

LOUISIANA RICE NOTES

Drs. Dustin Harrell & Don Groth

May 8, 2015

No. 2015-04

Blast found in Jupiter

Many things have happened over the past couple of weeks in regard to the Louisiana crop. Probably the most important is that leaf blast has been identified in two Vermilion Parish rice fields. Both fields are growing the medium grain variety Jupiter, which is considered moderately susceptible to blast. One field is approximately at the mid-tillering growth stage of development and the other is almost at green ring. With the early sighting of leaf blast in Jupiter many questions have arisen regarding fungicide applications for blast. The most often asked questions are: How bad does the leaf blast have to be before deciding to trigger a two fungicide application strategy to control the blast? If you do decide to apply two fungicide applications, what timings are recommended? These are excellent questions, and Dr. Groth has quickly put together information regarding these blast questions plus a whole lot more...

Leaf blast has started to show up in the area on the variety Jupiter. Blast disease is caused by the fungus *Pyricularia grisea* and is one of the most important diseases of rice in the world and the Mid-South. Yield losses as high as 90 percent have been observed in Louisiana because of this disease. Blast can infect rice from the seedling stage to near maturity. The leaf blast phase most commonly occurs between the seedling and late tillering stages. Leaf spots start as small white, gray or blue-tinged. They enlarge quickly under moist conditions to either oval or diamond-shaped spots or linear lesions with pointed ends with gray or white centers and narrow brown borders. Leaves and whole plants can be killed under severe conditions. The most important aspect of leaf blast is that it provides inoculum for infecting the panicles. Fungicides are not normally used at this stage unless you are losing the stand. The best control method is to restore or deepen the flood so all of the soil in the field is covered with water.

Scouting for blast should begin early in the season during the vegetative phase and continue through to heading. Scout the entire field, examining plants at several different locations. Blast is more commonly found in fields where (a) the field has a history of disease, (b) the variety is susceptible, (c) high nitrogen rates are used, (d) the field has sandy soils, (e) the rice was planted late (late-planted rice is more likely to encounter foliar disease problems than early-planted rice), (f) along the edges of tree lined fields, most importantly (g) the rice is

growing under upland (no flood) conditions. Draining for straighthead and water weevil control may increase the incidence and severity of blast. These conditions should be avoided whenever possible. Also, as the percentage acreage of blast-susceptible varieties increases, the probability of an epidemic increases because more wind-borne spores pass between fields.

Correct identification of rice leaf blast is critical (Figure 1). Several diseases and disorders have similar symptoms, but control practices are not justified for these other diseases. There is a lot of diversity of lesion type so examine several different lesions at several different locations in the field. If identification is in doubt, leaf samples can be placed in a moist chamber to induce sporulation and identified by spore type (Figure 2) under a microscope.

Figure 1. Correct identification of leaf blast is critical to effective disease control.

Not Blast



Brown Spot



Stackburn

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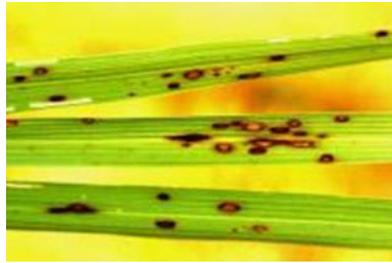
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Chemical damage



Blast



If leaf blast is in the field or has been reported in the same general area, and if the variety is susceptible, fungicidal applications are advisable to protect the head from rotten neck and panicle blast. The only fungicides that have activity against blast are the strobilurins Trifloxystrobin and Azoxystrobin. Trifloxystrobin containing fungicides (Stratego and Gem), are slightly more effective against blast than Azoxystrobin (Quadris, Quilt, and Equation) but they are all effective. I am not sure if Gem is commercially available. Most of the time leaf blast should not be sprayed unless it is killing the rice plants. Normally a single application will control blast on a susceptible or moderately susceptible variety. The rice should be sprayed at 50-70% heading to protect the neck and panicle branches. If a variety is very susceptible or leaf blast is still very active on susceptible varieties two applications are needed, one at 2-4 inch boot to reduce the inoculum in the field and the second to protect the head. Remember as little as a 5 day delay in the heading application can greatly reduce control.

Figure 2. Blast spores.



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Upcoming

- May 28 Southwest Rice and Soybean Field Day, Fenton. (morning)
- May 28 Vermilion Parish Field Day, Lake Arthur. (afternoon)
- June 16 Acadia Parish (Rice Research Station South Farm) Field Day, Crowley.
- July 1 Rice Research Station Field Day, Crowley.

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