Syngenta Crop Protection, Inc.
Foliar Treatments for Sheath Blight Control
Protocol # FAZ380A4-2007US
Beaumont, TX
2007
M. O. Way and Don Groth

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 1
Experimental design: randomized complete block with 6 treatments and 4 replications
Plot size = 7 rows, 7 in. row spacing, 18 ft long
Emergence on May 8

Irrigation: Flushed blocks (temporary flood for 48 hours, then drain) on May 1
Note: Plots were flushed as needed from emergence to permanent flood
Permanent flood on May 30

Fertilization: All fertilizer (urea) was distributed by hand.
113.3 lb N/A (2/3 of 170) on May 2 at planting
56.7 lb N/A (1/3 of 170) on Jun 19 at panicle differentiation (PD)
40 lb N/A on Jul 7 at late boot/heading

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 May 15

Treatments: Blanket application of Karate Z @ 0.03 lb (AI)/A on all plots with a 2-person hand-held spray boom (13-80015 nozzles, 50 mesh screens, 13 gpa final spray volume) to control rice water weevil on May 31
Rice not quite @ internode elongation (IE) on Jun 14
All plots were inoculated with sheath blight (SB) inoculum on Jun 27 (almost at PD); inoculum prepared by Piper Roberts (5 parts rice hulls: 1 part whole rice substrate inoculated with petri plugs of *Rhizoctonia solani*); 40 oz of inoculum distributed by hand evenly over middle 4 rows of each plot.
Rice @ 3 -5 inch panicle on Jul 5
Treatments 2 – 6 applied on Jul 7 with a hand-held CO₂-pressurized spray boom (3-800067 nozzles, 50 mesh screens, 20 psi, 24 gpa)

Sampling: SB ratings and estimates of % SB infected tillers performed by Dr. Don Groth on Aug 16

Harvest: Harvested plots on Aug 22
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

Inoculation resulted in severe SB damage since the untreated, inoculated plots averaged an 8 SB severity with 97% infected tillers (Table 1). All treatments (except Stratego 2.08EC) significantly reduced SB severity and % infected tillers. SB severity was similar for the low and high rates of A15909, but the high rate resulted in 11% fewer infected tillers than the low rate. However, this difference was not significant. All treatments significantly out yielded the untreated. The low rate of A15909 produced the highest yield–2016 lb/A more than the untreated. Thanks to Dr. Don Groth and Piper Roberts for technical assistance.


<table>
<thead>
<tr>
<th>Trt. #</th>
<th>Description</th>
<th>Rate  g (AI)/ha</th>
<th>Timing</th>
<th>SB severity rating</th>
<th>% infected tillers</th>
<th>Yield lb/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Untreated</td>
<td>---</td>
<td>---</td>
<td>8 a</td>
<td>98 a</td>
<td>7475 c</td>
</tr>
<tr>
<td>2</td>
<td>A15909</td>
<td>338</td>
<td>PDb + 5-10 days</td>
<td>5 c</td>
<td>48 c</td>
<td>9491 a</td>
</tr>
<tr>
<td>3</td>
<td>Quadris 2.08 SC + Tilt 3.6 EC</td>
<td>183 + 156</td>
<td>PD + 5-10 days</td>
<td>4 cd</td>
<td>33 c</td>
<td>9169 b</td>
</tr>
<tr>
<td>4</td>
<td>A15909</td>
<td>404</td>
<td>PD + 5-10 days</td>
<td>4 d</td>
<td>37 c</td>
<td>9308 ab</td>
</tr>
<tr>
<td>5</td>
<td>Quilt + Quadris 2.08 SC</td>
<td>292 + 115</td>
<td>PD + 5-10 days</td>
<td>5 cd</td>
<td>40 c</td>
<td>9245 ab</td>
</tr>
<tr>
<td>6</td>
<td>Stratego 2.08 EC</td>
<td>347</td>
<td>PD + 5-10 days</td>
<td>6 b</td>
<td>71 b</td>
<td>9073 b</td>
</tr>
</tbody>
</table>

SB severity rating = 0 – 9 (0 = no SB; 9 = SB in upper canopy and plant collapsed)
PD = panicle differentiation
Means in a column followed by the same letter are not significantly different (P > 0.05, ANOVA and LSD)