

Effect of Aquatrols Snowmaking Additive (DRIFT) on Drop Size and Volume Flux Distribution (Spraying Systems Co., Wheaton, IL, 2002)

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Objective: To evaluate the impact of Aquatrols snowmaking additive DRIFT[®] on the drop size and volume flux distribution through spray nozzles typically used in snowmaking

Study Details

Location:

Spraying Systems Co., Wheaton, IL

Site Conditions:

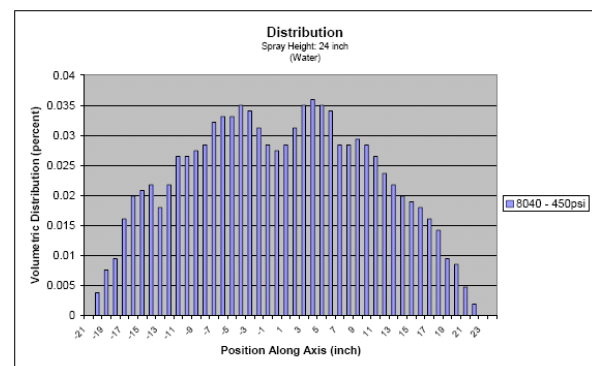
- Tests were conducted under laboratory conditions
- Equipment tested
 - SSCO. Veejet 8020
 - SSCO. Veejet 8040
- Flow rates were 2.0 and 4.0 gpm @ 40 psi
- Liquid pressure was 300 and 450 psi
- Spray height was 12 in. (30 cm.)
- Volume distribution was measured using a 1 in. patternator
- Drop size was measured using a two-dimensional TSI/Aerometrics PDPA instrument with test appropriate additional equipment

Treatments:

- Aquatrols DRIFT injected at 3 ppm
- Untreated Control

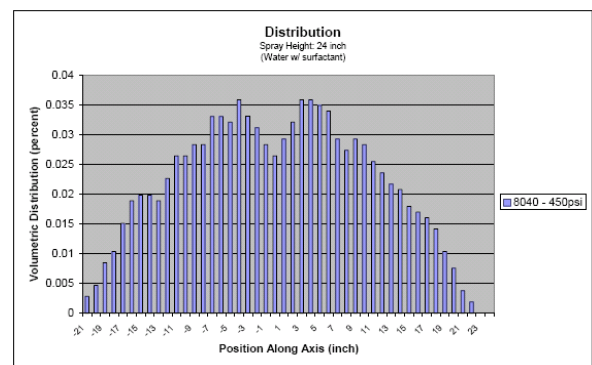
Evaluations:

- Drop size – using $D_{V0.1}$, $D_{V0.5}$, $D_{V0.9}$ and D_{32} diameters
- Average volume flux distribution



Results

- The drop size variance between water and Aquatrols DRIFT solutions was insignificant for both nozzles tested.
- Volumetric distributions for water and the DRIFT solution were virtually identical



Conclusion

Aquatrols DRIFT snowmaking additive has no significant impact compared to plain water on drop size or volume flux distribution through nozzles typically used for snowmaking.