

XXVII. EVALUATION OF FOLIAR TREATMENTS FOR CONTROL OF SOILBORNE DISEASES OF PEANUT (Duke farm)

A. PURPOSE: To compare the efficacy of fungicides against foliar and soilborne diseases of peanut

B. EXPERIMENTAL DESIGN:

1. Four randomized complete blocks separated by 15-ft alleyways
2. Two, 35-ft rows per plot with 36-in. row spacing
3. Seeding rate of three seed/row ft

C. APPLICATION OF TREATMENTS: Fungicides were applied with three, D<sub>3</sub>23 nozzles/row delivering 15 gal/A. The initial application was applied at beginning seed (R<sub>3</sub>) and thereafter according to the Va. Peanut Leaf Spot Advisory Program until beginning maturity (R<sub>7</sub>).

D. TREATMENT AND RATE/A:

1. Untreated check
2. Bravo 720 1.5 pt (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> spray)
3. Bravo 720 1.5 pt (1<sup>st</sup>, 5<sup>th</sup> spray)  
V-10116 50WD 2.56 oz + Induce 0.125% v/v (2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> spray)
4. Bravo 720 1.5 pt (1<sup>st</sup>, 5<sup>th</sup> spray)  
V-10116 50WD 3.42 oz + Induce 0.125% v/v (2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> spray)
5. Bravo 720 1.5 pt (1<sup>st</sup>, 5<sup>th</sup> spray)  
V-10116 50WD 4 oz + Induce 0.125% v/v (2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> spray)
6. Bravo 720 1.5 pt (1<sup>st</sup>, 5<sup>th</sup> spray)  
Folicur 3.6F 7.2 oz + Induce 0.125% v/v (2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> spray)
7. Bravo 720 1.5 pt (1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup> spray)  
Abound 2.08SC 18 fl oz (2<sup>nd</sup>, 4<sup>th</sup> spray)
8. Bravo 720 1.5 pt (1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup> spray)  
Headline 250EC 12 fl oz (2<sup>nd</sup>, 4<sup>th</sup> spray)

E. ADDITIONAL INFORMATION:

1. Location: Duke Farm, Longstreet Lane, Suffolk
2. Crop history: Corn 2004, Peanut 2003, Corn 2002
3. Planting date and cultivar: 29 Apr 2005, VA 98R
4. Soil fertility report:
 

pH.....	6.3	K .....	87 ppm
Ca .....	436 ppm	Zn.....	0.8 ppm
Mg .....	61 ppm	Mn.....	3.1 ppm
P .....	28 ppm	Soil type.....	Suffolk loamy sand
5. Herbicide:
  - Pre-plant - Prowl 1 pt/A (31 Mar)
  - Dual II Magnum 1 pt + Strongarm 0.23 fl oz/A (7 Apr)
  - Pre-emergence - Dual II Magnum 1 pt + Strongarm 0.23 fl oz/A (13 May)
6. Cylindrocladium black rot control: Sectagon 7.5 gal/A (5 Apr)
7. Insecticide: Temik 15G 7 lb/A in furrow (29 Apr)
  - Orthene 97S 6 oz/A (27 May)
  - Lorsban 13 lb/A (28 Jun)
8. Acaricide: Danitol 6 fl oz/A (22 Aug)
9. Additional crop management:
  - a. Liquid boron 1 qt/A (31 Mar)

- b. Liquid Mn 1 qt/A (20 Jun, 18 Jul, 2 Aug)  
 c. Landplaster: Peanut Maker 1500 lb/A (23 Jun)  
 d. Cultivation: 28 Jun  
 10. Harvest date: 20 Oct 2005

Table 94. Incidence of soilborne disease in fungicide-treated plots.

Treatment, rate/A and application date <sup>1</sup>	Stem rot <sup>2</sup>		CBR <sup>3</sup> (Sep 1)	Yellowed/ dead plants <sup>4</sup> (Oct 6)
	Aug 4	Sep 1		
Untreated check .....	0.0	0.0	1.5	10.0
Bravo 720 1.5 pt (7/18, 8/2, 8/17, 9/8)	0.3	0.5	1.3	14.5
Bravo 720 1.5 pt (7/18, 9/22)				
V-10116 50WD 2.56 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.0	0.3	0.8	11.3
Bravo 720 1.5 pt (7/18, 9/22)				
V-10116 50WD 3.42 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.0	5.3	1.0	12.5
Bravo 720 1.5 pt (7/18, 9/22)				
V-10116 50WD 4 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.0	0.0	1.8	13.0
Bravo 720 1.5 pt (7/18, 9/22)				
Folicur 3.6F 7.2 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.0	0.8	1.8	15.0
Bravo 720 1.5 pt (7/18, 8/17, 9/22)				
Abound 2.08SC 18 fl oz (8/2, 9/8).....	0.0	0.8	2.0	13.0
Bravo 720 1.5 pt (7/18, 8/17, 9/22)				
Headline 250EC 12 fl oz (8/2, 9/8).....	0.0	0.0	2.5	17.5
<b>LSD.....</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>

<sup>1</sup> Treatments were applied at R<sub>3</sub> (beginning seed) and thereafter according to the leaf spot advisory.

<sup>2</sup> Counts of infection centers in the two center rows of each plot or a total of 70 ft of row. An infection center was a point of active growth by *Sclerotium rolfsii* and included 6 in. on either side of that point.

<sup>3</sup> Number of symptomatic and/or dead plants per plot.

<sup>4</sup> Plants had symptoms of CBR and TSWV, but lacked distinguishing characteristics of either disease.  
Means are not significantly different (n.s.) according to Fisher's Protected LSD (P=0.05).

Table 95. Disease incidence in fungicide-treated plots.

Treatment, rate/A and application date <sup>1</sup>	% leaf spot <sup>2</sup>			% defolia- tion <sup>3</sup> (Oct 6)	Yield <sup>4</sup> (lb/A)
	Aug 4	Sep 1	Oct 6		
Untreated check .....	0.8	35.0 a	89.0 a	47.5 a	3904
Bravo 720 1.5 pt (7/18, 8/2, 8/17, 9/8)	0.3	0.3 b	0.1 b	0.1 b	3653
Bravo 720 1.5 pt (7/18, 9/22) V-10116 50WD 2.56 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.1	0.0 b	0.3 b	0.1 b	4356
Bravo 720 1.5 pt (7/18, 9/22) V-10116 50WD 3.42 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.3	0.0 b	0.1 b	0.1 b	3452
Bravo 720 1.5 pt (7/18, 9/22) V-10116 50WD 4 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.1	0.0 b	0.1 b	0.1 b	4118
Bravo 720 1.5 pt (7/18, 9/22) Folicur 3.6F 7.2 oz + Induce 0.125% v/v (8/2, 8/17, 9/8).....	0.0	0.0 b	0.3 b	0.1 b	4093
Bravo 720 1.5 pt (7/18, 8/17, 9/22) Abound 2.08SC 18 fl oz (8/2, 9/8).....	0.3	0.1 b	0.3 b	0.1 b	4017
Bravo 720 1.5 pt (7/18, 8/17, 9/22) Headline 250EC 12 fl oz (8/2, 9/8).....	0.1	0.0 b	0.1 b	0.1 b	3641
<b>LSD.....</b>	<b>n.s.</b>	<b>0.6</b>	<b>5.8</b>	<b>11.5</b>	<b>n.s.</b>

<sup>1</sup> Treatments were applied at R<sub>3</sub> (beginning seed) and thereafter according to the leaf spot advisory.

<sup>2</sup> Leaf spot rating scale: 0=none; 100=spots on all leaflets.

<sup>3</sup> Defoliation rating scale: 0=none, 100= no leaves on plants.

<sup>4</sup> Yields are weight of peanuts with 7% moisture. Peanuts were dug on 6 Oct and harvested on 20 Oct.

Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD (P=0.05).