Valent U.S.A. Corporation
Seed Treatments for Rice Water Weevil Control. Experiment II
Protocol # ST72.01
Beaumont, TX
2007

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 May 15
Experimental design: randomized complete block with 8 treatments and 4 replications
Plot size = 7 rows, 7 in. row spacing, 18 ft long with metal barriers, except for trt. 7 with 11 ft and 8 in. gap then untreated
Emergence on May 23

Irrigation: Rain followed planting on May 15; barriers pushed into mud after flush
Note: Plots were flushed as needed from emergence to permanent flood (PF)
PF on Jun 19 [27 days after emergence (DAE)]

Fertilization: All fertilizer (urea) was distributed by hand.
113.3 lb N/A (2/3 of 170) on May 15 at planting
56.7 lb N/A (1/3 of 170) on Jul 7 at panicle differentiation
40 lb N/A on Jul 23 at late boot/heading
(Total season urea = 210 lb N/A)

Herbicide: Stam 80EDF @ 2.0 lb, Basagran @ 0.75 lb, Facet 75DF @ 0.25 lb and Ordram 8E @ 2.0 lb (AI)/A and Agri-Dex @ 1.0 pt/A with a 2-person hand-held spray boom (13-80015 nozzles, 50 mesh screens, 16 gpa final spray volume) on Jun 15 for early season weed control

Treatments: Treatments 3 – 8 were seed treatments provided by Valent.
Treatment 2 (Karate Z) applied before flood (BF) with a hand-held CO2-pressurized spray boom on Jun 19 (3-800067 nozzles, 50 mesh screens, 20 psi, 24 gpa)

Sampling: Stand counts on all plots (2- 3 ft counts in rows 2 and 6 of each plot) on Jun 1
Rice water weevil (RWW) cores (5 cores per plot, each core 4 inches diameter, 4 inches deep containing at least one rice plant) were collected on Jul 10 (21 days after PF) and 9 days later, then washed through 40-mesh buckets and immature RWW counted.
Whitehead (WH) counts on rows 2, 3, 5, and 6 of each plot on Aug 24
Note: Prior to analysis RWW core and WH data transformed using $\sqrt{x + 0.5}$

Harvest: Harvested plots on Sep 4 (104 DAE)
Size harvested plot = 7 rows, 7 in. row spacing, 18 ft. long
Yields converted to lb/A and adjusted to 12% moisture
Note: All data analyzed using ANOVA and LSD
**Discussion**

Rice stands were not significantly different among treatments (Table 1). Although RWW populations were relatively low in the untreated, all seed treatments (regardless of rate) performed well. Stem borer damage caused by a combination of sugarcane borer and Mexican rice borer was too low to detect treatment differences. Yields of all seed treatments were greater than the untreated but only V-10170 at the highest rate significantly outyielded the untreated (1483 lb/A more than the untreated).

Table 1. Evaluation of V-10170 seed treatments for rice water weevil (RWW) and stem borer control. Experiment II. Beaumont, TX. 2007.

<table>
<thead>
<tr>
<th>Trt. #</th>
<th>Description</th>
<th>Rate g Al/hkg seed</th>
<th>Stand plants/ft</th>
<th>No. immature RWW/5 cores</th>
<th>WHs/plot</th>
<th>Yield d lb/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Untreated</td>
<td>---</td>
<td>21</td>
<td>16 a</td>
<td>16 a</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Karate Z</td>
<td>0.03 lb Al/A</td>
<td>18</td>
<td>10 a</td>
<td>4 b</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>V-10170</td>
<td>100</td>
<td>18</td>
<td>1 b</td>
<td>1 bc</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>V-10170</td>
<td>125</td>
<td>20</td>
<td>0 b</td>
<td>3 bc</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>V-10170</td>
<td>150</td>
<td>20</td>
<td>1 b</td>
<td>0 c</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>V-10170</td>
<td>200</td>
<td>19</td>
<td>0 b</td>
<td>0 c</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>V-10170</td>
<td>250</td>
<td>20</td>
<td>2 b</td>
<td>1 bc</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>V-10170</td>
<td>125</td>
<td>21</td>
<td>0 b</td>
<td>1 c</td>
<td>3</td>
</tr>
</tbody>
</table>

*Karate Z = foliar treatment; V-10170 = seed treatment.*
*Based on no. of plants in 2, 3 ft of row samples/plot.*
*WHs = whiteheads in 4 middle rows of each plot.*
*Yield data taken from reps I-III because rep IV experienced urea drift from an adjacent rice field. Means in column followed by the same or no letter are not significantly different (NS, P > 0.05, ANOVA and LSD).*