



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

November 23, 2020

Crystal Layton  
Arystal LifeScience North America LLC  
c/o UPL NA Inc.  
630 Freedom Business Center, Ste. 402  
King of Prussia, PA 19406

Subject: Notification per PRN 98-10 – Addition of ABN & Other Minor Changes  
Product Name: X-1581 AI Herbicide  
EPA Registration Number: 66330-435  
Application Date: 08/17/2020  
Decision Number: 565849

Dear Ms. Layton:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

The alternate brand name "Everest 3.0 XS Herbicide" has been added to the product record.

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.

If you have any questions, you may contact Hester Dingle at 703-347-8860 or via email at [dingle.hester@epa.gov](mailto:dingle.hester@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "JP" or "Jordan Page", followed by the word "For" written in a cursive script.

Jordan Page; Acting PM 24  
Fungicide-Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

**X-1581 AI Herbicide** **[ABN: Everest 3.0 XS Herbicide]**

**FOR POSTEMERGENCE CONTROL OF WILD OAT, GREEN FOXTAIL AND OTHER GRASS AND BROADLEAF WEEDS IN SPRING AND WINTER WHEAT.**

**ACTIVE INGREDIENT:** **% BY WT.****Flucarbazon-sodium:**

4,5-Dihydro-3-methoxy-4-methyl-5-oxo-*N*-[[2-(trifluoromethoxy)phenyl]sulfonyl]-1*H*-  
1,2,4-triazole-1-carboxamide, sodium salt .....20.60%

**OTHER INGREDIENTS:** .....79.40%

**TOTAL:** .....100.00%

This formulation contains 1.75 lb of Flucarbazon-Sodium active ingredient per gallon (210 g ai/l).

**Read entire label before use**

**KEEP OUT OF REACH OF CHILDREN**

**WARNING / AVISO**

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 for First Aid Instructions and [Leaflet][Booklet] for complete Precautionary Statements and Directions for Use.

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>Note to Physician:</b> Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote is available. Treat the patient symptomatically.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>FOR 24-HOUR MEDICAL EMERGENCY ASSISTANCE CALL <u>PROPHARMARocky Mountain Poison and Drug Safety: 1-866-673-6671</u></b> <del>1-866-303-6952 or +1-651-603-3432.</del>	
<b>FOR 24-HOUR CHEMICAL EMERGENCY (Spill, leaks, fire, exposure or accident) CALL CHEMTREC: 1-800-424-9300 or +1-703-527-3887.</b>	

**For Product Use Information Call 1-866-761-9397**

EPA Reg. No. 66330-435

xxxxxxV001

[Batch Code will be placed on the container.]

**Produced For:**

**ARYSTA LIFESCIENCE NORTH AMERICA, LLC**

**15401 Weston Parkway, Suite 150**

Cary, North Carolina 27513c/o UPL NA INC. 630 Freedom Business Center, Suite 402

King of Prussia, PA 19406

EPA Est. No.:

**NET CONTENTS:**

**NOTIFICATION**

66330-435

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

11/23/2020

## 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. 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. Wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant waterproof gloves. Wear protective eyewear.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants;
- Appropriate protective eyewear such as goggles, face shield, or safety glasses;
- Chemical-resistant gloves made of waterproof material (barrier laminate, butyl rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride (PVC)  $\geq 14$  mils, and/or viton  $\geq 14$  mils); and
- 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

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.

#### 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.

### PHYSICAL AND CHEMICAL HAZARDS

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

### IMPORTANT

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 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;
- Appropriate protective eyewear such as goggles, face shield, or safety glasses;
- Chemical-resistant gloves made of materials such as barrier laminate, butyl rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride (PVC)  $\geq 14$  mils, and/or viton  $\geq 14$  mils; and
- Shoes plus socks.

### PRODUCT INFORMATION

**X-1581 AI HERBICIDE** is for use in spring, durum and winter wheat. **X-1581 AI HERBICIDE** controls 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. **X-1581 AI HERBICIDE** also suppresses additional grass and broadleaf weeds, including downy brome, and wild buckwheat.

**X-1581 AI 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, **X-1581 AI HERBICIDE** may be tank-mixed with a broadleaf herbicide listed on this label. See **TANK-MIXES** section for specified products.

### WEED RESISTANCE MANAGEMENT

**X-1581 AI HERBICIDE**, which contains the active ingredient flucarbazone-sodium is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America (WSSA).

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 must:

- 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 **X-1581 AI 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 Arysta LifeScience North America, LLC ("Arysta") representative, local retailer, or county extension agent.
- Contact your Arysta 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 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 must 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.

**Read the entire DIRECTIONS FOR USE before using X-1581 AI HERBICIDE.**

This product is not to be used on flood irrigated fields or irrigated fields with a soil pH greater than 8.

**USE RESTRICTIONS**

- For use only in wheat.
- Make only one application per year.
- Do not graze livestock or harvest forage for hay from treated areas for a minimum of 30 days following 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 grain within the 60-day pre-harvest interval (PHI) following application.
- Do not apply this product through any type of irrigation system.

- 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.

### **SPRAY DRIFT MANAGEMENT (Mandatory)**

#### **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 to ultra-coarse 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 to ultra-coarse 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. 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.

## **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 must be clean and 50 to 80 mesh or coarser.

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 **X-1581 AI HERBICIDE**.
3. Add the broadleaf weed 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 **X-1581 AI HERBICIDE**.
8. For best results, apply mixed spray within 24 hours after mixing.

#### **GROUND APPLICATION**

Apply in a spray volume of 5 to 10 gal/A (or 50 to 100 L/ha) at 30 to 50 psi 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. Do not allow spray to drift onto adjacent crops, as injury or loss may occur.

#### **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:

<b>State</b>	<b>County</b>
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 **X-1581 AI HERBICIDE** to spring, durum and winter wheat from one leaf up to 60 days prior to harvest. Winter wheat applications can be made in the fall or spring.

## RESTRICTIONS

- Do not apply more than 2 fl oz/A of **X-1581 AI HERBICIDE** (0.027 lb active ingredient (ai)/A flucarbazone-sodium) per year.
- Do not apply less than 1 fl oz/A of **X-1581 AI HERBICIDE** (0.014 lb active ingredient /A flucarbazone-sodium) in a single application.
- Do not make more than one post emergence application of **X-1581 AI HERBICIDE** per year.
- If flucarbazone-sodium (PRE-PARE® HERBICIDE; EPA Reg. No. 66330-49) has been applied either preplant or preemergence to the crop, do not exceed a combined total of 0.027 pounds of active ingredient/acre of flucarbazone-sodium and **X-1581 AI HERBICIDE** per year. Follow directions in the table, **Use Rates of X-1581 AI HERBICIDE following a flucarbazone-sodium application** for each product when used in the same year.

Use Rates of X-1581 AI HERBICIDE following a PRE-PARE HERBICIDE Application	
Flucarbazone-sodium Use Rate Per Year (Pre-plant or Preemergence)	Maximum X-1581 AI HERBICIDE Use Rate Per Year (Postemergence)
0.20 oz product/A (0.009 lb active ingredient/A)	1.3 fl oz product/A (0.018 lb active ingredient/A)
0.25 oz product/A (0.011lb active ingredient/A)	1.2 fl oz product /A (0.016 lb active ingredient/A)
0.30 oz product/A (0.013 lb active ingredient/A)	1.0 fl oz product/A (0.014 lb active ingredient/A)

Rates of Application for Grass and Broadleaf Weed Control (C) or Suppression (S)			
Target Grass Weed	Stage	X-1581 AI HERBICIDE Rate <sup>1</sup>	
		2 fl oz/A	Flucarbazone-sodium <sup>2</sup> fb X-1581 AI HERBICIDE
Green Foxtail	1 to 4 leaves	C	C
Wild Oat	1 to 4 leaves	C	C
Volunteer Tame Oat	1 to 4 leaves	C	C
Barnyardgrass	2 to 4 leaves prior to tillering	C <sup>3</sup>	S
Windgrass	1 to 4 leaves	C	S
Cheat (True Cheat)	1 to 4 leaves actively growing	C/S <sup>4</sup>	C



Rates of Application for Grass and Broadleaf Weed Control (C) or Suppression (S)			
		X-1581 AI HERBICIDE Rate <sup>1</sup>	
Target Grass Weed	Stage	2 fl oz/A	Flucarbazone-sodium <sup>2</sup> fb X-1581 AI HERBICIDE
California Brome	1 to 4 leaves actively growing	C/S <sup>4</sup>	S
Japanese Brome	1 to 4 leaves actively growing	C/S <sup>4</sup>	C
Rattail Fescue	1 to 4 leaves actively growing	S <sup>3</sup>	S
Downy Brome	1 to 4 leaves actively growing	S	S
Rescuegrass	1 to 4 leaves actively growing	S	S
Italian Ryegrass	1 to 4 leaf prior to tillering	C <sup>3</sup>	S
Persian Darnel	1 to 4 leaf prior to tillering	C <sup>3</sup>	S
Yellow Foxtail	1 to 4 leaf prior to tillering	C <sup>3</sup>	S
Foxtail Barley	1 to 4 leaf prior to tillering	S <sup>3</sup>	S
Target Broadleaf Weeds			
Redroot Pigweed	4 inch	C	C
Wild Mustard	4 inch	C	C
Black Mustard	4 inch	C	C
Blue Mustard	4 inch	C	C
Field Pennycress	4 inch	C	C
Flixweed	4 inch	C	C
Ladysthumb	4 inch	C	C
Pennsylvania Smartweed	4 inch	C	C
Shepherd's purse	4 inch	C	C
Tansy Mustard	4 inch	C	C
Tumble Mustard	4 inch	C	C
Volunteer Canola	4 inch	C	C
Wild Buckwheat	2 inch	S	S
<ol style="list-style-type: none"> <li>1. Due to enhanced soil activity, <b>X-1581 AI HERBICIDE</b> may be used at 1.5 fl oz product/A (0.021 lb active ingredient/A) in spring wheat and durum wheat for the weeds listed in this table when soil pH is 7.8 or greater and organic matter is less than 3%.</li> <li>2. Column refers to weeds controlled or suppressed when using flucarbazone-sodium prior to crop emergence followed by a sequential application of <b>X-1581 AI HERBICIDE</b>.</li> <li>3. A tank-mix with tribenuron-methyl + thifensulfuron-methyl herbicides or other herbicides containing tribenuron-methyl enhances the activity on these weed species.</li> <li>4. Fall application control. Spring application suppression.</li> </ol>			

Wheat exposed to excessive salt levels (saline) or water logged saturated soils or temperature extremes such as 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.

#### ADJUVANT USE RATES

**X-1581 AI HERBICIDE** applied alone requires the use of an adjuvant according to the following directions. When **X-1581 AI 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, Arysta advises the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

Specified Adjuvant Use Rates For Durum, Spring and Winter Wheat	
<b>X-1581 AI HERBICIDE</b> 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"> <li>• A high quality basic blend at 2 to 4 qt per 100 gal (0.5-1% v/v).</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>• 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).</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>• A methylated seed oil (MSO) at 1% 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).</li> </ul>
<b>X-1581 AI HERBICIDE</b> with Emulsifiable Concentrate (EC)-based Herbicides used at greater than 8 fl oz/A	<ul style="list-style-type: none"> <li>• 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).</li> <li>• 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.</li> </ul>

### TANK-MIXES

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.

For disease control or suppression fungicides, such as fluoxastrobin (EVITO® 480SC FUNGICIDE; EPA Reg. No. 66330-64), can be tank-mixed with **X-1581 AI HERBICIDE**.

For insect control only pyrethroid-based insecticides may be used in mixture with **X-1581 AI HERBICIDE**.

For broader spectrum control of broadleaf weeds, **X-1581 AI 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 directions on all herbicide and surfactant labels. The tank-mix must be used in accordance with the more restrictive label limitations and precautions for all pesticides used.

### X-1581 AI HERBICIDE Tank-Mix<sup>1</sup> Partners

Active Ingredient(s)	Brand	EPA Reg. No.
2,4-D (amine or ester)		
bicyclopyrone + bromoxynil	Talinor™	100-1570
bromoxynil		
bromoxynil + 2,4-D		
bromoxynil + MCPA		
carfentrazone-ethyl	Aim® EC	279-3241
chlorsulfuron + metsulfuron-methyl	Finesse® Cereal and Fallow	279-9610
clopyralid	Stinger®	62719-73
clopyralid + 2,4-D	Curtail®	62719-48
clopyralid + fluroxypyr	WideMatch®	62719-512
clopyralid + MCPA	Curtail M	62719-86
dicamba <sup>2</sup>		
dicamba <sup>2</sup> + 2,4-D		
florasulam	Orion®	100-1307
florasulam + fluroxypyr	Starane® Flex	62719-604
fluroxypyr	Starane Ultra	62719-577
fluroxypyr + 2,4-D	Trumpcard®	5905-581
fluroxypyr + thifensulfuron-methyl + tribenuron-methyl	SUPREMACY®	66330-406
MCPA (amine or ester)		
MCPA + bromoxynil + clopyralid	Weld®	1381-246
MCPA + bromoxynil + fluroxypyr	Carnivore®	1381-249
MCPA + fluroxypyr + clopyralid	Hat Trick®	34704-1017
metsulfuron-methyl	Ally® XP	279-9575
propoxycarbazone-sodium	Olympus®	264-809
prosulfuron	Peak®	100-763
pyrasulfotole + bromoxynil	Huskie®	264-1023
sulfosulfuron	Outrider® Herbicide	59639-223
thifensulfuron-methyl	Harmony® SG	279-9595
thifensulfuron-methyl + fluroxypyr	Sentrallas™	279-9626
triasulfuron	Amber®	100-768
tribenuron-methyl	Express®	279-9594
tribenuron-methyl + thifensulfuron-methyl	AUDIT® 1:1	66330-418
tribenuron-methyl + thifensulfuron-methyl	AUDIT 4:1	66339-419
<sup>1</sup> For tank-mix partner rate directions follow the label of the tank-mix partner.		
<sup>2</sup> If <b>X-1581 AI HERBICIDE</b> is applied in a tank-mix combination with a dicamba-containing broadleaf herbicide; grass control will be reduced, with the exception of 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**

<b>Crops</b>	<b>Interval for soils with a pH &lt; 8.0</b>	<b>Intervals for soils with a pH at or &gt; 8.0</b>
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 <sup>1</sup>	9 months	9 months
Safflower	9 months	9 months
Soybeans	9 months	9 months
Sugarbeets <sup>1</sup>	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

<sup>1</sup>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 **X-1581 AI 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 - 7.5 <sup>1</sup>
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

<sup>1</sup>For soils with a pH greater than 7.5 rotate to wheat the following season then conduct a bioassay prior to other crops.

As **X-1581 AI 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 X-1581 AI 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 <sup>1</sup>
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

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

As **X-1581 AI 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

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 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 Arysta LifeScience North America, LLC ("Arysta") per instructions from Arysta service center (1 866-761-9397), 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 Arysta LifeScience North America, LLC ("Arysta"), 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.

Arysta 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 Arysta, and is subject to the inherent risks described above.

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