Experimental 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 19
Plot size = 7 rows, 7 in. row spacing, 18 ft long with metal barriers around plots
Emergence on May 1

Irrigation: Flushed blocks (temporary flood for 48 hours, then drain) on Apr 19
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 19 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: Treatments 2 through 8 applied 1 day after flood (DAF) with a hand-held CO2-pressurized spray boom (3-800067 nozzles, 50 mesh screens, 26 gpa) on May 24

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 14 and 24, 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
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

Experimental treatments 2-8 (conducted under confidentiality) gave excellent control of rice water weevil (RWW) on both sample dates (Table 1). Populations of immature RWW were high in untreated plots on both sample dates (the economic injury level is about 15 immatures/5 cores). Although yields were not significantly different among treatments, the yield of untreated plots was about 500 lb/acre less than the average yield of the remaining seven treatments.

Table 1. Rice water weevil (RWW) efficacy of experimental treatments. Bmt., TX. 2005

<table>
<thead>
<tr>
<th>Treatment&lt;sup&gt;a&lt;/sup&gt;</th>
<th>No. immature RWW/5 cores</th>
<th>Yield lb/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jun 14</td>
<td>Jun 24</td>
</tr>
<tr>
<td>Untreated</td>
<td>66 b</td>
<td>60 b</td>
</tr>
<tr>
<td>2</td>
<td>2 a</td>
<td>13 a</td>
</tr>
<tr>
<td>3</td>
<td>1 a</td>
<td>10 a</td>
</tr>
<tr>
<td>4</td>
<td>1 a</td>
<td>12 a</td>
</tr>
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<td>5</td>
<td>2 a</td>
<td>9 a</td>
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<td>6</td>
<td>4 a</td>
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<td>7</td>
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<td>14 a</td>
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<tr>
<td>8</td>
<td>2 a</td>
<td>6 a</td>
</tr>
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<td></td>
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</tbody>
</table>

<sup>a</sup> Treatments 2-8 applied one day 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).