

264-690

10/03/2001

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

EPA Reg. Number:

Date of Issuance:

264-690

OCT 3 2001

Term of Issuance: Conditional

Name of Pesticide Product: Bronate 5  
Herbicide

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Mr. Prasad Rao  
Registration Manager  
AVENTIS CROPSCIENCE  
2 T.W. Alexander Drive  
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5), 3(g), or 4 when the Agency requires all registrants of similar products to submit such data.
2. For the AI, 2-methyl-4-chlorophenoxyacetic acid, 2-ethylhexyl ester (Reg. No. 62719-64, 95.8%) you are advised to use lesser amounts (41.75 instead of 42.90) of active ingredient to keep the same product label claim of 40% (see attached TRB review).
3. A one year Storage Stability data and Corrosion Characteristics data is required, the agency will expect the data within 24 months of the date of this letter (see attached TRB review).
4. Make the following label changes:
  - a. Revise the EPA Registration Number to read: "EPA Reg. No. 264-690.

(continued on page 2)

Signature of Approving Official:

Date:

Jim Tompkins, PM-25  
Herbicide Branch  
Registration Division, (7505C)

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- b. Change all "caution" to "notice" or "attention".
  - c. Change "Chemigation User Precautions" to "Chemigation Use Restrictions and Precautions".
  - d. In the "ingredient statement" change the a.i. for MCPA to "2-ethylhexyl ester of MCPA".
5. Submit one (1) copy of the **revised final** printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Enclosure

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# BRONATE Advanced™ HERBICIDE

FOR CONTROL OF CERTAIN BROADLEAF WEEDS IN WHEAT, BARLEY, OATS AND RYE, GRASSES GROWN FOR SOD AND FLAX

**ACTIVE INGREDIENT:**

Octanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzotrile).....	18.7%
Heptonic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzotrile).....	18.1%
Isooctyl ester of 2-methyl-chlorophenoxyacetic acid**.....	40.0%

**INERT INGREDIENTS:**

Contains petroleum distillates..... 23.2%

\* Equivalent to or not less than 2.5 pounds bromoxynil per gallon.

\*\*Equivalent to or not less than 2.5 pounds MCPA acid per gallon.

E.P.A. Reg. No. 264-XXX

E.P.A. Est. No.

## KEEP OUT OF REACH OF CHILDREN CAUTION - CAUCION

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.)

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577

For **PRODUCT USE** Information Call 1-800-AVENTIS (1-800-283-6047)

### FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow</li> <li>• Do not give anything by mouth to an unconscious person</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</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 mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

For **MEDICAL** Emergencies Call 24 Hours A Day 1-800-334-7577.

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

**NOTE TO PHYSICIAN:** Contains petroleum distillate - vomiting may cause aspiration pneumonia.

### PRECAUTIONARY STATEMENTS

**CAUTION**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Harmful if swallowed.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical resistant to this product are listed below. If you want more information follow the instructions for category F on an EPA chemical resistant category selection chart.

ACCEPTED with COMMENTS  
In EPA Letter Dated

OCT 3 2001

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

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Applicators and other handlers must wear a long-sleeved shirt and long pants, chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, or viton gloves for cleaning equipment and mixing/loading, a chemical resistant apron when cleaning equipment and mixing/loading and shoes plus socks.

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

If you will handle a total of 48 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 or larger container, 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. 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 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.

**AERIAL APPLICATION:** Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc.)

Do not apply with backpack or hand-held application equipment.

Apply to non-residential turf only. Do not apply to residential, playground, or schoolyard turf.

### User Safety Recommendations

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Users should remove clothing immediately if pesticide gets inside. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

### PHYSICAL AND CHEMICAL HAZARDS

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

### CAUTION

BRONATE Advanced™ Herbicide 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 BRONATE Advanced™.

### 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, 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). For all crops except turf, the REI is 24 hours. The REI for harvesting sod farm turf is 12 days. The REI for other turf activities is 24 hours. For uses on turf grown for transplanting (e.g. on 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 Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls over long-sleeved shirt and long pants, chemical resistant gloves such as nitrile, viton or barrier laminate, shoes plus socks and protective eyewear.

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### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to the use of this product on non-residential turfgrass areas 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 others to enter the treated area until sprays have dried.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or 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 DISPOSAL

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

#### RETURNABLE – REFILLABLE CONTAINERS

This material may be repackaged in refillable containers by Aventis CropScience or a registered establishment under contract to Aventis CropScience. After use, return the containers to the point of purchase or designated locations. This container must only be refilled with BRONATE Advanced™ Herbicide. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions and damaged or worn out threads on closure devices. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. If the container is not being refilled, return it to the point of purchase.

### GENERAL INFORMATION

BRONATE Advanced™ is formulated as an emulsifiable concentrate of octanoic acid and heptanoic acid esters of bromoxynil containing the equivalent of 2.5 pounds of bromoxynil per gallon and 2.5 pounds per gallon of isooctyl ester of MCPA.

BRONATE Advanced™ is a selective postemergence herbicide for control of important broadleaf weeds infesting wheat, barley, oats, rye, flax and grass grown for sod. Optimum weed control is obtained when BRONATE Advanced™ is applied to actively growing weed seedlings. BRONATE Advanced™ is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

BRONATE Advanced™ 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.

Occasional transitory leaf burn may occur. The temporary leaf burn is similar to that seen with liquid fertilizer. Because the activity of BRONATE Advanced™ 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

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. Correct procedures for mixing and loading are provided in Aventis CropScience's Educational Program.

#### Bulk Containers

If you will handle a total of 48 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 or larger container, 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 rinseate directly to the mixing or spray tank.

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

**TANK MIXTURES:** BRONATE Advanced™ 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. BRONATE Advanced™ cannot be mixed with any product containing a label prohibition against such mixing.

BRONATE Advanced™ 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 BRONATE Advanced™ in mixture with another product, fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. If tankmixing with wettable powder, soluble powder, flowable or dry flowable products, add the powder or flowable product first. After the other herbicide is thoroughly mixed with water add the recommended amount of BRONATE Advanced™ and add water to the spray tank to the desired level. If tankmixing with other product types, add the BRONATE Advanced™ first before adding the other product. Always mix one product in water thoroughly before adding another product or compatibility problems may occur.

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.

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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 BRONATE Advanced™.

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

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

**CAUTION:** Fertilizers and spray additives can increase foliage leaf burn when applied with BRONATE Advanced™. Do not apply fertilizers or spray additives with BRONATE Advanced™ if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to BRONATE Advanced™. If BRONATE Advanced™ is mixed with liquid fertilizer, the fertilizer should compose no more than 1/2 the total spray mix.

#### **APPLICATION PROCEDURES**

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

##### **GROUND APPLICATION**

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 spaced no more than 20 inches on the boom with a spray pressure of 40-50 psi are recommended. Nozzle types, nozzle spacings 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 BRONATE Advanced™ may be reduced. A spray volume of 10 to 20 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum ground speed of 10 mph is suggested. 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 will be helpful in obtaining uniform weed coverage. If you are unsure of the infestation level or size of crop, consult your local agronomist or extension service.

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

##### **AERIAL APPLICATION**

Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage. 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.

##### **SPRINKLER IRRIGATION APPLICATION**

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

Apply BRONATE Advanced™ 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 BRONATE Advanced™.
9. BRONATE Advanced™ Herbicide should be applied continuously for the duration of the water application with center pivot and continuous lateral move systems. Application of BRONATE Advanced™ 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.

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- 12 If BRONATE Advanced™ Herbicide is diluted in the supply tank, fill the tank with half of the water amount desired, add the BRONATE Advanced™ and then add remaining water amount with agitation. Always dilute with at least 4 parts water to 1 part BRONATE Advanced™.
- 13 Start the sprinklers and then inject BRONATE Advanced™ Herbicide into the irrigation line. BRONATE Advanced™ 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 BRONATE Advanced™ Herbicide label 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.

#### 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 habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

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 formulation.

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

**INFORMATION ON DROPLET SIZE:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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

**CONTROLLING DROPLET SIZE:** (This section is advisory in nature and does not supersede the mandatory label requirements)

- 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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

For some use patterns, reducing the effective boom length to less than  $\frac{1}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

**APPLICATION HEIGHT:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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

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**TEMPERATURE AND HUMIDITY:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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

## GENERAL WEED LIST

Pastemergence application of BRONATE Advanced™ Herbicide will control the following weeds when sprayed in the seedling stage. Maximum weed stage of growth is listed under BRONATE ADVANCED™ RECOMMENDATIONS.

### MOST SUSCEPTIBLE BROADLEAF WEED SPECIES

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

<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> )
Common groundsel	( <i>Serratia vulgaris</i> )
Common ragweed	( <i>Ambrosia artemisiifolia</i> )
Corn chamomile	( <i>Anthemis arvensis</i> )
Corn groundsel	( <i>Lithospermum arvense</i> )
Fumitory	( <i>Fumaria officinalis</i> )
Giant ragweed	( <i>Ambrosia trifida</i> )
Hemp scabania	( <i>Sesbania esultans</i> )
Henbit	( <i>Flamium amplexicaule</i> )
Hyleaf morningglory	( <i>Ipomoea hederacea</i> )
Knawel	( <i>Scleranthus annuus</i> )
Knotweed	( <i>Rochia scoparia</i> )
Mayweed	( <i>Anthemis cotula</i> )
Prostrate knotweed	( <i>Polygonum aviculare</i> )
Puncture vine	( <i>Tribulus terrestris</i> )
Redroot pigweed	( <i>Amaranthus retroflexus</i> )
Smooth pigweed	( <i>Amaranthus hybridus</i> )
Spiny pigweed	( <i>Amaranthus spinosus</i> )
Tall morningglory	( <i>Ipomoea purpurea</i> )
Tall Waterhemp	( <i>Amaranthus tuberculatus</i> )
Tansy mustard	( <i>Discurainia pinnata</i> )
Tarweed	( <i>Hemizonia</i> spp.)
Velvetleaf	( <i>Abutilon theophrasti</i> )
Wild radish	( <i>Raphanus raphanistrum</i> )

Weeds germinating after spraying will not be controlled.

### WEED SUPPRESSION

Canada Thistle (*Cirsium arvense*)

BRONATE Advanced™ Herbicide 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. Refer to the tank mix recommendations on this label for optimum suppression options.



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**WHEAT, BARLEY, OATS AND RYE  
BRONATE ADVANCED™ RECOMMENDATIONS**

PRODUCT	BRONATE ADVANCED™ RATE			APPLICATION TIMING AND SPECIFIC COMMENTS	
	Pints/A	Fl. Oz/A	Acres/Gal	CROP	WEEDS
BRONATE Advanced™	4/5	12.8	10	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.	MOST SUSCEPTIBLE BROAD-LEAF 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 1/5 - 1 3/5	19.2 - 25.6	6.7 - 5		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.
	1 3/5	25.6	5		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.
	4/5 - 1 1/5	12.8 - 19.2	10 - 6.7	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 1/5 - 1 3/5	19.2 - 25.6	6.7 - 5	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.

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WHEAT, BARLEY, OATS AND RYE  
 BRONATE ADVANCED™ RECOMMENDATIONS (continued)

PRODUCT	BRONATE ADVANCED™ RATE			APPLICATION TIMING AND SPECIFIC COMMENTS	
	Pints/A	Fl. Oz/A	Acres/Gal	CROP	WEEDS
BRONATE Advanced™	Chemigation Only 1 3/5	25.6	5	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 3/5 - 1 3/5	9.6 - 25.6	13.3 - 5	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 3/5 to 4/5 pint/A to MOST SUSCEPTIBLE BROADLEAF WEEDS up to the 8 leaf stage or 4 inches in height, whichever comes first. Apply 1 1/5 to 1 3/5 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 BRONATE Advanced™ with Roundup® or other labeled brands of glyphosate + 2,4-D.

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WHEAT, BARLEY, OATS AND RYE  
BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS (continued)

BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS

PRODUCT	BRONATE ADVANCED™ RATE			APPLICATION TIMING AND SPECIFIC COMMENTS	
	Pints/A	Fl. Oz/A	Acres/Gal	CROP	WEEDS
BRONATE Advanced™ + MCPA ester (Based on 4 lb. per gallon AI)	3/5 - 1 3/5 + 1/4-1 pint/A	9.6-25.6	13.3 - 5	Apply to spring seeded wheat, barley, oats and rye from the 3 leaf 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.
BRONATE Advanced™ + Starane®	3/5 - 1 3/5 + 1/3 - 2/3 pin/A	9.6-25.6	13.3 - 5	Apply to spring seeded wheat, barley, oats and rye from the 2 leaf stage up to and including flag leaf emergence.	Enhances the control of kochia up to 4" (including ALS resistant). Apply to kochia up to 4 inches in height or diameter.
BRONATE Advanced™ + 2,4-D ester (Based on 4 lb. per gallon AI)	3/5 - 1 3/5 + 1/4-1 pin/A	9.6-25.6	13.3 - 5	Apply to spring seeded wheat, barley and rye after grain is fully tillered (usually about 4 to 8 inches high) but before it is forming joints in the stem. Do not apply to grain in boot to dough stage.	For control of MOST SUSCEPTIBLE and SUSCEPTIBLE weeds and improved control of redroot pigweed, wild buckwheat and kochia (including ALS-resistant weeds). 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.
BRONATE Advanced™ + Banvel® Clarity® or dicamba (based on 4 lb. per gallon AI)	3/5 - 1 1/5 + 1/8-1/4 pint/A	9.6-19.2	13.3 - 6.7	FOR USE ON WHEAT ONLY. DO NOT TREAT BARLEY, OATS OR RYE.  Fall seeded wheat from the 3 leaf stage but before jointing. Spring seeded wheat from the 3 to 5 leaf stage of growth.	This tankmix improves control of broadleaves such as prostrate knotweed and kochia (including ALS-resistant weeds). 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.
BRONATE Advanced™ + Clean® (refer to Clean® label for adjuvant recommendation)	3/5 - 1 1/5 + 1/6-1/3 oz/A	9.6-19.2	13.3 - 6.7	Apply to wheat and barley from the 3 leaf stage but before the crop reaches the boot stage. Refer to Clean® label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as Kochia, 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.
BRONATE Advanced™ + Finesse® (refer to Finesse® label for adjuvant recommendation)	3/5 - 1 1/5 + 1/6-1/3 oz/A	9.6-19.2	13.3 - 6.7	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 tankmix improves control of broadleaf weeds such as Kochia, 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.

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## BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS (continued)

BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS  
(CONTINUED)

PRODUCT	BRONATE ADVANCED™ RATE			APPLICATION TIMING AND SPECIFIC COMMENTS	
	Pints/A	Fl. oz/A	Acres/Gal	CROP	WEEDS
BRONATE Advanced™ + Ally™ (refer to Ally™ label for adjuvant recommendation)	3/5 - 1 1/5 + 1/10 oz/A + 1 qt/100 gal of water	9.6 - 19.2	13.3 - 6.7	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 tankmix improves control of broadleaf weeds such as Kochia, henbit, tansy mustard and chickweed (including ALS-resistant weeds). Apply to weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BRONATE Advanced™ + Peak™ (refer to Peak™ label for adjuvant recommendation)	3/5 - 1 1/5 + 0.25 oz/A	9.6 - 19.2	13.3 - 6.7	Apply to wheat and barley from the 3-leaf stage but before the crop reaches the boot stage. Refer to Peak™ label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as Kochia, henbit, tansy mustard and chickweed (including ALS-resistant weeds). Apply to weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BRONATE Advanced™ + Harmony™ Extra or Harmony™ GT (refer to Harmony or Harmony GT label for adjuvant recommendation)	3/5 - 1 1/5 + 3/10-1/2 oz/A	9.6 - 19.2	13.3 - 6.7	<b>Winter wheat.</b> Apply from the 3 leaf stage but before the crop reaches the boot stage. Refer to the Harmony™ Extra or GT label for crop rotation and other restrictions. <b>Spring wheat and barley.</b> Apply from the 3 leaf stage but before the crop reaches the boot stage. <b>Spring Oats:</b> From the third leaf stage of crop, but before jointing. Refer to the Harmony Extra or GT label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as Kochia, henbit, chickweed and redroot pigweed. Apply to weeds up to the 8 leaf stage, 4 inches in height or across, whichever comes first.
BRONATE Advanced™ + Amber™ (refer to the Amber™ label for adjuvant recommendation)	3/5 - 1 1/5 + 0.14-0.56 oz/A	9.6 - 19.2	13.3 - 6.7	Apply to wheat and barley from the 3 leaf stage, but before the crop reaches the boot stage. Refer to the Amber™ label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as Kochia, 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.
BRONATE Advanced™ + Express™ (refer to the Express™ label for adjuvant recommendation)	3/5 - 1 1/5 + 1/12-1/3 oz/A	9.6 - 19.2	13.3 - 6.7	Wheat and barley. Apply from the 3 leaf stage but before the crop reaches the boot stage. Refer to the Express™ label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as Kochia, 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.
BRONATE Advanced™ + Curtail™ or Curtail™ M	3/5 - 1 1/5 + 1-2 pints/A  1-1.75 pints/A	9.6 - 19.2	13.3 - 6.7	Apply to wheat and barley after the crop begins to tiller up to the 1st node detectable.	This tankmix improves 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.

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WHEAT, BARLEY, OATS AND RYE  
BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS (continued)

BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS  
(CONTINUED)

PRODUCT	BRONATE ADVANCED™ RATE			APPLICATION TIMING AND SPECIFIC COMMENTS	
	Pints/A	Fl. Oz/A	Acres/Gal	CROP	WEEDS
BRONATE Advanced™ + metribuzin (Sencor™ or Lexion™)	4/5 + 1/8-3/16 lb ai/A	12.8	10	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 tankmix 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.
BRONATE Advanced™ + Avenge™	4/5 - 1 3/5 + 2 1/2-4 pints/A	12.8 - 25.6	10 - 5	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 tankmix will provide wild oat control in addition to broadleaves. Apply to wild oats in the 3-5 leaf stage and broadleaves that do not exceed the 4 leaf stage or rosettes of 1.5 inches in diameter. Avenge use rates per acre are 2 1/2 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.).
BRONATE Advanced™ + Assort™	3/5 - 1 1/5 + 1 - 1 1/2 pints/A	9.6 - 19.2	13.3 - 6.7	Apply to wheat and barley from the 3 leaf stage but before boot stage. Refer to Assort™ label for crop rotation and other restrictions.	This tankmix will provide wild oat control in addition to broadleaf 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 Assort 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.
BRONATE Advanced™ + Puma™	4/5 + 1/3-2/3 pints/A	12.8	10	Apply to wheat and barley from the 3 leaf stage but before boot. No closer than 60 days prior to harvest in MN, MT, ND and SD, and no closer to harvest than 70 days in all other states.  Do not use this tankmix on two-row malting barley.	This tankmix will control broadleaf weeds, green foxtail and foxtail millet. If the higher Puma rate is used, additional grasses controlled include wild oats and barnyard grass. Yellow foxtail will be suppressed.
	1 1/5 + 2/3 pints/A	19.2	6.7	For use on winter wheat only in the states of Washington, Oregon, and Northern Idaho.	

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WHEAT, BARLEY, OATS AND RYE  
BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS (continued)

BRONATE ADVANCED™ TANK MIXTURE RECOMMENDATIONS  
(CONTINUED)

BRONATE Advanced™ + Discover™	3/5-1 3/5 + 3.2-4 oz/A	9.6-25.6	13.3-5	Refer to the Discover® label for proper rates, crops, adjuvants, rotation restrictions and application timing information.	Increase the rate of BRONATE Advanced™ as the broadleaf weed size increases. Use minimum spray volume of 10 GPA by ground and 5 GPA by air.
BRONATE Advanced™ + Everest™	4/5 + 0.61 oz/A	12.8	10	Refer to the Everest® label for proper rates, crops, adjuvants, rotation restrictions and application timing information.	This tankmix will control broadleaf weeds, green foxtail and foxtail millet.
BRONATE Advanced™ + Achieve™	4/5-1 3/5	12.8-25.6	10-5	Refer to the Achieve® label for proper rates, crops, adjuvants, rotation restrictions and application timing information.	This tankmix will control broadleaf weeds, green and yellow foxtail and wild oats.
BRONATE Advanced™ + Maverick™	4/5-1 3/5 + 0.66 oz.	12.8-25.6	10-5	Refer to the Maverick™ label for proper rates, crops, adjuvants, rotation restrictions and application timing information.	This tankmix will control broadleaf weeds plus grasses as listed on the Maverick™ label.

**Restrictions and Precautions: Wheat, Barley, Oats and Rye**

- Do not graze treated fields within 45 days after application.
- 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 more than 1.6 pints of BRONATE Advanced™ Herbicide per acre in a single growing season.
- Do not plant rotational crops within 30 days following BRONATE Advanced™ Herbicide application.

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## GRASSES GROWN FOR SOD PRODUCTION

### BRONATE ADVANCED™ RECOMMENDATIONS Seedling and Established Grasses

PRODUCT	RATE		APPLICATION TIMING AND SPECIFIC COMMENTS	
	Per ACRE	Per 1000 SQ.FT.	CROP	WEEDS
BRONATE Advanced™	4/5 – 1 3/5 Pints	0.3 to 0.6 H. Oz.	Apply to established and newly seeded grasses grown for sod production before the boot stage. Established grasses tolerant to BRONATE Advanced™ include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustinegrass and Zoysiagrass. BRONATE Advanced™ 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)
BRONATE Advanced™	Chemigation 1 3/5 pints/A only	0.6 Fl. Oz.	Apply to established and newly seeded grasses grown for 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 BRONATE Advanced™.	

#### RESTRICTIONS AND PRECAUTIONS: Grasses grown for sod production

- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BRONATE Advanced™ to grasses grown for sod production with backpack or hand-held application equipment.
- Do not apply more than 1.6 pints of BRONATE Advanced™ Herbicide per acre in a single growing season.
- Do not plant rotational crops within 30 days following BRONATE Advanced™ Herbicide application.

### FLAX (*Linum usitatissimum* only) BRONATE ADVANCED™ RECOMMENDATIONS

PRODUCT	BRONATE ADVANCED™ RATE			APPLICATION TIMING AND SPECIFIC COMMENTS	
	Pints/A	Fl. Oz/A	Acres/Gal	CROP	WEEDS
BRONATE Advanced™	5/7	11.4	11.3	Apply to flax that is 2 to 8 inches in height. Do not apply BRONATE Advanced™ 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.

- HIGHER SPRAY VOLUMES OF 15 TO 20 GALLONS PER ACRE WILL DECREASE POTENTIAL FOR FLAX INJURY

#### 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 BRONATE Advanced™ application to flax grown on high organic, peat type soils.
- Application under high humidity conditions can injure flax.
- Unless otherwise instructed, do not apply BRONATE Advanced™ to flax with crop oil concentrate, surfactants or nitrogen solutions.
- Do not use on ornamental flax.
- Do not apply more than 0.72 pint of BRONATE Advanced™ Herbicide per acre in a single growing season.
- Do not plant rotational crops within 30 days following BRONATE Advanced™ Herbicide application.

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**IMPORTANT: READ BEFORE USE**

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and should be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Aventis CropScience. All such risks shall be assumed by the user or buyer.

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**NET CONTENTS: 2.5 Gallons**

Aventis CropScience USA LP  
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