

PEANUT (*Arachis hypogaea* ‘Sullivan’)  
Late leaf spot; *Nothopassalora personata*  
Stem rot; *Sclerotium rolfsii*

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### **Evaluation of Equus and Acropolis for control of late leaf spot and stem rot on ‘Sullivan’ peanut, 2018.**

‘Sullivan’ peanuts were planted 2” deep on 18 May at rate of 5.5 seed/ft. Soil type was a Barnwell loamy sand. The trial was in an irrigated field that had been rotated to cotton the previous two years. Plots were four 40-foot rows on 38 in. centers with treatments replicated 4 times and arranged according to a randomized completely block design. Blocks were separated by 10-ft field-cultivated 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 (% canopy defoliation) were taken on 4 Oct, and ratings of % of row exhibiting symptoms or signs of stem rot (based on loci counts per row where 1 locus  $\leq$  1 ft consecutive stem rot damaged plants or signs per row) were taken on 12 Oct. Two yield rows of peanut per plot were inverted on 12 Oct and combined 19 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 29.5 in. In May, Jun, Aug and Oct the rainfall was 2.0, 1.0, 0.7 and 1.3 in. below average, and in July and Sep rain fall was 2.2 and 2.8 in. above average, respectively. Average maximum air temperatures were 1.1 and 9.7°F below average in May and Oct, and 4.3, 1.6, 2.9 and 2.9°F above average in Jun, July, Aug and Sep, respectively. Average minimum temperatures were 0.5 and 10.9°F below average in May and Oct, and 2.4, 3.4, 2.6 and 3.0°F above average in Jun, July, Aug and Sep, respectively.

Late leaf spot pressure was moderate in the trial (approximately 90% defoliation in the untreated check but numerically substantially less defoliation observed in the Equus check). While not statistically significant, all fungicide programs had lower defoliation compared to untreated check. Stem rot pressure was absent from the trial. All treatments exhibited significantly greater yield than the untreated check. Except for the treatment with Equus 16 fl oz (timing 1-5) + Equus 24 fl oz (timing 6) + Acropolis 17 fl oz (timing 1) + Orius 7.2 fl oz (timing 2-5) and untreated check, all remaining treatments yielded in the upper statistical grouping. No phytotoxicity was observed in the study.

Treatment and amount/A	Timing <sup>z</sup>	Late leaf spot %	Stem rot % incidence <sup>x</sup>		Yield (lb/A) <sup>w</sup>
		defoliation <sup>y</sup> 4-Oct	12-Oct		
Untreated check	-	89.3	0.0		806 c
Equus 16 fl oz	1-5	66.3	0.0		2452 b
Equus 24 fl oz	6				
Acropolis 17 fl oz	1				
Orius 7.2 fl oz	2-5				
Equus 16 fl oz	1-5	58.0	0.0		3022 ab
Equus 24 fl oz	6				
Acropolis 23 fl oz	1				
Orius 7.2 fl oz	2-5				
Equus 16 fl oz	2-5	42.8	0.0		3437 a
Equus 24 fl oz	6				
Acropolis 23 fl oz	1				
Orius 7.2 fl oz	2-5				
Equus 16 fl oz	1-6	47.0	0.0		3293 ab
Acropolis 17 fl oz	1, 3				
Orius 7.2 fl oz	2-6				
Equus 16 fl oz	1-6	54.8	0.0		3113 ab
Acropolis 23 fl oz	1, 3				
Orius 7.2 fl oz	2-6				
Equus 16 fl oz	2-6	54.8	0.0		2912 ab
Acropolis 23 fl oz	1, 3				
Orius 7.2 fl oz	2-6				
Equus 16 fl oz	2-6	60.5	0.0		3132 ab
Equus 24 fl oz	1				
Acropolis 17 fl oz	6				
Orius 7.2 fl oz	2-5				
Equus 16 fl oz	2-6	67.8	0.0		3151 ab
Equus 24 fl oz	1				
Acropolis 23 fl oz	6				
Orius 7.2 fl oz	2-5				
Equus 16 fl oz	2-5	58.3	0.0		2994 ab
Equus 24 fl oz	1, 6				
Orius 7.2 fl oz	2-5				
Equus 16 fl oz	1, 5	46.3	0.0		3787 a
Equus 24 fl oz	3, 6				
Alto 5.5 fl oz	1, 5				
Elatus 9 oz	2, 4				
Equus 24 fl oz	1-6	56.3	0.0		3115 ab

<sup>z</sup>Fungicide application dates: 1) 17 Jun, 2) 2 Jul, 3) 17 Jul, 4) 1 Aug, 5) 16 Aug, 6) 31 Aug, 7) 15 Sep.

<sup>y</sup>Percentage of total canopy defoliated.

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

<sup>w</sup>Yield data was modeled according to a negative binomial distribution with inverse-link means on the original scale presented. Means followed by the same letter are not significantly different according to Fisher's Protected LSD ( $\alpha = 0.05$ ).