



## SUPPLEMENTAL LABEL

### QUINSTAR® 4L GT

All applicable directions, restrictions, precautions and Conditions of Sale and Warranty on the EPA registered label are to be followed.

This labeling must be in the possession of the user at the time of application.

EPA Reg. No. 42750-171

AD021408

## USE ON AERIAL APPLICATION

### DIRECTIONS FOR USE

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

### APPLICATION INSTRUCTIONS

Applications must be made to actively growing weeds as broadcast applications at 0.3 – 0.5 pints of QUINSTAR® 4L GT herbicide per acre in 3-10 gallons of water per acre.

For most broadleaf weeds, the most effective control will result from applying QUINSTAR® 4L GT early, when weeds are small. Delaying application permits weeds to exceed the maximum size and may prevent adequate control.

In all irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth. In all aerial applications, read and adhere to all drift management guidelines in this labeling.

Due to the possible presence of endangered plant species that might be impacted by air applications of QUINSTAR® 4L GT, do not apply QUINSTAR® 4L GT by air in the counties listed in Table 1.

### Spray Exposure to Flaggers

Personnel working on the ground to help guide aerial applications must avoid contact with spray mist and must wear personal protective equipment and protective eyewear.

### ADDITIVES

To achieve consistent weed control, methylated seed oil or crop oil concentrate is required. AMS or UAN can be added to enhance efficacy, but cannot be used in place of methylated seed oil or crop oil concentrate. See Table 1. Additive Rates Per Acre for more information. Consult your local Albaugh representative for recommendations for your area.

**Table 1. Additive Rate Per Acre**

ADDITIVE	AERIAL APPLICATION
Methylated Seed Oil	1.0 – 2.0 <sup>2</sup> pints
Crop Oil Concentrate	2.0 pints
UAN Solution <sup>1</sup>	0.5 gallons
AMS, Liquid <sup>1</sup>	1.5 quarts

<sup>1</sup> Optional

<sup>2</sup> For best grass control, use at least 1.5 pints/acre of MSO.

## TANK MIXES

Consult the EPA approved QUINSTAR<sup>®</sup> 4L GT labeling for information for tank mixing with other registered products.

**Table 1.**

Due to the possible presence of endangered plant species that might be impacted by air application of QUINSTAR<sup>®</sup> 4L GT herbicide, do not apply QUINSTAR<sup>®</sup> 4L GT by air in the following counties.

STATE	COUNTIES
Colorado	Boulder, Delta, Garfield, Jefferson, La Plata, Mesa, Montezuma, Montrose, Morgan, Rio Blanco, San Miguel, Weld
Idaho	Idaho, Kootenai, Latah
Kansas	Allen, Anderson, Atchison, Bourbon, Coffey, Crawford, Douglas, Franklin, Jackson, Jefferson, Johnson, Leavenworth, Linn, Lyon, Miami, Neosho, Osage, Pottawatomie, Riley, Shawnee
Montana	Lake, Missoula
Nebraska	Box Butte, Cherry, Garden, Hall, Lancaster, Morrill, Seward, Sheridan
New Mexico	Chaves, Dona Ana, Eddy, San Miguel
North Dakota	Ransom, Richland
Oklahoma	Choctaw, Craig, Rogers
Oregon	Benton, Clackamas, Coos, Douglas, Harney, Klamath, Lane, Linn, Marion, Polk, Wallowa, Washington, Yamhill
South Dakota	Bennett, Brookings, Brown, Clay, Coddington, Day, Deuel, Grant, Lincoln, Minnehaha, Moody, Roberts, Todd, Turner, Union, Yankton
Texas	Bandera, Brazos, Burleson, Coke, El Paso, Fort Bend, Freestone, Harris, Hays, Hudspeth, Jim Wells, Kerr, Kimble, Kleberg, Leon, Live Oak, Madison, Mitchell, Nueces, Pecos, Refugio, Robertson, Runnels, San Patricio, Starr, Uvalde, Washington
Utah	Cache, Carbon, Duchesne, Emery, Garfield, Kane, Salt Lake, San Juan, Sanpete, Sevier, Tooele, Uintah, Utah, Washington, Wayne, Weber
Washington	Chelan, Clark, Cowlitz, Island, Spokane

## 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  $\frac{3}{4}$  the length of the wingspan or rotor,
2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees. Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the 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. Apply QUINSTAR<sup>®</sup> 4L GT\* herbicide in 3-10 gallons spray volume per acre.

Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy protection. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure. Use a maximum of 40 psi (measured at the boom, not at the pump or in the line).

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

Nozzle Orientation - Orienting nozzles so that the spray is released backward (the downward angle of the nozzles on fixed wing aircraft should not be greater than 20°) or parallel to the airstream on helicopters, 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. Some nozzle examples are CP Lund or flat fans with angles of 25°-65°. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types. If using nozzle screens, do not use screens finer than the 50 mesh size as nozzle plugging is possible.

Boom Length - For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  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 cross-wind, 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. Do not apply QUINSTAR<sup>®</sup> 4L GT when wind is blowing more than 8 mph. 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 equipment up 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 set 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 literally 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, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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