WHEAT, BARLEY, OATS, RYE AND TRITICALE - 1.5-2 PINTS/ACRE

General Information

GENERAL INFORMATION
BROX 2EC is formulated as a emulsifiable concentrate of octanoic acid ester of bromoxynil containing the equivalent of 2 pounds of bromoxynil per gallon.

BROX 2EC is a selective postemergence herbicide for control of important broadleaf weeds infesting corn (field and pop), sorghum (grain and forage), wheat, barley, oats, rye, triticale, alfalfa (seedling), flax, onions, garlic, mint (established peppermint and spearmint), Conservation Reserve Program (CRP) areas, grasses grown for seed or sod production, non-residential turfgrass, and non-cropland and industrial sites.

Optimum weed control is obtained when BROX 2EC is applied to actively growing weed seedlings. BROX 2EC is primarily a contact herbicide; therefore, thorough coverage of the weed seedlings is essential for optimum control.

BROX 2EC 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 BROX 2EC is not systemic, recovery of the crop is generally rapid with no lasting effect. Frequency and amount of leaf burn may be greater when crops are stressed by abrasive winds, cool to cold evening temperatures or mechanical injury, such as that caused by hail, sleet or insect feeding.

To reduce the potential for temporary leaf burn, applications should be made to dry foliage in the recommended spray volumes per acre when weather conditions are not extreme.

MIXING, LOADING AND HANDLING INSTRUCTIONS
2.5 Gallon Containers:
It is strongly recommended that special care be taken in mixing and loading this product. Hands should be placed on the container in such a way as to avoid possible drip or splash.

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

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

TANK MIXTURES:
BROX 2EC can be applied in tank mixture with other pesticide products registered for use on approved crops 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. BROX 2EC cannot be mixed with any product containing a label prohibition against such mixing. Refer to the specific crop section for rate recommendations and other restrictions. To apply BROX 2EC 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 BROX 2EC and add water to the spray tank to the desired level. If tank mixing with other product types, add the BROX 2EC 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.

SPRAYABLE LIQUID FERTILIZERS AND SPRAY ADDITIVES:
BROX 2EC 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 BROX 2EC. 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 BROX 2EC is evenly mixed with the fertilizer. Leaf burn may occur when BROX 2EC is applied with liquid fertilizer, but new leaves are not adversely affected.

NOTE: Fertilizers and spray additives can increase foliage leaf burn when applied with BROX 2EC. Do not apply fertilizers or spray additives with BROX 2EC if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to BROX 2EC. Do not apply BROX 2EC in combination with fertilizers or spray additives if restricted under the individual crop use directions.

APPLICATION PROCEDURES
BROX 2EC can be applied to registered use areas by ground, aerial and sprinkler irrigation equipment. The following provides permitted methods of application for each crop.

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

Select a spray volume and delivery system that will ensure thorough and uniform spray coverage. For optimum spray distribution and thorough coverage, use of flat-fan nozzles (maximum tip size 8008) with a minimum spray pressure of 30 psi at the nozzle tips are recommended.
Other nozzle types that produce course spray droplets may not provide adequate coverage of the weeds to ensure optimum control.

Raindrop nozzles are not recommended, as weed control with BROX 2EC may be reduced.

In general, a minimum spray volume of 10 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi 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 and subsequent poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas. Applications using less than 10 gallons per acre may result in reduced weed control.

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

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

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

SPRINKLER IRRIGATION APPLICATION
BROX 2EC can be applied through sprinkler irrigation systems to wheat, barley, oats, rye, triticale, field corn, popcorn, grain sorghum, mint, grasses grown for seed
or sod production, onions (dry bulb), garlic, and seedling alfalfa.

Apply BROX 2EC 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 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 BROX 2EC.

9. BROX 2EC should be applied continuously for the duration of the water application with center pivot and continuous lateral move systems. Applications of BROX 2EC should be made during the last 30-45 minutes of the irrigation set with other overhead sprinkler systems.

10. For best performance, set the sprinkler system to deliver approximately 0.5 inch or less of water per acre.

11. Remove scale, pesticide residues and other foreign matter from the supply tank and entire injector system. Flush with clean water.

12. If BROX 2EC is diluted in the supply tank, fill the tank with half of the water amount desired, add BROX 2EC and then add remaining water amount with agitation. Always dilute with at least 4 parts water to 1 part BROX 2EC.

13. Start the sprinklers and then inject BROX 2EC into the irrigation line. BROX 2EC should be injected with a positive displacement pump into the main line at least 8 feet ahead of a right angle turn to ensure adequate mixing. Refer to appropriate sections of this 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.

CULTIVATION
When properly utilized, timely cultivations of row crops may aid overall weed control efforts as well as crop growth. However, cultivation BEFORE or DURING BROX 2EC applications may place target weeds under stress, resulting in erratic weed control. Whenever BROX 2EC is being utilized in an overall weed control program, plan to postpone any anticipated cultivations until 5-7 days after application to ensure best performance.

WEED SUPPRESSION
BROX 2EC suppresses the growth of Canada thistle (Cirsium arvense) by burning down top growth. Regrowth may occur.

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

Limitations, Restrictions, and Exceptions

WHEAT, BARLEY, OATS, RYE AND TRITICALE

CROP
Fall-seeded wheat, barley, rye and triticale throughout the U.S. Apply from emergence to the boot stage.

Spring-seeded wheat, barley and oats in ID, OR, WA, CO, WY, and MT. Apply from
emergence to the boot stage.

WEEDS

Apply to MOST SUSCEPTIBLE weeds (see GENERAL WEED LIST) up to the 8-leaf stage or 4 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 2 inches in diameter. Apply to SUSCEPTIBLE broadleaf weeds up to the 4-leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: Wheat, Barley, Oats, Rye & Triticale

- Do not cut graze treated fields within 45 days following treatment.

- Do not apply when crops are under moisture stress.

- Do not apply when crop canopy covers the weeds as poor weed control will result.

- Do not apply when underseeded alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.

- Do not add a surfactant or crop oil when applying to underseeded alfalfa or increased injury will occur.

- Do not cut for feed or graze spring- treated underseeded alfalfa within 30 days following treatment.

- Do not cut for feed or graze fall- or winter-treated underseeded alfalfa until spring, at least 60 days following treatment.

- Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures.

- Refer to labels of products used in tank mixture for additional restrictions and precautions.

- Do not plant rotational crops until the following season within 30 days following BROX 2EC application.

- The total cumulative rate must not exceed 0.5 lb ai bromoxynil (2 pints/A BROX 2EC) per season.
Method
Broadcast/Foliar Air
Broadcast/Foliar Ground

Rates
field_rates 0

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Restricted Entry Interval

24 hours

Timings
From emergence to the boot stage.