



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 21, 2022

Rebecca Clemmer
Senior Regional Regulatory Manager
UPL NA Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Interim Decisions for Bromoxynil, Fluroxypyr, and Flucarbazone and the National Marine Fisheries Services' (NMFS) Biological Opinion on the Effects of Bromoxynil on Pacific Salmonids
Product Name: X2682AA HERBICIDE
EPA Registration Number: 70506-510
Application Dates: 5/13/2020, 9/24/2021, and 12/8/2022
Decision Numbers: 562816, 578649, 589106, and 589107

Dear Rebecca Clemmer:

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

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

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

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

If you have any questions about this letter, please contact Quinn Gavin at gavin.quinn@epa.gov.

Sincerely,



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

Enclosure

[Text in brackets is optional]

FLUCARBAZONE-SODIUM	GROUP	2	HERBICIDE
FLUROXYPYR	GROUP	4	HERBICIDE
BROMOXYNIL	GROUP	6	HERBICIDE

X2682aa Herbicide

[alternate brand name: Batallium]

FOR POSTEMERGENCE CONTROL OF ANNUAL BROADLEAF AND GRASS WEEDS IN SPRING AND WINTER WHEAT

ACTIVE INGREDIENTS:	% BY WT.
Octanoic acid ester of bromoxynil:	
3,5-Dibromo-4-hydroxybenzoxynil*	35.17%
Fluroxypyr 1-methylheptyl ester:	
((4-Amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid, 1-methylheptyl ester**	13.03%
Flucarbazone-sodium:	
4,5-Dihydro-3-methoxy-4-methyl-5-oxo-N-[[2-(trifluoromethoxy)phenyl]sulfonyl]-1H-1,2,4-triazole-1-carboxamide, sodium salt	2.59%
OTHER INGREDIENTS:	49.21%
TOTAL:	100.0%

This formulation contains 0.25 lb of flucarbazone-sodium active ingredient per gallon (30 g ai/l).

*This product contains 24.15% 3,5-Dibromo-4-hydroxybenzoxynil (bromoxynil) or 2.34 pounds per gallon (280 g/L).

** This product contains 9.05% ((4-Amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid (fluroxypyr) or 0.88 pound per gallon (105 g/L).

Read entire label before use

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCIÓN

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

See [front][back][side][inside] panel of container for First Aid Instructions and [Leaflet][Booklet] for complete Precautionary Statements and Directions for Use.

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

ACCEPTED

Dec 21, 2022

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 70506-510

IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN: No specific antidote is available. Treat the patient symptomatically.	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p> <p>For medical treatment, call Rocky Mountain Poison and Drug Safety at 1-866-673-6671.</p> <p>For CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.</p>	

EPA Reg. No. 70506-510

EPA Est. No.:

NET CONTENTS:

UPL NA Inc
 630 Freedom Business Center, Suite 402
 King of Prussia, PA 19406 · 1-800-438-6071

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Chemical-resistant gloves made of any waterproof material (barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils);
- Shoes plus socks.

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 STATEMENT

Handlers must use closed mixing loading systems during mixing/loading liquids for aerial applications to fallow land and high-acreage field crops. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR §170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides 40 CFR 170.240 (d)(6).

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

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

ENVIRONMENTAL HAZARDS

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 areas treated. Do not contaminate water when disposing of equipment washwater or rinsate.

Do not allow sprays to drift onto adjacent desirable plants.

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

GROUNDWATER ADVISORY STATEMENT: This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

SURFACE WATER ADVISORY STATEMENT: This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of flucarbazone-sodium from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Reporting Ecological Incidents

To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-800-438-6071.

PHYSICAL AND CHEMICAL HAZARDS

Do not mix or come into contact with oxidizing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

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

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.

Endangered Species Protection Requirements

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

Important Restrictions

This product is persistent and may be present in plant materials for over 30 days after application. Do not use treated plant material or manure from animals that have grazed or consumed forage from treated areas for compost, mulch, or mushroom spawn until 30 days after application.

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

Animals that have been fed fluroxypyr treated forage must be fed forage free of fluroxypyr for at least 3 days before they are moved off the treated property.

Important

Read the entire **DIRECTIONS FOR USE** and **WARRANTY AND DISCLAIMER STATEMENT** before using this product.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with 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 interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours following application.

Exception: 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,
- chemical-resistant gloves made of any waterproof material (barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or viton ≥ 14 mils),
- shoes plus socks.

PRODUCT INFORMATION

X2682aa Herbicide is for use in spring, durum and winter wheat. **X2682aa Herbicide** controls wild oat, green foxtail, and other grass species as well as numerous broadleaf weeds, including kochia, common lambsquarters, wild buckwheat, wild mustard and shepherd's purse. **X2682aa Herbicide** also suppresses additional grass and broadleaf weeds, including downy brome, and wild buckwheat.

X2682aa Herbicide is absorbed by foliage and roots of susceptible weeds, which cease growth soon after application. Maximum weed control is achieved one to two weeks after application, though susceptible weeds will stop growing and will no longer be competitive soon after application. For broader spectrum activity, **X2682aa Herbicide** may be tank-mixed with other broadleaf and grass herbicides listed on this label. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank-mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank-mixture. See **TANK-MIXES** section for recommended products.

WEED RESISTANCE MANAGEMENT

X2682aa Herbicide, contains the active ingredients flucarbazone-sodium, fluroxypyr, and bromoxynil, which are categorized as Group 2, 4 and 6 herbicides based on based on the site of action classification system of the Weed Science Society of America. Flucarbazone-sodium is an amino acid synthesis inhibitor (ALS) mode of action (Group 2) herbicide. Fluroxypyr is a growth

regulator (Group 4) herbicide. Bromoxynil is a photosynthesis inhibitor mode of action (Group 6) herbicide

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To delay herbicide resistance, take one or more of the following steps:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Apply the full label rate of **X2682aa Herbicide** at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate through vegetative propagation.
- Contact your UPL NA Inc. representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. Do not assume that each listed weed is being controlled by multiple MOAs. Co-formulated active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product. If resistant biotypes of target weeds have been reported, use the full application rate of this product specified for your local conditions. Tank-mix products so that there are multiple effective sites of actions for each target weed.
- Report any incidence of non-performance of this product against a particular weed to your UPL NA representative, local retailer, or county extension agent.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2, 4, or 6 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
 - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
 - A spreading patch of non-controlled plants of a particular weed species; and
 - Surviving plants mixed with controlled individuals of the same species
- Additionally, users should follow as many of the following herbicide resistance management practices as is practical:
 - Use a broad-spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
 - Utilize sequential applications of herbicides with alternative sites of action.
 - Rotate the use of this product with non-Group 2, 4, or 6 herbicides.
 - Avoid making more than two applications of this or any other herbicide with the same mode of action within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult to control weeds.
 - Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
 - Use good agronomic principles that enhance crop development and crop competitiveness.

- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.
- For further information or to report suspected resistance, contact UPL NA INC. at 1-866-673-6671.

Read the entire DIRECTIONS FOR USE before using X2682aa Herbicide.

This product is not to be used on flood irrigated fields or irrigated fields with a soil pH greater than 8.0.

USE RESTRICTIONS

- For use only in wheat.
- Make only one application per year.
- Grazing is prohibited in treated wheat fields within 15 days of application.
- Do not mix, load or clean spray equipment within 33 feet of well-heads or aquatic systems, including marshes, ponds, ditches, streams, lakes, etc.
- Do not apply within 50 feet of well-heads or aquatic systems, including marshes, ponds, ditches, streams, lakes, etc.
- Do not apply post emergence when rain is expected within the next hour after application.
- Do not allow this chemical to drift onto other crops.
- Do not harvest wheat forage or hay until 15 days after the last application.
- Do not harvest wheat grain or straw until 60 days after the last application.
- Do not apply this product through any type of irrigation system.
- Do not use if cereal crop is under seeded with a legume.
- For Idaho, use only in the counties of Benewah, Boundary, Bonner, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone. Use in all other counties of Idaho is prohibited.
- Aerial application to fallow land is restricted within 25 feet of residential areas (e.g. homes, schools, playgrounds, shopping areas, hospitals, etc.).

USE PRECAUTIONS

With **X2682aa Herbicide** occasional transitory leaf burn may occur. 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 specified spray volumes per acre when weather conditions are not extreme.

**POSTEMERGENCE USE DIRECTIONS
FOR SPRING, DURUM AND WINTER WHEAT**

APPLICATION PROCEDURES

MIXING INSTRUCTIONS

Ensure the spray-tank is clean. In-line strainers and nozzle screens should be clean and 50 to 80 mesh or coarser. **X2682aa Herbicide** added to water should be at a temperature above 50°F.

1. Fill the spray-tank 1/4 to 1/2 full with clean water and begin agitation or bypass.
2. Add the appropriate rate of **X2682aa Herbicide**.
3. Add any additional pesticide.
4. Add the adjuvant.
5. Add micronutrients (if needed).
6. Fill the spray-tank to the required level.
7. Maintain sufficient agitation during both mixing and application of **X2682aa Herbicide**.

8. For best results, apply mixed spray within 4 hours after mixing.

GROUND APPLICATION

Apply in a spray volume of 8 to 15 gal/A (or 80 to 150 L/ha) at the recommended pressure for the nozzles used to ensure proper weed coverage.

AERIAL APPLICATION

Apply in water using a minimum spray volume of 3 gal/A (or 30 L/ha). For best results, use a minimum of 5 gal/A (or 50 L/ha) under dry conditions or heavy weed infestations. Aerial applications with **X2682aa Herbicide** must be made with low drift nozzles at a maximum height of 10 feet above the crop and at a maximum pressure of 40 psi.

SPRAY DRIFT MANAGEMENT

Aerial Applications

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
-

SPRAY DRIFT ADVISORIES

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

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size - Ground Boom

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

Controlling Droplet Size - Aircraft

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

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

- **RELEASE HEIGHT - Aircraft**
Higher release heights increase the potential for spray drift. When applying aurally to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.
- **SHIELDED SPRAYERS**
Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.
- **TEMPERATURE AND HUMIDITY**
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.
- **TEMPERATURE INVERSIONS**
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- **WIND**
Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boomless Ground Applications:

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

Take precautions to minimize spray drift.

ENDANGERED SPECIES PROTECTION

To avoid adverse effects on endangered dicot plant species, the following measures will be required where endangered plant species occur in the counties listed in the following table:

State	County
Idaho	Idaho, Lewis, Nez Perce
Minnesota	Brown, Cottonwood, Goodhue, Jackson, Renville
Montana	Flathead, Lake
Oregon	Benton, Clackamas, Lane, Linn, Marion, Polk, Union, Wallowa, Washington, Yamhill
Washington	Asotin, Chelan, Cowlitz, Lewis, Lincoln, Spokane, Whitman
Wyoming	Laramie

For ground applications, the applicator must:

- Apply when there is sustained wind away from native plant communities,
OR
- Use low-pressure nozzles according to manufacturer's specifications that produce only coarse or very coarse droplets,
OR
- Leave a 50-foot untreated buffer between the treatment and native plant communities.

For aerial applications, the applicator must:

- Apply only when there is sustained wind away from native plant communities,
OR

- Leave a 350-foot untreated buffer between the treatment and native plant communities.

USE RATES AND TIMING OF APPLICATION

Best weed control is observed when environmental conditions and soil fertility support vigorous growth of crop and weeds. Research has demonstrated that optimum wheat yield is obtained by early removal of grassy weeds.

Apply **X2682aa Herbicide** at a rate of 13.7 fl* oz/A to spring, durum and winter wheat from two leaf up to 60 days prior to harvest. Winter wheat applications can be made in the fall or spring. ***13.7 fl oz product/A is equivalent to 0.25 lb ai/A bromoxynil, 0.09 lb ai/A fluroxypyr, 0.027 lb ai/A flucarbazone-sodium**

RESTRICTIONS

- Do not make more than one post emergence application of **X2682aa Herbicide** per year.
- Do not apply more than 13.7 fl oz/A of **X2682aa Herbicide** (equivalent to 0.027 lb active ingredient (ai)/A flucarbazone-sodium) per year.
- Do not cumulatively apply more than 0.50 lb ai/A bromoxynil per year. Do not cumulatively apply more than 0.25 lb ai/A fluroxypyr per year.

Grass Weed Control (C) or Suppression (S)		
Grass	Stage	Efficacy
Green foxtail	1 to 4 leaves	C
Volunteer oat	1 to 4 leaves	C
Wild oat	1 to 4 leaves prior to tillering	C ¹
Yellow foxtail	1 to 4 leaves actively growing	S
Japanese brome	1 to 4 leaves actively growing	S
True cheat	1 to 2 leaves	S ¹
Barnyardgrass	2 to 4 leaves prior to tillering	S ¹
Downy brome	1 to 4 leaves actively growing	S ¹
Foxtail barley	1 to 4 leaves prior to tillering	S ¹
Persian darnel	1 to 4 leaves actively growing	S ¹

¹ A tank-mix with AUDIT® brand herbicides or other herbicides containing tribenuron is required to achieve the level of control listed in the table above

Broadleaf Weeds Controlled; Up to 4 inches in height; 2 inch rosette ¹	
Annual sowthistle	Morningglory (ivy leaf, pitted, tall)
Bedstraw (cleavers) (1-4 whorls)	Mustard (blue, wild)
Bristly starbur	Nightshade, (black, cutleaf, Eastern black, hairy, silverleaf)
Buffalobur	Pepperweed
Burcucumber	Pigweed (redroot, spiny)
Coast fiddleneck	Prickly lettuce
Cocklebur, common	Puncturevine
Corn gromwell	Purslane, common
Cow cockle	Ragweed (common, giant)
Field pennycress	Russian thistle
Grounsel, common	Shepherd's purse
Hemp sesbania	Smartweed (green, ladythumb, Pennsylvania)
Jimsonweed	Sunflower ³
Knawel	Tartary buckwheat

Knotweed	Tarweed, common
Kochia ²	Velvetleaf
Lambsquarters, common	Volunteer canola
Lanceleaf sage	Volunteer flax
London rocket	Wild buckwheat
Mallow (common, Venice)	Wild radish
	Yellow starthistle
¹ For the states of Idaho, Oregon, Washington, Colorado, Wyoming, and Montana, add bromoxynil to provide 0.125 to 0.25 lb ai/A. Target weed size up to 2 inches in height; 1 inch rosette.	
² Includes ALS herbicide resistant. Best control is achieved when weeds are at least 1 inch tall.	
³ For best control of sunflower, delay application until emerging seedlings are 4 inches in height.	

Wheat exposed to excessive salt levels (saline) or water logged saturated soils or temperature extremes such as hot or freezing weather (frost 3 days before or 3 days after application), drought, low fertility or plant disease immediately prior to or after application could result in unacceptable injury symptoms. Weed control may also be reduced by these same conditions.

ADJUVANT USE RATES

X2682aa Herbicide applied alone requires the use of an adjuvant according to the following directions. When **X2682aa Herbicide** is applied in tank-mixture with EC products at a rate of 8 fl oz/A or greater, only a nitrogen source adjuvant is required. When an adjuvant is to be used with this product, UPL NA recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Specified Adjuvant Use Rates For Durum, Spring and Winter Wheat	
X2682aa Herbicide alone or in tank-mixture with dry formulated herbicides or Emulsifiable Concentrate (EC)-based herbicides used at less than 8 fl oz/A**	<ul style="list-style-type: none"> • A high quality basic blend at 2 to 4 qt per 100 gal (0.5-1% v/v). OR <ul style="list-style-type: none"> • A non-ionic surfactant at 1 to 2 qt per 100 gal (0.25-0.5% v/v) + a liquid nitrogen fertilizer (28%UAN) at 1 to 2 qt/A or ammonium sulfate fertilizer (AMS) at 1 to 2 lb/A (8.5 to 17.5 lb/100 gal of spray solution).
X2682aa Herbicide with Emulsifiable Concentrate (EC)-based Herbicides used at greater than 8 fl oz/A**	<ul style="list-style-type: none"> • A liquid nitrogen fertilizer (28%UAN) at 1 to 2 qt/A or ammonium sulfate fertilizer (AMS) at 1 to 2 lb/A (8.5 to 17.5 lb/100 gal of spray solution). • A non-ionic surfactant at 1 to 2 qt per 100 gal (0.25-0.5% v/v) can be added if not restricted by the tank-mix partner.

****8 fl oz product/A is equivalent to product/A is equivalent to 0.146 lb ai/A bromoxynil, 0.055 lb ai/A fluroxypyr, 0.016 lb ai/A flucarbazone-sodium**

TANK-MIXES

For disease control or suppression fungicides, such as fluoxastrobin (EVITO® 480SC FUNGICIDE), can be tank-mixed with **X2682aa Herbicide**.

Do not use X2682aa Herbicide with any organophosphate or carbamate containing insecticides.

For broader spectrum control of broadleaf weeds, **X2682aa Herbicide** may be mixed with the broadleaf herbicides listed in the following table. Depending on the tank-mix partner, an adjuvant may be included in the spray solution. See **ADJUVANT USE RATES** section.

With all tank-mix partners, read and follow the use directions, rates, precautions, timing, recropping restrictions, grazing interval restrictions and recommendations on broadleaf herbicide

and surfactant labels. The tank-mix must be used in accordance with the more restrictive label limitations and precautions for all pesticides used.

X2682aa Herbicide Tank-Mix¹ Partners	
2,4-D (amine or ester)	MCPA (amine or ester)
bromoxynil ²	metsulfuron-methyl (Ally [®] XP)
carfentrazone-ethyl (Aim [®] EC)	propoxycarbazone-sodium (Olympus [®])
chlorsulfuron + metsulfuron-methyl (Finesse [®])	prosulfuron (Peak [®])
clopyralid (Stinger [®])	pyrasulfotole + bromoxynil (Huskie [®])
clopyralid + 2,4-D (Curtail [®])	sulfosulfuron (Outrider [®])
clopyralid + fluroxypyr ³ (WideMatch [®])	thifensulfuron-methyl (Harmony [®] SG)
clopyralid + MCPA (Curtail M)	thifensulfuron-methyl + tribenuron-methyl + metsulfuron-methyl (Ally [®] Extra SG)
dicamba ⁴	triasulfuron (Amber [®])
fenoxaprop-p-ethyl	tribenuron-methyl (Express [®])
florasulam (Orion [®])	tribenuron-methyl + thifensulfuron-methyl (AUDIT)
fluroxypyr (Starane [®] Ultra)	
¹ For tank-mix partner rate directions follow the label of the tank-mix partner.	
² Do not tank-mix more than an equivalent of 0.25 lb ai/A bromoxynil. Do not cumulatively apply more than 0.50 lb ai/A bromoxynil per year.	
³ If X2682aa Herbicide is applied in a tank-mix combination with a dicamba-containing broadleaf herbicide; grass control will be reduced, except for green foxtail.	

ADDITIONAL INFORMATION

SPRAYER CLEAN-UP

Clean sprayer using the following procedures:

1. Drain the tank and thoroughly rinse spray-tank, boom and hoses with clean water especially all visible deposits.
2. Fill the tank with water and add household ammonia to make a 1% v/v solution (1 gal/100 gal). Flush the hoses, boom and nozzles with the cleaning solution. Circulate for at least 15 minutes. Flush hoses, boom and nozzles once more and then drain the tank.
3. Clean nozzles and screens in a separate container using the 1% v/v solution of ammonia and water.
4. Repeat Step 2.
5. Rinse tank and flush boom and hoses with clean water.

Do not clean sprayer near desirable vegetation, wells or other water sources:

1. Dispose of all rinsate in accordance with pertinent regulations.
2. Check tank-mix partner label for any additional clean-up procedures.

CROP ROTATION RESTRICTIONS for the states of North Dakota, Minnesota, Montana and South Dakota

Crops	Interval for soils with a pH < 8.0	Intervals for soils with a pH at or > 8.0
Spring and Winter Wheat	0 days	0 days
Durum Wheat	4 months	4 months
Sunflower	4 months	4 months
STS Soybeans	6 months	6 months
Barley	9 months	9 months
Canola	9 months	9 months
Dry Edible Beans	9 months	9 months
Flax	9 months	9 months
Potatoes ¹	9 months	9 months
Safflower	9 months	9 months
Soybeans	9 months	9 months

Sugarbeets ¹	9 months	9 months
Alfalfa	11 months	18 months
Corn	11 months	11 months
Field peas	11 months	18 months
Garbanzo bean (Chickpea)	11 months	18 months
Clearfield Lentils	18 months	18 months
Lentils	18 months	24 months
Oat	18 months	24 months
Sorghum or forage millet	18 months	18 months
Mustard	24 months	24 months
¹ Due to lower organic matter, seasonal moisture and irrigation practices, potatoes and sugarbeet grown in western North Dakota or South Dakota (west of highway 281) or Montana must not be planted until 24 months after application.		

As **X2682aa Herbicide** is degraded by soil microbes, environmental conditions that decrease microbial activity must be considered when making rotational cropping decisions. These environmental conditions include less than the 10 year average precipitation, cold temperatures within and following the cropping season, as well as soils with both low Organic Matter (OM) and high pH. If these conditions exist, or for crops not listed on the **CROP ROTATION RESTRICTIONS** for the states of ND, MN, MT and SD a soil bioassay may be necessary to ensure rotational crop safety. Previous herbicide history must be known prior to planting the crops listed in this section. Long-residual ALS inhibitors can remain for several years after application and increase the chance of rotational crop injury.

CROP ROTATION RESTRICTIONS for the states of Idaho, Oregon, and Washington

Crops	Interval for soils with a pH at or < 5.5	Intervals for soils with pH 5.6 - 7.5¹
Spring and Winter Wheat	0 days	0 days
Durum Wheat	4 months	4 months
Sunflower	4 months	4 months
STS Soybeans	6 months	6 months
Barley	9 months	11 months
Canola	9 months	9 months
Dry Edible Beans	9 months	9 months
Flax	9 months	9 months
Safflower	9 months	9 months
Soybeans	9 months	9 months
Timothy	9 months	18 months
Alfalfa	11 months	18 months
Corn	11 months	18 months
Field peas	10 months	18 months
Garbanzo bean (Chickpea)	10 months	18 months
Clearfield Lentils	10 months	18 months
Lentils	18 months	24 months
Oat	18 months	24 months
Sorghum or forage millet	18 months	24 months
Mustard	24 months	24 months
¹ For soils with a pH greater than 7.5 rotate to wheat the following season then conduct a bioassay prior to other crops		

As **X2682aa Herbicide** is degraded by soil microbes, environmental conditions that decrease microbial activity must be considered when making rotational cropping decisions. These environmental conditions include less than the 10 year average precipitation cold temperatures within and following the cropping season, as well as soils with both low Organic Matter (OM) and high pH. If these conditions exist, or for crops not listed on **CROP ROTATION RESTRICTIONS**

for the states of ID, OR, and WA a soil bioassay may be necessary to ensure rotational crop safety. Previous herbicide history must be known prior to planting the crops listed in this section. Long-residual ALS inhibitors can remain for several years after application and increase the chance of rotational crop injury.

CROP ROTATION RESTRICTIONS for all other states where X2682aa Herbicide is registered for use:

Crops	Interval for soils with a pH at or < 6.5	Intervals for soils with a pH 6.6 - 7.5	Intervals for soils with a pH 7.6 – 8.0 ¹
Spring and Winter Wheat	0 days	0 days	0 days
Durum Wheat	4 months	4 months	4 months
Sunflower	4 months	4 months	9 months
STS Soybeans	4 months	6 months	6 months
Barley	9 months	11 months	18 months
Canola	9 months	9 months	11 months
Dry Edible Beans	9 months	11 months	18 months
Flax	9 months	9 months	12 months
Soybeans	6 months	9 months	12 months
Cotton	6 months	9 months	12 months
Alfalfa	9 months	18 months	24 months
Corn	9 months	15 months	18 months
Garbanzo bean (Chickpea)	9 months	15 months	18 months
Oat	9 months	18 months	18 months
Grain Sorghum	9 months	15 months	18 months
Millet or forage sorghum	9 months	15 months	24 months

¹For soils with a pH greater than 8.0 rotate to wheat the following season then conduct a bioassay prior to other crops.

As **X2682aa Herbicide** is degraded by soil microbes, environmental conditions that decrease microbial activity must be considered when making rotational cropping decisions. These environmental conditions include less than the 10 year average precipitation, cold temperatures within and following the cropping season, as well as soils with both low Organic Matter (OM) and high pH. If these conditions exist, or for crops not listed on **CROP ROTATION RESTRICTIONS** for all other states a soil bioassay may be necessary to ensure rotational crop safety. Previous herbicide history must be known prior to planting the crops listed in this section. Long-residual ALS inhibitors can remain for several years after application and increase the chance of rotational crop injury.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Do not freeze. Store in a cool (above 45°F), dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container, keep tightly closed, and out of reach of children, preferably in a locked storage area.

PESTICIDE DISPOSAL

Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING

Rigid, Non-refillable containers small enough to shake (i.e., with capacities equal to or less than 5 gallons).

Non-refillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. 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.

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.

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.

Rigid Non-refillable containers that are too large to shake (i.e., with capacities greater than 5 gallons or 50 lbs).

Non-refillable container. Do not reuse or refill this container. After emptying product from container, either return container to UPL NA per instructions from UPL NA service center, or rinse and either recycle or dispose of the container as follows:

Bottom Discharge IBC (e.g. Schuetz Caged IBC or Snyder Square Stackable).

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix-tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums, and Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or rinsate collection system. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

Warranty and Disclaimer Statement

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of UPL NA Inc., and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer.

UPL NA Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to UPL NA Inc. and is subject to the inherent risks described above.

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