

PEANUT (*Arachis hypogaea* 'Gregory')  
Leaf spot, late; *Cercosporidium personatum*  
Stem rot; *Sclerotium rolfsii*

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### **Evaluation of fungicides for peanut disease management, 2015.**

'Gregory' peanuts were planted at a rate of 6 seed/ft on 13 May in Barnwell loamy sand. Rotation history was corn, cotton and peanut in 2014, 2013 and 2012, respectively. Plots were four 40-foot rows on 38 in. centers with treatments replicated 5 times and applied according to a randomized complete block design. Blocks were separated by 10-ft alleys. Standard practices were used to manage tillage, weeds, insects and nutrition. Fungicides were applied with two DG8002 nozzles/row (19-in. spacing) delivering 15 gal/A at 50 psi. Late leaf spot ratings (% leaflet incidence and % defoliation) were taken on 22 Sep, and ratings of % of row exhibiting symptoms or signs of stem rot (based on loci counts per row where 1 locus was  $\leq$  1 ft of consecutive stem rot damaged plants or signs per row) were taken 23 Sep. Two yield rows per plot were dug on 22 Sep and combined 9 Oct with yield reported at 10% moisture. SAS 9.4 PROC GLIMMIX was used to determine effects of treatments, with mean separations compared according to Fisher's Protected LSD at  $\alpha = 0.05$ . Yield data were modeled according to a negative binomial distribution. Rainfall during the period totaled 23.81 in. In May, Jun, July and Aug the rainfall was 3.49, 1.9, 2.58 and 0.72 in. below average, and in Sep and Oct rainfall was 1.47 and 4.66 in. above average, respectively. Average maximum air temperatures were 1.7, 3.1, 2.5 and 0.5°F above average in May, Jun, Jul and Aug and 1.4 and 2 °F below average in Sep and Oct, respectively. Average minimum air temperatures were near average in May and Aug and 1.4, 1.2, 2.2 and 1.3°F above average in Jun, Jul, Sep and Oct, respectively.

The trial site was exposed to moderately high levels of late leaf spot disease pressure. All treatments had  $\geq$  92% late leaf spot disease incidence. All fungicide programs reduced late leaf spot defoliation compared to the untreated check. All treatments with exception of Headline 9 fl oz/A significantly reduced stem rot incidence. Yield was significantly increased compared to the untreated check by all fungicide treatments. In this test, disease management nor yield were not significantly different among Priaxor produced for 2014 and Priaxor produced for 2015.

Treatment and amount/A	Application timing <sup>z</sup>	Leaf spot % incidence <sup>y</sup>	Leaf spot % defoliation <sup>x</sup>	Stem rot % incidence <sup>w</sup>	Yield (lb/A)
Priaxor 4.17F 6 fl oz	ABCD	95.0 b	1.6 c	6.4 bcd	4920 a
Elatus 0.45 WG 7.14 oz	ABCD	98.0 a	2.6 c	2.4 d	4872 ab
Induce L 0.25% v/v	ABCD				
Fontelis 1.67 SC 16 fl oz	ABCD	100 a	2.8 c	6.2 bcd	4782 abc
Orius 3.6F 7.2 fl oz	ABCD	100 a	12.2 c	2.0 d	4695 abc
Topguard L 7 fl oz	ABCD				
Elatus 0.45 WG 9.5 oz	ABCD	92.0 c	1.6 c	2.2 d	4607 abcd
Induce L 0.25% v/v	ABCD				
Priaxor 4.17F 4 fl oz	ABCD	97.5 ab	3.7 c	5.7 bcd	4540 abcd
Orius 3.6F 7.2 fl oz	ABCD	100 a	33.8 b	3.8 cd	4402 abcd
Abound 2.08F 12 fl oz	ABCD				
Bravo Weather Stik 6SC 24 fl oz	ABCD	100 a	5.8 c	12.9 b	4338 abcd
Orius 3.6F 7.2 fl oz	ABCD				
Priaxor 4.17F <sup>v</sup> 6 fl oz	ABCD	100 a	2.4 c	12.0 bc	4298 abcd
Priaxor 4.17F <sup>v</sup> 4 fl oz	ABCD	100 a	6.2 c	12.2 bc	4223 bcd
Orius 3.6F 7.2 fl oz	ABCD	100 a	14.0 c	12.7 bc	4147 cd
Topsin 4.5 FL 10 fl oz	ABCD				
Orius 3.6F 7.2 fl oz	ABCD	100 a	14.2 c	10.0 bcd	4062 de
Alto 100 SL 5.5 fl oz	ABCD				
Provost 433 SC 10.7 fl oz	ABCD	100 a	7.6 c	12.5 bc	4033 de
Orius 3.6F 7.2 fl oz	ABCD	100 a	43.0 b	13.6 b	4024 de
Elast 400 F 15 fl oz	ABCD				
Headline SC 6 fl oz	ABCD	100 a	29.4 b	10.7 bcd	3564 ef
Headline SC 9 fl oz	ABCD	100 a	9.4 c	25.1 a	3434 f
Untreated check	Not applicable	100 a	96.4 a	28.1 a	2908 g

<sup>z</sup>Application timings correspond to A: 26 Jun 2015 (45 days after planting [DAP]), B: 10 Jul 2015 (60 DAP), C: 23 Jul 2015 (75 DAP) and D: 10 Aug 2015 (90 DAP).

<sup>y</sup>Percentage of total leaflets in the two yield rows of the plot with one or more late leaf spot lesions.

<sup>x</sup>Percentage of total canopy in the two yield rows of the plot defoliated.

<sup>w</sup>Stem rot incidence expressed as the number of disease loci per 80 ft of row (1 locus =  $\leq$  1 ft of consecutive symptoms and signs of the disease).

<sup>v</sup>Priaxor produced for 2014, remaining products were produced for 2015.

Means within a column followed by the same letter are not significantly different according to Fisher's Protected LSD ( $\alpha = 0.05$ ).

Yield data was modeled according to a negative binomial distribution with inverse-link means on the original scale presented.