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Systems Integration Group, Inc.

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	Supple	mental		
	Labelir	ng	Dow Agro	Sciences
ACO	Dow AgroScionces	s LLC 9330 Zionsville	Road Indianapolis, IN 4	6268-1054 USA
MAY	18 1996	First	Rate*	
Under the l	Federal Insecticide.	EPA Reg. No		
Fungicide. cs amende registered EPE Esc. 3		Application for Broadle	af Weed Control in Soybe	ans
		ATTEN		
			a manner inconsistent with its lab	peling.
		in the possession of the user	at the time of application. before applying. Carefully follow	all precautionary
3	statements and applic		belove applying. Our croinly follow	an productionary
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 Except as described in this supplemental labeling, use of FirstRate is subject to all precautions and limitations imposed by the labels affixed to the containers for FirstRate.

Directions for Use

FirstRate* herbicide may be aerially applied for preemergence or postemergence control of broadleaf weeds in soybeans. Refer to the product label for FirstRate for complete Directions For Use and specific information on broadleaf weeds controlled.

Application Information

Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage. To minimize spray drift, apply FirstRate in a spray volume of 3 or more gallons per acre. Increase spray volume to 5 or more gallons per acre when there is a heavy weed pressure or dense crop foliage.

Spray Drift Management

The interaction of equipment and weather related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

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 sections on Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream will
 produce larger droplets than other orientations and is recommended. Significant deflection from
 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

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Application Height

Applications should not be made at a height greater than 10 feet above the top of the tallest 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 crosswind, the swath will be displaced downward. 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

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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. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

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.

Temperature Inversions

Applications should not occur during a local, low level 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 sets 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 the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

FirstRate 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, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

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