

# **PASTURE, HAY, RANGELAND, AND GENERAL FARMSTEAD (NONCROPLAND) - BIENNIAL WEEDS (ROSETTE DIAMETER: 3 INCHES OR MORE)**

General Information

## **PRODUCT INFORMATION**

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

This product is a water-soluble formulation intended for control and suppression of many annual, biennial, and perennial broadleaf weeds, as well as woody brush and vines listed in Table 1, General Weed List, Including ALS- and Triazine-Resistant Biotypes.

This product may be used for control of these weeds in asparagus, corn, cotton, conservation reserve programs, fallow cropland, grass grown for seed, hay, proso millet, pasture, rangeland, general farmstead (noncropland), small grains, sorghum, soybean, sugarcane, and turf. This product may also be used on rights-of-way (including roadways, utility, railroad, highway, pipeline, and rights-of-way that run through pasture and rangeland), utility facilities (including substations, pipelines, tankfarms, pumping stations, parking and storage areas, non-irrigated ditchbanks, and fencerows), fencerows, natural areas and forest site preparation.

**Mode of Action:** This product is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. This product interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

**Resistance Management:** This product has a low probability of selecting for resistant weed biotypes.

Cleaning Spray Equipment: Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner, according to the manufacturer's directions, and then triple rinsing the equipment before and after applying this product.

#### APPLICATION INSTRUCTIONS

This product can be applied to actively growing weeds as aerial, broadcast, band, or spot spray applications using water or sprayable fertilizer as a carrier. For product application rates for control or suppression by weed type and growth stage, see Table 2, PRODUCT APPLICATION RATES FOR CONTROL OR SUPPRESSION BY WEED TYPE AND GROWTH STAGE. For crop-specific application timing and other details, refer to the CROP-SPECIFIC INFORMATION section.

To avoid uneven spray coverage, this product should not be applied during periods of gusty wind or when wind is in excess of 15 mph.

Avoid off-target movement. Use extreme care when applying this product to prevent injury to desirable plants and shrubs.

Cultivation: Do not cultivate within 7 days after applying this product.

Sensitive Crop Precautions: This product may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes, and other broadleaf plants when contacting their roots, stems, or foliage. These plants are most sensitive to this product during their development or growing stage.

#### Recommendations to Avoid Herbicide Drift

- Use coarse sprays (volume median diameter of 400 microns or more) to avoid potential herbicide drift. Select nozzles that are designed to produce minimal amounts of fine spray particles (less than 200 microns). Examples of nozzles designed to produce coarse sprays via ground applications are Delavan Raindrops, Spraying Systems XR (excluding 110° tips) flat fans, Turbo Teejets, Turbo Floodjets, or large capacity flood nozzles such as D10, TK10, or greater capacity tips.
- Keep the spray pressure at or below 20 psi and the spray volume at or above 20 gallons per acre (for ground broadcast applications), unless otherwise required by the manufacturer of drift-reducing nozzles. Consult your spray nozzle supplier

concerning the choice of drift-reducing nozzles.

- Agriculturally approved drift-reducing additives may be used.

#### Aerial Application Methods and Equipment

**Water Volume:** Use 1 to 10 gallons of water per acre (2 to 20 gallons of diluted spray per treated acre for preharvest uses). Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Make aerial applications at the lowest safe height to reduce exposing the spray to evaporation and wind.

The applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling, as well as state and local regulations and ordinances.

Do not use aerial equipment if spray particles can be carried by the wind into areas where sensitive crops or plants are growing or when temperature inversions exist.

#### Ground Application (Banding)

When applying this product by banding, determine the amount of herbicide and water volume needed

#### Ground Application (Broadcast)

**Water Volume:** Use 3 to 50 gallons of spray solution per broadcast acre for optimal performance. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

Ground Application (Wipers): This product may be applied through wiper application equipment to control or suppress actively growing broadleaf weeds, brush, and vines. Use a solution containing 1 part of this product to 1 part water. Do not contact desirable vegetation with herbicide solution. Wiper application may be made to crops (including pastures) and non-cropland areas described in this label with the exception of cotton, sorghum, and soybean.

#### ADDITIVES

To improve postemergence weed control, agriculturally approved surfactants, sprayable fertilizers (urea ammonium nitrate, or ammonium sulfate), or crop oil concentrate may be added, particularly in dry growing conditions. (Refer to Table 3, Additive Rate Per Acre.)

#### Nitrogen Source

- Urea ammonium nitrate (UAN): Use 2 to 4 quarts of UAN (commonly referred to as 28%, 30%, or 32% nitrogen solution) per acre. Do not use brass or aluminum nozzles when spraying UAN.
- Ammonium sulfate (AMS): AMS at 2.5 pounds per acre may be substituted for UAN. Use high-quality AMS (spray grade) to avoid plugging of nozzles. Other sources of nitrogen are not as effective as those mentioned. Nufarm Americas Inc. does not recommend applying AMS, if applied in less than 10 gallons per acre because of potential problems with precipitation in reduced volumes. Use AMS only if it has been demonstrated to be successful in local experience.

Nonionic Surfactant: The standard label instructions are 1 pint of an 80% active nonionic spray surfactant per 100 gallons of water. For certain weeds, a higher spray surfactant rate is advised.

Oil Concentrate: A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be nonphytotoxic,
- contain only EPA-exempt ingredients,
- provide good mixing quality in the jar test, and
- be successful in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers to provide good mixing

quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see COMPATIBILITY TEST FOR MIX COMPONENTS.

Adjuvants containing crop oil concentrates may be used in preplant, preemergence, and preharvest application, as well as in pastures and noncropland. Do not use crop oil concentrate for postemergence in-crop applications unless specifically allowed in the CROPSPECIFIC INFORMATION section of this label.

#### RESTRICTIONS AND LIMITATIONS

Maximum seasonal use rate: Refer to Table 4, Crop-Specific Restrictions and Limitations for crop-specific maximum seasonal use rates. Do not exceed 64 fluid ounces of this product (2 pounds acid equivalent) per acre, per year.

Preharvest Interval (PHI): Refer to the CROP-SPECIFIC INFORMATION section for preharvest intervals.

Restricted-Entry Interval (REI): 24 hours

Crop Rotational Restrictions: The interval between application and planting rotational crop is given below. Always exclude counting days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions for this product's applications of 24 fluid ounces per acre or less: No rotational cropping restrictions apply at 120 days or more following application. Additionally, for annual crop uses in this label including corn, cotton, sorghum, and soybean, follow the preplant use directions in the CROP-SPECIFIC INFORMATION section. For barley, oat, wheat, and other grass seedings, the interval between application and planting is 15 days per 8 fluid ounces per acre applied east of the Mississippi River and 22 days per 8 fluid ounces per acre west of the Mississippi River.

Planting/replanting restrictions for applications of more than 24 fluid ounces and up to 64 fluid ounces of this product per acre: Corn, sorghum, cotton (east of the Rocky Mountains) and all other crops grown in areas with 30" or more of annual rainfall may be planted 120 days or more after application. Barley, oat, wheat, and other

grass seedings, may be planted if the interval from application to planting is 30 days per 16 fluid ounces per acre east of the Mississippi River and 45 days per 16 fluid ounces per acre west of the Mississippi River. For all other crops in areas with less than 30" of annual rainfall, the interval between application and planting is 180 days or more.

Rainfast period: Rainfall or irrigation occurring within 4 hours after postemergence applications may reduce the effectiveness of this product.

Stress: Do not apply to crops under stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, insects, or widely fluctuating temperatures as injury may result. Do not apply through any type of irrigation equipment. Do not treat irrigation ditches or water used for crop irrigation or domestic purposes.

#### Limitations, Restrictions, and Exceptions

##### PASTURE, HAY, RANGELAND, AND GENERAL FARMSTEAD (NONCROPLAND)

This product is recommended for use on pasture, hay, rangeland, and general farmstead (non-cropland) (including fencerows and nonirrigation ditchbanks) for control or suppression of broadleaf weed and brush species.

This product may also be applied to non-cropland areas to control broadleaf weeds in noxious weed control programs, districts, or areas including broadcast or spot treatment of roadsides and highways, utilities, railroad, and pipeline rights-of-way. Noxious weeds must be recognized at the state level, but programs may be administered at state, county, or other level.

Uses described in this section also pertain to small grains (forage sorghum, rye, sudangrass, or wheat) grown for pasture use only. Some perennial weeds may be controlled with lower rates of either this product or this product plus 2,4-D.

Rates above 32 fluid ounces of this product per acre are for spot treatments only. Do not broadcast apply more than 32 fluid ounces per acre.

Retreatments may be made as needed; however, do not exceed a total of 32 fluid ounces of this product per treated acre during a growing season.

Crop-Specific Restrictions and Limitations: Do not apply more than 16 fluid ounces

of this product per acre to small grains grown for pasture.

Newly seeded areas may be severely injured if more than 16 fluid ounces of this product is applied per acre.

Established grass crops growing under stress can exhibit various injury symptoms that may be more pronounced if herbicides are applied. Bentgrass, carpetgrass, buffalograss, and St. Augustinegrass may be injured if more than 16 fluid ounces of this product is applied per acre. Usually colonial bentgrasses are more tolerant than creeping types. Velvetgrasses are most easily injured. Treatments will kill or injure alfalfa, clovers, lespedeza, wild winter peas, vetch, and other legumes.

There are no grazing restrictions for animals other than lactating dairy animals.

To prepare oil in water emulsions, half-fill spray tank with water, then add the appropriate amount of emulsifier. With continuous agitation, slowly add the herbicide and then the oil (such as diesel oil or fuel oil) or a premix of oil plus additional emulsifier to spray tank. Complete filling of spray tank with water. Maintain vigorous agitation during spray operation to prevent oil and water from forming separate layers. This product may be applied broadcast using either ground or aerial application equipment.

#### Aerial Application

- Spray Volume: Use 2 to 40 gallons of diluted spray per treated acre in a water-based carrier.

#### Ground Application

- Spray Volume: Use 3 to 600 gallons of diluted spray per treated acre. The volume of spray applied will depend on the height, density, and type of weeds or brush being treated and on the type of equipment being used.

- Spot Treatments: This product may be applied to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Spot treatment](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

24 hours

Timings

[Postemergence \(Weed\)](#)