Field Notes
March 23, 2011
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We just had our second verification field planted. This one is in Vermilion parish where you can see from the photograph at right, it is very dry. I have spoken to farmers in northeast Louisiana and Texas who have told me they are "powder dry". The good thing about rice is that we can plant even if there is insufficient moisture then we can flush the field. Once we have flushed a field on a silt loam soil type we are committed to flushing until the crop emerges to prevent the formation of a crust. Clay soil types tend to granulate on the surface so flushing is a little easier, but it should not be allowed to dry out either. Ideally, one could flush the field before planting and then plant into sufficient moisture. The problem with this method is timing – anticipating that conditions will still be good by the time the field has been flushed, drained, and then dried enough to plant. Pretty tricky to say the least.

In an adjacent field the farmer said he had applied two pints of glyphosate plus 0.5 ounce of First Shot five days prior and did not observe the same activity as in some of his other fields. When county agent Stuart Gauthier and I looked at the field we found the heaviest population of Narrow Leaf Aster I have ever seen. The other fields had the same problem, but also had other weeds that were showing herbicidal activity producing an illusion of better activity in some fields than others. The aster was responding the same in both. Dry conditions have a great deal to do with the herbicide response.

This weed is a perennial that has been around a long time, but has not been a real problem until the last few years. This is especially true in no-till or reduced tillage stale seedbed systems. Regular plowing tends to keep it in check which is typical of many perennial broadleaf weeds. We recommended another two pints of glyphosate to be mixed with Command he intended to apply anyway. If glyphosate was not as economical as it is now I would recommend a flush before applying more herbicide. However, since he intends to apply Command with a ground rig and no rain is in sight, the additional glyphosate is insurance. He will flush following the Command application if it does not rain. We'll let you know what happens.

Above is the field with the heavy population of Narrow Leaf Aster. At left is a single plant. There is some chlorosis of the youngest leaves and some curling. This is a tough weed that is building up in some fields. With adequate moisture I think we would have seen much better activity.

I also have had a few calls regarding drill calibration. This topic was covered in an earlier edition of Field Notes (March 26, 2007) and it is on the web at www.lsuagcenter.com/en/crops_livestock/crops/rice/culturalpractices . It is also addressed in the March issue of Rice Farming magazine. Following is an abbreviated version.

Determine the space between runners. Divide the inches measured by 12 to convert this to feet.

Divide 43,560 (the square feet in one acre) by the drill spacing. This will determine the number of feet under each runner to cover one acre.

Find out how many seed per pound your variety has by using tables or information on the bag.

Multiply the desired seeding rate in pounds by the number of seed per pound. This will determine the number of seed per acre.

Divide the number of seed per acre by the feet per acre under each runner. This will determine the seed per foot of row needed.

Older drills can be calibrated by turning the drive wheel by hand. The newer air drills require other techniques beyond the scope of this publication.

On an older drill mark a spot on the lower part of the drive wheel and mark a spot in the field that matches it. Drive the drill until the wheel makes 10 revolutions. Mark that spot.

Measure the distance between these two marks. The distance measured in this manner takes into account the drive wheel sinking into the soil and is the effective circumference of the wheel.

Multiply the distance measured times the seed per foot determined earlier. This is the number of seed you will need to catch to achieve the desired seeding rate.

Park the drill, load it with enough seed to ensure proper feeding, place catch bags under the downspouts, and then turn the wheel 10 revolutions.

Count the number of seed caught. When adjusted properly the number counted will equal the number needed for the seeding rate desired.

Example:
7 ½ inch runner spacing = 7.5 divided by 12 = .625 feet
43,560 divided by .625 feet = 69,696 feet
Seed per pound is 19613 according to the table in Rice Varieties and Management Tips 2011
Desired planting rate is 60 pounds per acre
Multiply 19,613 times 60 pounds per acre = 1,176,780 seed per acre
Divide 1,176,780 seed per acre by 69,696 feet per acre = 16.9 seed per foot
Distance measured in the field is 75 feet after 10 revolutions of the drive wheel.
Multiply 16.9 seed per foot times 75 feet = 531 seed to catch.

If this number seems too high then just turn the wheel five times and catch half the number of seed (265). The more revolutions you turn the more accurate the estimate will be.

This is a tedious task that will probably take at least a couple of hours. These two hours will be well spent. I have had calls about folks planting 100 acres before realizing they have only planted half the intended amount of seed or in some cases twice as much. Both will cost more than two hours spent calibrating the drill especially considering the cost of seed today. I hope this helps.