SOYBEAN (*Glycine max* 'Asgrow 5606')
Aerial web blight; *Rhizoctonia solani*

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Evaluation of foliar fungicide applications to prevent yield loss from aerial web blight in Mississippi, 2010b.

A foliar fungicide efficacy trial was conducted in Noxubee County, Mississippi in a continuous soybean production field. The trial was planted in a Freest fine sandy loam soil on 1 May to the soybean variety Asgrow 5606. Plots consisted of six rows spaced15-in. apart and were 45 ft long. Treatments were replicated four times in a randomized complete block design. Plots were not irrigated. Fungicide treatments were applied on 21 Jul (approximately R5) to each plot using a CO_2-pressurized, Bowman MudMaster sprayer fitted with TeeJet 11001VS nozzles spaced 20 in apart and delivering 16.5 gal/A at 58 psi. A non-ionic surfactant was added to all treatments at a rate of 0.25% v/v. Disease severity was visually assessed by parting back a 4 foot section of the soybean canopy and rating for the disease based on presence of symptoms and disease severity. Plots were rated 14 days (5 Aug) and 28 days (19 Aug) post-treatment. Assessments were made based on a scale of 0 to 9 where 0 = no disease present and 9 = a dead plant, from 10 randomly selected areas within each plot. Plots were harvested with a plot combine on 11 Oct and yields were adjusted to 13% moisture. Data were subjected to analysis of variance and means were compared at the 0.05 significance level using Fisher's protected least significant difference (LSD) test.

Aerial web blight was the predominant foliar disease in this particular soybean field. Foliar fungicide application, regardless of product or rate, significantly reduced disease progression based on observable symptoms 14 and 28-days post application compared to the non-treated check. Only application with Gem resulted in a significant yield difference compared to treatment with one application of Headline or a 6 fl oz/A followed by a 4 fl oz/A Headline application as well as compared to the non-treated check. In addition, there were no significant differences between two applications of Headline or Quadris and a single application of the same product. No phytotoxicity was observed as a result of foliar fungicide application.

Treatment[z], rate/A	Application timing	Disease severity14-days post application	Disease severity 28-day post application	Yield (bu/A)[y]
Non-treated check.....		5.6 a	5.6 a	36.3 b[x]
Headline 2.09EC, 6 fl oz	R5	3.3 bc	3.2 bc	39.5 b
Headline 2.09EC, 6 fl oz fb 4 oz	R5 fb. R5.5	3.2 bc	2.8 cd	38.9 b
Quadris 2.08F, 6 fl oz.....	R5	3.9 b	3.4 b	42.8 ab
Quadris 2.08F, 6 fl oz fb 4 oz.....	R5 fb. R5.5	2.8 bc	2.9 cd	43.1 ab
Stratego 2.08EC, 10 fl oz.....	R5	2.8 bc	2.8 cd	43.6 ab
Gem 4.17SC, 3.5 fl oz.....	R5	2.4 c	2.8 cd	46.8 a
Headline 2.09SC, 6 fl oz.....	R5	3.4 bc	2.6 d	40.8 ab
LSD (0.05)		0.44	0.41	7.3
CV (%)		28.6	28.4	12.1
P-value for F-statistic		0.0053	<0.0001	0.16

[z]All fungicide treatments included a non-ionic surfactant at 0.25% v/v.
[y]Yields are weight of soybean with moisture content adjusted for 13%.
[x]Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD (*P*=0.05).