On-Farm Comparison Results - Headline Fungicide

Quad County On Farm Research Group

Years: 2005

Title: Headline Fungicide Study

Crop: Irrigated and Dryland Soybeans

Quad Operators: Joe Birky
Chad Dane
Roger Fehr
Brandon & Daryl Hunnicutt
Ron and Ray Makovicka
Brent & Ron Uffelman

Objective: Determine if strobilurin fungicides (ex. Headline) increases yield in the absence of soybean diseases such as soybean rust.

Treatments: Headline vs. Untreated

University of Nebraska Lincoln EXTENSION

On-Farm Comparison Results - Headline Fungicide

Quad County On Farm Research Group

Background: Research in cereal crops with strobilurin fungicides has shown increased yields in the absence of disease. This is attributed to strobilurin fungicides having added physiological effects on plants such as increased chlorophyll content, increased biomass, and reduced drought and cold stress.

Fungicides were highly marketed in soybeans once soybean rust was found in the U.S. in Nov. 2004. In the Northern U.S., strobilurin fungicides were also marketed for increasing yields in the absence of soybean rust due to increased plant health and drought tolerance.

Quad county producers tested yield effects of Headline fungicide application in one dryland and five irrigated fields with a total of 20 replications.

University of Nebraska Lincoln EXTENSION

On-Farm Comparison Results - Headline Fungicide

Quad County On Farm Research Group

Irrigated Locations	Yield (bu/A) (with Fungicide)	Yield (bu/A) (no fungicide)	Yield Increase	Return over Cost*
Ong	81.1	77.2	3.9	$5.47
Clay Center	68.4	68.1	0.3	-$13.42
Waco	77.8	75.4	2.4	-$2.40
York	83.3	83.1	0.2	-$13.95
Giltner	88.7	83.9	4.8**	$10.20
Averages	79.9	77.5	2.3	-$2.82
Strang (dryland)	47.0	45.2	1.8	-$5.55

*Based on $5.25/bu soybean price and fungicide + application costs of $10 and $5 respectively.

**Significant at 5% and 1% levels.

University of Nebraska Lincoln EXTENSION

On-Farm Comparison Results - Headline Fungicide

Quad County On Farm Research Group

Results: 2005 Five Irrigated Fields with 17 replications.

Headline	79.9 bu./acre
Untreated	77.5 bu./acre[1]

[1] Not significant at 5% or 1% levels.

The Giltner location was significant between the treatments at both 5% and 1% levels.

Summary: Headline fungicide did not significantly increase yields in five of the six plots located in South Central Nebraska. A yield increase of 4 bu/acre is necessary in order for profit to be realized. It is currently unclear why strobilurin fungicides such as Headline increase yields in some fields and not others.