



# Foliar Fungicide, Insecticide Study on Soybeans – 2007

**Planted:** April 25, 2007  
**Harvested:** September 24, 2007  
**Rows:** Eight 30" rows  
**Seeding Rate:** 165,000 seeds/A.

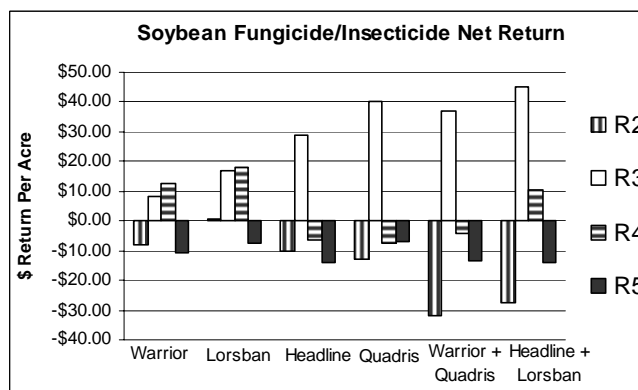
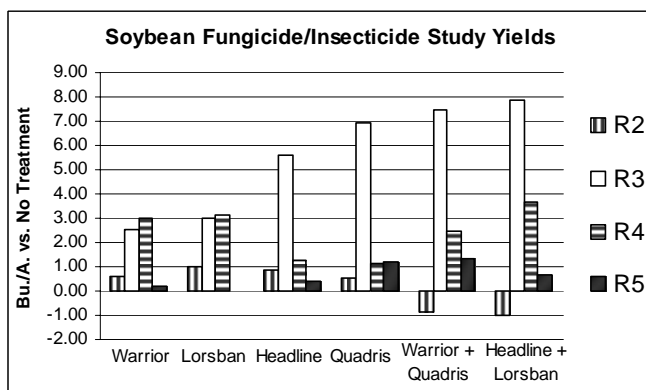
**Previous Crop:** Corn  
**Tillage:** Chisel  
**Herbicide:** Roundup Original  
**Product Tested:** BECK 321NRR

RAINFALL	
April	5.54 in.
May	2.29 in.
June	2.83 in.
July	3.48 in.
August	2.09 in.
Total	16.23 in.

**Purpose:** This study evaluates applications of both fungicide and insecticide products on BECK 321NRR at growth stages of R2-R5. Weather data was also collected during each growth stage to evaluate correlations between climate and agronomic conditions.

Insecticide and/or Fungicide Application	Yield (Bu./A.)* and Application Stage							
	R2 Stage	\$ Return/Acre	R3 Stage	\$ Return/Acre	R4 Stage	\$ Return/Acre	R5 Stage	\$ Return/Acre
No Insecticide/Fungicide	61.8		59.5		61.2		60.2	
Warrior	62.4	-\$7.74	62.0	\$8.49	63.9	\$12.37	60.4	-\$10.97
Lorsban	62.8	\$0.65	62.4	\$17.00	64.3	\$18.12	60.2	-\$7.50
Headline	62.7	-\$10.08	65.0	\$28.93	62.5	-\$6.46	60.6	-\$13.77
Quadris	62.4	-\$12.79	66.4	\$40.12	62.3	-\$7.57	61.5	-\$6.87
Warrior + Quadris	61.0	-\$31.83	66.9	\$37.13	65.1	-\$4.32	61.6	-\$10.58
Headline + Lorsban	60.9	-\$27.51	67.3	\$45.26	66.0	\$10.58	60.9	-\$13.97

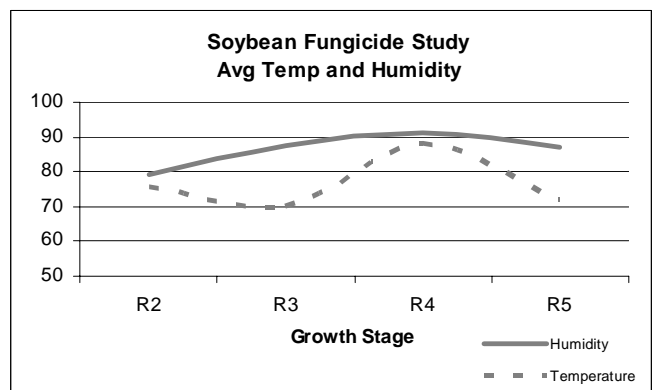
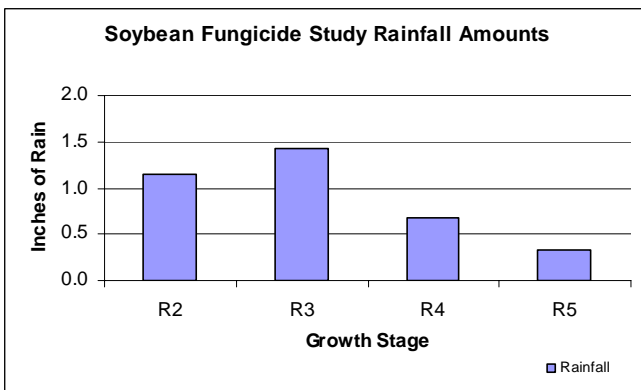
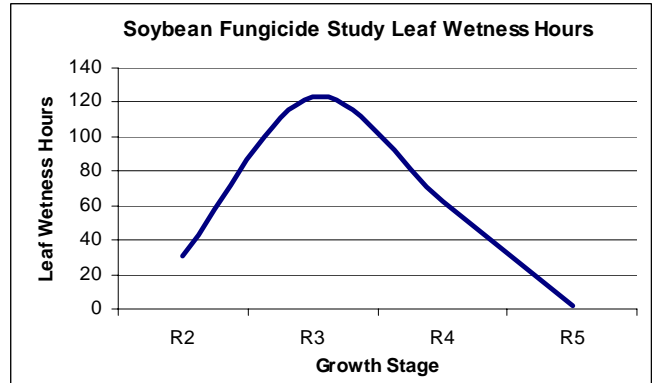
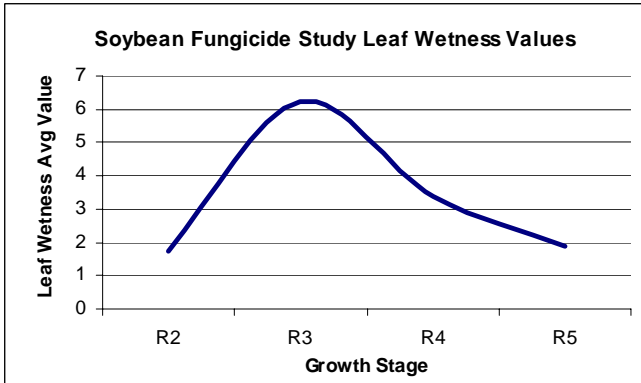
\*Bushels per acre corrected to 13% moisture. Weighed by: BECK'S Hybrids – Jason Webster  
 Costs/acre used were Headline \$12, Quadris \$12, Warrior \$7.50, Lorsban \$2.50, and application cost of \$5/acre. Soybean price used is \$8.25/bushel.



**Fungicide Summary:** Fungicide applications responded very well at the R3 growth stage and gained 5-7 Bu./A. All stand alone fungicide applications increased yield to some degree, but only the R3 growth stage application was justified economically with returns of \$29-\$40 per acre. All other growth stage applications lost money.

**Insecticide Summary:** 2007 was also a year where soybean aphids caused considerable problems for soybean growers in Illinois. The R3 and R4 growth stages in this study gained 2.5 – 3.1 Bu./A. by applying an insecticide to control the soybean aphid. This yield increase resulted in an \$8-\$18 per acre net return increase. The R2 growth stage application occurred before aphids arrived and the R5 application was too late and damage had already occurred.

## Foliar Fungicide, Insecticide Study on Soybeans – Continued



### Leaf Wetness/ Humidity Summary:

This year at the IL PFR we utilized small weather stations within the crop canopy to measure temperature, rainfall, humidity, and leaf wetness. Leaf wetness and rainfall were at the highest levels of the season at the R3 growth stage, which correlates to the high yields and economic returns at that R3 fungicide application. Leaf wetness hour readings were on average 4 times higher at the R3 growth stage, which indicated that during that time period we sustained the most hours during the day with significant moisture within the crop canopy. These are interesting findings and we plan to continue utilizing this technology to help form better agronomic recommendations regarding when or if to apply a fungicide.



Site-specific environmental conditions influence plant disease and pests. Above is a mini-weather station at the Illinois PFR Center. This unit is a data logger that measures leaf wetness, temperature and humidity and is made by Spectrum Technologies located in Naperville, Illinois.