

RANGELANDS - MEDUSAHEAD - POSTEMERGENCE

General Information

GENERAL INFORMATION

(How This Product Works)

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It is generally nonselective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS, PERENNIAL WEEDS AND WOODY BRUSH AND TREES RATE TABLES" for recommendations for specific weeds.

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area. Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Annual Maximum-Use Rate: Except as otherwise specified in a crop section of the label, the combined total of all treatments must not exceed 15.5 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 20.5 quarts of this product per acre per year. The maximum-use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate- or sulfosate-containing products does not exceed stated maximum-use rate.

NOTE: Use of this product in any manner not consistent with the label may result in injury to persons, animals or crops, or other unintended consequences.

APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial - Fixed-Wing and Helicopter

Ground Broadcast Spray - Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment - Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment - Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems - Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA) - Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY-MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THE LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless specified, do not exceed 1.75 quarts per acre. Refer to the individual use area sections of the label for recommended volumes, application rates, and further instructions.

Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "Annual Weeds - Hand-Held or High-Volume Equipment" section of this product label.

Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on the label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row-middles (in between rows of crop plants) where any dripping or leaking will

not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Recirculating Spray System

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Shielded and Hooded Applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of the label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Wiper Applicators

When applied under the conditions described in the following paragraphs, this product **CONTROLS** many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, spanishneedles and bristly starbur; and **SUPPRESSES** many weeds including Florida beggarweed, Bermudagrass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, velvetleaf.

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may

migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator. Do not use wiper equipment when weeds are wet. Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water. Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators - Mix 1.85 gallon of this product with 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed in this section.

For Panel Applicators - Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

CDA Equipment

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in the label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 40 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of perennial weeds, apply a 40 to 80 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 4 quarts per acre).

ANNUAL AND PERENNIAL CROPS (Alphabetical)

TYPES OF APPLICATIONS:

Chemical fallow, Pre-plant Fallow beds, Pre-plant, Pre-emergence, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper

Applicators in Row-Middles, and Post-Harvest treatments.

GENERAL USE INSTRUCTIONS:

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergent to annual and perennial crops listed in the label, except where specifically limited. For any crop not listed in the label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", AND "WOODY BRUSH AND TREES" RATE TABLES" in the label. Repeat applications may be made up to a maximum of 15.5 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row-middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "Selective Equipment" section of the label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator. The maximum-use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate- or sulfosate-containing products does not exceed stated maximum-use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications

must be made at least 30 days prior to planting any non-labeled crop. See “APPLICATION EQUIPMENT AND TECHNIQUES” section of the label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason. For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

Limitations, Restrictions, and Exceptions

RANGELANDS

USE INSTRUCTIONS: This product will control or suppress many annual weeds growing in perennial cool and warmseason grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands.

Follow-up applications in sequential years should eliminate most of the viable seeds.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

PRECAUTIONS, RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product.

Postemergence

For medusahead, apply 1.75 pints of this product at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

Slight discoloration of the desirable grasses may occur, but they will regreen and

regrow under moist soil conditions as effects of this product wear off.

ANNUAL WEEDS

Apply to actively-growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank-mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 96 fluid ounces per acre where heavy weed densities exist.

For control of downy brome in no-till systems, use 42 fluid ounces per acre.

Cheat and Rye, Volunteer: Performance is better if application is made before this weed reaches the boot stage of growth.

Use 42 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 56 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 56 fluid ounces followed by 56 fluid ounces of this product per acre.

Do not treat kochia in the button stage.

Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank-mixture with 2,4-D, Unison or Barrage HF as described may improve control.

Annual Weeds - Rates for 10 to 40 Gallons per Acre

Apply 1.75 to 3.6 quarts of this product per acre. Use 1.75 quarts per acre if weeds are less than 6 inches tall, 2.75 quarts per acre if weeds are 6 to 12 inches tall and 3.6 quarts per acre if weeds are greater than 12 inches tall. These rates will provide

control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Annual Weeds - Hand-Held or High-Volume Equipment

For control of weeds listed in the “ANNUAL WEEDS RATE TABLES”, apply a 1.0 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1.75 percent solution. For best results, use a 3.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle. When using application methods that result in less than complete coverage, use a 10 percent solution for annual and perennial weeds and a 8 to 16 percent solution for woody brush and trees.

Refer to the annual weeds rate table on the label for specific rate for weeds and its maximum height/length (in inches).

Method

[Foliar spray](#)

Rates

[field rates 0](#)

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Restricted Entry Interval

12 hours

Timings

[Postemergence \(Weed\)](#)