
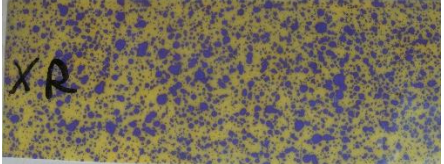
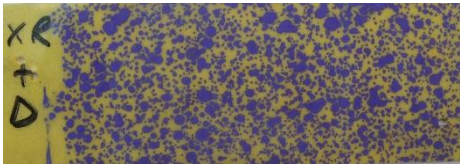

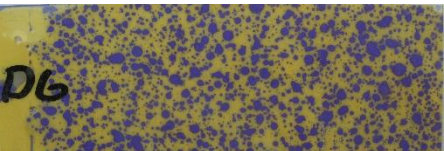
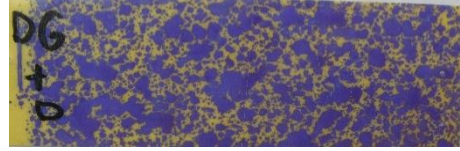

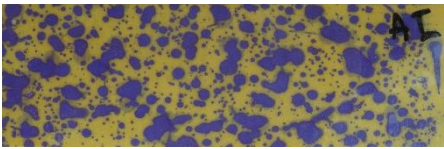
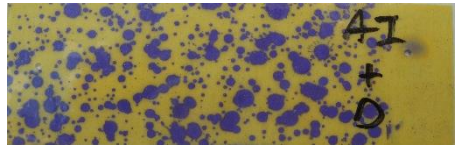

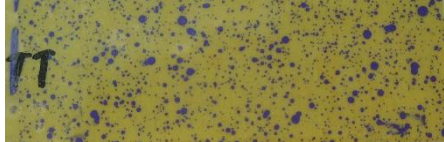


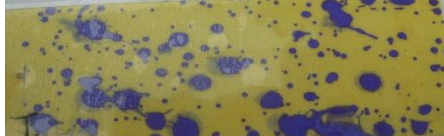
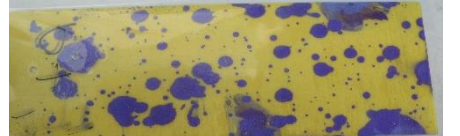


**2020 Grow More Nozzle Sprayer Demonstration**

Early planted crops are now up and the post application season is upon us. Nozzle selection is no longer a “one size fits all” with the onset of new technologies and weeds that require maximum foliar coverage to help gain control. Many post products today work better at higher carrier volumes to help improve coverage of weed foliage. Most foliar herbicides work best with coarse droplets between 200-450 micron sizes, yet due to drift /off target concerns the new Dicamba products require very coarse droplets that can easily exceed 700 microns in size.

To help evaluate how nozzle types impact foliar coverage and the impact of addition of a Drift Reduction Agent, we conducted a test of each nozzle with and without a DRA. The test was conducted at 20 gallons of carrier rates, at 4 mph, using appropriate pressures. Water sensitive papers were laid out at ground level and also at 1 foot and 3 foot to either side of the applications. Winds were very light at between 2-4.5 mph.

Nozzle Type	Water @ 20 gpa	Water @ 20 gpa + DRA
XR 80015 		
DG 80015 		
AI 11004 		
TTJ 11002 		
TTi 11002 		

Only the TTJ (Turbo TeeJet) and AI nozzles had observable drift particles at the 1 foot distance. Both were 110 degree nozzles so the spray angle was wider which contributed to

the sideways movement at 1 foot distance. The TTJ had 10-15% drift coverage and the AI had 5%. Photos not included.

#### Key Observations:

- Addition of DRA increased droplet sizes but reduced coverage with the AI and TTI nozzles by 10% (from 70 to 60% for AI Nozzle; from 25 to 15% for the TTI)
- The Xtended Range (XR) and Drift Guard (DG) nozzles provided the most thorough coverage followed by the Turbo TeeJet and AI nozzles.

#### Key Takeaways:

- The TTI nozzles with DRAs should be reserved for use with the new soybean Dicamba technologies (Tavium, XtendiMax, Engenia, or Fexapan brands only) as required by labeling. The coverage may not be adequate for most other post applied herbicides applied in the absence of an approved soybean Dicamba product.
- The XR and DG nozzles provide the most uniform droplet sizing and overall coverage. These are best used with post herbicide applications, especially with non-systemic herbicides such as Flexstar (the Group 14 PPO site of action herbicides) and Fusilade DX (Group 1 AACase site of action herbicides) when an approved soybean Dicamba containing product is **not** in the tank mix.

When making a soybean application including an approved dicamba product, check the appropriate manufacturer websites for the latest guidelines around tank mixes, approved adjuvants, DRAs, and nozzle selections. As an example, the Tavium with VaporGrip Technology website recently increased the number of approved nozzles including several AI types AI11003; AI11005, AI11006; AI8003; AI8004; AI8005; AI8006. If tank mixing with a nonselective herbicide you may want to use an AI nozzle to improve coverage over a TTI type nozzle as our demonstration showed.

Applicators should follow all label directions when selecting and setting up their spray systems selecting the right nozzles, at the right pressures to provide the best uniform coverage of the targeted label weeds while reducing risks of off target movement. Properly sized nozzles used within the target spray pressures reduce the risks of having to exceed pressure targets in order to reach application volumes. Too high of pressures can increase drift risks.

Talk to your Syngenta Representative for information about selecting the right nozzle for application of any Syngenta product.

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Product performance assumes disease presence.

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Some seed treatment offers are separately registered products applied to the seed as a combined slurry. **Always read individual product labels and treater instructions before combining and applying component products.** Orondis Gold is a combination of separately registered products: Orondis Gold A and Orondis Gold B.

**Consult bag tags for E-Z Refuge product herbicide options. Only those labeled EZ1 may be sprayed with glufosinate ammonium based herbicides.** LibertyLink<sup>®</sup>, Liberty<sup>®</sup> and the Water Droplet logo are registered trademarks of Bayer. HERCULEX<sup>®</sup> and the HERCULEX Shield are trademarks of Dow AgroSciences, LLC. HERCULEX Insect Protection technology by Dow AgroSciences. **Under federal and local laws, only dicamba-containing herbicides registered for use on dicamba-tolerant varieties may be applied. See product labels for details and tank mix partners.** Golden Harvest<sup>®</sup> and NK<sup>®</sup> Soybean varieties are protected under granted or pending U.S. variety patents and other intellectual property rights, regardless of the trait(s) within the seed. The Genuity<sup>®</sup> Roundup Ready 2 Yield<sup>®</sup> and Roundup Ready 2 Xtend<sup>®</sup> traits may be protected under numerous United States patents. It is unlawful to save soybeans containing these protected traits for planting or transfer to others for use as a planting seed. Roundup Ready 2 Yield<sup>®</sup>, Roundup Ready 2 Xtend<sup>®</sup>, Genuity<sup>®</sup>, Genuity and Design and Genuity Icons are trademarks used under license from Monsanto Technology LLC. Other trademarks displayed or otherwise used herein are the property of a Syngenta Group Company or the respective trademark owners.