

Tolerance To Ignite

Trials Show 29 Ounce Rates Do Not Injure Cotton

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Research on using Ignite on Widestrike and LibertyLink cotton was presented recently by Dr. Darrin Dodds, Mississippi State Extension cotton specialist. He, along with Dr. Tom Barber from the University of Arkansas and Dr. Chris Main, University of Tennessee, as well as researchers in Georgia and North Carolina, are looking at tolerance of some of these varieties to the Ignite herbicide.

“Essentially, in 2010 and again in 2011 we were looking at Phytogen 375 WRF which has been Vitasin’s flagship Widestrike variety,” Dodds said. “Then we used Fibermax 1773 LLB2 from the LibertyLink side and we’re looking at different rates of Ignite on those varieties. We looked at 29 ounces which is a 1X labeled rate, 58 ounces, 87 ounces and 116 ounces of Ignite over the top. We sprayed those on one to three leaf cotton and six to eight leaf cotton. We were trying to simulate a farmer’s in season program with Ignite and maybe how they would use it on some of these varieties.

“We found that the 29 ounce rate, which is a labeled rate, over the top of Widestrike cotton shows no yield decreases,” he said. “Where we start to see problems show up is when we get to the 58, 87 and 116 ounce rate of Ignite; however, all three of those are off label. The highest label rate is going to be 43 ounces. In addition, with 29 oz, we really don’t see any delays in maturity, we don’t see any height difference and we don’t see any yield problems.”

Once the rate gets to 58 ounces, there’s a little delay in maturity, anywhere from 2 days to 4 or 5 days, depending on the weather.

“If you have cool conditions it might delay that a little bit; and that delay just tends to be in step-wise increment increases as you go to 87 ounces and 116 ounces,” Dodds reported.

Another aspect of the study is the question of whether all varieties are created equal. The trials center on whether Phytogen 367 WRF, 375 WRF, and 440 W, have the same level of tolerance to Ignite or if all those genes expressed differently.

“For the most part, most of these varieties look like they have some level of tolerance,” he said. “So we compared those to three LibertyLinks, 1773 LLB2, 1845 LLB2 and 1735 LLB2, and for 2011 we brought ST 4145 LLB2 into the study. That’s going to be the new Stoneville LibertyLink, the only Stoneville LibertyLink, and it’s Stoneville’s flagship LibertyLink variety.”

They had a block that was completely untreated with Ignite and a block that was treated with 29 ounces of Ignite two times, at one to three leaf and again at six to eight leaf. No issues with tolerance from a height standpoint, from a number of nodes standpoint, from a yield standpoint, on Widestrike cotton were seen.

“LibertyLink cotton showed very, very robust tolerance to Ignite; even at 116 ounces twice applied, we saw no visual injury, we saw no height issues, no yield issues, no instances at all, just very, very, robust tolerance,” he added.

Essentially, the recommendation is that 29 ounces is a safe application; however, care must be taken when putting additives in with it.

“I would not recommend putting ammonium

sulfate with it,” he warned. “In Mississippi, we have a lot of plant bugs, but I wouldn’t recommend putting Bidrin or Dimethoate or even Orthene in there. That increases the chances for injury and I just don’t think those are chances we need to be taking.”

He also warned that in later applications as plants approach bloom, the injury potential starts to go up.

“We tend to see more injury from the later ap-



Dr. Darrin Dodds, Mississippi State Extension cotton specialist explains research on tolerance of some cotton varieties to Ignite herbicide.

Photo by John LaRose

plications than we do from the earlier applications, which in some respects, is a little counter intuitive to what we normally think,” Dodds said. “We normally think young tender cotton is more susceptible to injury, but when that plant starts partitioning resources to different places as it approaches bloom, the chance for injury with Ignite on Widestrike really begins to increase.”

He urged those who grow cotton in West Tennessee, Mississippi and Arkansas to continue to use a residual program, and if rainfall is uncertain a backup plan is needed.

“You have to have something in place if the pigweed gets out of control,” he said. “So if you choose to plant Widestrike cotton, I feel like 29 ounces is going to be a safe application on that; if you’re uncomfortable with that and you decide you want to go to LibertyLink, the tolerance from a LibertyLink standpoint is unquestioned in terms of Ignite tolerance on it.”

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