Effect of Quilt XL on Soybean Grain Yield

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Objective
To evaluate yield response of soybeans to Quilt XL (Azoxystrobin & Propiconazole) when applied at soybean growth stage R3/R4.

Background
Crop Year: 2013
Location: OSU Unger Farm
County/Town: Crawford
Soil Type: Blount/Pewamo
Drainage: Systematic
Previous Crop: Corn
Tillage: No – tillage
Soil Test: pH 5.9, P 34 ppm, K 146 ppm
SCN Count 1: 0 eggs per 100cc (drained)
SCN Count 2: 2920 eggs per 100cc
SCN Count 3: 1689 eggs per 100cc
Soybean Planting Date: May 16, 2013
Soybean Variety: Pioneer P93Y06
Herbicide: 3.5 oz Canopy, 1 qt glyphosate
Herbicide (Post): 1 qt glyphosate 2 times
Treatment Date: June 25 2013
Soybean Seeding rate: 168,000 seeds/acre
Date of Harvest: October 2, 2013
Rain fall: 25.57 inches (5/16-10/2)

Methods
Pioneer P93Y06 soybeans containing SCN resistance PI88788 were planted at a rate of 168,000 seeds per acre on May 16th with a Great Plains 2010P, 10 inch precision drill. Pre-emergent herbicides were applied on April 24: Canopy at a rate of 3.5 oz/acre with 1 quart/acre glyphosate. Post emergence weed control was accomplished with two applications of 1 quart of glyphosate/acre, applied on June 18 and July 22. The field was both systematically tiled at one end and spot tiled at the other allowing for 2 trials in the field. SCN sample 1 was taken from the systematically tiled trial while samples 2 and 3 were taken in the spot tiled trial.

This study was arranged in a randomized complete block design replicated four times. This design was used in both a systematically tiled section of the field and a spot tiled section. Foliar Fungicide Quilt XL applied at 10.5 oz/acre was compared to an untreated control. Plots were treated on June 25 with a 10 foot CO2 plot sprayer calibrated to apply 15 gallons of water/acre at 40 PSI. Each plot was 10 feet wide and 40 feet long. Plots were trimmed to 35 feet in length. Plots were harvested on October 2nd using a Hege 140 small plot combine harvesting the center five feet of the plot and the entire 35 foot length.

Treatments
1) Quilt Excel at 10.5 oz/acre applied in 15 gallons of water at 40 psi
2) Control (no fungicide application)
Results

Table 1. Soybean yield adjusted to 13.5 % moisture (Well Drained Soil)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean yield (bu/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quilt Excel 10.5 oz</td>
<td>58.9</td>
</tr>
<tr>
<td>Control</td>
<td>54.4</td>
</tr>
</tbody>
</table>

P>F=.16, NS; LSD= 6.99, CV =6.94, s=4.46

Table 2. Soybean yield adjusted to 13.5 % moisture (Poorly Drained Soil)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean yield (bu/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quilt Excel 10.5 oz</td>
<td>54.6</td>
</tr>
<tr>
<td>Control</td>
<td>49.9</td>
</tr>
</tbody>
</table>

P>F=.11 NS; LSD=6.58, CV =5.6, s=8.4

Summary

There were no significant differences observed over treatments on either of the two field sites (same field, but different drainage). Quilt Excel cost $21.10/acre for the product and another $10.00/acre for application and adjuvants for a total cost of $31.10/acre. If soybeans were $12.23/bushel (cash price on harvest date), it would take 2.54 bushels/acre to cover costs.

Acknowledgement

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