Efficacy of Syngenta Rice Seed Treatments for Rice Water Weevil Control

Beaumont, TX
2005

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 20
Plot size = 7 rows, 7 in. row spacing, 18 ft long with metal barriers around plots
Experimental design: randomized complete block with 4 replications
Emergence on May 2

Irrigation: Flushed blocks (temporary flood for 48 hours, then drain) on Apr 20
*Note: Plots were flushed as needed from emergence to permanent flood*
Permanent flood on May 23

Fertilization: All fertilizer (urea) was distributed by hand.
56.7 lb N/acre (⅓ of 170) on Apr 20 at planting
56.7 lb N/acre (⅓ of 170) on May 23 at permanent flood
56.7 lb N/acre (⅓ of 170) on Jun 6 at panicle differentiation
40 lb N/acre on Jun 27 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) on May 16 for early season weed control

Treatments: Karate Z applied with a hand-held CO2-pressurized sprayboom
(3-800067 nozzles, 50 mesh screens, 25 psi, 28 gpa) on May 23
*All other treatments are seed treatments applied by Syngenta.*

Sampling: Stand counts (7-3 ft counts in rows 1-7 of each plot) 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) were collected on Jun 13 and 22, 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 19
Size harvested plot = 7 rows, 7 in. row spacing, 18 ft long
Yields converted to lb/acre adjusted to 12% moisture

*Note: All data analyzed using ANOVA and LSD*
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Beaumont, TX.  2005

Discussion

Experimental seed treatments were evaluated for rice water weevil (RWW) control in 2005. Cruiser 5FS, A14006 and STP15299 all performed well (Table 1). All seed treatments produced good yield responses. For instance, the Cruiser 5FS treatment yielded more than 1100 lb/acre compared to the untreated plots. These and other seed treatments we have tested are possible replacements for Icon 6.2FS.

Table 1. Efficacy of Syngenta rice seed treatments for rice water weevil (RWW) control.
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<table>
<thead>
<tr>
<th>Treatment</th>
<th>g (AI)/100 kg seed</th>
<th>No. immature RWW/5 cores</th>
<th>Yield lb/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Jun 13</td>
<td>Jun 22</td>
</tr>
<tr>
<td>Untreated</td>
<td>—</td>
<td>126 e</td>
<td>17</td>
</tr>
<tr>
<td>A14006</td>
<td>100</td>
<td>17 c</td>
<td>11</td>
</tr>
<tr>
<td>A14006</td>
<td>50</td>
<td>32 d</td>
<td>6</td>
</tr>
<tr>
<td>Cruiser 5FS</td>
<td>80</td>
<td>7 b</td>
<td>6</td>
</tr>
<tr>
<td>STP15299</td>
<td>42</td>
<td>13 bc</td>
<td>41</td>
</tr>
<tr>
<td>Karate Z a</td>
<td>34</td>
<td>1 a</td>
<td>14</td>
</tr>
</tbody>
</table>

*a Karate Z is a foliar spray applied immediately before flood @ 34 g (AI)/ha
Means in a column followed by the same or no letter are not significantly different (NS) at the 5% level (ANOVA, LSD).