

# Bison®

## Herbicide

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

**ACTIVE INGREDIENTS:**

Octanoic acid ester of bromoxynil (3,5-dibromo-4-Hydroxybenzotrile)* .....	31.7%
Isooctyl ester of 2-methyl-chlorophenoxyacetic acid** .....	34.0%

<b>OTHER INGREDIENTS:</b> .....	<u>34.3%</u>
<b>TOTAL:</b> .....	100.0%

Contains petroleum distillates.

\*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.

### KEEP OUT OF REACH OF CHILDREN

## CAUTION / PRECAUCION

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

#### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION / PRECAUCION

Harmful if swallowed or absorbed through skin or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

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

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant apron for cleaning equipment, mixing and loading,
- Chemical-resistant gloves (such as barrier laminate or viton) when cleaning equipment, mixing, or loading any hand-held equipment.

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

- Chemical-resistant apron, and
- NIOSH-approved particulate filtering respirator equipped with N, R, or P class filter media. The respirator should have a NIOSH approval number prefix TC-84A. 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 Control Statements:**

ENGINEERING CONTROLS STATEMENT: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agriculture pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

**SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS**

**EPA Reg. No. 71368-28-1381**  
**Distributed By:**  
**Winfield Solutions, LLC**  
**P.O. Box 64589**  
**St. Paul, MN 55164-0589**

**EPA Est No.**  
**Net Contents: Gals. (.....Liters)**

**1/0605/8**

**USER SAFETY RECOMMENDATIONS****Users Should:**

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

**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 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 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 eye.</li> <li>• Call a poison control center or doctor for treatment advice.</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 to 20 minutes.</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>

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-424-7452 for emergency medical treatment information.

**NOTE TO PHYSICIAN**

May pose an aspiration pneumonia hazard. Contains petroleum distillate.

### ENVIRONMENTAL HAZARDS

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

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

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### PHYSICAL AND CHEMICAL HAZARDS

This product contains low volatile isooctyl 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 this product.

### 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.

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 (WPS), 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 WPS.

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

The REI for harvesting sod farm turf is 12 days.

The REI for non-harvesting turf activities and all other crops is 12 hours.

For uses on turf grown for transplanting (e.g. sod farms), notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks, chemical-resistant apron made of any waterproof material and protective eyewear.

### NON-AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow treatment areas until spray has dried.

### PRODUCT INFORMATION

This product is formulated as an emulsifiable concentrate containing the equivalent of 2 lbs. per gallon of bromoxynil and 2 pounds per gallon of MCPA.

This product is a selective postemergence herbicide for control of important broadleaf weeds infesting small grains (wheat, barley, oats, rye), conservation reserve program areas, and grass grown for seed. Optimum weed control is obtained when this product is applied to actively growing weed seedlings. This product is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

This product 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 this product 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.

### MIXING, LOADING AND HANDLING INSTRUCTIONS

#### 2.5 Gallon Containers

Special care must 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.

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

**TANK MIXTURES:** This product 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 this product in mixture with another product, fill the spray tank 1/2 to 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 specified amount of this product and add water to the spray tank to the desired level. If tank mixing with other product types, add this product 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 this product.

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

This product 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 this product.

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 this product is evenly mixed with the fertilizer. Leaf burn may occur when this product is applied with liquid fertilizer, but new leaves are not adversely affected.

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

### **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 the grower are responsible for considering all these factors when making decisions.

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

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  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](#).

### **CONTROLLING DROPLET SIZE**

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

### **BOOM LENGTH**

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

### **APPLICATION HEIGHT**

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

**SWATH ADJUSTMENT**

When applications are made with a crosswind, the swath will be displaced downward. 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 at wind speeds below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**TEMPERATURE AND HUMIDITY**

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

**TEMPERATURE INVERSIONS**

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

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

**APPLICATION PROCEDURES**

This product 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 to 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 this product 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. When grains 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 size of 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.

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

**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. A minimum spray volume of 3 gallons per acre may be used if crop canopy and weed density allow adequate spray coverage. Aerial applications using less than 5 gallons of spray volume per acre may result in reduced weed control.

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.

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above crop canopy. When applications are made with a cross wind, the swath will be displaced downward. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Do not make application into temperature inversions.

Enclosed cockpits/Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [(40 CFR 170.2409D)(60)].

### SPRINKLER IRRIGATION APPLICATION

This product can be applied through sprinkler irrigation systems to small grains and grasses grown for seed. Apply this product 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 this product.
9. This product should be applied continuously for the duration of the water application with center pivot and continuous lateral move systems. Application of this product should be made during the last 30 to 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 this product is diluted in the supply tank, fill the tank with half of the water amount desired, add this product and then add remaining water amount with agitation. Always dilute with at least 4 parts water to 1 part this product.
13. Start the sprinklers and then inject this product into the irrigation line. This product 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 this product label for detailed information on application rates and timings.

### APPLICATION RESTRICTIONS

DO NOT apply with backpack or hand-held application equipment.

DO NOT apply to residential areas (e.g. homes, schools, playgrounds, shopping areas, hospitals, etc.).

Aerial Application is prohibited within 300 feet of residential areas.

Wheat, barley, oats, rye and flax treated with MCPA may be replanted with any crop specified on an MCPA label or any crop for which a residue tolerance exists for MCPA. For crops not listed on an MCPA label, or on crops for which no residue tolerances for MCPA have been established, a 60 day plantback interval must be observed

### 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.

### WEED LIST

Postemergence application of this product will control the following weeds when sprayed in the seedling stage. Maximum weed stage of growth is listed under PRODUCT INSTRUCTIONS.

#### MOST SUSCEPTIBLE BROADLEAF WEED SPECIES

Annual sowthistle	(Sonchus oleraceus)
Black mustard	(Brassica nigra)
Black nightshade	(Solanum nigrum)
Common cocklebur	(Xanthium strumarium)
Common lambsquarters	(Chenopodium album)
Common tarweed	(Hemizonia congesta)
Cow cockle	(Saponaria vaccaria)
Cutleaf nightshade	(Solanum triflorum)
Eastern black nightshade	(Solanum ptycanthum)
Coast fiddleneck	(Amsinckia intermedia)

#### SUSCEPTIBLE BROADLEAF WEED SPECIES

Blue (purple) mustard	(Chlorispora tenella)
Common groundsel	(Senecio vulgaris)
Common ragweed	(Ambrosia artemisiifolia)
Corn chamomile	(Anthemis arvensis)
Corn gromwell	(Lithospermum arvense)
Fumitory	(Fumaria officinalis)
Giant ragweed	(Ambrosia trifida)
Hemp sesbania	(Sesbania exaltata)
Henbit	(Lamium amplexicaule)
Ivyleaf morningglory	(Ipomoea hederacea)

Field pennycress	(Thlaspi arvense)	Knawel	(Scleranthus annuus)
Green smartweed	(Polygonum scabrum)	Kochia	(Kochia scoparia)
Hairy nightshade	(Solanum sarachoides)	Mayweed	(Anthemis cotula)
Horned Poppy	(Glaucium corniculatum)	Prostrate knotweed	(Polygonum aviculare)
Jimsonweed	(Datura stramonium)	Puncture vine	(Tribulus terrestris)
Ladysthumb	(Polygonum persicaria)	Tall morningglory	(Ipomoea purpurea)
Lanceleaf sage	(Salvia reflexa)	Tansy mustard	(Descurainia pinnata)
London rocket	(Sisymbrium irio)	Tarweed	(Hemizonia spp.)
Marshelder	(Iva xanthifolia)	Velvetleaf	(Abutilon theophrasti)
Pennsylvania smartweed	(Polygonum strumarium)	Wild radish	(Raphanus raphanistrum)
Pepperweed spp.	(Lepidium app.)	Weeds germinating after spraying will not be controlled.	
Redroot pigweed	(Amaranthus retroflexus)		
Russian thistle	(Salsola kali)		
Shepherdspurse	(Capsella bursa-pastoris)		
Silverleaf nightshade	(Solanum elaeagnifolium)		
Smooth pigweed	(Amaranthus hybridus)		
Spiny pigweed	(Amaranthus spinosus)		
Sunflower <sup>1</sup>	(Helianthus annuus)		
Tall Waterhemp	(Amaranthus tuberculatus)		
Tartary buckwheat	(Fagopyrum tataricum)		
Tumble mustard	(Sisymbrium altissimum)		
Wild buckwheat	(Polygonum convolvulus)		
Wild mustard	(Sinapis arvensis)		
Yellow rocket	(Barbarea vulgaris)		

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

#### WEED SUPPRESSION

Canada Thistle (Cirsium arvense)

This product applied at 1-1/2 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.

#### WHEAT, BARLEY, OATS AND RYE PRODUCT INSTRUCTIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
Bison Herbicide	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.	MOST SUSCEPTIBLE BROADLEAF WEEDS: 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.
	1-1/2 to 2 pints/A	Apply to wheat, barley, oats and rye from the 3-leaf stage but before the crop reaches the boot stage.	SUSCEPTIBLE BROADLEAF WEEDS: 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 1 inch in diameter.
			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 instructed stage of growth or are growing under cool, dry conditions.
	2 pints/A		
1-1/2 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.	MOST SUSCEPTIBLE AND SUSCEPTIBLE BROADLEAF WEEDS: 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.
1-1/2 to 2 pints/A	<p>Spring seeded wheat and barley except Idaho, Oregon, Washington, Colorado, Montana, and Wyoming.</p> <p>Apply to wheat, barley, oats and rye from the 3-leaf stage but before the crop reaches the boot stage.</p>	Apply to kochia that is 2 to 4 inches height.
Chemigation Only 2 pints/A	<p>Apply to wheat, barley, oats and rye from the 3-leaf stage but before the boot stage.</p> <p>Apply through automated sprinkler irrigation systems with mechanical transfer loading system only. See MIXING LOADING AND HANDLING INSTRUCTIONS section for complete details.</p>	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 3/4 to 2 pints/A	<p>Make applications following harvest of wheat, barley, oats and rye in the states of North Dakota, South Dakota, Minnesota, and Montana.</p> <p>Do not plant any rotational crop until the following use season.</p>	<p>Apply 3/4 to 1 pint/A to MOST SUSCEPTIBLE BROADLEAF WEEDS up to the 8-leaf stage or 4 inches in height, whichever comes first.</p> <p>Apply 1-1/2 to 2 pints/A to SUSCEPTIBLE BROADLEAF WEEDS up to the 4-leaf stage or 2 inches in height, whichever comes first.</p> <p>For control of both grasses and broadleaf weeds, tank mix this product with Roundup® or Roundup + 2,4-D such as WEEDONE® or WEEDAR® brand herbicides.</p>



**WHEAT, BARLEY, OATS AND RYE  
PRODUCT TANK MIXTURE INSTRUCTIONS**

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
Bison Herbicide + Rhonox® (MCPA Ester)	3/4 to 2 pints/A + 1/4 to 1/2 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.
Bison Herbicide + Glean® + nonionic surfactant	3/4 to 1-1/2 pints/A + 1/6 to 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 chickweed.  Apply to weeds up to the 8-leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
Bison Herbicide + Finesse® + nonionic surfactant	3/4 to 1-1/2 pints/A + 1/6 to 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 chickweed.  Apply to weeds up to the 8-leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
Bison Herbicide + Ally® or Purestand® + nonionic surfactant	3/4 to 1-1/2 pints/A + 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® or Purestand® label for crop rotation and other restrictions.	This tank mix improves control of broadleaf weeds such as henbit, tansy mustard and chickweed.  Apply to weeds up to the 8-leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
Bison Herbicide + Banvel® or Diablo®	3/4 to 1-1/2 pints/A + 1/8 to 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.	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.
Bison Herbicide + Harmony® Extra or Treaty® Extra + nonionic surfactant	3/4 to 1-1/2 pints/A + 3/10 to 1/2 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 or Treaty® 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 or Treaty® 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.
Bison Herbicide + Amber® + nonionic surfactant	3/4 to 1-1/2 pints/A + 0.28 to 0.56 oz/A + 0.25 - 0.5% 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.

**WHEAT, BARLEY, OATS AND RYE**  
**PRODUCT TANK MIXTURE INSTRUCTIONS**  
(Continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
Bison Herbicide + Express® or Victory® + nonionic surfactant	3/4 to 1-1/2 pints/A + 1/6 to 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® or Victory® 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.
Bison Herbicide + Curtail® or Cutback® or Curtail® M or Cutback® M	3/4 to 1-1/2 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 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.
Bison Herbicide + metribuzin (Sencor® or Lexone®)	1 pint/A + 1/8 - 3/16 lb ai/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, frost damage, disease or drought.	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.
Bison Herbicide + Avenge®	1 - 2 pints/A + 2-1/2 to 4 pints/A	Winter wheat. 4-leaf to tillering stage. Refer to Avenge® label for varietal and other restrictions.  Spring Wheat. 5- to 6-leaf stage. Refer to Avenge® label for varietal and other restrictions.  Barley. 3- to 7-leaf stage.	This tank mix will provide wild oat control in addition to broadleaves.  Apply to wild oats in the 3- to 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 2-1/2 pints (1 to 10 oats per sq. ft.), 3 pints (11 to 25 oats per sq. ft.) or 4 pints (more than 25 oats per sq. ft.).
Bison Herbicide + Assert®	1 to 1-1/2 pints/A + 1 to 1-1/2 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 broadleaf weeds.  Apply to wild oats at the 1- to 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 1-1/2 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.

**RESTRICTIONS AND PRECAUTIONS: Wheat, Barley, Oats and Rye**

- Do not apply more than 2 pints product (0.5 lb ae Bromoxynil) per acre in a single growing season.
- Do not apply more than 0.75 lb ae MCPA per acre per year.
- Do not graze treated field 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 apply plant rotational crops within 30 days following application of this product.

**CONSERVATION RESERVE PROGRAM AREAS (CRP)  
PRODUCT INSTRUCTIONS**

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
Bison Herbicide	1 to 2 pints/A	Apply to grasses from the 3-leaf stage.	Apply 1 pint/A to MOST SUSCEPTIBLE and 1-1/2 to 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 this product.
- Do not apply more than 2 pints product (0.5 lb. ae Bromoxynil) per acre in a single growing season.
- Do not apply more than 1.5 lb ae MCPA per acre per year.
- Do not apply more than 2 applications per year with a minimum retreatment interval of 21 days.

**GRASSES GROWN FOR SEED PRODUCTION  
PRODUCT INSTRUCTIONS  
Seedling and Established Grasses**

PRODUCT	RATE PER ACRE	RATE PER 1000 SQ. FT.	APPLICATION TIMING AND SPECIFIC COMMENTS	
			CROP	WEEDS
Bison Herbicide	1 to 2 Pints	0.375 to 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 this product include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustinegrass and Zoysiagrass. This product may also be used on seedling grasses such as Merion, Park, Delta, or common Kentucky Bluegrasses, Pennlawn, Chewings, Illahee or Alta Fescues, Orchard grass, Highland, Seaside or Astoria Bentgrasses, 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.)
Bison Herbicide	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 this product.	

**RESTRICTIONS: Grasses grown for seed or sod production**

- Do not apply more than 2 pints product (0.5 lb. Ae Bromoxynil) per acre in a single growing season.
- Do not apply more than 1.5 lb ae MCPA per acre per year.
- Do not apply more than 2 applications per year with a minimum retreatment interval of 21 days.
- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply this product to grasses grown for seed production with backpack or hand-held application equipment.

**FLAX (LINUM USITATISSIUM ONLY)  
PRODUCT INSTRUCTIONS**

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
Bison Herbicide	0.9 pint/A	Apply to flax that is 2 to 8 inches in height. Do not apply this product 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 more than 1 pint product (0.25 lb. ae MCPA) per acre in a single growing season.
- 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 this product application to flax grown on high organic, peat type soils.
- Application under high humidity conditions can injure flax.
- Unless otherwise instructed, do not apply this product to flax with crop oil concentrate, surfactants or nitrogen solutions.
- Do not use on ornamental flax.
- Do not plant rotation crops within 60 days following application of this product.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store at temperatures above 3°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:**

**"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size.

**Nonrefillable Containers 5 Gallons or Less:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. **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 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**Nonrefillable containers larger than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by 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. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Turn the container over onto its other 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.

**Refillable containers larger than 5 gallons:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. If unable to refill, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
For Medical Emergencies Only, Call (877)424-7452**

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