

Bring your questions and if possible your answers to my talk and together we will peer into the future of the US rice price in 2007 and into the long-term size and shape of the US rice production industry in the South of the US.

► Performance Of Hybrid Rice In A Furrow Irrigation System

Presented by Wes Long

Technical Service Representative, RiceTec

Multi-year furrow irrigation trials were established in Arkansas County using conservation tillage practices. RiceTec hybrids XL723 and a new experimental XP729 along with varieties Wells, Cybonnet, and Cheniere were planted on beds using a conventional style drill, under a furrow irrigation system. The hybrids were all planted at the standard 600,000 seeds per acre (approximately 30 lbs/ac), while the varieties were planted at 70 lbs/ac. Hybrid grain yields were excellent as shown in Figure 1. In the past, weed pressure would have taken over rice that was not grown under flooded conditions. The competitiveness of hybrid rice, as well as the new residual herbicides, makes it possible to grow rice with new, more conservation practices, in a furrow irrigation system. University and RiceTec data has documented those hybrids out compete weeds, even at lower seeding rates.

With an increase in the price of farm inputs and a reduction in commodity prices, no-till practices are becoming more popular. Reduced input cost associated with hybrid rice makes it a logical choice when planting on a raised seed bed. A potential concern with most rice varieties grown under these conditions is the susceptibility to diseases, mainly blast. University data has proven increased potential of losses due to Blast under shallow flood conditions. Hybrid rice offers the best disease package on the market today; including some of the highest resistance to the most common races of blast.

The RiceTec 2006 line up of hybrid seed offered yield stability, not only on raised beds, but across all types of environments. Planting from early to late the hybrids excel, however planting early will maximize yield potential. In 2006 RiceTec had 4 long grain hybrids CLEARFIELD®XL8, CLEARFIELD®XL730, CLEARFIELD®XP729 and XL723. RiceTec is also testing, for the second year, XP729 in university and RiceTec trials. With all these hybrids comes the possibility of ratoon crop. Ratoon crops have been done successfully, as far as North East Arkansas. Raised beds offer the chance of ratooning quicker by being able to flush within hours of harvest, while reducing the chance of rutting fields during harvest.

With water becoming such a valuable commodity, the maturity of your rice is extremely important. Hybrid rice offers the ability to be able to either plant late or early, without sacrificing yield or milling. RiceTec hybrid XL723 is the earliest hybrid RiceTec offers at 3-5 days earlier than Cocodrie; all other hybrids are within 2-5 days of XL723.

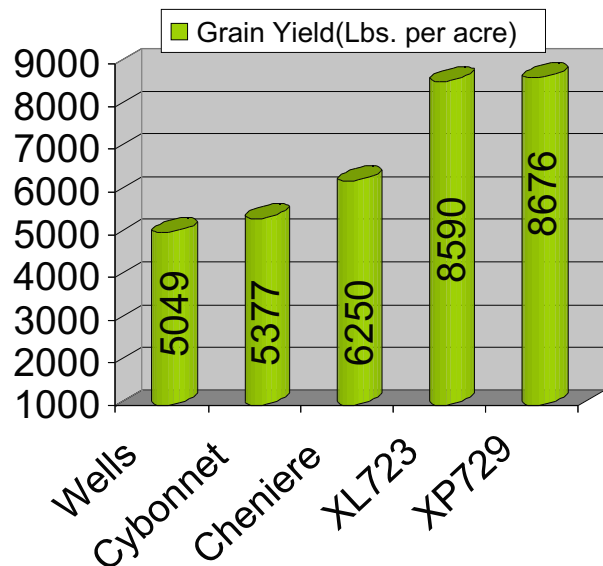
The benefits of raising rice on beds requires less labor, less fuel, and a dramatic reduction in conventional cultural practices; therefore increasing the potential of putting ground into production that normally required large numbers of levees to water. The labor cost is drastically reduced, with no need in checking or maintaining levees everyday. The fuel cost can be cut down as well, without having to maintain a consistent flood, or trying to maintain a consistent flood. Herbicide application also becomes a little easier with the absence of levees. With no levees present you have the choice of putting your herbicides out by ground. A good application of a residual herbicide is key, when trying to prevent heavy infestations of weeds before the rice has had a chance to tiller. Insects such as the water weevils, said to be the worst in rice, no longer present a problem.

Nitrogen application on bedded rice is also handled a little different than your conventional nitrogen applications. Instead of the normal 2 applications, raised beds usually use 4. The same amount of nitrogen is used, just in little shots spread out over time. This differs from RiceTec recommendations of 120 lbs N/A pre-flood and 30 lbs N/A at late boot. Urea should be treated with Agrotain® before application on bedded rice. Between the 3-5 leaf stage Ammonium Sulfate or DAP can be used for a flush application instead of Urea.

In conclusion, hybrid rice planted on raised beds offers many benefits. The disease package that the hybrids offer along with the yield stability makes them a logical choice for planting on raised beds. With a reduction in labor and fuel cost, furrow irrigated rice might work well in your farming practices.

Figure 1. Summary of RiceTec field yield trial. The data is a combination of 2 trial locations

in Arkansas county, Arkansas from 2005-2006. Hybrids have a 3,075 lb raw yield advantage over the conventional varieties on bedded trials.



► Water Conservation From Reduced Tillage And Land Forming

Presented by Dr. Garry N. McCauley

Rice Agronomist, Texas A&M University

The objective of this project was to evaluate the in-field conservation from practices adopted since the last studies. The potential conservation of irrigation inflow of zero grade land forming and fall-stale seedbed tillage systems was evaluated. Conventional contour-levee fields and continuous grade fields were monitored for baseline comparison. The average field use in the Lakeside and Garwood Districts is included in the report for general reference.

MATERIALS AND METHODS

The only known fields that have been converted to zero grade land forming are in the Lakeside District. Measurements comparing this practice to unimproved fields will focus in that area. Reduced tillage is a more widely adopted practice. The impact of fall-stale seedbed on in-field irrigation water use was evaluated in the Garwood and Gulf Coast Districts. Monitoring sites and comparisons are shown in Table 1.

Irrigation Field Monitoring

The irrigation field monitoring study will characterize all inputs and losses from selected rice fields. Additional information will be collected to correlate with the water use information. The study was designed to monitor a field with minimal interference with the producer's general management. The parameters monitored and monitoring methodology is described below.

$$I + R = RO + FU$$

where

I = irrigation inflow

R = rainfall

RO = runoff

FU = field use

Three components of the equation below are measured. Field use is determined by sub-