

Effect of Quilt XL Applied at R2 or R4 on Soybean Grain Yield

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Objective

To evaluate yield response of soybeans to Quilt XL (Azoxystrobin & Propiconazole) fungicide applied at soybean growth stages late R2 or R4.

Background

Crop Year: 2014

Location: OSU Unger Farm

County/Town: Crawford

Soil Type: Blount/Pewamo

Drainage: Systematic

Previous Crop: Corn

Tillage: No – tillage

Soil Test: pH 6.5, P 63 ppm, K 197 ppm

Soybean Planting Date: May 11, 2014

Soybean Variety: NK- S29-V2 CMV+C (twin)
Pioneer 93Y05 (10 inch)

Herbicide: 3.5 oz Canopy, 1 quart glyphosate

Post: 1 quart glyphosate

Treatment Date: July 17, 2014 or August 1, 2014

Soybean Seeding Rate: 160,000 seeds/acre-twins
168,000 Seeds/acre (10 inch)

Date of Harvest: October 2, 2014

Rainfall: 12.5 inches (from 5/11-9/1)

Methods

Trial A (Twins): Soybean cultivar NK S29-V2 with SCN resistance source PI88788 was planted at a rate of 160,000 seeds per acre on May 11th with a Great Plains YP 425A twin row (rows 8 inches apart with a 22 in skip) precision planter.

Trial B (10 inch): Soybean cultivar Pioneer P93Y05 also containing SCN resistance PI88788 was planted at a rate of 168,000 seeds per acre on May 10th with a Great Plains 2010P 10 inch precision drill.

All treatments received the following burndown and pre-emergent herbicides on May 1: Canopy at a rate of 3.5 oz/acre with 1 quart/acre glyphosate. Post emergence weed control was accomplished with one application of 1 quart of glyphosate/acre, applied on July 2. Treatments were Quilt XL (azoxystrobin and propiconazole) at 10.5 ounces/A applied at R2/R3, Quilt XL at 10.5 ounces/A applied at R4, and a control. The R2/R3 treatments were applied on July 17, with 20% of the leaf area affected by Septoria Brown Spot on the bottom half of the plant; upper canopy contained less than 1% Frogeye Leaf Spot; and leaf feeding injury was below 3% most likely from grasshoppers, Japanese beetles and corn rootworm beetles. R4 applications were made on August 1. Leaves with Septoria brown spot in the lower canopy had fallen off. Frogeye Leaf Spot was still less than 1% with none on the top two trifoliolate leaves affected; feeding injury from insects was approximately 4 percent; from grasshoppers, bean leaf beetles, and green stink bugs



This study was arranged in a randomized complete block design replicated four times. Each plot was 10 feet wide and 45 feet long. Plots were trimmed to 40 feet in length. Plots were harvested on October 2nd using a Kincaid 8 XP small plot combine harvesting, seven and a half feet of the plot and the entire 40 foot length.

Treatments

- 1) Quilt XL applied on July 16th R2/R3
- 2) Quilt XL applied on August 1st R4
- 3) Non treated Control

Results

Table 1. Trial A (Twin row soybeans): Soybean yield adjusted to 13.5 % moisture

Treatment	Mean yield (Bu/A)
Quilt XL @ R2/R3	68.4
Quilt XL @ R4	68.3
Control	67.7

P>F=0.951, NS; STD=4.31; CV=6.32

Table 1. Trial B (10 inch soybeans): Soybean yield adjusted to 13.5 % moisture content

Treatment	Mean yield (Bu/A)
Quilt XL @ R2/R3	71.5
Quilt XL @ R4	71.2
Control	71.1

P>F=0.97, NS; STD=2.66; CV=3.73

Summary

There were no significant differences observed in yield.

Acknowledgement

The authors express appreciation to Chuck Smith for his cooperation and aid in the planting and harvest of this trial. Also to the OSU soybean performance team for harvesting the trials.

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