



## Foliar Fungicide and Insecticide Study – 2008

**Planted:** May 1, 2008  
**Harvested:** October 1, 2008  
**Rows:** Six 30" rows  
**Seeding Rate:** 120,000 seeds/A.

**Previous Crop:** Corn  
**Tillage:** Chisel / Field Cultivator (twice)  
**Herbicide:** 24 oz. Durango

RAINFALL	
April	4.64 in.
May	6.36 in.
June	3.12 in.
July	8.90 in.
August	0.80 in.
Total	23.82 in.

**Purpose:** The use of foliar fungicides has grown with the movement of Asian Soybean Rust into the southern United States. Although rust was discovered as far north as central Illinois this fall, it has yet to be detrimental to Beck's growers. Testing of foliar fungicides in preparation for Rust control has led to the discovery that these products could be used for other yield enhancing qualities due to their ability to maintain plant health and seed quality. This test is our continued look into the usefulness of these products for our growers. We are also using leaf wetness sensors to monitor the amount of moisture present in the canopy during the season to see if there may be a way to monitor the crop to determine when applications may be profitable.

### 2008 Summary

Insecticide and/or Fungicide Application	Growth Stage	Bushels Per Acre*	Yield Advantage	Return on Investment^
<b>BECK 399NRR</b>				
Headline	R2	76.0	-2.4	-\$50.04
Headline/Mustang Max	R2	77.6	-0.8	-\$37.27
Mustang Max	R2	78.4	0.0	-\$13.00
Untreated	----	78.4	----	----
Headline	R4	77.5	-0.9	-\$33.38
Headline/Mustang Max	R4	78.4	0.0	-\$28.38
Mustang Max	R4	73.7	-4.7	-\$65.22
<b>BECK 422NRR</b>				
Headline	R2	68.3	+0.3	-\$20.05
Headline/Mustang Max	R2	66.4	-1.6	-\$46.16
Mustang Max	R2	67.3	-0.7	-\$20.78
Untreated	----	68.0	----	----
Headline	R4	72.4	+4.4	\$25.50
Headline/Mustang Max	R4	72.6	+4.6	\$22.73
Mustang Max	R4	75.0	+7.0	\$64.77

### 3 Year Summary

Insecticide and/or Fungicide Application	Growth Stage	Bushels Per Acre*	Yield Advantage	Return on Investment^
Headline/Pyrethroid Insecticide	R2	74.1	+3.0	\$9.61
Headline	R2	72.9	+1.8	-\$8.09
Pyrethroid Insecticide	R2	71.2	+0.1	-\$12.10
Untreated	----	71.1	----	----
Headline/Pyrethroid Insecticide	R4	77.3	+6.2	\$45.43
Headline	R4	77.3	+6.2	\$40.28
Pyrethroid Insecticide	R4	74.0	+2.9	\$19.33

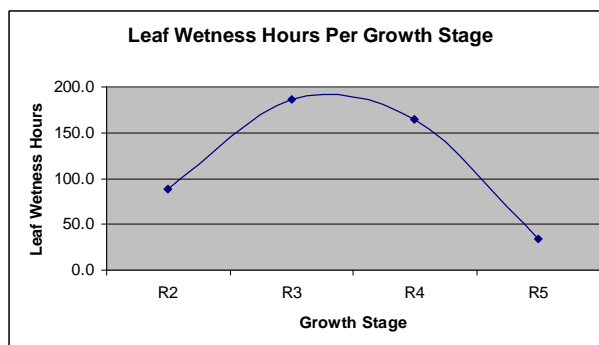
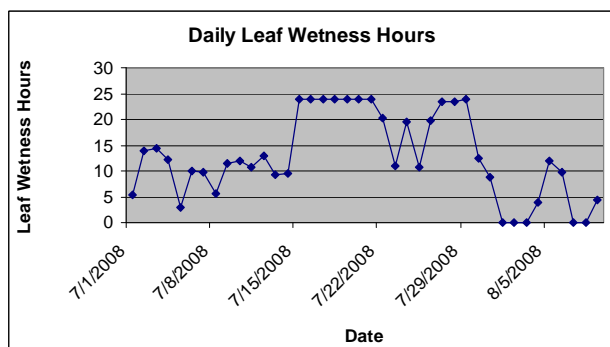
\*Bushels per acre corrected to 13% moisture.

^Return on Investment (ROI) based upon yield advantage of application minus the cost of product and application charge.

Costs were based on \$15.38/A. for 6 oz. of Headline, \$5 for 2.5 oz. of Mustang Max, \$2.00/A. for additives, and \$6.00/A. average application charge. Soybean price based on \$11.11/Bu. average.



## Foliar Fungicide and Insecticide Study – Continued



**Summary:** Unlike previous years' results, the data collected from the Southern PFR farm did not show as much promise using fungicides on soybeans in 2008. Both BECK 399NRR and BECK 422NRR failed to produce positive yield gains using fungicide, insecticide, or a combination of both at the R2 growth stage. BECK 422NRR did however produce a positive return on investment using these applications at the R4 growth stage although BECK 399NRR did not. With the use of our leaf wetness sensors we were able to monitor the amount of moisture present in the crop canopy at the time that each of these applications were made. It is interesting to note that the number of leaf wetness hours was significantly higher at R4 growth stage than at R2. Previous data collected with these tools at the IL PFR suggested that there may be a correlation between increased leaf wetness and the likelihood of making profitable fungicide applications in soybeans. Was this the case in 2008 at the Southern PFR farm? The jury is still out, but we hope to expand our efforts in future testing to see if applications made at various growth stages follow the same patterns that we recorded with the moisture sensors.

The three year summary shows only marginal yield gains that did not produce a profitable return using fungicide alone at the R2 growth stage. To the contrary, applications made with both a fungicide and a pyrethroid insecticide at this same stage show a slight increase in profitability. Both applications of fungicide with and without insecticide as well as stand alone applications of insecticide show promising results at the R4 growth stage in the three year summary.



## Soybean Foliar Feed Study – 2008

**Planted:** May 21, 2008  
**Harvested:** October 1, 2008  
**Rows:** Six 30" rows  
**Seeding Rate:** 120,000 seeds/A.

**Previous Crop:** Corn  
**Tillage:** Chisel / Field Cultivator (twice)  
**Herbicide:** 24 oz. Durango  
**Product Tested:** BECK 422NRR

**Purpose:** To evaluate the use of liquid fertilizers applied three different times: as starter, as foliar feed applications with Roundup, and at the time of fungicide applications. Monty's Plant Food products are low rate foliar fertilizers with a humic acid base that are meant to be used as a supplement to a standard dry fertilizer program. All-Plant Liquid Fertilizers are neutral pH, low salt fertilizers that can be used as supplement to a dry fertilizer program or as a stand alone fertility program.

Foliar Fertilizer Application	Growth Stage	Bushels Per Acre*	Yield Advantage	Return on Investment^
Untreated	----	75.0	----	----
16 oz. Monty's 8-16-8 w/ Roundup	V6	74.0	-1.0	-\$25.36
16 oz. Monty's 2-15-15	R4	71.7	-3.3	-\$50.91
16 oz. Monty's 8-16-8 w/ Roundup & 16 oz. 2-15-15	V6/R4	74.1	-0.9	-\$38.50
4 gal. All-Plant 5-15-15	R4	76.2	+1.2	-\$7.87
4 gal. All-Plant 5-15-15 w/ Headline	R4	73.8	-1.2	-\$51.91

\*Bushels per acre corrected to 13% moisture.

^Return on Investment (ROI) based upon yield advantage of application minus the cost of product and application charge. Costs were based on \$15.38/A for 6 oz. of Headline, \$2.00/A. for additives, and \$6.00/A. average application charge. Costs for Monty's 8-16-8 were based on \$8.25/A. for 16 oz. of product. Costs for All-Plant 5-15-15 were based on \$3.80/gallon product. Soybean price based on \$11.11/Bu. average.

**Summary:** The only foliar fertilizer application in this study that showed a yield increase was 4 gallons of All-Plant 5-15-15 at R4. None of the entries applied were able to produce a positive return on investment. Considering the ideal growing conditions for soybeans and the high levels of P & K on the Southern PFR farm, the likelihood of these products showing a return on investment diminished in 2008. Under extremely wet or dry conditions that decrease nutrient availability, the probability of a foliar fertilizer providing a yield benefit may increase. There was no visual tissue burn or stunting noted in any of the entries in 2008.