

PEANUT (*Arachis hypogaea* 'Georgia-06G')
Leaf spot, late; *Nothopassalora personata*
Stem rot; *Sclerotium rolfsii*

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Evaluation of Lucento for control of late leaf spot and stem rot on 'Georgia-06G' peanut, 2019.

'Georgia-06G' peanut was planted on 21 May 2019 at a rate of 5.5 seed/ft and depth of 2" in bedded single rows spaced 38". Plots were four rows by 40'. Treatments were replicated four times and arranged according to a randomized completely block design. Blocks were separated by 10-ft alleys. The field was irrigated and was grown to corn the previous two years. Soil type was a Barnwell loamy sand. 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 incidence (% symptomatic leaves), severity (% diseased leaf area) and defoliation (% canopy defoliation) were rated on 1 Oct (133 DAP). 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 9 Oct (141 DAP). Two yield rows of peanut per plot were inverted on 9 Oct and combined 18 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 26.3 in. In May, Jul and Sep the average of rainfall was 0.10, 0.09 and 0.11 in. below average, and in Jun and Aug the average of rainfall was 0.09 and 0.11 in. above average, respectively. Average maximum air temperatures were 0.4, 0.8 and 7.5°F below average in May, Jun and Oct, and 3.9, 2.3 and 2.6°F above average in Jul, Aug and Sep, respectively. Average minimum temperatures were 1.2 and 8.1°F below average in May and Oct, and 0.8, 3.8, 4.2 and 0.7°F above average in Jun, July, Aug and Sep, respectively.

Late leaf spot incidence, severity and defoliation were all significantly different among treatments ($P = <0.0001$). All fungicide programs, except a program containing Lucento at timings 4, 6 + Muscle ADV at application timing 7, resulted in significantly less late leaf spot % incidence compared to the untreated control. All fungicide programs also resulted in significantly less late leaf spot % severity and % defoliation than the untreated control. All fungicide programs resulted in less than 10% late leaf spot defoliation, except for a program containing Lucento at timings 4, 6 + Muscle ADV at 5, 7 (20.6%) and a program containing Lucento at 2, 4 + Convoy at 3, 5, 6 (17.2%). When compared among comparable programs, Lucento exhibited statistically similar yet numerically reduced leaf spot management activity compared to Fontelis. In this trial, Provost Opti appeared to be the best programmatic alternating partner examined with Lucento. Overall, the Priaxor program, Provost Opti program, Fontelis program, and Velum Total + Absolute + Propulse + Provost Silver programs provided effective late leaf spot control. Incidence of stem rot was very low (<7%) across the trial, and no significant differences were observed among treatments ($P = 0.4054$). Similarly, yield was not significantly different among treatments ($P = 5406$) and ranged between 4190 and 5100 lb/A.

Treatment and amount/A	Timing ^z	Late leaf spot ratings ^y			Stem rot % incidence ^x	Yield (lb/A) ^w
		% incidence	% severity	% defoliation		
Untreated		100 a	83.8 a	82.5 a	3.6	4464
Priaxor 6 fl oz	3,5	8.6 ef	4.5 d	1.1 d	0.0	4751
Convoy 21 fl oz	4,6,7					
Bravo WS 24 fl oz	4,6,7,8					
Lucento 5.5 fl oz	2,4	58.9 bc	45.7 bc	17.2 bc	0.3	4945
Convoy 21 fl oz	3,5,6					
Bravo WS 24 fl oz	3,5,6,7					
Bravo WS 24 fl oz	2,3,7,8	16.3 def	7.6 d	0.2 d	1.6	4690
Fontelis 16 fl oz	4,5,6					
Alto 5.5	7					
Bravo WS 24 fl oz	2,3,7,8	40.6 bcde	11.3 d	2.0 d	1.9	4588
Lucento 5.5 fl oz	4,6					
Fontelis 16 fl oz	5					
Alto 5.5 fl oz	7					
Bravo WS 24 fl oz	2,3,5,7,8	25.2 cdef	20.8 bcd	6.9 cd	0.9	4276
Elatus WG 9.5 oz	4,6					
Alto 5.5 fl oz	7					
Bravo WS 24 fl oz	2,3,8	71.9 ab	49.1 b	9.4 cd	2.5	4371
Lucento 5.5 fl oz	4,6					
Muscle ADV 24 pt	7					
Bravo WS 24 fl oz	2,3,8	3.0 f	1.1 d	0.0 d	0.3	4428
Provost Opti 10.7 fl oz	4,5,6,7					
Bravo WS 24 fl oz	2,3,8	13.6 ef	6.3 d	0.5 d	1.9	5098
Lucento 5.5 fl oz	4,6					
Provost Opti 10.7 fl oz	5,7					
Bravo WS 24 fl oz	2,3,8	27.3 cdef	17.8 cd	3.1 d	6.6	4194
Muscle ADV 24 pt	4,5,6,7					
Bravo WS 24 fl oz	2,3,8	51.1 bcd	40.5 bc	20.6 b	0.6	4628
Lucento 5.5 fl oz	4,6					
Muscle ADV 24 pt	5,7					
Velum Total 18 fl oz	1	0.8 f	0.3 d	0.0 d	0.6	4910
Absolute 3.5 fl oz	2					
Propulse 16.6 fl oz	3					
Elatus 7.3 oz	4,6					
Provost Silver 13 fl oz	5,7					
Bravo 1.5 pt	8					

^zFungicide application dates: 1) 21 May (in-furrow), 2) 20 Jun, 3) 5 Jul, 4) 22 Jul, 5) 5 Aug, 6) 19 Aug, 7) 3 Sep, 8) 18 Sep.

^yPercentage of symptomatic leaves (incidence), diseased leaf areas (severity) and total canopy defoliated (defoliation). Means in each column followed by the same letter are not significantly different according to Fisher's Protected LSD ($\alpha = 0.05$).

^xStem rot incidence expressed as number of disease loci per 80 ft row (1 locus = < 1 ft consecutive stem rot symptoms and signs). Means followed by the same letter are not significantly different according to Fisher's Protected LSD ($\alpha = 0.05$).

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