

432-1507

12/16/2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

DEC 16 2014

Terrie Moore  
Regulatory Affairs Manager  
Bayer CropScience  
Environmental Science Division  
2 T. W. Alexander Drive  
Research Triangle Park, NC 27709

Subject: Label Notification per PRN 98-10 – Marketing Claims/Pictures and Format Changes  
Product Name: Celsius WG  
EPA Registration Number: 432-1507  
Application Date: November 17, 2014  
Decision Number: 497881

Dear Ms. Moore:

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

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

If you have any questions, you may contact Terri Stowe at (703) 305-6117 or via email at [stowe.terri@epa.gov](mailto:stowe.terri@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kathryn V. Montague".

Kathryn V. Montague, Product Manager 23  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs



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# PRECAUTIONARY STATEMENTS

## HAZARD TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, using tobacco, chewing gum, or using the toilet.

### 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.

**All mixers, loaders, applicators and other handlers must wear:** Long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves (except for applicators using ground boom equipment) made of any waterproof material such as polyethylene or polyvinyl chloride. See Engineering Control Statement for additional requirements and exceptions.

### User Safety Requirements:

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### Engineering control statement:

When handlers use closed systems, enclosed cabs, in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR §170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

~~Remove clothing/PPE immediately if pesticide gets inside or after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash hands thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.~~

Users should:

- Wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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.

## ENVIRONMENTAL HAZARDS

This product is toxic to non-target plants. Non-target plants may be adversely affected if the product is allowed to drift from the areas of application. Avoid spray drift from treated area. Do not apply when conditions favor drift from treated areas. 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 or rinsate. Do not drain or rinse equipment near desirable vegetation. Refer to the Spray Drift Management section of this label for additional information.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having "high potential for reaching surface water via runoff," according to the chemical's "mean" soil partition coefficient (Kd) for several days after application. A level well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this herbicide from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Some of the chemicals in this product have properties and characteristics associated with chemicals detected in ground water. These chemicals may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

## PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near extreme heat or open flame.

## DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.  
Read entire label before using this product.**

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 same area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

[The following Agricultural Use Requirement box is only required if agricultural uses, such as sod farms, are on product label:]

**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 intervals. 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 (sod farm use only).

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 over long-sleeved shirt and long pants, chemical-resistant footwear plus socks, chemical-resistant gloves made of any waterproof material, chemical-resistant headgear for overhead exposure, and 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. Do not enter or allow others to enter treated areas until sprays have dried.

**PRODUCT INFORMATION**

**PRODUCT USES**

CELSIUS™ WG is a selective herbicide with multiple modes of action that provide a broad spectrum of weed control. CELSIUS WG controls weeds after they have germinated (post) and also has some residual activity that prevents new weed germination, depending on the specific weed.

CELSIUS WG is intended for foliar application by licensed commercial applicators to established turf including residential lawns, commercial lawns, golf courses, sports fields, parks, campsites, recreational areas, roadsides, school grounds, cemeteries, sod farms to control annual and perennial broadleaf weeds and grasses in certain warm-season turf types.

**SYMPTOMS**

Weed growth ceases within hours after application of CELSIUS WG. Symptoms progress from yellowing or reddening/purpling to necrosis, resulting in control of weeds within 1-4 weeks after application, depending on the sensitivity of the weed and environmental conditions. Weed control is more rapid when soil temperatures are above 65 degrees, when soil moisture is adequate for weed growth, and when weeds are not under environmental stress (e.g. drought).

**MODE OF ACTION**

Two of the three active ingredients in CELSIUS WG Herbicide (thiencarbazone-methyl and iodosulfuron-methyl-sodium) inhibit acetolactate synthase (ALS). ALS is responsible for the synthesis of essential amino acids that are essential for plant growth. Inhibition of these amino acids stops weed growth. Some weed species, however, have naturally occurring biotypes that are resistant to ALS-inhibiting herbicides. Resistant weed populations may occur when ALS herbicides are used year after year. To add to the weeds controlled and provide resistance management, CELSIUS WG Herbicide also contains dicamba, a benzoic acid herbicide that acts on the same biochemical site as the natural plant auxin, indole acetic acid (IAA). Having several herbicides with different modes of action (MOA) reduces the probability that resistant biotypes to CELSIUS WG Herbicide will develop.

**TURF TOLERANCE**

This product has been tested and can be used on the following types of turfgrass and their cultivars:

St. Augustinegrass (Floritam, Palmetto, Bitter Blue, Common, Amerishade, Raleigh, Sapphire, Delmar, Captiva [add or delete varieties as needed])

Bermudagrass (Tifway 419, Common, Tifsport, Discovery, Celebration, Sahara [add or delete varieties as needed])

Centipedegrass (Tifblair [add or delete varieties as needed])

Zoysiagrass (Meyer, Empire, Crown, Palisades, Cavalier, Zorro, DeAnza, Zenith [add or delete varieties as needed])

Bahiagrass [(Argentine; Pensacola [add or delete varieties as needed])

Buffalograss (Legacy, Cody [add or delete varieties as needed])

Other turfgrasses and their cultivars may be tolerant to this product. However, tolerance testing must be done prior to use. Some temporary discoloration of certain warm-season grasses may occur to turf under stress from drought, disease, extreme cold or hot weather.

Do not use this product on bahiagrass, seashore paspalum or cool-season turf types, including tall fescue, fine fescue, Kentucky bluegrass, perennial ryegrass, or creeping bentgrass.

**USE OF CELSIUS WG HERBICIDE NEAR SENSITIVE GRASSES**

CELSIUS WG can damage or control cool season grasses. Some use sites, including many golf courses, grow warm and cool season grasses in the same vicinity. To reduce the probability of CELSIUS WG being moved from its site of application to adjacent areas containing sensitive grasses, practice the following.

- To prevent tracking from the application site onto sensitive grasses, maintain a 25 ft untreated buffer.
- Allow the leaf surface of treated turf to dry several hours prior to allowing foot traffic or equipment in the treated area adjacent to sensitive grasses.
- When there may be a risk to adjacent sensitive grasses, apply CELSIUS WG when the soil is less than field capacity. Avoid applications to saturated soil.
- Allow CELSIUS WG to be absorbed several hours prior to an irrigation cycle. If dew is present on the day following application, irrigate lightly (0.1-0.2 inches) prior to allowing foot traffic or equipment on the treated area.

**RESISTANCE MANAGEMENT**

Repeated applications of a herbicide may select for resistant weed biotypes. There is no known biotype resistance to this product. If resistance to ALS type herbicides is proven, rotate to a herbicide with an alternate mode of action. Consult a manufacturer representative for the latest information on resistance management for this product.

**MOWING INSTRUCTIONS**

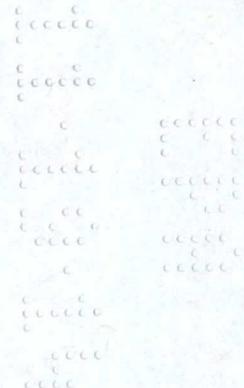
Do not mow immediately after treating with this product or before spray has dried. After treatment, do not transfer clippings to non-target areas.

**IRRIGATION**

Weed control and turf tolerance is best if turf is growing well and not under stress at the time of treatment. For best results, irrigate prior to treatment if grass is under stress. After application, do not irrigate until spray has dried.

**PRECAUTIONS**

1. Rainfall before spray has dried may necessitate retreatment with this product or reduced weed control may result.
2. Make applications to actively growing weeds. Mature, hardened-off weeds may not be controlled. Weed control may be reduced if application is made in the presence of heavy dew, fog, and mist/rain or when weeds are under stress due to drought.
3. Apply spray mixtures of this product within 5 days of mixing to avoid product degradation.
4. Spot treatments to St. Augustinegrass turf at temperatures above 90 degrees may cause temporary growth regulation. Turf will assume normal growth rate after mowing.



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### RESTRICTIONS

1. Do not apply more than a total of 7.4 oz (210 g) of product per acre (0.17 oz or 4.8 g of product per 1,000 sq ft) per year (365 days).
2. [If sod farms is listed on label, add the following: The reentry interval (REI) for sod farms is 24 hours.]
3. Do not apply this product by air or through any type of irrigation system.
4. Do not apply this product to turf if a frost or freeze is expected within 48 hours of application
5. [If golf course use is listed on the label, the following restriction must be added: Do not use this product on golf course greens and collars.]
6. Do not apply this product on turf exhibiting injury from previous applications of other products.
7. Apply this product only to established turf unless otherwise noted on the label.
8. Some ornamentals may be sensitive to this product. Do not plant ornamentals or bedding plants in treated bare areas for at least 30 days after the last application of this product.
9. Avoid application of this product near the roots of newly planted ornamentals.
10. In order to minimize risk to sensitive areas (water bodies or non-target plants), apply by broadcast application (boom-type sprayers) only when the potential for drift to adjacent sensitive areas is minimal (e.g., when the wind is 10 mph or less and is blowing away from the sensitive area) and maintain a 25-ft buffer between the point of direct application and the closest downwind edge of adjacent sensitive areas.
11. Keep people and pets out of the area during application.
12. Do not allow people or pets to enter the treated areas until sprays have dried.
13. Do not use this product on bahiagrass, seashore paspalum or cool-season turf types, including tall fescue, fine fescue, Kentucky Bluegrass, perennial ryegrass, or creeping bentgrass.

### APPLICATION

This product may be applied at three different rates depending on the weeds to be controlled. For the appropriate rate and species consult USE RATES FOR WEED CONTROL section. CELSIUS WG may be applied by broadcast, zone, or spot applications.

For broadcast applications, use a minimum of 10 gallons of water per acre. For weed control in dense weed populations, control of weeds under adverse growing conditions, or control of mature weeds, the optimum spray volume is 60 gallons per acre.

#### ZONE

A zone application is defined as a broadcast application made to a defined area (less than 10,000 sq ft per acre). Add the specified product rate of 0.057-0.113 oz (1.6-3.2g) to 1-gallon water. One gallon of spray solution will treat up to 1,000 sq ft.

#### SPOT

Spot applications are defined as directed applications made to control one or several weeds in a turfgrass situation with a backpack or hand-held sprayer. Add the specified product rate of 0.057-0.113 oz (1.6-3.2g) to 1-gallon water. For spot applications, spray to wet. Avoid over application.

### TANK MIXING CELSIUS WG HERBICIDE WITH ADJUVANTS AND FERTILIZERS

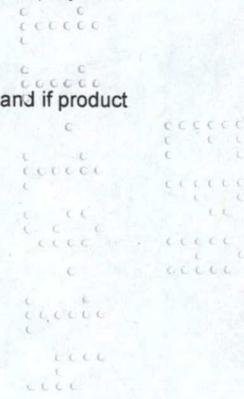
- In areas where weed pressure is high and adequate coverage is critical, add a non-ionic surfactant (NIS) at 0.25% v/v to the spray solution.
- For difficult-to-control weeds, the addition of methylated seed oil (MSO) at a rate of 0.25-0.5% v/v may improve weed control.
- Do not use a spray adjuvant at temperatures above 90 degrees.
- Application of CELSIUS WG with a spray adjuvant or nitrogen-containing fertilizers may damage turf that is under stress.

### APPLICATION METHODS, MIXING AND COMPATIBILITY

Uniform, thorough spray coverage with properly calibrated spray equipment is important to achieve consistent weed control. Select spray nozzles and pressure that deliver at least MEDIUM spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. Nozzles that deliver COARSE spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of weeds.

#### Spray Solution pH

The efficacy of this product may be affected by the pH of the spray solution. A pH near 7.0 is ideal. If the pH is <6 and if product spray solution is not to be used within 24 hours, add a suitable buffer.



**Mixing Instructions**

This product must be applied with clean and properly calibrated equipment. Prior to adding this product, ensure that the spray tank, filters, and nozzles have been thoroughly cleaned. Prepare only as much spray mixture as needed for application on the same day.

1. Fill spray tank with 25% to 50% of the required volume of water, and begin agitation prior to the addition of this product.
2. Before filling or adding any additional products, ensure full dispersion of this product.
3. If this product is applied in a tank mixture with other products, add this product to the spray tank first and ensure it is thoroughly dispersed before adding other products.
4. Continue to fill the spray tank with water to the desired volume and agitate while adding spray adjuvants or nitrogen fertilizers.
5. Continue agitation during application to ensure a uniform spray mixture.

**Compatibility**

If this product is to be tank-mixed with other products, compatibility should must be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop (precipitation, settling, changes in color), do not use this mixture for spraying. Indications of incompatibility may occur within 5-15 minutes after mixing. Read and follow the label of each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

**TANK CLEANUP PROCEDURE**

1. Drain the tank completely, then wash out tank, boom, and hoses with clean water. Drain again.
2. Fill the tank half full with clean water and add ammonia (i.e. 3% domestic ammonia solution) at a dilution rate of 1% (i.e. 1 gallon of domestic ammonia for every 100 gallons of rinsate). Completely fill the tank with water. Agitate/re-circulate and flush through boom and hoses. Leave agitation on for 10 minutes. Drain tank completely.
3. Repeat Step 2.
4. Remove nozzles and screens and soak them in a 1% ammonia solution. Inspect nozzles and screens and remove visible residues.
5. Flush tank, boom, and hoses with clean water.
6. Inspect tank for visible residues. If present, repeat Step 2.

**WEED CONTROL INFORMATION**

This product may be used to control a variety of broadleaf weeds and grasses in tolerant turf. Apply this product to susceptible weeds as listed in the Use Rates for Weed Control section. For certain weeds, a follow-up application made 4-6 weeks later may be needed if regrowth is observed. Total amount of product applied in a calendar year (365 days) must not exceed 7.4 oz (210 g) of product per acre.

**BERMUDAGRASS OVERSEEDED WITH RYEGRASS**

Bermudagrass may be treated with broadcast applications of CELSIUS WG prior to overseeding. Allow a minimum of 14 days between broadcast application of CELSIUS WG to established turf and overseeding with ryegrass. Allow a minimum of 60 days between broadcast application of CELSIUS WG Herbicide to bareground or to thin turf with significant areas of bareground. Intervals less than these may cause undesirable reductions in the stand of ryegrass. When making spot applications, allow 28 days before overseeding ryegrass. [This product may be used in conjunction with an application of Ronstar prior to overseeding for post emergent and pre-emergent weed control. Allow 4 months between the use of tank mix combinations of this product and RONSTAR herbicides and ryegrass overseeding]. When other products are mixed with this product, follow the most restrictive application interval prior to ryegrass overseeding on each label.

**SEEDING AND SPRIGGING INTERVALS**

**Seeded Bermudagrass, Zoysiagrass, and Centipedegrass:** This product may be applied to Bermudagrass up to 60 days prior to seeding without a significant reduction in stand where the soil is disturbed at planting. For newly established stands, do not apply this product for at least 4 weeks after emergence as injury may result.

**Sprigged Bermudagrass:** This product may be applied to sprigged Bermudagrass no sooner than 2 weeks after sprigging.

**DALLISGRASS CONTROL**

This product in combination with REVOLVER Herbicide (2 fl oz per gallon) and MSO at 1% v/v applied as a spot or zone treatment in late summer or early fall will suppress and/or control dallisgrass. Applications made sooner in the growing season may not be effective. Add the specified product rate of 0.085 - 0.113 oz (2.4 - 3.2 g) to enough water to create approximately one gallon of spray solution. One gallon of spray solution will treat up to 1,000 sq ft. Make a second application if regrowth is observed 30-60 days later, but do not exceed 0.17 oz (4.8 g) of product per 1,000 sq. ft. in a calendar year.







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Thin paspalum, bull paspalum*	Paspalum	setaceum
Virginia dwarf dandelion	Krigia	virginica
White sweet clover	Melilotus	alba
Wild garlic, field garlic	Allium	vineale
Wild lettuce, tall lettuce	Lactuca	canadensis
Wild mustard	Brassica	kaber
Wild parsley	Lomatium	foeniculaceum
Yellow foxtail	Setaria	lutescens
Yellow rocket	Barbarea	vulgaris
Yellow woodsorrel, Oxalis*	Oxalis	stricta

**Weeds controlled at 0.113 oz (3.2 g) of product per 1,000 sq ft**

Common Name	Genus	Species
Annual lespedeza	Lespedeza	striata
Birdseye pearlwort	Sagina	procumbens
Black medic , hop medic	Medicago	lupulina
Dallisgrass**	Paspalum	dilatatum
Doveweed	Murdannia	nudiflora
Florida pusley	Richardia	scabra
Hemp sesbania	Sesbania	exaltata
Large crabgrass***	Digitaria	sanguinalis
Prostrate spurge	Chamaesyce	maculata
Purple cudweed	Gnaphalium	purpureum
Ryegrass (clumpy)	Lolium	perenne
Virginia buttonweed*	Diodia	virginiana
Western ragweed	Ambrosia	psilostachya
Whiteleaf sage	Salvia	leucophylla

\* Weeds that may need a second application of this product for control. If weeds are showing signs of recovery, make a second application 2-4 weeks after the first. Do not exceed 7.4 oz (210 g) of product per acre per year (365 days) for all applications.

\*\* Dallisgrass is best controlled with two spot applications as described above. Follow application directions for a spot application.

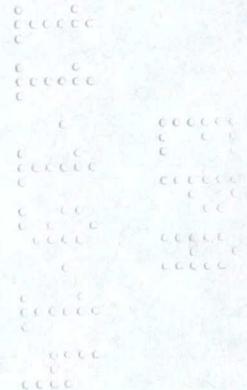
\*\*\*Large crabgrass (Digitaria sanguinalis) is best controlled at early growth stages as described above. Sequential applications of CELSIUS WG may be necessary

**[Optional packaging-related product measurement directions]:**

**CELSIUS WG rates and measurements chart for backpack sprayers and hand-cans  
(For spot treatments only)**

**Labeled Use Rates**

CELSIUS WG Use Rates	oz/1000 sq ft	grams/1000 sq ft	oz/A	grams/A
Low	0.057	1.6	2.5	70
Middle	0.085	2.4	3.7	105
High	0.113	3.2	4.9	140



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**Volumetric measure**

CELSIUS WG Rate\Mix size	Amount of CELSIUS WG to use per mix size				
	1 gallons	2 gallons	3 gallons	4 gallons	5 gallons
Low	½ teaspoon	1 teaspoon	1.5 teaspoons	2 teaspoons	2.5 teaspoons
Middle	¾ teaspoon	1.5 teaspoons	2.25 teaspoons	1 tablespoon	3.75 teaspoons
High	1 teaspoon	2 teaspoons	1 tablespoon	4 teaspoons or 1 tablespoon plus 1 teaspoon	5 teaspoons or 1 tablespoon plus 2 teaspoons

**Rate of CELSIUS WG from measuring cone**

Rate of CELSIUS WG\Mix size	oz CELSIUS WG per mix size			
	2 gallons	3 gallons	4 gallons	10 gallons
Low	-	0.17	0.226	0.56
Middle	0.17	0.25	0.34	0.85
High	0.226	0.34	0.45	1.13

**CELSIUS WG measuring cone equivalents**

Rates on CELSIUS WG measuring cone in oz	Equals	Rate	Mix size
0.17	=	Low rate	3 gallons
0.226	=	Low rate	4 gallons
0.25	=	Middle rate	3 gallons
0.34	=	High Rate	3 gallons
0.34	=	Middle rate	4 gallons
0.45	=	High rate	4 gallons
0.56	=	Low rate	10 gallons
0.85	=	Middle rate	10 gallons
1.13	=	High rate	10 gallons

**SPRAY DRIFT MANAGEMENT**

Damage to sensitive non-targeted plants can occur as a result of spray drift. Spray drift can be managed by several application factors and by spraying under the appropriate climatic conditions. Consequently, avoidance of spray drift is the responsibility of the applicator.

**Sensitive Areas:** Apply by broadcast application (boom-type sprayers) only when the potential for drift to adjacent sensitive areas (water bodies or non-target plants) is minimal (e.g., when wind is 10 mph or less and is blowing away from the sensitive areas). Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Do not apply under circumstances where possible drift to unprotected persons or to food, forage, desirable plants, or crops intended for sale, use, or consumption.

**Droplet Size:** Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Temperature and Humidity below). Select nozzles and pressure that deliver at least MEDIUM-sized spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. Higher-flow-rate nozzles generally deliver larger droplet size and can help reduce drift potential. Nozzles that deliver COARSE spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of weeds.

**Application Height:** To minimize spray drift, apply with nozzle height no more than 3 feet above the ground.

**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. Avoid spraying during conditions of low humidity and/or high temperatures.



[Optional Marketing Claims:]

Pictures:

