

**Evaluation of peanut fungicides and a biocontrol product for stem rot management, 2017.**

'Georgia 06G' peanuts were planted 2 in. deep on 18 May 2017 at the 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 applied according to a randomized complete block design. Blocks were separated by 10-ft alleys. Standard practices were used to manage tillage, weeds, insects, nutrition and irrigation. Rotation history for the field in 2016, 2015 and 2014 was cotton, corn and peanut, respectively. The biocontrol products (Bunchabugs and Biovate) were applied in-furrow at planting with a D2 orifice set to deliver 8.7 gal/A at 32 psi. Post-planting fungicides and Calbore were applied with two DG8002 nozzles/row (19-in. spacing) delivering 15 gal/A at 50 psi. Plots were inoculated at 55 days after planting (when rows were approximately closed) with *Sclerotium rolfsii*-colonized corn and oats at the rate of approximately 1 g/row ft which was spread by hand. 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 5 Oct. Two yield rows per plot were dug on 5 Oct and combined 12 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. Average monthly temperatures for the growing season were as follows: 71.4 (May), 76.8 (Jun), 79.5 (Jul), 79.0 (Aug), 74.1 (Sep), and 66.0°F (Oct).

Leaf spot pressure was negligible in the trial. Under high disease pressure, Elatus (2 applications) and Provost Opti + Convoy (2 applications each) were effective treatments in managing stem rot and yield. Proline at 45 or 60 DAP numerically reduced stem rot incidence compared to the Bravo + Tebuzol standard but had significantly lower yield. The Bunchabugs + Biovate + Calbore treatment was no different from Bravo-only (e.g., did not decrease disease or increase yield), with yield not exceeding 1000 lb/A.

Treatment and amount/A	Application timing <sup>z</sup>	Stem rot % incidence <sup>y</sup>	Yield (lb/A) <sup>x</sup>
Bravo WS SE 24 fl oz	BCDEFG	92.4 a	758 d
Bunchabugs 16 fl oz	A	94.1 a	852 d
Biovate 16 fl oz	A		
Calbore 16 fl oz	BC		
Bravo WS SE 24 fl oz	BCDEFG		
Bravo WS SE 24 fl oz	BCDEFG	87.8 a	2270 b
Tebuzol 7.2 fl oz	CDEF		
Bravo WS SE 24 fl oz	BDFG	47.7 c	3421 a
Tebuzol 7.2 fl oz	B		
Provost Opti 10.7 fl oz	CE		
Convoy 16 fl oz	DF		
Bravo WS SE 24 fl oz	CEFG	68.8 abc	3599 a
Tebuzol 7.2 fl oz	CEFG		
Elatus 8 oz	BD		
Bravo WS SE 24 fl oz	BDFG	52.3 bc	3797 a
Tebuzol 7.2 fl oz	BDFG		
Elatus 8 oz	CE		
Proline 4.3 fl oz	B	69.7 abc	1757 c
Bravo WS SE 24 fl oz	CDEFG		
Tebuzol 7.2 fl oz	CDEF		
Proline 4.3 fl oz	C	76.3 ab	1655 c
Bravo WS SE 24 fl oz	BDEFG		
Tebuzol 7.2 fl oz	BDEF		

<sup>z</sup>Timing: A: 18 May (in-furrow at planting), B: 28 Jun, C: 18 Jul, D: 2 Aug, E: 17 Aug, F: 31 Aug, and G: 14 Sep.

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

<sup>x</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 ( $\alpha = 0.05$ ).