

Cotton, May 30, 2003

CAN I CHEAT ON THE 4-LEAF OVER-THE TOP STAGE?

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Why does Roundup Ready cotton have an over-the-top cutoff of the 4-leaf stage? What happens if you cheat and wait until the 5-leaf stage? In a perfect world, we accept the 4-leaf cutoff as gospel and don't worry about it. But this is 2003 where there's a 3-inch rain every other day, and growers are being faced with these very questions.

Just after the 4-leaf stage, cotton begins its first steps of boll formation. When glyphosate is applied too late, it can disrupt boll formation and can often result in three or so missing positions.

Sometimes, you can apply Roundup, over the top, late and have no yield effect. Very likely, there will be a "hole" in the middle of the plant with no bolls, but in these cases there are more bolls higher up in the plant. This is called "compensation" and many plants have a wonderful ability to compensate for damage, be it hail, or glyphosate. Cotton has the ability to compensate, but this requires excellent growing conditions. While you can sometimes get away with it "sometimes" is the magic word. It's a pretty good bet that those lost positions result in lost yield- especially in the heat-limited North Delta..

What about cheating to the 5-leaf stage or the 6-leaf stage? Some data show that yields are usually not affected up to the 6-leaf stage. (Hopefully you've noticed my liberal use of crawfish words like "some" and "usually"). But you should also know that there is a large amount of data that show that when you go over-the-top after the 4-leaf stage, the first fruiting node starts creeping higher. So while late applications sometimes don't affect yield, they very often affect fruiting.

What's the bottom line? You might get away cheating to the six-leaf stage, but that opens the door for a very slippery slope. If it was 5 leaves two days ago and you'll be out to spray as soon as it dries up, you can be well into the yield loss range. The 5-leaf stage may be a good bet, but there is no guarantee that the cotton will compensate. The 4-leaf cutoff is the result of a whole lot of data and a small safety margin. Cheating on it, risks a yield loss. Maybe it will be small, but maybe you'll win the lottery too. Spraying after the 4-leaf stage, will put you in a situation of being on your own, should your yield wind up being off.