

FLUCARBAZONE-SODIUM	GROUP	2	HERBICIDE
PYROXSULAM	GROUP	2	HERBICIDE

IRONGATE™

HERBICIDE

For Postemergence Control of Wild Oat, Green Foxtail and other Grass and Broadleaf Weeds in Spring Wheat & Durum and Winter Wheat

ACTIVE INGREDIENTS:	% BY WT.
Flucarbazone-sodium: 4,5-Dihydro-3-methoxy-4-methyl-5-oxo- <i>N</i> -[[2-(trifluoromethoxy)phenyl]sulfonyl]-1 <i>H</i> -1,2,4-triazole-1-carboxamide, sodium salt.	19.47%
Pyroxsulam: N-(5,7-dimethoxy[1,2,4]triazolo [1,5- <i>a</i>]pyrimidin-2-yl)-2-methoxy-4-(trifluoromethyl)-3-pyridinesulfonamide	5.85%
OTHER INGREDIENTS:	74.68%
TOTAL:	100.00%

IRONGATE™ Herbicide is an OD formulation containing 1.96 lb of Flucarbazone-Sodium (235.5 g ai/l) and 0.56 lb of Pyroxsulam (66.8 g ai/l) active ingredient per gallon.

EPA Reg. No. 70506-629

Read entire label before use

KEEP OUT OF REACH OF CHILDREN

WARNING

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.)

FIRST AID	
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.
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.
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR 24-HOUR MEDICAL EMERGENCY ASSISTANCE CALL Rocky Mountain Poison and Drug Safety: 1-866-673-6671. FOR 24-HOUR CHEMICAL EMERGENCY (Spill, leaks, fire, exposure or accident) CALL CHEMTREC: 1-800-424-9300.</p>	

For Product Use Information Call: 1-800-438-6071

See inside for additional Precautionary Statements and complete Directions For Use.

Net Contents: _____ Gallons (_____ Fl Oz)



Produced For: **UPL NA Inc.** • 630 Freedom Business Center, Suite 402
King of Prussia, PA 19406 U.S.A. • 1-800-438-6071



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: Causes substantial but temporary eye injury. **DO NOT** get in eyes or on clothing. Avoid contact with skin. 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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Appropriate protective eyewear such as goggles, face shield, or safety glasses;
- Long-sleeved shirt and long pants;
- Chemical-resistant gloves made of materials such as butyl rubber ≥ 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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

ENGINEERING CONTROL STATEMENT

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

USER SAFETY RECOMMENDATIONS

User should:

- 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. 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: 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: 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: 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 including 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.

PHYSICAL AND CHEMICAL HAZARDS

DO NOT mix or allow to come into contact with oxidizing agents. Hazardous chemical reaction may occur.

Read the entire **DIRECTIONS FOR USE** and **Warranty and Disclaimer Statement** before using this product.

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.

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 48 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: protective eyewear such as goggles, face shield, or safety glasses; coveralls; chemical-resistant gloves made of materials such as butyl rubber ≥ 14 mils.

PRODUCT INFORMATION

IRONGATE Herbicide controls common lambsquarters, wild oat, green foxtail, yellow foxtail, Italian ryegrass, windgrass, barnyardgrass, brome species and numerous broadleaf weeds, including redroot pigweed, wild mustard and shepherd's purse. IRONGATE Herbicide also suppresses additional grass and broadleaf weeds, including downy brome, and wild buckwheat.

IRONGATE 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, IRONGATE Herbicide may be tank-mixed with a broadleaf herbicide registered for the use.

WEED RESISTANCE MANAGEMENT

IRONGATE Herbicide contains the active ingredients flucarbazone-sodium and pyroxulam; both are Group 2 herbicides based on the mode of action classification system of the Weed Science Society of America.

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 aid in the prevention of developing weeds resistant to this product, users should:

- 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.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full label rates of IRONGATE 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.

- Report any incidence of non-performance of this product against a particular weed to your UPL NA Inc. representative at 1-800-438-6071, local retailer, or county extension agent.
- Contact your UPL NA representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use non-chemical 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 herbicides.
 - Avoid making more than two applications of Group 2 herbicides 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.

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 for 60 days after the last application.
- **DO NOT** apply this product through any type of irrigation system.
- This product is not to be used on flood irrigated fields or irrigated fields with a soil pH greater than 8.0.
- **DO NOT** apply a product containing organophosphates for five days before or five days after an application of IRONGATE Herbicide.
- 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.

APPLICATION PROCEDURES

MIXING INSTRUCTIONS

Ensure the spray-tank is clean. In-line strainers and nozzle screens must be clean and 50 to 80 mesh or coarser. IRONGATE Herbicide is an oil-dispersion (OD) formulation, and it is generally added after dispersed liquid formulations like suspension concentrates (SC) or flowables (FL). For best results, conduct a jar/compatibility test of the desired tank-mixture prior to application to ensure compatibility.

1. Fill the spray-tank 1/4 to 1/2 full with clean water and begin agitation or bypass.
2. Add the broadleaf weed herbicide.
3. Add the appropriate rate of IRONGATE Herbicide.
4. Add the surfactant.
5. Add micronutrients (if needed).
6. Fill the spray-tank to the required level.
7. Maintain sufficient agitation during both mixing and application of IRONGATE Herbicide.
8. For best results, apply mixed spray within 2 hours after mixing.

COMPATIBILITY TESTING

If IRONGATE Herbicide will be mixed with other pesticide products, test the compatibility of the intended tank mixture before mixing the products in the spray tank.

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 1/2 full 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.

GROUND APPLICATION

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Apply in a spray volume of 5 to 15 gal/A (or 50 to 150 L/ha) at 30 to 50 psi to ensure proper weed coverage. Use nozzles that provide a medium to coarse size droplet for best coverage and drift control.

AERIAL APPLICATION

MANDATORY SPRAY DRIFT MANAGEMENT

Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- **DO NOT** apply during temperature inversions.

Apply in water using a minimum spray volume of 5 gal/A (or 50 L/ha) or more. For best results, use a minimum of 5 gal/A (or 50 L/ha) under dry conditions or heavy weed infestations. Use nozzles that provide 200 to 350 micron size droplets for best results and to insure uniform spray coverage. Aerial applications with IRONGATE 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. **DO NOT** apply aurally when wind speed is greater than 10 mph. **DO NOT** allow spray to drift onto adjacent crops, as injury or loss may occur.

SPRAY DRIFT ADVISORIES

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

IMPORTANCE OF DROPLET SIZE

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

Controlling Droplet Size - Ground Boom

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

Controlling Droplet Size - Aircraft

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

BOOM HEIGHT - Ground Boom

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

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

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. Avoid applications during temperature inversions.

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.

When applying IRONGATE Herbicide in a tank-mix with other herbicides in eastern Washington, observe all applicable Washington State Department of Agriculture herbicide rules.

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.

Weeds Controlled (C) or Suppressed (S)

Grass Weeds			
Common Name	Scientific Name	Fall	Spring
barley, foxtail	<i>Hordeum jubatum</i>	S	S
barnyardgrass	<i>Echinochloa crus-galli</i>	C	C
blackgrass	<i>Alopecurus myosuroides</i>	C	C
bluegrass, bulbous	<i>Poa bulbosa</i>	C	C
brome, California	<i>Bromus carinatus</i>	C	S
brome, downy	<i>Bromus tectorum</i>	C	S
brome, Japanese	<i>Bromus japonicus</i>	C	C
brome, ripgut	<i>Bromus diandrus</i>	C	C

(continued)

Weeds Controlled (C) or Suppressed (S) (continued)

Grass Weeds (continued)			
Common Name	Scientific Name	Fall	Spring
canarygrass, hood	<i>Phalaris paradoxa</i>	S	S
canarygrass, littleseed	<i>Phalaris minor</i>	S	S
cheat	<i>Bromus secalinus</i>	C	C
chess, hairy	<i>Bromus commutatus</i>	C	C
corn, volunteer	<i>Zea mays</i>		C
darnel, Persian	<i>Lolium persicum</i>	C	C
fescue, rattail	<i>Vulpia myuros</i>	S	S
foxtail, green	<i>Setaria viridis</i>		C
foxtail, yellow	<i>Setaria pumila</i>		C ⁴
oat, tame	<i>Avena sativa</i>	C	C
oat, wild	<i>Avena fatua</i>	C	C
quackgrass	<i>Elymus repens</i>	S	S
rescuegrass	<i>Bromus catharticus</i>	S	S
ryegrass, Italian	<i>Lolium perenne</i>	C	C
windgrass	<i>Apera spica-venti</i>	C	C

Broadleaf Weeds			
Common Name	Scientific Name	Fall	Spring
bedstraw, catchweed (cleavers)	<i>Galium aparine</i>	S	C
bittercress, hairy	<i>Cardamine hirsuta</i>	C	C
buckwheat, wild	<i>Polygonum convolvulus</i>		S
burclover, spotted	<i>Medicago arabica</i>	C	C
buttercup, smallflower	<i>Ranunculus abortivus</i>	C	C
canola, volunteer (wild turnip) ²	<i>Rapistrum rugosum</i>	C	C
chickweed, common	<i>Stellaria media</i>	C	C
chickweed, mouseear	<i>Cerastium fontanum</i>	C	C
clover, white	<i>Trifolium repens</i>	C	C
coreopsis, plains	<i>Coreopsis tinctoria</i>	S	S
evening primrose, cutleaf	<i>Oenothera laciniata</i>	S	S
falseflax, smallseed ¹	<i>Camelina microcarpa</i>	C	C
fiddleneck, coast	<i>Amsinckia intermedia</i>	C	C
flixweed ¹	<i>Descurainia sophia</i>	C	C
geranium, Carolina	<i>Geranium carolinianum</i>	C	C
gromwell, corn	<i>Buglossoides arvensis</i>	C	C
hempenettle, common	<i>Galeopsis tetrahit</i>		C
henbit	<i>Lamium amplexicaule</i>	C	S
ladythumb	<i>Persicaria maculosa</i>	C	C
lambsquarters, common	<i>Chenopodium album</i>		C ³

(continued)

Weeds Controlled (C) or Suppressed (S) (continued)

Broadleaf Weeds (continued)			
Common Name	Scientific Name	Fall	Spring
mustard, black	<i>Brassica nigra</i>	C	C
mustard, blue ¹	<i>Chorispora tenella</i>	C	C
mustard, tansy ¹	<i>Descurainia</i> sp.	C	C
mustard, tumble ¹	<i>Sisymbrium altissimum</i>	C	C
mustard, wild	<i>Sinapis arvensis</i>	C	C
mustard, wormseed ¹	<i>Erysimum cheiranthoides</i>	C	C
pennycress, field ¹	<i>Thlaspi arvense</i>	C	C
pepperweed, Virginia	<i>Lepidium virginicum</i>	C	C
pigweed, redroot	<i>Amaranthus retroflexus</i>		C
shepherd's-purse ¹	<i>Capsella bursa-pastoris</i>	C	C
smartweed, annual	<i>Polygonum</i> sp.		C
smartweed, Pennsylvania	<i>Persicaria pennsylvanica</i>	C	C
tansymustard, pinnate ¹	<i>Descurainia pinnata</i>	C	C
thistle, Russian	<i>Salsola tragus</i>		C ³
vetch, hairy	<i>Vicia villosa</i>		C
wallflower, bushy ¹	<i>Erysimum repandum</i>	C	C

¹ Control may be reduced when application is made after bolting.

² Including herbicide-tolerant canola varieties except Clearfield (imidazolinone-tolerant) canola.

³ Less than 2 inches tall. For control of lambsquarters over 2 inches tall, tank mix with 0.25 lb ae 2,4-D ester or MCPA ester. For control of Russian thistle over 2 inches tall, tank mix with 0.25 lb ae 2,4-D ester.

⁴ One- to four-leaf stage of growth.

WINTER WHEAT USE DIRECTIONS

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 and broadleaf weeds. In general, apply IRONGATE Herbicide to actively growing grass weeds that have 1 to 4 leaves and to actively growing broadleaf weeds that are 2 inches in height or diameter. This product will not control Group 2 (ALS) resistant biotypes of weeds. Grass control of IRONGATE Herbicide will generally be reduced by 2,4-D amine, dicamba or MCPA. For best results, split applications of IRONGATE Herbicide and 2,4-D amine, dicamba or MCPA if the main weed target is grass weeds. See the **WEED TABLE** section for more information on controlling or suppressing grass and broadleaf weeds.

Applications of IRONGATE Herbicide to winter wheat can be made in fall or spring to actively growing wheat. Apply to winter wheat that is 3 leaf (Zadoks stage 13) and applications can be made up to 60 days prior to harvest.

Periods of cool or cold, including frosting events or freezing temperatures, following application can reduce weed control of IRONGATE Herbicide and increase crop injury, regardless of winter wheat growth stage. Additionally, periods of excessive heat or humidity, including temperatures above 90 degrees Fahrenheit or 80% relative humidity, during or within the week following application can increase crop injury, regardless of winter wheat growth stage. For best results avoid application of IRONGATE Herbicide during these weather patterns.

Wheat exposed to excessive salt levels (saline) or water logged saturated soils or temperature extremes including hot or freezing weather, 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.

ADJUVANTS

IRONGATE Herbicide applied alone requires the use of an adjuvant according to the following directions. When IRONGATE 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 Inc. advises the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Specified Adjuvant Use Rates for Winter Wheat	
IRONGATE 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). <p>OR</p> <ul style="list-style-type: none"> A non-ionic surfactant with at least 80% active ingredient 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).
IRONGATE 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).

Potential for crop response is increased with the use of oil adjuvants versus non-ionic surfactants.

DO NOT use additives that lower the spray solution below a pH of 6.0.

TANK MIXTURES

For disease control or suppression fungicides labeled for the crops on this label, including fluoxastrobin, can be tank-mixed with IRONGATE Herbicide.

For insect control, pyrethroid-based insecticides are advised in mixture with IRONGATE Herbicide.

For broader spectrum control of broadleaf weeds, IRONGATE Herbicide may be mixed with the broadleaf herbicides registered for these uses. 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 directions on broadleaf herbicide and surfactant labels.

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.

CROP SPECIFIC RESTRICTIONS

- DO NOT** apply more than 1.75 fl oz/A of IRONGATE Herbicide (0.027 lb ai/A flucarbazone-sodium and 0.0076 lb ai/A pyroxsulam) per year.
- DO NOT** apply more than 1.75 fl oz/A of IRONGATE Herbicide (0.027 lb ai/A flucarbazone-sodium and 0.0076 lb ai/A pyroxsulam) in a single application.
- DO NOT** make more than one post emergence application of IRONGATE Herbicide per acre per year.

SPRING WHEAT & DURUM USE DIRECTIONS

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 and broadleaf weeds. In general, apply to actively growing grass weeds that have 1 to 4 leaves and to actively growing broadleaf weeds that are 2 inches in height or diameter. IRONGATE Herbicide will not control Group 2 (ALS) resistant biotypes of weeds. Grass control of IRONGATE Herbicide will generally be reduced by 2,4-D amine, dicamba or MCPA. It is advised to split applications of IRONGATE Herbicide and 2,4-D amine, dicamba or MCPA if the main weed target is grass weeds. See the **WEED TABLE** section for more information on controlling or suppressing grass and broadleaf weeds.

Apply IRONGATE Herbicide to actively growing spring wheat or durum that is 3 leaf (Zadoks stage 13) to first jointing (Zadoks stage 31/Feekes 6).

Periods of cool or cold, including frosting events or freezing temperatures, following application can reduce weed control of IRONGATE Herbicide and increase crop injury, regardless of spring wheat growth stage. Additionally, periods of excessive heat or humidity, e.g. temperatures above 90 degrees Fahrenheit or 80% relative humidity, during or within the week following IRONGATE Herbicide application can increase crop injury, regardless of spring wheat growth stage. For best results avoid application of IRONGATE Herbicide during these weather patterns.

Wheat exposed to excessive salt levels (saline) or water-logged saturated soils or temperature extremes, e.g. hot or freezing weather, 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.

ADJUVANTS

IRONGATE Herbicide applied alone requires the use of an adjuvant according to the following directions. When an adjuvant is to be used with this product, UPL NA Inc. advises the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Specified Adjuvant Use Rates for Spring Wheat and Durum*	
IRONGATE 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 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). <p>OR</p> <ul style="list-style-type: none"> A non-ionic surfactant with at least 80% active ingredient at 1 to 2 qt per 100 gal (0.25 - 0.5% v/v).
IRONGATE 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).

* Addition of both a nitrogen source fertilizer/AMS and a non-ionic surfactant or a basic blend adjuvant may increase risk of crop injury.

DO NOT use additives that lower the spray solution below a pH of 6.0.

TANK MIXTURES

For disease control or suppression, fungicides labeled for the crops on this label, including fluoxastrobin, can be tank-mixed with IRONGATE Herbicide.

For insect control, pyrethroid-based insecticides can be used in mixtures with this product.

For broader spectrum control of broadleaf weeds, IRONGATE Herbicide may be mixed with the broadleaf herbicides registered for these uses. 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 directions on broadleaf herbicide and surfactant labels.

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.

CROP SPECIFIC RESTRICTIONS

- DO NOT** apply more than 1.75 fl oz/A of IRONGATE Herbicide (0.027 lb ai/A flucarbazone-sodium and 0.0076 lb ai/A pyroxsulam) per year.
- DO NOT** apply more than 1.75 fl oz/A of IRONGATE Herbicide (0.027 lb ai/A flucarbazone-sodium and 0.0076 lb ai/A pyroxsulam) in a single application.
- DO NOT** make more than one post emergence application of IRONGATE Herbicide per year.

CROP ROTATION RESTRICTIONS

Because IRONGATE 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	ND, MN, MT, SD Time in Months		ID, OR, WA Time in Months		All Other States with Registered Use Time in Months		
	pH < 8	pH ≥ 8	pH ≤ 5.5 or Rainfall: <16 inches	pH 5.6 - 7.5 ² and Rainfall: >16 inches	pH ≤ 6.5	pH 6.6 - 7.5	pH 7.6 - 8 ³
wheat, spring and winter	1	1	1	1	1	1	1
durum wheat	4	4	4	4	4	4	4
soybean	9	9	10	10	6	9	12
barley	9	9	10	11	9	11	18
field corn	11	11	11	18	9	12	15
millet or forage sorghum	18	18	18	24	9	15	24
oats	18	24	18	24	9	18	18
grain sorghum	18	18	18	24	9	12	15
sunflower	9	9	10	10	9	9	9
alfalfa	11	18	11	18	9	18	24
canola	9	9	10	10	9	9	11
chickpea ⁴	11	18	18	18	9	15	18
cotton					9	9	12
dry bean	9	9	10	10	9	11	18
pea (dry & succulent) ⁴	11	18	18	18			
flax	9	9	10	10	9	9	12
lentil ⁴	18	24	18	24			
mustard	24	24	24	24			
potato ⁴	9 ¹	9 ¹	18	18			
safflower	9	9	10	10			
sugar beet	9 ¹	9 ¹	18	18			
other crops ⁴	18	18	18	18	18	18	18

¹ Due to lower organic matter, seasonal moisture and irrigation practices, potatoes and sugar beet grown in western North Dakota or South Dakota (west of highway 281) or Montana must not be planted until 24 months after application.

² For soils with a pH greater than 7.5 rotate to wheat the following season then conduct a bioassay prior to other crops.

³ For soils with a pH greater than 8.0 rotate to wheat the following season then conduct a bioassay prior to other crops.

⁴ If rainfall within the listed rotation interval following application is 16 inches or less, a field bioassay is recommended prior to planting these crops.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE. Store in a cool, 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 plastic containers small enough to shake (i.e., with capacities equal to or less than 5 gallons).

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

Rigid, Non-refillable plastic container. DO NOT reuse or refill this container. After emptying product from container, either return container to UPL NA Inc. per instructions from UPL NA service center (1-800-438-6071), or rinse and either recycle or dispose of the container as follows:

Rigid Non-refillable plastic containers, 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.

Rigid Non-refillable plastic containers, 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. To the extent consistent with applicable law, 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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