

SOYBEAN (*Glycine max* L. 'Pioneer 92M61')  
Brown spot; *Septoria glycines*

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**Foliar fungicide efficacy on brown spot in soybeans, 2008.**

A foliar fungicide efficacy trial was established at the South Central Agricultural Laboratory near Clay Center, NE. Soybeans were planted on 20 May 2008 in 30 in rows. A randomized complete block design with four replications was used for this trial. Each plot in the trial was four rows wide (10 ft) by 26 ft long. Foliar fungicides were applied with a hand held spray boom pressurized with CO<sub>2</sub> to 40 psi. The spray boom consisted of 6 nozzles (Teejet XR11002) spaced 19 in apart. Each application was applied at 3.9 mph resulting in an application volume of 15 gal/A. Fungicides were applied at the R3 growth stage (beginning pod formation) on 24 Jul 2008. Brown spot severity was assessed on 8 Aug 2008 (15 DAT) and 22 Aug 2008 (29 DAT) and leaf retention was assessed on 15 Sep 2008 (53 DAT). All assessment and harvest data were made in the two center rows of each plot. Harvest occurred on 3 Oct 2008 with a research plot combine. Yields were calculated by standardizing moisture to 13%. Means were separated with Fisher's protected LSD.

Planting occurred later than normal due to an abnormally wet spring. June, July, and August received normal precipitation, however, this trial was under a sprinkler irrigation system so moisture was never lacking. Most treatments that contained a full rate of a strobilurin fungicide had significantly reduced brown spot severity ( $P = 0.05$ ) at 29 DAT. Headline + Respect had lower brown spot severity than the control but it was not significantly different. Most of the strobilurin treatments also had increased leaf retention from the control, though some were not statistically significant. All Headline and one of the Stratego treatments had significantly longer leaf retention than the control. There may have been an increase in yield for a majority of the treatments over the control, but it was not significant. The Headline + Respect treatment significantly increased yield above the control. Punch + Asana, another fungicide + insecticide treatment, did not indicate a significant yield increase above the control.

Table 1: Brown spot severity, leaf retention, and yield for selected fungicides in a foliar fungicide efficacy in Nebraska. Different letters in data columns indicate significant differences (P = 0.05).

Treatment and Rate, fl oz/A	Brown spot severity <sup>z</sup> (%) 15 DAT	Brown spot severity (%) 29 DAT	Leaf Retention <sup>y</sup>	Yield (bu/A)
Non-treated Control.....	13.8	32.5 a	2.8 cd	74.9 bc
Stratego, 10 fl oz + NIS, 0.125% V/V.....	7.5	13.8 b	4.8 a	75.5 bc
Stratego, 10 fl oz + Proline, 1 fl oz. Headline, 6 fl oz + NIS, 0.25% V/V.....	9.0	12.5 b	4.3 a-c	77.2 bc
Topguard, 7 fl oz.....	7.5	13.8 b	4.8 a	78.8 bc
Topguard, 14 fl oz.....	9.5	20.0 ab	3.3 a-d	75.6 bc
Quadris, 6 fl oz + COC, 1% V/V....	7.8	17.5 ab	3.3 a-d	73.3 c
Headline, 6 fl oz + Respect, 3.2 fl oz + NIS, 0.25% V/V.....	8.8	15.0 b	4.3 a-c	75.5 bc
Evito, 3 fl oz + COC, 1% V/V.....	8.3	16.3 ab	4.8 a	83.2 a
Punch, 3 fl oz + Asana, 5.8 fl oz.....	10.0	26.3 ab	4.3 a-c	75.1 bc
LSD ( $\alpha=0.05$ )	9.5	17.5 ab	4.8 a-d	77.3 bc
	NS <sup>x</sup>	9.1	0.9	3.2

<sup>z</sup> Brown spot severity was assessed in the lower half of the soybean canopy.

<sup>y</sup> Leaf retention was assessed using a 1-5 (1 = low leaf retention, 5 = high leaf retention) scale.

<sup>x</sup> NS = no significant differences between treatments.