date management recommendations for improving N use efficiency. Product testing is important so growers can make informative decisions on what products to employ and how they are best utilized in their system. Knowledge of the soil/plant interactions is critical and continued investigations are critical to further develop best management practices for rice production.

Program 13R-2

Evaluation Of CLEARFIELD® Production System Label Changes On Clearfield® Hybrid Rice

Presented by Mason Wallace
Development Representative, RiceTec, Inc.

BASF® recently changed its Clearfield® Production System to allow Beyond® to be applied at 4- leaf stage to panicle initiation on Clearfield® hybrids. The label changes allow producers the flexibility to apply Beyond instead of Newpath® at the second application timing. Experiments were conducted in Arkansas, Missouri, Texas, and Louisiana to evaluate the use of Beyond at this second application timing on Clearfield hybrid rice.

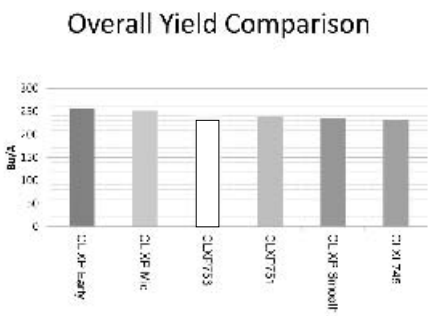
The experiments were planted in four states to insure a wide range of environmental conditions and varying soil types for the experiments. The Texas location was planted on April 4th at Eagle Lake, TX. The Louisiana location was planted on March 28th at Eunice, LA. The Arkansas location was planted on April 19th at Harrisburg, AR. The Missouri location was planted on May 31st at Broseley, MO. The experiments ranged from a clay soil at Eagle Lake, TX to a sandy loam at Broseley, MO. The experiments consisted of 1X and 2X rates in the Clearfield Production System utilizing Newpath applied at the 1-2 leaf stage and either Newpath or Beyond at the 4-5 leaf stage.

Treatment	Application Timing	
	1-2 Leaf Stage	4-5 Leaf Stage
1	0 oz/A	0 oz/A
2	Newpath 6 oz/A	Newpath 6 oz/A
3	Newpath 12 oz/A	Newpath 12 oz/A
4	Newpath 6 oz/A	Beyond 5 oz/A
5	Newpath 12 oz/A	Beyond 10 oz/A

All applications were made with a CO2 backpack sprayer at 10GPA. Crop oil concentrate was used at 1% v/v with each treatment.

The data from all four locations showed that regardless of application rate or product at the second timing there was no significant difference in yield among treatments. Newpath or Beyond resulted in very similar yields when applied at the 4-5 leaf stage at the varying rates. Yields varied by locations with Louisiana and Arkansas having the highest overall yields. The Missouri location had the lowest yields of all the locations due to its late planting date. The yield data showed that the two newest hybrids had the highest overall yield. The two new hybrids showed approximately an 8% increase in yield over CLXL745. The 1X and 2X application rates of Newpath and Beyond showed very little plant response at any of the locations. The Missouri location on the sandy loam soil did exhibit some plant response from the applications. Plants exhibited stunting and slow growth approximately two weeks after application for 7 to 10 days. Plant response was brief and plants quickly recovered from symptoms. No effect on yield was apparent in the Missouri data from the brief plant response. The data concludes that producers can choose between Newpath or Beyond at the second application timing in the Clearfield Production System with no differences in plant response or yield with RiceTec, Inc. hybrids. The label change will give producers more flexibility in

choosing what product to use in the Clearfield Production System.



Program 10R-2

Rice Bacterial Panicle Blight In The Southern United States

Presented by Dr. Yeshi Wamishe
Assistant Professor Extension Rice Pathologist, University of Arkansas

Bacterial panicle blight has been observed increasing in rice production fields in Arkansas and other southern states since 1995. The disease is favored in summers with hot nights and thought to be primarily seed-and possibly residue-borne, and can cause up to 60% yield loss under favorable environmental conditions like 2010 and 2011 in Arkansas. During the past two summers in our state, yield reductions caused by bacterial panicle blight were up to 50% as the disease has been a serious problem in other southern states including Louisiana, Texas, Southeast Missouri and Mississippi. Symptoms develop late in the season on the panicles which makes predicting its occurrence difficult.

Although bacterial panicle blight of rice has been reported to be caused by more than one bacterial plant pathogen, we have isolated B. glumae most frequently from infested rice fields. Recently, bacterial panicle blight has been considered the top priority disease in Arkansas because of the serious yield losses experienced and that no reliable management options are at hand. Further complicating matters, the disease cycle is not fully understood under our conditions and chemical control options, while used in Asia, have not been registered in the U.S. Current fungicides used on rice in the U.S. have no activity on bacterial panicle blight and the development of antibiotic resistance in Asia to products there have fostered concern about development and use here.

There are no dependable cultural management options, although reducing the nitrogen amount applied has been observed to reduce disease severity but these observations require further investigations. The disease also appears to increase in fields where rice plants have been under stress, although specific factors have not been well researched. In 2010 in Arkansas, the disease appeared to be more severe in rice after rice fields and we do not know how long the bacteria may survive in the soil or residue. Dispersal of the pathogen in rice fields is also not well understood. The role of stink bugs or other panicle active insects or mites in pathogen dispersal needs investigation. Although planting early has been considered to likely help the plants escape the disease, it may be effective only if the hot weather comes later in the season and this also needs further investigation.

Like most other diseases, growing bacterial panicle blight resistant rice varieties is a user- and environmentally friendly way of managing the disease. However, most varieties that are available commercially are susceptible under favorable conditions with the exception of 'Jupiter' and hybrid rice cultivars. 'Jupiter' has only partial resistance indicating the disease may not be fully controlled and resistance in the hybrids is not understood. LSU Ag Center scientists and have been working towards various management options and resistance devel-