Agronomic and Cultural Information

Planting: Drill-planted Cocodrie @ 90 lb/A into League soil (pH 5.5, sand 3.2%, silt 32.4%, clay 64.4%, and organic matter 3.8 - 4.8%) on Apr 7
Plot size = 7 rows, 7 in. row spacing, 18 ft long with metal barriers around each plot
Experimental design: randomized complete block with 4 replications
Emergence on Apr 15

Irrigation: Flushed block (temporary flood for 48 hours, then drain) on Apr 7
Note: Plots were flushed as needed from emergence to permanent flood
Permanent flood on May 5

Fertilization: All fertilizer (urea) was distributed by hand.
56.7 lb N/acre (½ of 170) on Apr 7 at planting
56.7 lb N/acre (½ of 170) on May 5 at permanent flood
56.7 lb N/acre (½ of 170) on May 22 at panicle differentiation
40 lb N/acre on Jun 12 at late boot/heading
(Total season N/acre = 210 lb N/acre)

Herbicide: Stam 80EDF @ 2.0 lb, Basagran @ 0.75 lb, Facet 75DF @ 0.25 lb and Ordram @ 2.0 lb (AI)/acre and Agri-Dex @ 1.0 pt/acre with a 2-person hand-held spray boom (13-80015 nozzles, 50 mesh screens, 21 gpa final spray volume) for early season weed control

Treatments: See Table 1 for treatment descriptions and rates.
Treatments 1 – 7 (seed treatments) were applied on Mar 31.
Treatment 8 (Karate Z) applied before flood (BF) as a foliar spray with a hand-held CO2-pressurized spray boom (3-800067 nozzles, 50 mesh screens, 20 psi, 24 gpa) on May 5

Sampling: Stand counts (4-3 ft counts in rows 2, 3, 5 and 6 of each plot) on Apr 24
Adult RWW feeding scars from 5 random plants per plot recorded 7 days after flood (DAF) on May 12
Rice water weevil (RWW) cores (5 cores per plot, each core 4 in. diameter, 4 in. deep, containing at least one rice plant) collected on May 26 (3 wks after permanent flood) and Jun 7 (12 days following first cores). Cores were later washed through 40-mesh screen buckets and immature RWW counted.
Note: Prior to analysis RWW core data transformed using $\sqrt{x + 0.5}$

Harvest: Harvested plots on Aug 2
Size harvested plot = 7 rows, 7 in. row spacing, 18 ft long
Yields converted to lb/acre and adjusted to 12% moisture
Rice Seed Treatments for Rice Water Weevil Control

**Discussion**

Plots emerged to good, uniform stands (test mean of 17 plants per foot of row). There were no significant differences in stand establishment among treatments. Dramatically fewer adult rice water weevil (RWW) feeding scars were observed in plots treated before flood (BF) with a foliar spray of Karate Z (Trt. 8). Feeding scars were also reduced in seed treatments containing Cruiser 5FS regardless of the rate (Table 1). Immature RWW in untreated plots were well above threshold level (about 15 per 5 cores) at the first sampling date (May 26). The low, mid and high rates of Cruiser 5FS in combination with the low, mid and high rates of A14006 (Trts. 4, 5, and 6) performed equally as well as the Karate Z foliar spray (Trt. 8). A14006 and Cruiser 5FS, each alone at the high rate (Trts. 2 and 3) were less effective at controlling immature RWW. Karate Z applied as a seed treatment (Trt. 7) showed absolutely no immature RWW efficacy. A question arose as to the possibility that seed for this treatment were inadvertently not treated. At the second sampling date (Jun 7), immature RWW declined across all treatments, including the untreated. All seed treatments, excluding Karate Z (Trt. 7), resulted in good immature RWW control by the second sampling date (about 5 weeks after permanent flood).

Despite the high number of immature RWW in untreated plots, there were no significant differences in yield among treatments (Table 1). Untreated plots, however, yielded the lowest. On average, seed treatments (excluding Karate Z, Trt. 7) yielded only 300 lb/acre more than untreated. The Karate Z foliar spray resulted in a 450 lb/acre increase over untreated. With the elimination of Icon 6.2FS as a viable rice seed treatment for RWW, it is extremely important to continue research to identify and approve suitable alternatives.

**Table 1. Syngenta rice seed treatments for rice water weevil (RWW) control.**

**Beaumont, TX. 2006**

<table>
<thead>
<tr>
<th>Trt. no.</th>
<th>Description</th>
<th>Rate [g(AI)/100kg seed]</th>
<th>Timing</th>
<th>Adult RWW feeding scars/plant</th>
<th>No. immature RWW/5 cores</th>
<th>Yield (lb/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Untreated</td>
<td>---</td>
<td>---</td>
<td>51 a</td>
<td>99 a</td>
<td>59 a</td>
</tr>
<tr>
<td>2</td>
<td>A14006</td>
<td>50</td>
<td>ST</td>
<td>53 a</td>
<td>35 b</td>
<td>6 cd</td>
</tr>
<tr>
<td>3</td>
<td>Cruiser 5FS</td>
<td>80</td>
<td>ST</td>
<td>25 c</td>
<td>19 bc</td>
<td>14 c</td>
</tr>
<tr>
<td>4</td>
<td>A14006 + Cruiser 5FS</td>
<td>25 + 40</td>
<td>ST</td>
<td>34 bc</td>
<td>13 cd</td>
<td>8 cd</td>
</tr>
<tr>
<td>5</td>
<td>A14006 + Cruiser 5FS</td>
<td>37.5 + 60</td>
<td>ST</td>
<td>28 c</td>
<td>10 cd</td>
<td>5 de</td>
</tr>
<tr>
<td>6</td>
<td>A14006 + Cruiser 5FS</td>
<td>50 + 80</td>
<td>ST</td>
<td>25 c</td>
<td>4 d</td>
<td>3 de</td>
</tr>
<tr>
<td>7</td>
<td>Karate Z 2.08CS</td>
<td>80</td>
<td>ST</td>
<td>41 ab</td>
<td>126 a</td>
<td>41 b</td>
</tr>
<tr>
<td>8</td>
<td>Karate Z 2.08CS</td>
<td>34</td>
<td>BF</td>
<td>5 d</td>
<td>5 d</td>
<td>1 e</td>
</tr>
</tbody>
</table>

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a ST = seed treatment
b BF = immediately before flood (foliar spray)

Means in a column followed by the same or no letter are not significantly different (NS) at the 5% level (ANOVA, LSD).