

Rice Disease Newsletter Number 4
Scouting for blast
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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. 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.

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



Figure 2. Typical microscopic lemon shaped blast fungal spores viewed through a microscope.

