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*
Randomized complete block with 4 replications
Plot size = 7 rows, 7 in. row spacing, 18 ft long with metal barriers around plots
Emergence on Apr 28

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 19* (3 weeks after emergence)

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 19 at permanent flood
56.7 lb N/acre (⅓ of 170) on Jun 2 at panicle differentiation
40 lb N/acre on Jun 23 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, 16 gpa final spray volume) on May 12 for early season weed control

Treatments: *Karate Z and V-10170 50WDG* were applied as a foliar spray with a hand-held CO₂-pressurized spray boom (3-80067 nozzles, 50 mesh screens, 20 psi, 24 gpa).
*V-10170 GR* (granular formulation) was distributed by hand.
Before flood (BF) treatments applied on May 19
3 days after flood (DAF) treatments applied on May 22
12 DAF treatments applied on May 31
*See Table 1 for treatment descriptions and rates.*

Sampling: *Stand counts* (4- 3 ft counts in rows 2, 3, 5 and 6 of each plot) on May 10
*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 9 and 19, 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 17* (time from emergence to harvest = 111 days)
Size harvested plot = 7 rows, 7 in. row spacing, 18 ft long
Yields converted to lb/acre and adjusted to 12% moisture
V-10170 Formulations for Rice Water Weevil Control

Discussion

Plots emerged to uniform, good stands. Three weeks after permanent flood, immature rice water weevil (RWW) were well above threshold levels (about 15 per 5 cores) in untreated plots. All treatments (Karate Z, V-10170 50WDG and V-10170 GR) provided good control of immature RWW at the first sampling date (Table 1). This control persisted through the second sampling date on Jun 19. Also, there was a natural decline in immature RWW populations as observed in untreated plots. The three days after flood (DAF) application of V-10170 GR (both the high and low rate) performed as well as in combination with the V-10170 50WDG foliar spray applied before flood (BF). As observed in previous research, timing of application was extremely important. BF and 3 DAF applications statistically outperformed 12 DAF applications. However, the 12 DAF applications of both the high and low rate of V-10170 GR still effectively controlled immature RWW.

Due to variability in harvest data, there was not a statistical difference in yield among treatments. However, all treatments out-yielded untreated plots. On average, plots receiving a BF treatment resulted in a 570 lb/acre yield advantage over the untreated. Three and 12 DAF treatments, on average, provided only a 150 lb/acre increase over the untreated. The V10170 GR formulation applied BF and 3 DAF proved very effective at controlling immature RWW. The V-10170 50WDG formulation applied alone as a foliar spray has been tested in another experiment (See "Planting Date vs. Rice Water Weevil"). These data will help confirm the efficacy of this formulation.

Table 1. V-10170 formulations for rice water weevil (RWW) control. Beaumont, TX. 2006.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate [lb (AI)/acre]</th>
<th>Timing</th>
<th>No. immature RWW/5 cores</th>
<th>Yield (lb/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>---</td>
<td>---</td>
<td>107 a</td>
<td>8631</td>
</tr>
<tr>
<td>Karate Z</td>
<td>0.03</td>
<td>BF&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1 c</td>
<td>1 bc</td>
</tr>
<tr>
<td>V-10170 50WDG + V-10170 GR</td>
<td>1.5 oz prod + 0.187</td>
<td>BF + 3 DAF&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0 c</td>
<td>1 bc</td>
</tr>
<tr>
<td>V-10170 50WDG + V10170 GR</td>
<td>1.5 oz prod + 0.187</td>
<td>BF + 12 DAF</td>
<td>0 c</td>
<td>0 c</td>
</tr>
<tr>
<td>V-10170 GR</td>
<td>0.187</td>
<td>3 DAF</td>
<td>1 c</td>
<td>1 bc</td>
</tr>
<tr>
<td>V-10170 GR</td>
<td>0.187</td>
<td>12 DAF</td>
<td>7 b</td>
<td>2 bc</td>
</tr>
<tr>
<td>V-10170 GR</td>
<td>0.094</td>
<td>3 DAF</td>
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<td>4 b</td>
</tr>
<tr>
<td>V-10170 GR</td>
<td>0.094</td>
<td>12 DAF</td>
<td>10 b</td>
<td>2 bc</td>
</tr>
</tbody>
</table>

<sup>a</sup> BF = immediately before permanent flood  
<sup>b</sup> DAF = days after permanent flood  

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