fertilizer or spray additives such as surfactants or crop oil concentrate. When tank mixing with liquid fertilizer always add the fertilizer to the spray tank first and agitate thoroughly before adding BROMAC. 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 BROMAC is evenly mixed with the fertilizer. Leaf burn may occur when BROMAC is applied with liquid fertilizer, but new leaves are not adversely affected.

NOTICE: Fertilizers and spray additives can increase foliage leaf burn when applied with BROMAC. Do not apply fertilizers or spray additives with BROMAC if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to BROMAC.

#### **APPLICATION PROCEDURES**

BROMAC can be applied to registered use areas by ground, aerial and sprinkler irrigation equipment.

##### **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 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 and flood nozzles are not recommended as weed control with BROMAC 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. When using higher speed equipment, a maximum ground 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.

##### **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

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recommended. A minimum spray volume of 3 GPA may be used if crop canopy and weed density allow adequate spray coverage at that gallonage.

### **SPRINKLER IRRIGATION APPLICATION**

BROMAC Herbicide can be applied through sprinkler irrigation systems to wheat, barley, oats, rye, triticale and grasses grown for seed.

Apply BROMAC Herbicide 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 BROMAC Herbicide.
9. BROMAC Herbicide should be applied continuously for the duration of the water application with center pivot and continuous lateral move systems. Application of BROMAC Herbicide 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 BROMAC Herbicide is diluted in the supply tank, fill the tank with half of the water amount desired, add the BROMAC and then add remaining water amount with agitation. Always dilute with at least 4 parts water to 1 part BROMAC.
13. Start the sprinklers and then inject BROMAC Herbicide into the irrigation line. BROMAC 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 recommendations for specific crops for detailed information on application rates and timings.

### **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.

**MANDATORY SPRAY DRIFT MANAGEMENT**

**Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Applicators are required to use a medium or coarser droplet size (ASABE S572 and S641).
- The distance of the outer most nozzles on the boom must not exceed 75% of the length of the wingspan or 90% of the rotor diameter
- Do not apply during temperature inversions.

**Ground Boom Applications:**

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.  
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

**IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

**Controlling Droplet Size - Ground Boom**

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

**Controlling Droplet Size – Aircraft**

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

**BOOM HEIGHT - Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

**RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift.

**SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

**TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

**TEMPERATURE INVERSIONS**

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Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

**SENSITIVE AREAS**

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

**GENERAL WEED LIST**

Postemergence application of BROMAC Herbicide will control the following weeds when sprayed in the seedling stage. Maximum weed stage of growth is listed under BROMAC RECOMMENDATIONS.

**MOST SUSCEPTIBLE BROADLEAF WEED SPECIES**

Annual sowthistle ( <i>Sonchu oleraceus</i> )	( <i>Sisymbrium irio</i> )
Black mustard ( <i>Brassica nigra</i> )	Marshelder ( <i>Iva xanthifolia</i> )
Black nightshade ( <i>Solanum nigrum</i> )	Pennsylvania smartweed ( <i>Polygonum strumarium</i> )
Coast fiddleneck ( <i>Amsinckia intermedia</i> )	Pepperweed spp. ( <i>Lepidium app.</i> )
Common cocklebur ( <i>Xanthium strumarium</i> )	Redroot pigweed ( <i>Amaranthus retroflexus</i> )
Common lambsquarters ( <i>Chenopodium album</i> )	Russian thistle ( <i>Salsola kali</i> )
Common tarweed ( <i>Hemizonia congesta</i> )	Shepherdspurse ( <i>Capsella bursa-pastoris</i> )
Cow cockle ( <i>Saponaria vaccaria</i> )	Silverleaf night-shade ( <i>Solanum elaeagnifolium</i> )
Cutleaf nightshade ( <i>Solanum triflorum</i> )	Smooth pigweed ( <i>Amaranthus hybridus</i> )
Eastern black nightshade ( <i>Solanum ptycanthum</i> )	Spiny pigweed ( <i>Amaranthus spinosus</i> )
Field pennycress ( <i>Thlaspi arvense</i> )	<sup>1</sup> Sunflower ( <i>Helianthus annuus</i> )
Green smartweed ( <i>Polygonum scabrum</i> )	Tall Waterhemp ( <i>Amaranthus tuberculatus</i> )
Hairy nightshade ( <i>Solanum sarachoides</i> )	Tartary buckwheat ( <i>Fagopyrum tataricum</i> )
Horned Poppy ( <i>Glaucium corniculatum</i> )	Tumble mustard ( <i>Sisymbrium altissimum</i> )
Jimsonweed ( <i>Datura stramonium</i> )	Wild buckwheat ( <i>Polygonum convolvulus</i> )
Ladysthumb ( <i>Polygonum persicaria</i> )	Wild mustard ( <i>Sinapis arvensis</i> )
Lanceleaf sage ( <i>Salvia reflexa</i> )	Yellow rocket ( <i>Barbarea vulgaris</i> )
London rocket	

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

**SUSCEPTIBLE BROADLEAF WEED SPECIES**

Blue (purple) mustard ( <i>Chlorispora tenella</i> )	Knawel ( <i>Scleranthus annuus</i> )
Common groundsel ( <i>Senecio vulgaris</i> )	Kochia ( <i>Kochia scoparia</i> )
Common ragweed ( <i>Ambrosia artemisiifolia</i> )	Mayweed ( <i>Anthemis cotula</i> )
Corn chamomile ( <i>Anthemis arvensis</i> )	Prostrate knotweed ( <i>Polygonum aviculare</i> )
Corn gromwell ( <i>Lithospermum arvense</i> )	Puncture vine ( <i>Tribulus terrestris</i> )
Fumitory ( <i>Fumaria officinalis</i> )	Tall morningglory ( <i>Ipomoea purpurea</i> )
Giant ragweed ( <i>Ambrosia trifida</i> )	Tansy mustard ( <i>Descurainia pinnata</i> )
Hemp sesbania ( <i>Sesbania exaltata</i> )	Tarweed ( <i>Hemizonia</i> spp.)
Henbit ( <i>Lamium emplexicaule</i> )	Velvetleaf ( <i>Abutilon theophrasti</i> )
Ivyleaf morningglory ( <i>Ipomoea hederacea</i> )	Wild radish ( <i>Raphanus raphanistrum</i> )

Weeds germinating after spraying will not be controlled.

**WEED SUPPRESSION**

Canada thistle  
(*Cirsium arvense*)

BROMAC Herbicide applied at 1.5 pints per acre provides burn down of top growth. Regrowth may occur. Make applications when Canada thistle is 8 inches tall to the bud stage.

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**WHEAT, BARLEY, OATS AND RYE BROMAC  
APPLICATION INSTRUCTIONS**

This table contains the amounts of Bromoxynil and MCPA applied in various use rates of Bromac.

<b>Pint(s) Product /acre</b>	<b>Bromoxynil lb. ai/acre</b>	<b>MCPA lb. ai/acre</b>
0.25	0.06	0.06
0.75	0.18	0.18
0.9	0.23	0.23
1.0	0.25	0.25
1.25	0.31	0.31
1.5	0.37	0.37
2.0	0.5	0.5

**Use Rate Restrictions Wheat, Barley, Oats, Rye:**

Do not apply more than 2 pints of BROMAC (0.5 lb bromoxynil, 0.5 lb MCPA Acid) per acre per year.

**Flax:**

Do not apply more than 1 pint of BROMAC (0.25 lb bromoxynil, 0.25 lb MCPA Acid) per acre per year.

**APPLICATIONS TIMING AND SPECIFIC COMMENTS**

<b>PRODUCT</b>	<b>RATE</b>	<b>CROP</b>	<b>WEEDS</b>
BROMAC	1 pint/A	Fall seeded wheat, barley, oats and rye throughout the United States and spring seeded wheat, barley, oats and rye in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats and rye from the 3 leaf stage but before the crop reaches the boot stage.	<b>MOST SUSCEPTIBLE BROAD LEAF WEEDS</b> Apply to weeds 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.
	1.5 – 2 pints/A	Fall seeded wheat, barley, oats and rye throughout the United States and spring seeded wheat, barley, oats and rye in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats and rye from the 3 leaf stage but before the crop reaches the boot stage.	<b>SUSCEPTIBLE BROADLEAF WEEDS</b> Apply to weeds up to the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 1inch in diameter.
	2 pints/A	Fall seeded wheat, barley, oats and rye throughout the United States and spring seeded wheat, barley, oats and rye in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats and rye from the 3 leaf stage but before the crop reaches the boot stage.	Apply to henbit, knawel and mayweed up to the 4 leaf stage or 2 inches in height, whichever comes first. Apply to kochia and tansy mustard for improved control when these weeds exceed the recommended stage of growth or are growing under cool, dry conditions.

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1-1½ pints/A	Spring seeded wheat and barley except Idaho, Oregon, Washington, Colorado, Montana, and Wyoming. Apply to wheat, barley, oats and rye from the 3 leaf stage but before the crop reaches the boot stage.	MOST SUSCEPTIBLE and SUSCEPTIBLE BROADLEAFWEEDS Apply to weeds that do not exceed 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 kochia up to 2 inches in height.
1½ - 2 pints/A	Spring seeded wheat and barley except Idaho, Oregon, Washington, Colorado, Montana, and Wyoming. Apply to wheat, barley, oats and rye from the 3 leaf stage but before the crop reaches the boot stage.	Apply to kochia that is 2-4 inches in height.
Chemigation only 2 pints/A	Apply to wheat, barley, oats and rye from the 3 leaf stage but 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.	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.
Post-harvest ¾ - 2 pints/A	Make applications following harvest of wheat, barley, oats and rye in the states of North Dakota, South Dakota, Minnesota, and Montana. Do not plant any rotational crop until the following use season.	Apply ¾ to 1 pint/A to MOST SUSCEPTIBLE BROADLEAF WEEDS up to the 8 leaf stage or 4 inches in height, whichever come first. Apply 1½ to 2 pints/A to SUSCEPTIBLE BROADLEAF WEEDS up to the 4 leaf stage or 2 inches in height, whichever comes first. For control of both grasses and broadleaf weeds, tank mix BROMAC with Roundup <sup>9</sup> or Roundup + 2,4-D such as Weedone <sup>6</sup> or Weedar <sup>6</sup> brand herbicides.
BROMAC + Rhonox <sup>10</sup> (MCPA ester)	¾ - 2 pints/A + ¼ - ½ pint/A	Apply to spring seeded wheat, barley, oats and rye from tillering stage, but before boot stage
		For control of MOST SUSCEPTIBLE and SUSCEPTIBLE weeds and improved control of redroot pigweed and kochia. Apply to weeds up to the 8 leaf stage, 3 inches in height or 2 inches in diameter, whichever comes first. Apply to kochia and redroot pigweed up to 2 inches in height or diameter.

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BROMAC + Glean <sup>5</sup> + nonionic surfactant	$\frac{3}{4}$ - $1\frac{1}{4}$ pints/A + $\frac{1}{6}$ - $\frac{1}{3}$ oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 3-leaf stage but before the crop reaches the boot stage. Refer to Glean label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as henbit, tansy, mustard and chick weed. Apply to weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BROMAC + Finesse <sup>5</sup> + nonionic surfactant	$\frac{3}{4}$ - $1\frac{1}{2}$ pints/A + $\frac{1}{6}$ - $\frac{1}{3}$ oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 3-leaf stage but before the crop reaches the boot stage. Refer to Finesse label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as henbit, tansy mustard and chick weed. Apply to weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BROMAC + Ally <sup>5</sup> + nonionic surfactant	$\frac{3}{4}$ - $1\frac{1}{2}$ pints/A + $\frac{1}{10}$ oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 3-leaf stage but before the crop reaches the boot stage. Refer to Ally label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as henbit, tansy mustard and chick weed. Apply to weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BROMAC + Banvel <sup>1</sup>	$\frac{3}{4}$ - $1\frac{1}{2}$ pints/A + $\frac{1}{8}$ - $\frac{1}{4}$ pint/A	Fall seeded wheat from the 3 leaf stage but before jointing. Spring seeded wheat from the 3 to 5 leaf stage of growth. DO NOT TREAT RYE WITH BROMAC + BANVEL; ONLY FOR USE ON WHEAT, BARLEY, AND OATS	This tank mix improves control of broadleaves such as prostrate knotweed and kochia. Apply to weeds up to the 8 leaf stage, 3 inches in height or 2 inches in diameter, whichever comes first. Apply to kochia up to 2 inches in height or diameter.
BROMAC + Harmony Extra <sup>5</sup> + nonionic surfactant	$\frac{3}{4}$ - $1\frac{1}{2}$ pints/A + $\frac{3}{10}$ oz/A + 1 qt/100 gal of water	Winter wheat. Apply from the 3 leaf stage but before the 3rd node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions. Spring wheat and barley. Apply after the 3 leaf stage but before the 1st 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 the 8 leaf stage, 4 inches in height or across, whichever comes first.
BROMAC + Amber <sup>8</sup> + nonionic surfactant	$\frac{3}{4}$ - $1\frac{1}{2}$ pints/A + 0.28-0.56 oz/A + 0.25% v/v	Apply to wheat and barley from the 3 leaf stage, but 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 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.



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BROMAC + Express <sup>5</sup> + nonionic surfactant	$\frac{3}{4}$ -1½ pints/A + 1/6-1/3 oz/A + 1 qt/100 gal. of water	Wheat and barley. Apply from the 3 leaf stage but before the flag is visible. Refer to the Express label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as henbit, chickweed, redroot pigweed and suppression of Canada thistle. Apply to annual weeds up to the 8 leaf stage, 4 inches in height or across, whichever comes first and to Canada thistle 4 to 8 inches tall with 2 to 6 inches of new growth.
BROMAC + Curtail <sup>4</sup> or Curtail M <sup>4</sup>	$\frac{3}{4}$ -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 buck wheat and suppression of Canada thistle. Apply to annual broadleaf weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter and to Canada thistle in the rosette to prebud stage.
BROMAC + metribuzin (Sencor <sup>2</sup> )	1 pint/A + 1/8 3/16 pints/A	Winter wheat in Idaho, Oregon and Washington. Apply in spring after growth has started and secondary roots with a minimum of 3 to 4 tillers have been established, but before the forming of joints in the stem. Avoid application when crop has experienced winter kill,	This tank mix improves control of broadleaf weeds such as chickweed, filaree, henbit. Apply to weeds up to the 4 leaf stage, 2 inches in height or diameter, whichever comes first. A recognized authority should be consulted concerning the use of this mixture in your area.
BROMAC + Avenge <sup>1</sup>	1-2 pints/A + 2½-4 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. Three to 7 leaf stage.	This tank mix will provide wild oat control in addition to broad leaves. 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. Average use rates per acre are 2½ 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.).
BROMAC + Assert <sup>1</sup>	1-1½ pints/A + 1-1½ pints/A	Apply to wheat and barley from the 3 leaf stage but before boot stage. Refer to Assert label for crop rotation and other restrictions.	This tank mix will provide wild oat control in addition to broad leaf weeds. Apply to wild oats at the 1-4 leaf stage and broadleaf weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first. Use Assert at 1½ pints/A west of the Rocky Mountains or if wild oats have initiated tillering. For spray volumes in excess of 10 GPA, add 0.3 fluid oz. of nonionic surfactant for each gallon in excess of 10 GPA.

**APPLICATIONS TIMING AND SPECIFIC COMMENTS**

**RESTRICTIONS AND PRECAUTIONS:**

**WHEAT, BARLEY, OATS AND RYE**

- Do not graze treated fields within 45 days after application.
- Do not apply when crops are under moisture stress.
- Do not apply when crop canopy covers the weeds as poor control will result.
- 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 for additional restrictions and precautions.
- Do not plant rotational crops within 30 days following bromoxynil herbicide application.
- Do not apply more than 0.5 lbs ai of bromoxynil (2 pints of Bromac) per acre per year.

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**CONSERVATION RESERVE PROGRAM AREAS (CRP)**  
**BROMAC APPLICATION INSTRUCTIONS**  
**APPLICATION TIMING AND SPECIFIC COMMENTS**

<b>PRODUCT</b>	<b>RATE</b>	<b>CROP</b>	<b>WEEDS</b>
BROMAC	1-2 pints/A	Apply to grasses from the 3leaf stage.	Apply 1 pint/A to MOST SUSCEPTIBLE and 1½-2 pints/A to SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.

**RESTRICTIONS AND PRECAUTIONS: CRP AREAS**

- Do not allow livestock to graze in treated areas or feed treated grass to livestock.
- If legumes are included in CRP area planting, severe injury may occur to legumes treated with BROMAC.
- Do not plant rotational crops within 30 days following bromoxynil herbicide application.
- Do not apply more than 0.5 lbs ai of bromoxynil (2 pints of Bromac) per acre per year.

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**GRASSES GROWN FOR SEED PRODUCTION  
BROMAC APPLICATION INSTRUCTIONS  
Seedling and Established Grasses**

PRODUCT	RATE	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
	PerAcre	Per 1000 Sq. Ft.	CROP	WEEDS
BROMAC	1–2 pints	0.375-0.75 Fl. Oz	Apply to established and newly seeded grasses grown for seed or sod production before the boot stage. Established grasses tolerant to BROMAC include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustine grass and Zoyiagrass. BROMAC 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 Bentgrasses, perennial Rye grasses, 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).
	Chemigation 2 pints/ A 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 BROMAC	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: GRASSES GROWN FOR SEED OR SOD PRODUCTION**

- Do not apply more than 2 applications per year with a minimum retreatment interval of 21days.
- Do not allow livestock to graze in treated areas or feed treated grasses, forage, hay, straw, silage, or seed to livestock.
- Do not apply BROMAC to grasses grown for seed production with backpack or hand-held application equipment.
- The Restricted Entry Interval (REI) for harvesting sod farm turf is 26 days. The REI for other turf activities is 24 hours.
- Do not plant rotational crops within 30 days following bromoxynil herbicide application.
- Do not apply more than 0.5 lbs ai of bromoxynil (2 pints of Bromac) per acre per year.
- Do not apply this product to golf course turf.

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**FLAX (Linum usitatissimum only)**  
**BROMAC APPLICATION INSTRUCTIONS**  
**APPLICATION TIMING AND SPECIFIC COMMENTS**

<b>PRODUCT</b>	<b>RATE</b>	<b>CROP</b>	<b>WEEDS</b>
BROMAC	0.9 pint/A	Apply to flax that is 2 to 8 inches in height. Do not apply BROMAC 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.

**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 BROMAC application to flax grown on high organic, peat type soils.
- Application under high humidity conditions can injure flax.
- Unless otherwise instructed, do not apply BROMAC with crop oil concentrate, surfactants or nitrogen solutions.
- Do not use on ornamental flax.
- Do not plant rotational crops within 30 days following bromoxynil herbicide application.
- Do not apply more than 0.25 lbs ai of bromoxynil (1.0 pints of Bromac) per acre in a single growing season.

### **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store at temperatures above 32°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 HANDLING:** 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 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.

### **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

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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 LOVE LAND 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 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.

- <sup>1</sup> Registered trademark of BASF CORP.
- <sup>2</sup> Registered trademark of Bayer AG, Germany.
- <sup>3</sup> Registered trademark of Delavan Corporation.
- <sup>4</sup> Registered trademark of DowElanco.
- <sup>5</sup> Registered trademark of E.I. DuPont de Nemours and Company.
- <sup>8</sup> Registered trademark of Syngenta Group Company.
- <sup>9</sup> Registered trademark of Monsanto Company.
- <sup>10</sup> Registered trademark of NuFarm.

**FORMULATED FOR LOVELAND PRODUCTS, INC.**  
**P.O. BOX 1286, GREELEY, COLORADO 80632-1286**