

# Specimen Label



Dow AgroSciences



## HERBICIDE

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

**For selective postemergence control of annual and perennial broadleaf weeds and volunteer potatoes in small grains, field corn, sweet corn, grain sorghum, on-farm non-cropland, and grasses grown for seed, forage or hay.**

### Active Ingredient(s):

fluroxypyr 1-methylheptyl ester: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid, 1-methylheptyl ester.....	45.52%
Other Ingredient(s).....	54.48%
Total .....	100.00%

Acid Equivalent: fluroxypyr: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid – 31.59% - 2.8 lb/gal

## Precautionary Statements

### Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-577

## WARNING

**Causes Substantial But Temporary Eye Injury • Prolonged or Frequently Repeated Skin Contact May Cause Allergic Reactions in Some Individuals**

**Do not get in eyes or on clothing. Avoid contact with skin.**

### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as natural rubber  $\geq$ 14 mils
- Shoes plus socks
- Protective eyewear

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

### Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protections 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

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on 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.

### First Aid

**If in eyes:** 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

### Environmental Hazards

This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

### Directions for Use

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

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry 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.

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 such as natural rubber  $\geq$ 14 mil
- Shoes plus socks
- Protective eyewear

### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Entry Restrictions for Non-WPS Uses:** When applied to on-farm non-cropland, keep unprotected persons out of treated areas until sprays have dried.

### Storage and Disposal

Do not contaminate water, food, feed or fertilizer by storage or disposal. **Pesticide Storage:** Store above 10°F or warm and agitate before use to ensure any crystallization that may have occurred redissolves.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, 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.

#### Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **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

## Storage and Disposal (Cont.)

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.

### Refillable containers larger than 5 gallons:

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

### Nonrefillable containers larger than 5 gallons:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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 to 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.

## Product Information

Starane® Ultra herbicide is a selective postemergence product for control of annual and perennial broadleaf weeds and volunteer potatoes in wheat, barley, oats, or triticale not under seeded with a legume, field corn, sweet corn, grain sorghum, and on-farm non-cropland.

## Product Precautions

- Avoid applications where proximity of susceptible crops or other desirable plants is likely to result in exposure to spray or spray drift.

## Product Restrictions

- Do not apply Starane Ultra directly to, or otherwise permit it to come in direct contact with, susceptible crops or desirable plants including, but not limited to, alfalfa, canola, cotton, lettuce, edible beans, grapes, lentils, mustard, peas, potatoes, radishes, soybeans, sugar beets, sunflowers, tomatoes, or tobacco.
- Do not contaminate irrigation ditches or water used for domestic purposes.
- **Maximum Application Rate:** Do not apply more than 0.7 pints per acre of Starane Ultra per growing season.
- **Plant-back Restriction:** If replanting is required, plant only those crops listed on this label or Federally approved supplemental labeling for Starane Ultra within 120 days following application.
- **Chemigation:** Do not apply this product through any type of irrigation system.

## Management of Kochia Biotypes

Research has suggested that many biotypes of kochia can occur within a single field. While kochia biotypes can vary in their susceptibility to Starane Ultra, all will be suppressed or controlled by the 0.4 pint per acre labeled rate. Application of Starane Ultra at rates below the 0.4 pint per acre rate can result in a shift to more tolerant biotypes within a field.

**Best Resistance Management Practice:** To preserve Starane Ultra it is recommended to use only a single application per season for the control of kochia. Populations of dicamba tolerant kochia have been identified in certain small grain and corn production regions. In these areas, apply Starane Ultra at a minimum rate of 0.4 pint per acre for optimal control of dicamba tolerant kochia. In addition, Starane Ultra should be rotated with products that do not contain dicamba to minimize selection pressure. Use of these practices will preserve the utility of Starane Ultra for control of dicamba tolerant kochia biotypes.

## Precautions for Avoiding Spray Drift

Spray drift, even very small quantities of the spray that may not be visible, may severely injure susceptible crops whether dormant or actively

growing. When applying Starane Ultra, use low-pressure equipment capable of producing sprays of uniform droplet size with a minimum of fine spray droplets. Under adverse weather conditions, fine spray droplets that do not settle rapidly onto target vegetation may be carried a considerable distance from the treatment area. A drift control or spray thickening agent may be used with this product to improve spray deposition and minimize the potential for spray drift. If used, follow all use directions and precautions on the product label.

**Ground Applications:** To minimize spray drift, apply Starane Ultra in a total spray volume of 8 or more gallons per acre using spray equipment designed to produce large-droplet, low pressure sprays. Refer to the spray equipment manufacturer's instructions for detailed information on nozzle types, arrangement, spacing and operating height and pressure. Spot treatments should be applied only with a calibrated boom to prevent over application. Operate equipment at spray pressures no greater than is necessary to produce a uniform spray pattern. Operate the spray boom no higher than is necessary to produce a uniformly overlapping pattern between spray nozzles. Do not apply with hollow cone-type insecticide nozzles or other nozzles that produce a fine-droplet spray.

**Aerial Application:** Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high potential for temperature inversion. Spray drift from aerial application can be minimized by applying a coarse spray at spray boom pressure no greater than 30 psi; by using straight-stream nozzles directed straight back; and by using a spray boom no longer than 3/4 the rotor or wing span of the aircraft. Spray pattern and droplet size distribution can be evaluated by applying sprays containing a water-soluble dye marker or appropriate drift control agents over a paper tape (adding machine tape). Mechanical flagging devices may also be used.

**Do not apply under conditions of a low level air temperature inversion.** A temperature inversion is characterized by little or no wind and lower air temperature near the ground than at higher levels. The behavior of smoke generated by an aircraft mounted device or continuous smoke column released at or near site of application will indicate the direction and velocity of air movement. A temperature inversion is indicated by layering of smoke at some level above the ground and little or no lateral movement.

## Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory Information:**

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

### Controlling Droplet Size:

**Volume-**Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure-**Use the lower spray pressures specified for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of nozzles-**Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation-**Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

**Nozzle Type**-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

**Boom Length**-For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application**-Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment**: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

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

**Temperature and Humidity**: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

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

**Sensitive Areas**: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

#### **Sprayer Cleanup**

To avoid injury to or exposure of nontarget crops, thoroughly clean and drain spray equipment used to apply Starane Ultra after use. Cleaning should occur as soon as possible after application of Starane Ultra. Spray equipment should be cleaned after use with Starane Ultra by the following procedure:

1. Drain any remaining Starane Ultra from the spray tank and dispose of according to label disposal instructions.
2. Hose down the interior surfaces of the tank. Flush tank, hoses, boom, and nozzles with clean water for 10 minutes. Fill the tank with water and recirculate for 15 minutes. Spray part of the mixture through the hoses, boom, and nozzles and drain the tank. All rinse water must be disposed of in compliance with local, state, and federal guidelines.
3. Remove the nozzles and screens and clean separately.
4. If the spray equipment will be used on crops other than those labeled for Starane Ultra, repeat steps 1 and 2 and thoroughly wash the outside of spray tank and the boom.

### **Mixing Instructions**

#### **Starane Ultra Alone**

Fill spray tank with water equal to 1/2 to 3/4 of the required spray volume. Add the required amount of Starane Ultra, then finish filling the tank. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

#### **Tank Mixing**

This product may be applied in tank mix combination with labeled rates of other products provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product.

#### **Tank Mixing Precautions:**

6. Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.

7. Do not exceed labeled application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.
8. Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing**: Perform a jar test prior to tank mixing to ensure compatibility of Starane Ultra and other pesticides, fertilizers or carriers. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

#### **Tank Mixing Instructions**

Fill spray tank with water to 1/4 to 1/3 of the required spray volume. Start agitation. Add different formulation types in the order indicated, allowing time for complete mixing and dispersion after addition of each.

1. Add dry flowables; wettable powders; aqueous suspensions, flowables or liquids.
2. Maintain agitation and fill spray tank to 3/4 of total spray volume and then add Starane Ultra and other emulsifiable concentrates and any solutions.

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

### **Application Directions**

**Application Timing**: Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. **Only weeds that are emerged at the time of application will be affected.** Foliage that is wet at the time of application may decrease control. Applications of Starane Ultra are rain-fast within 1 hour after application.

**Effect of Temperature on Herbicidal Activity**: Herbicidal activity of Starane Ultra is influenced by weather conditions. Optimum activity requires active plant growth. The temperature range for optimum herbicidal activity is 55°F to 75°F. Reduced activity will occur when temperatures are below 45°F or above 85°F. Frost before application (3 days) or shortly after (3 days) may reduce weed control and crop tolerance.

**Application Rates**: Generally, application rates at the lower end of the specified rate range will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species, perennials, and under conditions where control is more difficult (plant stress conditions such as drought or extreme temperatures, dense weed stands and/or larger weeds) the higher rates within the rate range will be needed. Weeds growing in the absence of crop competition generally require higher rates to obtain satisfactory control or suppression.

**Coverage**: Apply in 3 or more gallons per acre by air or in 8 or more gallons per acre by ground equipment. Do not exceed 40 gallons per acre total spray volume. Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. Inadequate spray volume and coverage may result in decreased weed control. As canopy and weed density increase, spray volume should be increased to obtain equivalent weed control. Use larger nozzle tips or decrease spraying speed to increase spray volume rather than increasing boom pressure. Refer to manufacturer's instructions for information on relationships between spray volume, and nozzle size and arrangement.

**Adjuvants**: Generally, this product does not require the use of an adjuvant to achieve satisfactory weed control when applied alone. However, the addition of an adjuvant may optimize herbicidal activity when applications are made (a) at lower carrier volumes, (b) under conditions of cool temperature, low relative humidity or drought, or (c) to small, heavily pubescent kochia. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner.

**Spot Treatments**: To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand sprayers according to directions provided below.

**Hand-Held Sprayers**: Hand-held or backpack sprayers may be used for spot applications of Starane Ultra if care is taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1,000 sq ft. The amount of

Starane Ultra (fl oz or ml) in the table should be mixed with 1 gallon or more of water and applied to an area of 1,000 sq ft. To calculate the amount of product required for larger areas, multiply the table value (fl oz or ml) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3,500 sq ft, multiply the table value by 3.5 (calc. 3,500 ÷ 1,000 = 3.5). An area of 1000 sq ft is approximately 10.5 X 10.5 yards (strides) in size.

Amount of Starane Ultra to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1000 sq ft)		
0.4 pt/acre	0.55 pt/acre	0.7 pt/acre
0.15 fl oz (4.4 ml)	0.20 fl oz (5.9 ml)	0.26 (7.7 ml)

1 fl oz = 29.6 (30) ml

## Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes below.)

### Weeds Controlled

bedstraw (cleavers)  
chickweed  
clover, white  
cocklebur  
coffeeweed  
flax, volunteer  
grape species  
hemp dogbane  
kochia<sup>(1)</sup>  
mallow, Venice  
morningglory  
prickly lettuce  
puncturevine  
purslane, common  
ragweed, common  
ragweed, giant  
sunflower  
velvetleaf

### Weeds Suppressed<sup>(2)</sup>

bindweed, field  
buckwheat, wild  
canola, volunteer  
devilsclaw  
field horsetail  
horseweed (marestail)  
knotweed  
mallow, common  
marestail  
marshelder  
mustard  
nightshade species  
pennycress, field  
potato, volunteer  
Russian thistle

- Includes herbicide tolerant or resistant biotypes.
- Suppression** is expressed as a reduction in weed competition (reduction population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

## Application Sites

### Wheat - Barley - Oats - Triticale

Apply as a broadcast postemergence treatment to actively growing wheat, barley, oats or triticale from the 2 leaf crop growth stage up to and including flag leaf emergence (Zadoks scale 39) for control of broadleaf weeds. Apply when weeds are actively growing, but before weeds are 8 inches tall or vining. For control of volunteer potatoes, apply before potato plants are 8 inches tall. Only weeds emerged at the time of treatment will be controlled. Extreme growing conditions such as drought or near freezing temperatures prior to, at, and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. **Do not use if cereal crop is underseeded with a legume.**

**Spot Application:** Spot applications may be made, however, to prevent over-application spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for Spot Application in Application Directions section.

### Broadcast Application Rates:

(Numbers in parentheses (-) refer to footnotes following table.)

Weed Size or Species <sup>(1)</sup>	Application Rate (pint/acre)
Susceptible broadleaf weed seedlings less than 4 inches tall <sup>(2)</sup>	0.3
Susceptible broadleaf weed seedlings less than 8 inches tall or vining	0.4
Volunteer potatoes	0.7

- See "Weeds Controlled or Suppressed" section for a complete listing of weeds controlled or suppressed.
- The 0.3 pint/acre rate will generally provide satisfactory control of kochia seedlings less than 4 inches tall (including ALS resistant biotypes). However, when conditions for control are less favorable, such as under drought or cool temperatures, the 0.4 pint/acre rate will provide more consistent control of kochia seedlings 1 to 4 inches tall. Control of small kochia with reduced rates will be more

consistent if kochia is at least 1 inch tall. The 0.4 pint/acre rate should be used for optimal control of dicamba tolerant kochia populations (see "Management of Kochia Biotypes" in the Product Information section of this label).

### Restrictions:

- Do not allow livestock to graze treated areas or harvest treated forage within 7 days of application.
- Do not apply more than 0.7 pint per acre of Starane Ultra per growing season.
- Preharvest Interval:** Do not apply closer than 14 days before cutting of hay or 40 days before harvesting of grain and straw.

## Field Corn

Apply Starane Ultra as a broadcast post emergence treatment using ground equipment or by air. Starane Ultra may also be applied as a pre plant treatment for control of **emerged** volunteer potato or for burndown of emerged weeds (refer to "Special Directions for Control of Volunteer Potato" below). Refer to the Product Information section of this label for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application. Starane Ultra may be applied in tank mix combination with labeled rates of other registered herbicides. Read and follow all label directions, including applicable use directions, precautions and limitations on each product label.

### Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled <sup>(1)</sup>	Key Weeds Suppressed <sup>(3)</sup>	Application Rate (pint/acre)
catchweed bedstraw (cleavers) chickweed cocklebur common purslane common ragweed giant ragweed hedge bindweed hemp dogbane jimsonweed kochia <sup>(2)</sup> morningglory puncturevine sunflower velvetleaf Venice mallow	devilsclaw field bindweed field pennycress marestail (horseweed) marshelder mustard nightshade species Russian thistle volunteer potato (4) wild buckwheat	0.4

- See Weeds Controlled or Suppressed section of this label for a complete listing.
- Includes herbicide tolerant or resistant biotypes.
- Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.
- See Special Directions for Control or Suppression of Volunteer Potato below.

### Application Timing

Apply as a broadcast or band treatment to field corn up to, and including, 5 fully exposed leaf collars (V5 growth stage). Do not broadcast apply to field corn with 6 fully exposed leaf collars (V6 growth stage). Applications to field corn beyond the V5 growth stage should be made as a directed spray using drop nozzles (see crop safety precaution below). Apply when broadleaf weeds are actively growing, but before weeds are 8 inches tall. If wild buckwheat is present, apply before vining stage of growth. Only weeds emerged at the time of application will be controlled or suppressed.

- Pre plant Burndown:** For no-till or burndown applications to control emerged weeds, apply alone or in tank mix combination with a labeled herbicide prior to planting.

### Special Directions for Control or Suppression of Volunteer Potato:

- Preplant Application (Suppression):** Apply 0.4 pint per acre prior to planting corn when the majority of volunteer potato plants are 4 to 8 inches tall. For best results, leave soil undisturbed and plant field corn two weeks following application.
- Sequential Applications (Control):** To control heavy populations of volunteer potato, a preplant application may be followed by a postemergence application of 0.4 pint per acre. Do not exceed two applications per season.

- **Postemergence Application (Suppression):** Apply 0.4 pint per acre when the majority of volunteer potato plants are 4 to 8 inches tall.

**Restrictions:**

- Do not make more than two applications or apply more than 0.7 pint per acre per crop season.
- **Preharvest Interval:** Do not allow livestock to graze or harvest forage from treated areas within 47 days of application. Do not apply less than 90 days before harvest of grain and stover.

**Crop Tolerance Precaution:** Crop injury (stem curvature, stunting, or brace root injury) may occur with some corn hybrids or lines when Starane Ultra is applied as a broadcast treatment. Hybrids or lines that are susceptible to phenoxy injury may also be susceptible to injury from Starane Ultra. Consult current seed corn company herbicide management guides for further information.

**Tank Mixing:** Starane Ultra may be applied alone or in tank mix combination with other herbicides registered for post emergence application in field corn unless tank mixing with Starane Ultra is specifically prohibited by the label of the tank mix product. When Starane Ultra is tank mixed with a companion herbicide, follow all applicable use directions, precautions, restrictions, and limitations listed on the manufacturer's label. If an adjuvant is added to the spray mixture as a requirement of the tank mix partner, follow label directions for both the tank mix partner and the adjuvant product.

**Adjuvants:** Generally, this product does not require the use of an adjuvant to achieve satisfactory weed control when applied alone. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner. Use of a high quality adjuvant may improve weed control in hot, dry conditions.

**Sweet Corn**

Apply Starane Ultra as a broadcast postemergence treatment using ground equipment or by air. Starane Ultra may also be applied as a pre plant treatment for control of **emerged** volunteer potato or for burndown of emerged weeds (refer to "Special Directions for Control of Volunteer Potato" below). Refer to the Product Information section of this label for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application. Starane Ultra may be applied in tank mix combination with labeled rates of other registered herbicides. Read and follow all label directions, including applicable use directions, precautions and limitations on each product label.

**Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled <sup>(1)</sup>	Key Weeds Suppressed <sup>(3)</sup>	Application Rate (pint/acre)
catchweed bedstraw (cleavers) chickweed cocklebur common purslane common ragweed giant ragweed hedge bindweed hemp dogbane jimsonweed kochia <sup>(2)</sup> morningglory puncturevine sunflower velvetleaf Venice mallow	devilsclaw field bindweed field pennycress marestail (horseweed) marshelder mustard nightshade species Russian thistle volunteer potato (4) wild buckwheat	0.4

1. See Weeds Controlled or Suppressed section in product label for a complete listing.
2. Includes herbicide tolerant or resistant biotypes.
3. Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.
4. See Special Directions for Control or Suppression of Volunteer Potato below.

**Application Timing**

Apply as a broadcast or band treatment to sweet corn up to, and including, 4 fully exposed leaf collars (V4 growth stage). Do not broadcast apply to sweet corn with 5 fully exposed leaf collars (V5 growth stage). Applications to sweet corn beyond the V4 growth stage should be made

as a directed spray using drop nozzles (see crop tolerance precaution below). Apply when broadleaf weeds are actively growing, but before weeds are 8 inches tall. If wild buckwheat is present, apply before vining stage of growth. Only weeds emerged at the time of application will be controlled or suppressed.

- **Pre plant Burndown:** For no-till or burndown applications to control emerged weeds, apply alone or in tank mix combination with a labeled herbicide prior to planting.

**Special Directions for Control or Suppression of Volunteer Potato:**

- **Preplant Application (Suppression):** Apply 0.4 pint per acre prior to planting corn when the majority of volunteer potato plants are 4 to 8 inches tall. For best results, leave soil undisturbed and plant sweet corn two weeks following application.
- **Sequential Applications (Control):** To control heavy populations of volunteer potato, a preplant application may be followed by a postemergence application of 0.4 pint per acre. Do not exceed two applications per season.
- **Postemergence Application (Suppression):** Apply 0.4 pint per acre when the majority of volunteer potato plants are 4 to 8 inches tall.

**Restrictions:**

- Do not make more than two applications or apply more than 0.7 pint per acre per crop season
- **Preharvest Interval:** Do not allow livestock to graze or harvest forage from treated areas within 31 days of application. Do not apply less than 31 days before harvesting ears.

**Crop Tolerance Precaution:** Not all sweet corn hybrids have been screened for tolerance to Starane Ultra. Crop injury (stem curvature, stunting, brace root injury) may occur with some hybrids or lines when Starane Ultra is applied as a broadcast treatment. Take particular care to manage for environmental conditions such as unfavorable combinations of temperature and humidity. Hybrids or lines that are susceptible to phenoxy injury may also be susceptible to injury from Starane Ultra. Consult current seed corn company herbicide management guides for further information.

**Tank Mixing:** Starane Ultra may be applied alone or in tank mix combination with other herbicides registered for post emergence application in sweet corn unless tank mixing is specifically prohibited by the label of the tank mix product. When Starane Ultra is tank mixed with a companion herbicide, follow all applicable use directions, precautions, restrictions, and limitations listed on the manufacturer's label.

**Use of Spray Adjuvants in Tank Mixes:** Do not use a spray adjuvant when applying Starane Ultra alone. Use of an adjuvant may increase effectiveness on weeds but may reduce selectivity to the crop, particularly under conditions of plant stress such as drought or cold temperatures. If an adjuvant is added to the spray mixture as a requirement of a tank mix partner, follow all manufacturer's instructions. Do not apply Starane Ultra in combination with crop oil concentrates, petroleum-based oils or methylated seed oils unless the risk of injury is acceptable.

**Grain Sorghum (Milo)**

Apply Starane Ultra as a broadcast treatment using ground equipment or by air. See product label for Starane Ultra for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application.

Starane Ultra may be applied in tank mix combination with labeled rates of other herbicides such as atrazine. Read and follow all label directions, including applicable use directions, application timing, precautions and limitations on each product label.

**Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled <sup>(1)</sup>	Key Weeds Suppressed <sup>(3)</sup>	Application Rate (pint/acre)
cocklebur common ragweed giant ragweed hemp dogbane hedge bindweed kochia <sup>(2)</sup> morningglory puncturevine sunflower velvetleaf Venice mallow	devilsclaw field bindweed field pennycress marestail (horseweed) mustard nightshade species Russian thistle wild buckwheat	0.4

1. See Weeds Controlled or Suppressed section in product label for a complete listing.
2. Includes herbicide tolerant or resistant biotypes.

- Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

provide more consistent control of kochia seedlings 1 to 4 inches tall. Control of small kochia with reduced rates will be more consistent if kochia is at least 1 inch tall. The 0.4 pint/acre rate should be used for optimal control of dicamba tolerant kochia populations (see Management of Kochia Biotypes in the Product Information section of the label booklet for Starane Ultra.

#### Application Timing

- Pre emergence:** For no-till or burndown applications, apply to emerged weeds after planting, but prior to grain sorghum emergence.
- Post emergence:** Starane Ultra may be broadcast applied from the 3-leaf growth stage of grain sorghum through the 7-leaf stage. Use drop nozzles and directed spray from the 8-leaf stage to boot stage. Drop nozzles should direct the spray toward the soil surface to avoid contact with grain sorghum foliage and reduce the potential for crop injury. Do not apply after the boot stage.
- For both pre emergence and post emergence applications, apply when weeds are actively growing, but before weeds are 8 inches tall and before wild buckwheat is vining. Only weeds that have emerged at the time of application will be controlled.
- To control heavy weed populations, a pre emergence application may be followed by a post emergent application. Do not exceed two applications per season.

#### Restrictions:

- Do not make more than two applications or apply more than 0.7 pint per acre per crop season.
- Pre harvest Interval:** Do not allow livestock to graze or harvest forage within 40 days of application. Do not apply within 70 days of harvesting grain or stover.

**Tank Mixing:** Starane Ultra may be applied alone or in tank mix combination with other herbicides registered for post emergence application in grain sorghum unless tank mixing is specifically prohibited by the label of the tank mix product. When Starane Ultra is tank mixed with a companion herbicide, follow applicable use directions, precautions, restrictions, and limitations listed on the manufacturer's label. Do not apply in combination with Ally herbicide.

**Adjuvants:** Generally, this product does not require the use of an adjuvant to achieve satisfactory weed control when applied alone. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner. Use of a high quality adjuvant may improve weed control under hot, dry conditions.

#### Grasses Grown for Seed, Forage or Hay

Starane Ultra may be applied for broadleaf weed control in the following grasses grown for seed, forage or hay: bermudagrass, bluegrass (perennial and annual), bromegrass, fescue, hay grazer, orchardgrass, ryegrass (perennial and annual), redtop cane, sorghum, sorghum-Sudan, Sudan, sudex, and timothy. **Starane Ultra may be applied for broadleaf weed control in the following grasses grown for hay or forage only:** sorghum, and triticale.

Apply Starane Ultra as a broadcast postemergence treatment using ground equipment or by air. A second application may be made a minimum of 14 days after the first. Starane Ultra may be applied in tank mix combination at labeled rates with other herbicides registered for these uses. All applicable use directions, precautions and limitations on the labels of the tank mix products must be followed. When tank mixing, the most restrictive limitations on each label must apply.

**Application Timing:** Apply to established grasses in the spring when weeds are actively growing and before weeds are 8 inches tall. Only weeds emerged at the time of treatment will be controlled. New plantings of grass crops may be treated from the 2 true leaf stage of growth prior to early boot stage. Do not apply during boot, flowering, or seed development stage of growth if grass crop is to be harvested for seed.

**Broadcast Application Rates:** (Numbers in parentheses (-) refer to footnotes following table.)

Weed Size or Species (1)	Application Rate (pint/acre)
Susceptible broadleaf weed seedlings less than 4 inches tall (2)	0.3
Susceptible broadleaf weed seedlings less than 8 inches tall or vining	0.4

- Refer to the Weeds Controlled or Suppressed section in the label booklet for Starane Ultra for a complete listing of weeds controlled or suppressed.
- The 0.3 pint/acre rate will generally provide satisfactory control of kochia seedlings less than 4 inches tall (including ALS resistant biotypes). However, when conditions for control are less favorable, such as under drought or cool temperatures, the 0.4 pint/acre rate will

#### Restrictions:

- Do not apply more than 0.7 pint per acre of Starane Ultra per growing season.
- Grazing restrictions:** There are no grazing restrictions for lactating or non-lactating dairy animals.
- Harvest restrictions:** Do not harvest grass for hay or silage from treated areas within 7 days of application.
- Slaughter restrictions:** Meat animals must be withdrawn from treated forage at least 2 days before slaughter.

#### On-Farm Non-Cropland

Apply as a single broadcast treatment or spot treatment to control susceptible broadleaf weeds in on-farm non-cropland areas such as fencerows, building perimeters, around irrigation equipment and on-farm private roadways. Apply at the rate of 0.4 to 0.7 pints per acre when weeds are small and actively growing, but before weeds are 8 inches tall or vining. Spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for "Spot Application" in "Application Directions" section. See "Weeds Controlled or Suppressed" section for a complete listing of weeds controlled or suppressed.

#### CRP Acres

**Do not use on CRP acres that are underseeded with desirable legumes, clovers, or other sensitive broadleaf plants.**

Starane Ultra may be applied to Conservation Reserve Program (CRP) acres. For best results, apply as a single broadcast treatment by ground or aerial equipment to control susceptible broadleaf weeds. Apply at the rate of 0.4 to 0.7 pints per acre when weeds are small and actively growing, but before weeds are 8 inches tall or vining. Spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for Spot Application in Application Directions section. See Weeds Controlled or Suppressed section for a complete listing of weeds controlled or suppressed.

**Restriction:** Grazing or haying of treated CRP acres is prohibited.

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- Replacement of amount of product used.

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**Revisions:**

**Proposed changes by amendment:**

1. Update to trademark line
2. Updated Best Resistance Management Practice
3. Updated Mixing Directions
4. Triticale: Added to Wheat, Barley, Oats section.
5. Changed 'General Information' to 'Product Information' throughout label (2) Created separate sections for 'Product Precautions' and 'Product Restrictions'