cospera incidence was greatest for the ratoon rice harvested normally (4.8) and was reduced when applying any stubble management practice (all < 3.0) when fungicide was not applied. Fungicide application reduced cercospera pressure from 4.8 to 3.5 in the normal harvest height rice when a fungicide was applied. However, fungicide application did not significantly reduce disease pressure when coupled with a stubble management practice.

In 2012 at the Vermilion Parish location, main crop mean rice yields differed between Catahoula and CL131 (8899 and 8036 lb/A, respectively) but did not differ prior to implementation of the other treatments. A highly significant grain yield response (P = 0.0001; LSD = 154 lb/A) was observed for the interaction between variety and stubble management. Raton grain yields for CL131 was greatest when harvested at a low harvest height (2921 lb/A), were reduced when either rolling (2768 lb/A) or bush hogging (2759 lb/A), and reduced further (2024 lb/A) at the normal harvest height. Ratoon grain yields for Catahoula were statistically similar for the low harvest height (2541 lb/A), normal harvest height (2451 lb/A), and rolled stubble (2413 lb/A); however, ratoon grain yields were reduced (2179 lb/A) when bush hogging compared with all other treatments. Mean cercospera disease ratings pooled over stubble management and fungicide application were significantly (P = 0.0001; LSD = 0.2) greater in CL131 (4.8) compared with Catahoula (3.3). When pooled over variety and fungicide application, stubble management was significant for cerospera ratings (P = 0.0001; LSD = 0.05). Normal harvested rice straw produced ratoon rice with a higher incidence of cercospora (5.4) compared with rolled stubble (3.9), low harvest height stubble (3.6), or bush hogged stubble (3.5). Fungicide application in the ratoon crop did not statistically improve ratoon grain yields or decrease cercospera disease incidence.

Program 9R-2

Water- And Energy-Saving Rice Irrigation: Comparison Of Intermittent Flooding And Row-Rice Systems

Presented by Dr. Joseph Massey
Associate Professor, MSU

During the 2010-2012 growing seasons, six Clearfield varieties were planted at the top and bottom of a paddy in producer's fields and managed using intermittent flooding within a straight-levee, multiple-inlet system. The number of wetting and drying cycles to which the upper rice plots were subjected ranged from five (2010) to eight (2011). The corresponding irrigation water use values ranged from 18 A-in/A (2011, 2012) to 23 A-in/A (2010) while in-season rainfall at the study locations was 10.6 inches (2010), 7.6 inches (2011) and 3.1 inches (2012). Statistical analyses comparing top of paddy vs. bottom of paddy rough rice yields for the combined 2010-2012 data indicate that of the six varieties/hybrid, four showed no differences ($p > 0.05$) in yield (CL111, CL142, CL181, CLX745) and two (CL131 and CL151) showed significant yield increases ($p < 0.05$) when the upper plots were subjected to intermittent flooding as compared to the continuously-flooded lower plots. Results from up to nine other varieties that were tested for only one or two years, but were not included in these analyses, always followed this same trend: Either rice yields were unaffected or were improved by intermittent flood management when compared to continuous flooding. These tests always included a 1-x rate fungicide treatment at full boot stage. Seeding rate, fertility program and weed management were as standard practice for the cooperating growers. Although the 2012 milling data were not available at the time of this writing, there have been no statistical differences between intermittent and flooded rice in terms of milling quality measured in on-farm trials to date. These test confirm these rice varieties can be successfully grown under less-than-full flood conditions while benefiting from reduce water and energy use. Certain producers find that using rice flood depth gauge (such as pictured below) can assist them in managing their flood so as to improve rainfall capture and reduce over-pumping.

One non-replicated, on-farm study conducted in 2012 investigating row rice production where rice is grown on beds and irrigated down the furrows used 39 A-in/A water as compared to the 18 A-in/A water use by the 2012 intermittent flood management trail described above.