

CONTROL OF KOCHIA, VOLUNTEER POTATOES, AND OTHER SUSCEPTIBLE BROADLEAF WEEDS IN DRY BULB ONIONS - WASHINGTON

General Information

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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.

Application Precautions and 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.
- Avoid applications where proximity of susceptible crops or other desirable plants is likely to result in exposure to spray or spray drift.
- 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 the label or Federally approved supplemental labeling for Starane Ultra within 120 days following application.

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: Extensive populations of dicamba tolerant kochia have been identified in certain small grain and corn production regions (such as Chouteau, Fergus, Liberty, Toole, and Treasure counties in the state of Montana). 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.

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, the 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.

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. $3,500 \div 1,000 = 3.5$). An area of 1000 sq ft is approximately 10.5 X 10.5 yards (strides) in size. (see label for the table)

Limitations, Restrictions, and Exceptions

Directions for Use

Starane Ultra herbicide may be applied for postemergence control of kochia, volunteer potatoes, and other susceptible broadleaf weeds in onions using ground or aerial application equipment. Refer to the product label for Starane Ultra for a complete list of weeds controlled. Follow all mixing and application instructions in the General Information section of the product label for Starane Ultra.

Use sufficient spray volume to achieve thorough coverage. See package label for

use directions and restrictions for ground applications.

Rate and Application Timing: Apply 0.35 pint/acre Starane Ultra as a broadcast postemergence treatment. Volunteer potatoes, kochia, and other susceptible target weeds should be from 4 to 8 inches tall for optimum control.

Broadcast (over-the-top) application may be made to onions from the 2 true leaf stage through the 6-leaf stage. Do not apply as a broadcast over-the-top spray after the 6-leaf stage of growth. Application to onions beyond the 6- leaf stage should be made as a directed spray using drop nozzles (see crop injury warning below). Tank mix combinations with other herbicides registered for use in onions may result in unacceptable crop injury. Adjuvants are not recommended with Starane Ultra applications in onions.

Frequency of Applications: To control heavy populations or successive flushes of kochia, volunteer potatoes, or other susceptible broadleaf weeds, two postemergence applications can be made on a 10- to 14-day re-treatment interval. Do not make more than two applications per season.

Restrictions and Precautions:

- Do not allow livestock to graze treated areas or harvest treated forage within 7 days of application.
- Preharvest Interval: Do not apply within 42 days of onion harvest.
- Do not make more than 2 applications per season.
- Plant-Back Restriction: Plant only labeled crops within 120 days of application.
- For use under this SLN label do not apply through any type of irrigation system.
- Do not apply this product when furrow irrigation is running. Treated fields should be managed to avoid water runoff for at least 6 hours after application.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.
- Maximum Application Rate: Do not apply more than 0.7 pint of Starane Ultra per acre per year

- Crop Injury Warning: Crop injury (such as but not limited to leaf twisting) may occur with some onion cultivars when Starane Ultra is applied as a broadcast treatment, especially when applications are made to larger onions. Do not use Starane Ultra if the risk of injury is unacceptable.

- WSDA Aquatic Advisory: This product is toxic to fish. Starane Ultra should not be used under this SLN label where impact on listed threatened or endangered species is likely. You may refer to the Washington State Department of Agriculture Endangered Species web site at <http://agr.wa.gov/PestFert/NatResources/EndangSpecies.aspx>, or contact the Washington Department of Fish & Wildlife, National Marine Fisheries Service (NOAA Fisheries) or US Fish & Wildlife Service for information regarding aquatic species listed as threatened or endangered. Consult the federal label for additional restrictions and precautions to protect aquatic organisms.

Washington State Department of Agriculture (WSDA) Container Disposal Guidance: Pesticide containers must be properly cleaned prior to disposal. The best time to clean empty pesticide containers is during mixing and loading, because residue can be difficult to remove after it dries. Triple rinse (or pressure rinse) the pesticide container, empty all pesticide rinse water into the spray tank, and apply to a labeled crop or site. Recycling cleaned containers is the best method of container disposal. Information regarding the recycling of empty and cleaned plastic pesticide containers in Washington is available on the WSDA Waste Pesticide Program web site at <http://agr.wa.gov/PestFert/Pesticides/WastePesticide.aspx>. Cleaned containers may also be disposed of in a sanitary landfill, if permitted by the county. Burning is not a legal method of container disposal in Washington.

Method

[Broadcast Application](#)

Pre-Harvest Interval

42 days

Rates

[field rates 0](#)

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Restricted Entry Interval

24 hours

Timings

[Postemergence \(Weed\)](#)

[Postemergence \(Weed\)](#)