Evaluation of Application Timings with Karate and Belay for Rice Water Weevil Control
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Prior to the commercial release of Dermacor X-100 and Cruiser 5FS as seed treatments for rice water weevil control, foliar application with a pyrethroid was the only management option available for rice water weevil. With foliar applications, timing is critical and these applications provide sporadic control. A large percentage of rice in Mississippi did not have an insecticidal seed treatment during 2010 and relied on foliar insecticide applications for rice water weevil control. Because of this, research is needed to determine the optimum timing for foliar applications.

An experiment was conducted at the Delta Research and Extension Center in Stoneville, MS to determine the optimum application timings of Karate (pyrethroid) and Belay (neonicotinoid) for rice water weevil control. Wells rice cultivar was planted in a large block. Plot size was 5.33 ft. by 15 ft. Agronomic practices followed those recommended by the Mississsippi State University Extension Service. The application timings included Pre-flood, 1 day post flood, and 7 days post flood. The treatments included Karate at 2.56 fl oz/A and Belay at 4.5 fl oz/A. Rice water weevil larval densities were determined 4 weeks post flood. At the end of the season, plots were harvested and yields were determined.

Based on densities of rice water weevil larvae, Karate was more sensitive to application timing than Belay. Rice water weevil densities were significantly lower for all of the Belay timings and the Karate applied 7 days after flood than the untreated control, Karate pre-flood and Karate 1 day post flood. There were no differences in rice water weevil densities among the Belay timings. Belay, like other neonicotinoids, has systemic activity within the plant. This systemic activity is probably an important factor why application timing is not as critical for Belay. Belay is not currently labeled for foliar applications in rice.