

LSU AgCenter
PROJECT PROPOSAL - LOUISIANA RICE RESEARCH BOARD
New _____ Continuing X

Rice Weed Control Research in Northeast Louisiana

Principal Investigator(s): Bill J. Williams
Department of Northeast Research Station

Summary of Results:

In 2005, rice weed control research conducted at the Northeast Research Station focused on: 1) evaluation of burndown programs; 2) evaluation of conventional and transgenic weed control programs; and 3) evaluation of experimental herbicides. Each year about one third of the 40 to 60 studies conducted in rice will be either in their first, second or third year. About 70% of the efforts of this program are spent on drill-seeded rice. The remaining 30% of the research focuses on water seeded and broadcast dry-seeded rice. Due to space limitations only selected studies are discussed here.

Grasp demonstrated excellent activity on barnyardgrass, hemp sesbania, rice flatsedge, duck salad, dayflower and purple ammannia in both drill- and water-seeded rice. In off-station test Grasp has failed to control smallflower umbrella sedge, indicating that it may not be effective against all annual sedges. In drill-seeded rice 2.0 oz/A Grasp controlled small weeds when applied to 2-3 leaf rice, but at least 2.3 oz/A was needed at the 4-5 leaf stage for consistent control of larger weeds. Grasp at 2.5 oz/A controlled both barnyardgrass and sesbania post flood. In water-seeded rice, Grasp controlled barnyardgrass best when applied from pegging through 2-3 lf rice. Sesbania control was best when Grasp (2.3 oz/A) was applied at the 2-3 lf stage. The best control of purple ammannia and duck salad from Grasp was observed from pegging treatments.

Grasp at 2 oz/A plus 1.3 pts/A Command applied to 1-3 leaf rice resulted in excellent control of barnyardgrass, Amazon sprangletop, hemp sesbania, and rice flatsedge. In some studies, additional applications were needed to control sesbania coming up after the application. Clincher plus Grasp combinations controlled barnyardgrass, sprangletop, flatsedge, and sesbania. Overall, weed control was best when Grasp plus Clincher was applied at the 2-3 leaf rice stage. Tank mixing Clincher with Grasp reduced post flood sprangletop control compared to Clincher alone.

Newpath plus Grasp combinations in Clearfield rice were also promising. Texasweed control was improved and sesbania was controlled when Newpath was tank mixed with Grasp. Unlike 2004, a reduction in red rice control was not observed in 2005. Grasp plus Londax combinations were also effective at managing Texasweed in conventional rice. Grasp alone did not control Texasweed.

Alligatorweed is becoming more problematic throughout Louisiana. Grasp at 2.3 oz/A controls alligatorweed as well as 11 oz/A Grandstand for about 4 weeks, but is less effective after that. The best alligatorweed control, 90% 4 weeks after treatment and 85% 6 weeks after treatment, was observed from 2.9 oz/A Grasp or 1 pt/A Grandstand. Grasp plus Grandstand at lower rates has not been effective at controlling alligatorweed in Louisiana. It is expected that Grasp will be an effective tool for controlling new alligatorweed infestations. However, in fields where alligatorweed has been allowed to establish an extensive root system Grasp will only provide suppression. Fall applications of 1 lb ai/A glyphosate still appear to be the most promising method of controlling alligatorweed. Glyphosate applied October 1st, 2003 was still providing 85% alligatorweed control in September 2005.

Beyond at 5 oz/A can be applied to Clearfield rice after the 2nd Newpath application through 14 days past PI. Research suggests that timing will be critical. If applied too early, coverage is an issue so applications need to be made after red rice is at least as tall as commercial rice. Even though applications can be made up 14 day after PI in commercial rice, it is important that the application is made before the early boot stage of red rice. Beyond also controls Amazon sprangletop and barnyardgrass when applications are made before early boot stages. Research suggests that as with Newpath, increasing Beyond rate doesn't ensure adequate control when applications are made after the optimum timing.

Plans for 2006:

Research in 2006 will be similar to that of 2005 and continue to focus on the evaluation of new weed management technologies. A couple of experimental herbicides with sprangletop and Texasweed activity will be evaluated extensively. Fall applications of selected herbicides for alligatorweed management have been established and will be evaluated in the spring. The rice program at the Northeast Research station will continue to work with researchers from Baton Rouge and the Rice Research Station to better serve the producers of Northeast Louisiana. Results of these studies will be used to update rice weed control recommendations as appropriate.