

Evaluation of Insecticide and Insecticide/Fungicide Tankmix on Soybeans

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Objectives

To determine if the addition of Warrior insecticide and Warrior insecticide plus Quadris fungicide tankmix will provide a yield benefit to soybeans.

Background

Cooperator:	Farm Focus, Inc.	Herbicide:	
County:	Van Wert	PREPLANT:	1.25 pt./A Boundary + 1 pt./A (April 22) 2,4-D LVE + 1% v/v COC
Soil Type:	Hoytville silty clay loam, Haskins loam	POST (June 8):	64 oz./A Touchdown IQ + 17 lb./100 gal. AMS
Drainage:	Tile- nonsystematic	Variety:	Northrup King X332R
Previous Crop:	Corn	Row width:	7.5 inches
Tillage:	No-till	Planting Rate:	225,000 seeds/A
Soil Test (2002):	pH 6.0, P 27 ppm, K 133 ppm	Planting Date:	May 4, 2004
Fertilizer:	285 lb./A 4-19-38 surface broadcast (Fall 2003)	Harvest Date:	October 6, 2004

Methods

This study consisted of three treatments replicated ten times in a complete randomized block design. The treatments are as follows:

1. Warrior insecticide @ 3.2 oz./A applied at R3 – beginning pod set (applied July 13).
2. Warrior insecticide @ 3.2 oz./A + Quadris fungicide @ 6.4 oz./A applied at R3 – beginning pod set (applied July 13).
3. Untreated Check

Applications were made with a Great Plains ground sprayer operated at 40 psi application pressure in 15 gallons per acre spray volume. Turbo TeeJeet wide angle flat spray tips (TT11004-VP) on 30 inch spacings were used for all applications. Plot size was 45 feet wide by 572 feet long.

Harvest populations (September 28) were estimated by counting the number of plants in the row on each side of a 10 foot section at three different locations in each plot. The average number of plants counted per 10 feet was converted to plants per acre. Yields were determined by harvesting one round (28 feet) out of the center of each plot with a John Deere 6620 combine equipped with a calibrated AgLeader PF3000 yield monitor. Plot weights were determined with a calibrated weigh wagon and moistures were taken from the combine yield monitor. All yields were adjusted to a 13% moisture standard.

Results

Table 1. Soybean harvest population, moisture, and yield means for each treatment.

Treatment	Harvest Population (plants/A)	Moisture (%)	Yield (bu./A)
Untreated Check	167,200	10.6	60.6
Warrior Insecticide	168,200	10.7	57.9
Warrior Insecticide plus Quadris Fungicide	171,800	10.6	62.8
LSD (P=0.05)	NS	NS	NS
F-test	<1	1.2	3.4
CV (%)	6.5	<1	7.0

NS= not significant

Summary

Results of this one year study indicate no statistical differences in harvest population, moisture, or yield from a foliar application of Warrior insecticide or Warrior insecticide plus Quadris fungicide. Results from this year's study contradict many farmer observations that show a consistent and positive benefit of using Warrior insecticide or Warrior insecticide plus Quadris fungicide.

The presence of soybean aphids was confirmed in the test field in mid-August. However, we noted very low populations of soybean aphids in the study field. One reason the Warrior insecticide treatment may have shown no benefit was due to the overall low insect pressure in the test field.

In this one year study, all Quadris plus Warrior plots were visually noted to have green stems and leaves still on plants in greater incidence than the Warrior only or untreated check plots. Many farmers also report the prolonged presence of green stems and leaves still on plants as a result of a Quadris fungicide application compared to an untreated plot.

The additional cost for adding the Warrior insecticide in this trial was \$7.06 per acre at the 3.2 oz./A rate. The additional cost for adding the Warrior insecticide plus Quadris fungicide in this trial was \$22.34 per acre at the 3.2 oz./A rate for Warrior and 6.4 oz./A rate for Quadris. These prices are based on in season pricing with no discounts and this cost does not include application fees. Typical commercial application fees are approximately \$5 per acre.

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