

Evaluation of Lucento for the control 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. Late leaf spot ratings (% canopy defoliation) were taken on 2 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 3 Oct. Two yield rows of peanut per plot were dug and inverted on 3 Oct and harvested 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 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 95% defoliation in the untreated check and 8% defoliation in the Bravo WS program). All fungicide programs resulted in significantly less late leaf spot % defoliation than the untreated control. The grouping with the second highest amount of defoliation included Priaxor + Provost Opti + Bravo WS, Headline + Convoy + Bravo + Topsin, and Bravo + Tebuzol + Aprovia, whereas all remaining treatments not including the untreated control were in the lowest grouping for defoliation. Incidence of stem rot was very low (less than 3%) across the trial, and no significant differences were observed among treatments. Poor plant health and non-target diseases confounded stem rot rating in the untreated control and as such this was excluded from the analysis. All fungicide programs resulted in a significant increase in yield compared to the untreated control. No phytotoxicity was observed in the study.

Treatment and amount/A	Application timing ^z	Leaf spot % defoliation ^y		Stem rot % incidence ^x	
		2-Oct	3-Oct	Yield (lb/A) ^w	
Untreated		94.5 a	- ^v	2730 c	
Bravo WS 24 fl oz	1-7	8.3 cd	0.9	5058 ab	
Bravo WS 24 fl oz	1,2,4,6,7	2.8 d	2.8	5007 ab	
Lucento 5.53 fl oz	3,5				
Bravo WS 24 fl oz	1,2,6,7	4.3 cd	2.2	4656 b	
Lucento 5.53 fl oz	3,4,5				
Bravo WS 24 fl oz	1,2,7	10.3 cd	1.3	4632 b	
Lucento 5.53 fl oz	3,5				
Topguard EQ 8 fl oz	4,6				
Bravo WS 24 fl oz	1,2,5,7	3.8 cd	2.5	4715 b	
Lucento 5.53 fl oz	3,4,6				
Tebuzol 7.2 fl oz	5				
Bravo WS 24 fl oz	1,2,4,6,7	4.3 cd	2.2	4887 ab	
Topguard EQ 8 fl oz	3,5				
Tebuzol 7.2 fl oz	4,6				
Bravo WS 24 fl oz	1,4,6	8.5 cd	0.6	4874 ab	
Proline 5.7 fl oz	1				
Provost Opti 10.7 fl oz	2,3,5				
Priaxor 6 fl oz	1,2,4	12.5 bcd	1.3	4584 b	
Provost Opti 10.7 fl oz	3,5,6				
Bravo WS 25 fl oz	7				
Headline 9 fl oz	1,4	21.0 b	2.5	4938 ab	
Convoy 13 fl oz	2,3,4,5				
Bravo WS 16 fl oz	2,5				
Topsin 5 fl oz	2,5				
Bravo WS 24 fl oz	3,6				
Bravo WS 24 fl oz	1,2,3,5,6,7	3.5 cd	2.8	4678 b	
Proline 5.7 fl oz	1				
Provost Opti 10.7 fl oz	4				
Tebuzol 7.2 fl oz	2,5,6,7				
Elatus 8 oz wt	3				
Bravo WS 24 fl oz	1-7	4.0 cd	1.6	5099 ab	
Tebuzol 7.2 fl oz	3,4,5,6				
Bravo WS 24 fl oz	1,2,3,5,6,7	7.0 cd	1.9	5524 a	
Provost Opti 10.7 fl oz	4				
Tebuzol 7.2 fl oz	2,5,6,7				
Elatus 8 oz wt	3				
Bravo WS 24 fl oz	1,2,4,6,7	2.5 d	0.9	4924 ab	
Tebuzol 7.2 fl oz	4,6				
Elatus 8 oz wt	3,5				
Bravo WS 24 fl oz	1,2,4,6,7	13.5 bc	2.5	5496 a	
Tebuzol 7.2 fl oz	4,6				
Aprovia 11.6 fl oz	3,5				
Bravo WS 24 fl oz	1,2,4,6,7	6.8 cd	0.6	4533 b	
Tebuzol 7.2 fl oz	4,6				
Abound 9.2 fl oz	3,5				

^zFungicide application dates: 1) 8 Jun, 2) 23 Jun, 3) 8 Jul, 4) 23 Jul, 5) 7 Aug, 6) 22 Aug, 7) 6 Sep.

^yPercentage of total canopy defoliated.

^xStem rot incidence expressed as number of disease loci per 80 ft row (1 locus = \leq 1 ft consecutive stem rot symptoms and signs).

^wYield 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 ($\alpha = 0.05$).

^vStem rot incidence in untreated control was excluded due to poor plant health and confounding factors.