PEANUT (*Arachis hypogaea* 'TUFRunner 511')
Late leaf spot; *Nothopassalora personata*
Stem rot; *Sclerotium rolfsii*

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Evaluation of NNF1681SC for management of late leaf spot and stem rot on 'TUFRunner 511' peanut, 2018.

'TUFRunner 511' peanuts were planted 2" deep on 9 May at rate of 5.8 seed/ft. Soil type was a Barnwell loamy sand. 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, nutrition and irrigation. Fungicides were applied with two DG8002 nozzles/row (19 in. spacing) delivering 15 gal/A at 50 psi. The trial was inoculated by spreading corn and oats colonized with *S. rolfsii* at the rate of 1 g/row ft on 11 Jul (63 days after planting, one day after application 3). Late leaf spot ratings (% canopy defoliation) were taken on 28 Sep, 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 5 Oct. Two yield rows per plot were dug and inverted on 5 Oct and harvested 15 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 low in the trial and defoliation did not exceed 6% in any treatment. Stem rot incidence was not observed to exceed 8% in all fungicide programs and did not significantly vary among treatments. Yields were relatively similar (between 5250 and 5890 lb/A) among all fungicide regimes and did not separate out statistically. No phytotoxicity was observed during the course of the study.

Treatment and amount/A	Application timing[z]	Late leaf spot % defoliation[y] 28-Sep	Stem rot % incidence[x] 5-Oct	Yield (lb/A)[w]
Bravo WS 24 fl oz	1-7	4.5	4.7	5393
Bravo WS 24 fl oz	1,2,4,6,7	3.2	4.4	5799
Bravo WS 16 fl oz	3,5			
Abound 11 fl oz	3,5			
Convoy 32 fl oz	3,5			
Priaxor 6 fl oz	1	3.0	2.2	5886
Topsin 10 fl oz	3,5			
Bravo WS 24 fl oz	2,7			
Bravo WS 16 fl oz	3,4,5,6			
Convoy 32 fl oz	3,5			
Tebuzol 7.2 fl oz	4,6			
Bravo WS 24 fl oz	1,2,4,6,7	4.0	1.3	5789
Dithane 38.4 fl oz	3,5			
NNF-1681SC 36 fl oz	3,5			
Bravo WS 24 fl oz	1,2,4,6,7	4.0	3.4	5424
Elatus 9.5 oz wt	3,5			
NNF-1681SC 36 fl oz	3,5	4.0	4.1	5263
Bravo WS 24 fl oz	1,2,4,6,7			
Bravo WS 16 fl oz	3,5			
Bravo WS 24 fl oz	1,2,4,6,7	5.0	5.0	5632
Bravo WS 16 fl oz	3,5			
Alto 5.5 fl oz	3,5			
Convoy 32 fl oz	3,5			

[z]Fungicide application dates: 1) 8 Jun, 2) 23 Jun, 3) 10 July, 4) 23 July, 5) 7 Aug, 6) 22 Aug, 7) 6 Sep.

[y]Percentage of total canopy in the two yield rows of the plot defoliated.

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

[w]Means 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.