Dupont Seed Treatments for Rice Water Weevil Control
Beaumont, TX
2005

Agronomic and Cultural Information

Planting: Drill-planted Cypress @ 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 14
Plot size = 7 rows, 7 in. row spacing, 18 ft long with metal barriers around plots
Emergence on May 22

Irrigation: Flushed blocks (temporary flood for 48 hours, then drain) on May 14
Note: Plots were flushed as needed from emergence to permanent flood
Permanent flood on Jun 13

Fertilization: All fertilizer (urea) was distributed by hand.
113.3 lb N/acre (⅔ of 170) on May 14 at planting
56.7 lb N/acre (⅓ of 170) on Jun 13 at permanent flood
40 lb N/acre on Jun 28 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 Jun 8 for early season weed control

Sampling: 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 6 and 16, 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 Sep 6
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

See discussion below.

Discussion

Both the low and high rate of the experimental seed treatment gave outstanding control of RWW (Table 1). Fipronil served as a standard and it also provided good control. The low rate of the experimental was equally effective as the high rate. Treatment yields were not significantly different, but the low rate of the experimental seed treatment out-yielded the untreated 321 lb/acre. Populations of immature RWW in the untreated were very high (the economic injury level is about 15 per five cores), so this was a severe test of the treatments.

<table>
<thead>
<tr>
<th>Seed treatments</th>
<th>Rate [mg (AI)/seed]</th>
<th>No. immature RWW/5 cores</th>
<th>Yield (lb/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>---</td>
<td>61 c</td>
<td>49 c</td>
</tr>
<tr>
<td>Fipronil</td>
<td>0.05 lb (AI)/acre</td>
<td>4 b</td>
<td>9 b</td>
</tr>
<tr>
<td>DPX-E2Y45</td>
<td>0.05</td>
<td>1 a</td>
<td>3 a</td>
</tr>
<tr>
<td>DPX-E2Y45</td>
<td>0.20</td>
<td>2 ab</td>
<td>0 a</td>
</tr>
</tbody>
</table>

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