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### **ATRAZINE SHUFFLE- TIMING NOT CRITICAL**

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We have a study called "The Atrazine Shuffle." Since you can't use very much atrazine, the goal of the study is to determine if it's best to use it preemergence, postemergence or split. This study was headed by Dr. Neil Rhodes with UT Knoxville and included Dr. Tom Muller and Dr. Bob Hayes, from UT in addition to us at the Delta Center.

The treatments were designed to use the entire 2.5 pound per acre per year of atrazine. We started with 2 pounds PRE and decreased it to 1.5 and 1 pounds pre. As the PRE rate decreased, the POST rate increased from ½, to 1, 1.5 and 2 pounds POST. Crop oil was used with POST treatments and they were applied when corn weeds were 2 to 4 inches tall.

The results were a little bit different in each study- but all of the atrazine sequences resulted in good weed control. If activating rains were good, and it was dry at POST time, the treatments with more PRE atrazine were slightly better. If the activating rain wasn't so good, but POST conditions were good, the POST treatments were a bit better.

It's the same old story- we can't control the weather and it's the biggest factor. Overall, the best schemes were roughly 50% of the atrazine PRE and 50% POST. While we did not test an exact 50-50 split, there was virtually no difference between 1.5 followed by 1 and the reverse. The benefit to this treatment is that it spreads the risks and reduces some of the weather effects.

There are some good reasons to use preemergence atrazine. Whatever the crop, preemergence herbicides give weed control a head start, increase the flexibility of postemergence treatments, and are good insurance. If spraying things on time is a problem, you should consider this route. However, the current practice is to use postemergence atrazine to allow replant flexibility. As long as you can spray on time, there are big benefits to this program. Season-long weed control is a major limitation to corn and the later you can spray, the later it will last.

With the "50-50" splits the one problem is that if can be if everything goes well with the preemergence treatment, corn can be a foot tall and be weed free and you might be tempted to skip the second shot. However, that's a prescription for failure. It's extremely rare that a preemergence treatment provide season long weed control- especially a lower rate. So stick with your plan and put it out when corn is 8 to 12" tall- needed or not.

Of course the final factor here, is that corn weed control is more than just atrazine. Atrazine-grass premixes and atrazine-based post products like Basis Gold may seem to complicate things. However, they do not change the key concepts. Just be sure that your program isn't short changing you on atrazine in favor of a more expensive broadleaf herbicide. Many of the mix products have important, needed attributes, just be sure to spike atrazine as needed and ask if you aren't sure when you should.