

PEANUT (*Arachis hypogaea* 'CHAMPS')
Leaf spot, late; *Cercosporidium personatum*
Stem rot; *Sclerotium rolfsii*

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Evaluation of fungicide programs for foliar and soil peanut disease management, 2015.

'CHAMPS' peanuts were planted at a rate of 6 seed/ft on 13 May in Barnwell loamy sand. Rotation history was corn, cotton and peanut in 2014, 2013 and 2012, respectively. Plots were four 40-foot rows on 38 in. centers with treatments replicated 5 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 and nutrition. Fungicides were applied with two DG8002 nozzles/row (19-in. spacing) delivering 15 gal/A at 50 psi. Late leaf spot ratings (% leaflet incidence and % defoliation) were taken on 21 Sep, and ratings of % of row exhibiting symptoms or signs of stem rot and of total other disease were taken 28 Sep. Two yield rows per plot were dug on 15 Sep and combined on 14 Oct. 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 23.81 in. In May, Jun, July and Aug the rainfall was 3.49, 1.9, 2.58 and 0.72 in. below average, and in Sep and Oct rainfall was 1.47 and 4.66 in. above average, respectively. Average maximum air temperatures were 1.7, 3.1, 2.5 and 0.5°F above average in May, Jun, Jul and Aug and 1.4 and 2 F° below average in Sep and Oct, respectively. Average minimum air temperatures were near average in May and Aug and 1.4, 1.2, 2.2 and 1.3°F above average in Jun, Jul, Sep and Oct, respectively.

The trial site was exposed to moderately high levels of late leaf spot disease pressure. All treatments controlled defoliation to less than 6%. Stem rot pressure moderately high in the test. Approximately 3.4% of the row of the untreated check had other diseases (e.g., *Cylindrocladium* black rot and *Rhizoctonia*) that were not further differentiated. All treatments had significantly higher yield than the untreated check.

Treatment and amount/A	Application timing ^z	Leaf spot % incidence ^y	Leaf spot % defoliation ^x	Stem rot % incidence ^w	Total disease ^v	Yield (lb/A)
Bravo WS SE 24 fl oz	AC	91.0 ab	5.0 b	0.7 e	1.1 d	4754 a
Abound 2.08F 24 fl oz	BD					
Orius 3.6F 7.2 fl oz	C					
Bravo WS SC 24 fl oz	A	33.0 d	2.0 d	1.6 de	3.1 bcd	4705 a
Provost 433 SC 10.7 fl oz	BCD					
Bravo WS SE 24 fl oz	AC	89.0 ab	3.6 bcd	1.1 de	2.4 cd	4672 a
Convoy 40 SC 13 fl oz	C					
Provost 433 SC 10.7 fl oz	BD					
Bravo WS SE 24 fl oz	AC	98.0 a	5.2 b	5.3 bc	6.0 bcd	4648 ab
Equation SC 12 fl oz	BD					
Orius 3.6F 7.2 fl oz	C					
Bravo WS SE 24 fl oz	ABCD	78.0 b	4.8 b	0.07 e	1.8 d	4559 ab
Convoy 40 SC 13 fl oz	BD					
Orius 3.6F 7.2 fl oz	C					
Bravo WS SE 24 fl oz	AC	18.0 d	2.2 cd	4.0 bcde	5.3 bcd	4509 ab
Provost 433 SC ^u 8 fl oz	BCD					
Bravo WS SE 24 fl oz	ABCD	54.0 c	4.2 b	1.3 de	2.7 cd	4435 ab
Orius 3.6F 7.2 fl oz	BCD					
Bravo WS SE 24 fl oz	A	30.0 d	2.0 d	4.4 bcd	6.4 bcd	4434 ab
Prosaro 421 SC 10 fl oz	BCD					
Bravo WS SE 24 fl oz	AC	91.0 ab	4.2 b	2.7 cde	7.1 bcd	4193 abc
Prosaro 421 SC 10 fl oz	BD					
Convoy 40 SC 13 fl oz	C					
Bravo WS SE 24 fl oz	A	76.0 b	4.0 bc	7.1 b	9.8 bc	4145 abc
Provost 433 SC 8 fl oz	BCD					
Bravo WS SE 24 fl oz	AC	89.0 ab	4.8 b	3.1 cde	10.4 b	4055 bc
Equation SC 24 fl oz	BD					
Orius 3.6F 7.2 fl oz	C					
Bravo WS L 24 fl oz	ABCD	81.0 b	4.4 b	3.6 bcde	7.8 bcd	3755 c
Untreated check	Not applicable	100 a	97.2 a	20.4 a	3.4 a	1756 d

^aApplication timings correspond to A: 26 Jun (45 days after planting [DAP]), B: 10 Jul (60 DAP), C: 23 Jul (75 DAP), D: 10 Aug (90 DAP).

^yPercentage of total leaflets in the two yield rows of the plot with one or more late leaf spot lesions.

^xPercentage of total canopy in the two yield rows of the plot defoliated.

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

^vTotal soil disease other than stem rot expressed as the number of disease loci per 80 ft of row (1 locus = \leq 1 ft of consecutive symptoms and signs).

^uProduct produced for 2014, remaining products were produced for 2015.

Means within a column 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.