

**Rice Research and Promotion Board 2005  
Progress Report for Breeding and Evaluation for Improved Rice Varieties (1860)  
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A line, STG03IMI261-177 has been released to BASF for further testing and seed increase. It originated from the cross Wells/CL161 made at the Rice Research Station at Crowley LA in conjunction with Tim Croughan in 1999. STG03IMI261-177 is similar in maturity to 'Cypress'. Rough rice grain yields and milling yields are similar to Cypress, CL161 and CL131 in the Arkansas Rice Performance Trials (ARPT). STG03IMI261-177, like Wells, Francis and CL161, it is susceptible (S) to common rice blast (*Pyricularia grisea* (Cooke) Sacc.). It is moderately susceptible (MS) to sheath blight like Wells which is an improvement over CL161 and CL131 which rate very susceptible (VS) to sheath blight. STG03IMI261-177 is also rated MS to kernel smut which compares to Wells which is moderately resistant (MR), and CL XL8 (MS), CL161 (S), CL131 (S), and Cypress (VS).

Banks a high yielding, long-grain line was grown as registered seed on 3.6% of the 2005 Arkansas acreage according to the DD50. It has blast resistance to many of the common races of blast in Arkansas and is susceptible to races IE-1k and IB-33 and moderately susceptible to race IB-49.

The early line Spring was released to seed growers for the first time in 2005. Spring has good yield potential and heads in less than 80 days. It originated from a cross involving an extremely early line from Hungary, it shows good seedling vigor and some cold tolerance. It has been evaluated for its potential in rice cropping systems as an early line.

Approximately 100 very early lines, heading between 62 and 64 days that appear to have some blast resistance were harvested to be screened in the preliminary test in 2006. These lines are from the cross Raminad Strain 3/RU9101001. Raminad Strain 3 is a line with blast resistance to all of our blast races, RU9101001 is the early parent in Spring which has the Hungarian line in its pedigree.

Fifty-four cross combinations have been planted in the greenhouse this winter. Panicles were also selected from 100 cross combinations in 2005. These have been sent to Puerto Rico to be grown this winter. From the 13,000 long-grain panicle rows grown in 2005, 1167 have had panicles selected and 746 have been harvested in bulk to be advanced into the Preliminary Test in 2006. As stated above 100 of these lines are early lines. Two hundred and twenty-eight rows were also harvested from the panicle rows which came back from Puerto Rico last spring, and 829 of these rows have had panicles selected.

There were 446 entries harvested from the 722 plots in the 2005 Preliminary Test grown at the RREC. These lines will be further screened and the best will be advanced to the Stuttgart Initial Test in 2006. The data from the 304 entries in the Stuttgart Initial Test in 2005 are being evaluated at this time. We have 104 entries again in the ARPT, and 200 entries in the URRN, these are joint trials with Dr. Gibbons. The ARPT is grown at 7 locations Jackson County, Clay County, and the NEREC (James Gibbons); RREC, Pine Tree Experiment Station, SEREC (Karen Moldenhauer) and Missouri with Donn Beighley. The URRN has entries from Arkansas, Louisiana, Texas and Mississippi, and is grown in these locations and Missouri. The SEREC was not harvested in 2005 due to damage from hurricane Rita.

In 2005, 966 Newpath resistant lines were evaluated in panicle rows at the RREC. Of these, 198 have been harvested for further testing and panicles have been selected from another 72 for further selection. There were also 32 Newpath resistant lines in a replicated yield test at Stuttgart. This work is being conducted in conjunction with BASF. BASF has helped fund the yield test that we have at the RREC this year. Data are currently being evaluated on these lines and a decision will be made on whether to release one of them shortly.

Dr Moldenhauer participated in field days at PTES, RREC, Lake Hogue and Cash River Valley during August 2005.

Data from the Arkansas Rice Performance Trials (ARPT) conducted in Arkansas in 2005, is available in the University of Arkansas Cooperative Extension Service Information Sheet "Arkansas Rice Performance Trials, 2003-2005, and on line at: [www.aragriculture.org/](http://www.aragriculture.org/) Go to Crops Soils and Water Management; Rice; Performance Trials.