

Hitting The Target ~ AG Retailer

Hitting the Target, Right From the Spraying Tip

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In the pesticide application business, all eyes are on the target. Not only does the commercial applicator keep a careful watch on reaching target weeds and insects, but his grower customers maintain a watchful eye on his performance as well. The neighbors of his customers, whether they are growers themselves or just the people next door, also keep tabs on how well he is doing. From our nation's capital to each state capital, the EPA, charged by Congress to protect the nation's environment, is watching over both growers and commercial applicators to ensure that they are using safe products and applying them in environmentally friendly ways. With such scrutiny, there isn't much room for error.

Fortunately, advancing technology is keeping pace with the demands of the crop protection industry and is coming through with improvements that consistently reduce spray drift. Introduced just a few years ago, air induction nozzles that allow greater flexibility in pressure ranges are now marketed by nearly all major agricultural nozzle manufacturers. The way they work is that larger droplets are formed at the same flow rate and operating pressure as the droplets formed by comparable flat-fan nozzles. This is accomplished by adding a pre-orifice to the nozzle tip assembly just ahead of the conventional discharge orifice. The pre-orifice reduces the pressure at the exit orifice, creating larger droplets - thus reducing drift significantly.

The True Test Is a Field Test

Using Venturi-type nozzles manufactured by Greenleaf Technologies of Covington, LA, Bryan Whittington of Eudora, AR, runs a one-man operation covering 34,000 to 35,000 acres of soybeans, rice and cotton each year. He says, "These nozzles keep me running in field conditions I wouldn't be able to stay in otherwise." The fact that these nozzles handle a wider range of pressures and that he can run at 100psi opens up additional application opportunities for him.

Like others throughout the U.S., since the introduction and wide acceptance of genetically modified crops, he has had to be much more careful in controlling off-target drift.

Approximately 22,000 to 23,000 acres, close to three-quarters of his business, is applying glyphosate to Roundup Ready soybeans.

"Not only do these nozzles force the chemical into the canopy of the crop, but they offer durability that others have not been able to," Whittington says. Because of windy conditions that occur in his region and the tight window of opportunity available to cover the necessary acres each May, he does a substantial amount of work at night. Here too, he is happy with these nozzles. He says, "There is no way I could have gone out at night with my old nozzles."

According to Whittington, maintenance is low on the TurboDrop nozzles. Currently, he gets two full seasons per set without having to replace them. He adds, "I think we could get three seasons out of them, but I'm not ready to go that far yet."

Will Smart, president of Greenleaf Technologies, agrees that low-drift nozzles are the wave of the future. He explains that in parts of Europe, where buffer zone restrictions are already in place, allowances are now being considered with approved low-drift nozzles.

Greenleaf's first Venturi-type nozzle, the TurboDrop, was introduced in 1996. It later updated that nozzle with the TurboDrop XL, designed to operate at even lower pressures. This year, Greenleaf introduced the TurboDrop CXL, a ceramic version of the XL nozzle.

Todd White, who operates a John Deere 4700 for Brown's Fertilizer and Chemical out of Carmi and Ridgeway, IL, also thinks that drift reduction is the way of the future. Applicators throughout central Illinois agree. Talk around the coffee shops is that any time there is trouble with crop damage, the first words out of an insurance adjuster's mouth are, "Were you using drift-reducing nozzles?"

White says, "Seeing is better than believing. With the set of TurboDrops on my unit, I can run where others can't." He has plenty of opportunity to compare, covering approximately 30,000 acres of application each year, primarily in corn and soybeans. He also operates a pickup truck sprayer where the booms don't go close to the ground. "These nozzles give us better coverage and no drift," he concludes.

Greenleaf Technologies recently introduced the TurboDrop CXL. This nozzle tip follows the introduction of the TurboDrop in 1996, followed by the TurboDrop XL, designed to operate at even lower pressures. Now, the ceramic tip offers longer wear.

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