

tion increases spray droplet size, thereby minimizing the potential for drift damage. Tests show that in some cases downwind drift deposits are reduced from 50 to 80 percent with the use of drift control additives. However, in some cases increased drift has occurred when drift control additives were added to the tank mix. Drift control additives constitute a specific class of chemical adjuvants and should not be confused with products such as surfactants, wetting agents, spreaders and stickers. Drift control additives are formulated to produce a droplet spectrum with fewer small droplets.

A number of drift control additives are commercially available, but to be effective they must be mixed and applied according to label directions. Some products are recommended for use at a rate of two to eight ounces per 100 gallons of spray solution. Increased rates may further reduce drift but may cause nozzle distribution patterns to be non-uniform. Drift control additives vary in cost depending on their rate and formulation, but they are comparatively inexpensive for the amount of control they provide. It is wise to test these products in your own spray system to ensure they are working properly before adapting this practice. Not all products work equally for all systems.

## Focus on droplet size

From spray equipment catalogs and web sites, most applicators know how to use flow rate charts to determine the nozzle orifice size needed to deliver a proper application volume (GPA or G/1000 sq. ft.).

Applicators are also comfortable in making those applications with the help of an automatic rate controller, which helps improve the uniformity of application volume. However, a properly calibrated sprayer does not guarantee the application will achieve its highest level of efficacy or minimize drift.

The next step in calibration, calibrating for droplet size, is designed to achieve a more uniform droplet spectra, although most applicators are not familiar with it. The step requires applicators to review droplet size charts to choose nozzle types

<b>ASABE STANDARD S-572.1 SPRAY QUALITY</b>	
<b>CATEGORY</b>	<b>COLOR</b>
Extra Fine (XF)	purple
Very Fine (VF)	red
Fine (F)	orange
Medium (M)	yellow
Coarse (C)	blue
Very Coarse (VC)	green
Extra Coarse (EC)	white
Ultra Coarse (UC)	black

and pressure levels that will meet a specified droplet classification listed on the pesticide label. The droplet size created by a nozzle becomes very important when the efficacy of a particular turf protection product is dependent on coverage or when the minimization of material leaving the target area is a priority. Pesticide manufacturers are beginning to add droplet specifications and spray quality requirements to their labels. Thus, consulting the nozzle manufacturers' droplet sizing charts is essential.

To help applicators select nozzles according to droplet size, spray equipment manufacturers are including drop size charts with their catalogs and websites. The charts classify the droplet size from a given nozzle at various pressure levels according to a standard established by the American Society of Agricultural and Biological Engineers (ASABE). The standard (S-572.1) rates droplets and droplet size categories are color-coded as shown in the chart. Remember, if the label specifies a particular droplet size category, you are required to set up the sprayer to meet that particular spray quality. The label is the law.

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