

Date: March 3, 2011

Memo to: Industry Cooperators

From: Tim Brenneman

Subject: Field Trial Results

Attached are the results of our 2010 field trials on peanuts and pecans. This year was interesting in that it started out with some wet weather, but then turned dry and hot which continued through harvest. In fact we are still dry and ponds are very low for this time of year. These conditions lead to moderate foliar disease pressure on both peanuts and pecans, but there were some extreme stem rot epidemics both in our small plots and in grower fields. In fact, some normally good stem rot treatments were overwhelmed by the extreme disease levels on susceptible cultivars and/or short rotations. Overall it was a good year for disease data on both crops.

I want to acknowledge the hard work of our crew lead by Russ Griffin, Lewis Mullis, and Pat Hilton. Summer workers included Michael Lawhorn, John Sims, and Miranda Goodman, and the cooperation of other scientists including Dr. Albert Culbreath, Dr. Bob Kemerait, Dr. Corley Holbrook, Dr. Patty Timper, Dr. Bill Branch, Dr. John Beasley, and Dr. Barry Tillman is much appreciated. Dr. Joao Augusto, a post-doc in my program, was also an important part of these investigations.

Once again we are making this available primarily as an online document, and it can be found at www.tomatospottedwiltinfo.org by clicking on “Publications”, and “2010 Field Trial Results on Diseases of Peanuts and Pecans”. If you have any problems or any questions feel free to call. We have printed a few bound copies and can send you one upon request, but the entire book is available as a pdf file. Thanks again for your support, and we look forward to cooperating with you again in the future.

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EVALUATION OF FUNGICIDE APPLIED IN FURROW OR AT EARLY EMERGENCE FOR PEANUT DISEASE CONTROL

A. PURPOSE: To evaluate the comparative efficacy of fungicides applied in furrow or at early emergence for the control of seedling, foliar, and soil borne peanut diseases.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with six replicates. All plots were sprayed with chlorothalonil for foliar diseases, although sprays 1 and 2 were omitted to evaluate early season leaf spot effects.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There are eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: Tifguard

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI. The early season spray was applied 18 May in 40 GPA with a single 8010 nozzle in a 4" band. In furrow sprays were applied with an 80015E tip at 22 PSI, total volume of 3.7 GPA.
2. All plots were traveled by tractor and cover sprayed with Bravo (1.5 pt/A) on 13 July, 23 July, 5 August, 18 August, and 30 August. Trt # 6 was sprayed with Bravo by back pack on 14 June and 29 June.

D. ADDITIONAL INFORMATION:

- 1: Location: Lang Farm, Cotton Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 5 May
4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 Apr
POST:
6. Insecticides: Thimet 20G, (4.3 lb/A) in furrow on 28 April
7. Nematicides: None
8. Planting Info: Tifguard 6 seed/ft on 28 April
9. Harvest Dates: Dug - 23 Sept Picked - 28 Sept

E: SUMMARY:

While not as dramatic as the other trial, this test demonstrated that early emergence sprays can suppress white mold and leaf spot, although the scheduled sprays of chlorothalonil were the best in that regard. There was a clear trend of yield improvement with the early emergence sprays also, but due to variability in the trial it was not significant at the P=0.05 level.

BAYER IN FURROW TEST II, 2010
Rigdon Farm, Cotton Field

TREATMENTS	APP'S	RATE	Plants/ft ¹		White Mold ²		TSWV ⁵
			24-May	1-Jun	19-Sep	23-Aug	20-Aug
1. Nontreated			2.6	2.6	21.3	18.3	1.3
2. Propulse	In furrow*	13.7 fl oz	2.7	2.7	19.0	20.0	0.3
3. Proline	In furrow*	5.7 fl oz	2.8	2.7	13.0	19.3	0.7
4. Propulse	At cracking**	13.7 fl oz	2.8	2.7	12.0	13.7	0.7
5. Proline	At cracking**	5.7 fl oz	2.7	2.5	15.0	18.3	1.7
6. Nontreated***			2.7	2.6	19.3	24.0	1.0
LSD(P<0.5)			n.s.	n.s.	n.s.	7.0	n.s.

*=in furrow applications applied in 3.75 GPA and mixed in 2 L volume.
 (TP 80015E flat fan nozzle w/100 mesh t-ball check valve at 22 psi).

**=Applied in a narrow band (2-4 inches) directly over the row with a single 80-10 nozzle in a total spray volume of 40 GPA.

***=All plots will be coversprayed with Bravo, but omit sprays 1 and 2. The exception is Trt 6 which will be sprayed with Bravo by back pack.

¹Stand count is the number of emerged plants per foot of row on 24 May and 1 June.

²Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

³Florida 1 - 10 scale where 1=no disease and 10=no disease.

⁴Average plant width (measured in cm), mean of 6 plants per plot.

⁵Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

BAYER IN FURROW TEST II, 2010
Rigdon Farm, Cotton Field

TREATMENTS	APP'S	RATE	Leaf Spot ³			Plant Width ⁴ 23-Jun	Yield (lb/A)
			27-Jul	23-Aug	20-Sep		
1. Nontreated			3.1	2.3	2.2	32.3	1994
2. Propulse	In furrow*	13.7 fl oz	3.0	2.3	2.1	33.5	2173
3. Proline	In furrow*	5.7 fl oz	2.8	2.2	2.0	34.2	2265
4. Propulse	At cracking**	13.7 fl oz	2.9	2.3	1.9	.	2556
5. Proline	At cracking**	5.7 fl oz	2.7	2.1	1.8	.	2573
6. Nontreated***			2.4	2.0	1.9	35.0	2122
LSD(P<0.5)			0.3	n.s.	0.2	n.s.	660

*=in furrow applications applied in 3.75 GPA and mixed in 2 L volume.
 (TP 80015E flat fan nozzle w/100 mesh t-ball check valve at 22 psi).

**=Applied in a narrow band (2-4 inches) directly over the row with a single 80-10 nozzle in a total spray volume of 40 GPA.

***=All plots will be coversprayed with Bravo, but omit sprays 1 and 2. The exception is Trt 6 which will be sprayed with Bravo by back pack.

¹Stand count is the number of emerged plants per foot of row on 24 May and 1 June.

²Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

³Florida 1 - 10 scale where 1=no disease and 10=no disease.

⁴Average plant width (measured in cm), mean of 6 plants per plot.

⁵Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF PEANUT SOILBORNE DISEASES

A. PURPOSE: To evaluate the comparative efficacy of labeled and experimental fungicides for the control of southern stem rot on Tifguard peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with four replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: Tifguard

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
2. Belt-pack spray treatments (1-7) were applied on 14 June, 29 June, 12 July, 26 July, 9 August, 23 August, and 6 Sept. Also treatment was applied to spray (1.5) on 23 June. This test was not cover-sprayed with Bravo or Convoy.

D. ADDITIONAL INFORMATION:

- 1: Location: Lang Farm, Cotton Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 5 May
4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 April
POST:
6. Insecticides: Temik 15G, (5 lb/A) in furrow on 27 April
7. Nematicides: None
8. Planting Info: Tifguard, 6 seed/ft on 27 April
9. Harvest Dates: Dug – 23 Sept Picked - 28 Sept

E: SUMMARY:

Leaf spot pressure was relatively light in this field due to the dry weather, but white mold pressure was heavy. Those treatments effectively reducing white mold had large yield increases compared with treatments controlling only foliar diseases, even though they may still have had 15-20% disease incidence.

MISCELLANEOUS FUNGICIDE TEST I, 2010
RIGDON FARM, COTTON FIELD

TREATMENTS	APP'S	RATE/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield
			17-Aug	29-Sep	23-Aug	24-Sep	26-Aug	(lb/A)
1. Bravo W'stik	1 - 7	1.5 pt	40.0	53.5	2.2	3.3	3.0	2396
2. Q8Y48 240SC	1 - 7	18 fl oz	14.0	21.0	2.8	2.1	0.5	4138
3. Headline 2.09	1.5	9.0 fl oz	26.0	34.0	2.2	1.9	2.0	3510
Fontelis	3 - 5	16.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
4. QFA61 350	1 & 2	14.5 fl oz	20.5	35.0	2.1	1.6	1.0	3118
Provost	3 - 5	8.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
5. Headline 2.09	1.5	9.0 fl oz	23.0	37.0	2.2	1.8	1.0	3380
Provost	3 - 5	8.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
6. Headline 20.9	1.5	9.0 fl oz	16.5	21.5	2.3	2.2	2.5	4309
Convoy	3 - 5	16.0 fl oz						
+ Bravo		1.5 pt						
Bravo W'stik	6 & 7	1.5 pt						
7. Headline 2.09	1.5	9.0 fl oz	9.5	19.0	2.4	2.9	1.5	4421
Convoy	3 & 4	21.0 fl oz						
+ Bravo		1.5 pt						
Bravo W'stik	5	16.0 fl oz						
+ Topsin		5.0 fl oz						
8. Headline 2.09	1.5	9.0 fl oz	10.5	26.0	2.0	2.0	0.5	3797
Convoy	3 - 5	15.0 fl oz						
+ Bravo W'stik		1.5 pt						
Bravo W'stik	6	16.0 fl oz						
+ Topsin		5.0 fl oz						
9. Headline 2.09	1.5	9.0 fl oz	16.5	24.0	2.1	2.3	0.5	3841
Convoy	3 - 6	13.0 fl oz						
+ Bravo		1.5 pt						
Bravo W'stik	7	1.5 pt						
+ Topsin		5.0 fl oz						

MISCELLANEOUS FUNGICIDE TEST I, 2010
RIGDON FARM, COTTON FIELD

TREATMENTS	APP'S	RATE/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield
			17-Aug	29-Sep	23-Aug	24-Sep	26-Aug	(lb/A)
10.Headline 2.09	1.5	9.0 fl oz	11.0	22.5	2.1	2.0	0.5	3815
Artisan	3 & 4	26.0 fl oz						
+ Bravo		16.0 fl oz						
Bravo W'stik	5	16.0 fl oz						
+ Topsin		5.0 fl oz						
11.Headline 2.09	1.5	9.0 fl oz	14.5	20.0	2.2	1.9	3.5	4091
Artisan	3 - 5	18.0 fl oz						
+ Bravo		16.0 fl oz						
Bravo W'stik	6	16.0 fl oz						
+ Topsin		5.0 fl oz						
12.Headline 2.09	1.5	9.0 fl oz	14.5	19.0	2.2	2.2	1.5	3772
Artisan	3 - 6	16.0 fl oz						
+ Bravo		16.0 fl oz						
Bravo W'stik	7	1.5 pt						
13.Tilt/Bravo	1 & 2	1.75 pt	22.5	34.0	2.2	1.8	1.5	3772
Abound	4 & 5	18.0 fl oz						
Bravo W'stik	4, 6, 7	1.5 pt						
14.Bravo W'stik	1, 2, 7	1.5 pt	20.5	35.5	2.3	1.9	2.0	3380
Provost	3 - 6	8.0 fl oz						
15.Tilt/Bravo	1 & 2	1.75 pt	23.5	40.5	2.3	2.0	1.5	2886
Abound	3 & 5	15.0 fl oz						
Bravo W'stik	4, 6, 7	1.5 pt						
16.Tilt/Bravo	1 & 2	1.75 pt	21.0	33.0	2.1	1.9	1.0	3405
Abound	3 & 5	15.0 fl oz						
Convoy	4	16.0 fl oz						
+ Bravo		1.5 pt						
Bravo W'stik	6 & 7	1.5 pt						
17.Untreated			55.0	64.5	2.8	5.1	0.5	1605
LSD(P<0.5)			13.2	12.9	0.5	0.8	2.4	967

^{1 & 3}Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

²Florida 1 - 10 scale where 1=no disease and 10=dead plant.

EVALUATION OF ENCLOSURE (RDL-29) FOR THE CONTROL OF PEANUT SOILBORNE DISEASES AND NEMATODES

A. PURPOSE: To evaluate the efficacy of Enclosure (RDL-29) for the control of southern stem rot and root knot nematode on GA-06G peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with six replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: GA-06G

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
2. This test was cover sprayed with Bravo on 14 June, 29 June, 13 July, 23 July, 5 August, 18 August, and 30 Aug. Also treatment was applied to spray (1.5) on 23 June. Sprays at 45 DAP (28 June) and 66 DAP (16 July) were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI. The T-Band sprays were applied in a 6 inch band (3.72 GPA) centered over the open furrow at planting.

D. ADDITIONAL INFORMATION:

- 1: Location: Rigdon Farm, Cotton Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 5 May
4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 Apr
POST:
6. Insecticides: Thimet 20G, (4.3 lb/A) in furrow on 28 April
7. Nematicides: None
8. Planting Info: GA-06G, 6 seed/ft on 28 April
9. Harvest Dates: Dug – 23 Sept Picked – 28 Sep

E: SUMMARY:

There were some differences in nematode data and yield but patterns were not consistent across treatment combinations. Nematode pressure was severe in several reps of this test, and much lighter in the others. Overall nematode and stem rot damage greatly reduced yields in the trial. A distinct black lesion was observed on the foliage. While these spots were also evident on the non-treated plants, they were consistently more abundant in the RDL-29 plots.

DEVGEN TEST II, 2010 Lang/Rigdon Farm, Cotton Field

Treatments	App's	Rate/A	Plants/ft ¹		White Mold ²		TSWV ³	Black Lesions ⁴
			24-May	1-Jun	17-Aug	23-Sep	20-Aug	15-Sep
1. Non-treated			2.0	2.1	8.8	22.7	2.3	17.7
2. Temik	Band @ plant	10.0 lb	2.1	2.3	9.5	22.3	3.0	27.2
3. Temik	Band @ plant	10.0 lb	2.1	2.0	8.3	21.3	2.3	16.5
Temik	Band @ 45 DAP	10.0 lb						
4. Temik	Band @ plant	10.0 lb	2.3	2.1	10.3	19.0	3.7	35.2
RDL-29	45 DAP	3.0 pt						
5. Temik	Band @ plant	10.0 lb	2.0	2.1	9.5	17.7	2.7	43.5
RDL-29	45 & 66 DAP	3.0 pt						
6. RDL-29	45 & 66 DAP	3.0 pt	1.9	2.1	11.8	23.0	1.7	48.3
7. RDL-29	T-Band @ plant	3.0 pt	2.1	2.2	9.0	21.3	3.3	35.8
RDL-29	45 DAP	3.0 pt						
8. RDL-29	T-Band @ plant	2.0 pt	2.0	2.0	9.7	19.0	4.3	40.7
RDL-29	45 DAP	2.0 pt						
9. RDL-29	T-Band @ plant	2.0 pt	1.9	2.0	10.3	24.0	2.0	42.0
RDL-29	45 & 66 DAP	2.0 pt						
10. RDL-29	45 & 66 DAP	3.0 pt	2.1	2.1	9.0	20.0	2.7	42.3
	NIGHT SPRAY							
LSD (P<0.5)			0.3	n.s.	n.s.	n.s.	2.5	11.2

¹Stand count is the number of emerged plants per foot of row on 24 May and 1 June.

² & ³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

⁴Dark black lesions resembling late leaf spot but are not.

DEVGEN TEST II, 2010
Lang/Rigdon Farm, Cotton Field

Treatments	App's	Rate/A	Galling ⁵	Rootknot ⁶			Yield (lb/A)
			23-Sep	18-May	15-Jul	17-Sep	
1. Non-treated			33.8	0.5	2.7	36.5	1941
2. Temik	Band @ plant	10.0 lb	32.2	0.7	8.2	67.8	1868
3. Temik	Band @ plant	10.0 lb	27.5	.	3.5	31.0	2246
Temik	Band @ 45 DAP	10.0 lb					
4. Temik	Band @ plant	10.0 lb	20.8	.	8.8	67.0	2565
RDL-29	45 DAP	3.0 pt					
5. Temik	Band @ plant	10.0 lb	28.8	.	12.3	54.5	2091
RDL-29	45 & 66 DAP	3.0 pt					
6. RDL-29	45 & 66 DAP	3.0 pt	37.8	.	27.3	101.0	1626
7. RDL-29	T-Band @ plant	3.0 pt	41.7	1.8	29.3	203.5	1912
RDL-29	45 DAP	3.0 pt					
8. RDL-29	T-Band @ plant	2.0 pt	20.0	0.2	0.3	156.8	2130
RDL-29	45 DAP	2.0 pt					
9. RDL-29	T-Band @ plant	2.0 pt	25.0	.	7.5	119.0	1709
RDL-29	45 & 66 DAP	2.0 pt					
10. RDL-29	45 & 66 DAP	3.0 pt	38.3	.	18.3	110.8	1873
	NIGHT SPRAY						
LSD (P<0.5)			n.s.	n.s.	n.s.	n.s.	619

⁵Visual rating of the percent of pods and roots (1-100) with visible damage from root knot nematode

⁶Populations of root knot nematode per 100 cm³ of soil.

DEVGEN TEST II, 2010
Lang/Rigdon Farm, Cotton Field

Treatments	App's	Rate/A	Lesions ⁷			Ring ⁸		
			18-May	15-Jul	17-Sep	18-May	15-Jul	17-Sep
1. Non-treated			0.0	0.0	0.2	65.8	299.0	104.0
2. Temik	Band @ plant	10.0 lb	0.2	0.0	0.2	54.8	234.8	83.3
3. Temik	Band @ plant	10.0 lb	.	0.0	0.2	.	237.7	56.8
Temik	Band @ 45 DAP	10.0 lb						
4. Temik	Band @ plant	10.0 lb	.	0.0	0.0	.	359.0	59.2
RDL-29	45 DAP	3.0 pt						
5. Temik	Band @ plant	10.0 lb	.	0.0	0.2	.	410.8	96.2
RDL-29	45 & 66 DAP	3.0 pt						
6. RDL-29	45 & 66 DAP	3.0 pt	.	0.2	0.0	.	260.8	69.7
7. RDL-29	T-Band @ plant	3.0 pt	0.0	0.0	0.0	58.3	362.8	151.7
RDL-29	45 DAP	3.0 pt						
8. RDL-29	T-Band @ plant	2.0 pt	0.0	0.0	0.0	46.0	135.5	103.7
RDL-29	45 DAP	2.0 pt						
9. RDL-29	T-Band @ plant	2.0 pt	.	0.0	0.0	.	335.5	65.5
RDL-29	45 & 66 DAP	2.0 pt						
10. RDL-29	45 & 66 DAP	3.0 pt	.	0.0	0.0	.	363.5	95.3
	NIGHT SPRAY							
LSD (P<0.5)			n.s.	0.2	n.s.	n.s.	252.2	n.s.

⁷Populations of lesion nematode per 100 cm³ of soil.

⁸Populations of ring nematode per 100 cm³ of soil.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF PEANUT SOILBORNE DISEASES

A. PURPOSE: To evaluate the comparative efficacy of labeled fungicides for the control of southern stem rot on GA-06G peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with five replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: GA-06G

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
2. Belt-pack spray treatments (1-7) were applied on 16 June, 30 June, 13 July, 27 July, 10 August, 23 August, and 8 Sept. Also treatment was applied to spray (1.5) on 24 June. This test was not cover-sprayed.

D. ADDITIONAL INFORMATION:

- 1: Location: Lang Farm, South Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 5 May
4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 7 May
POST: 24DB, Butoxone 175 (28 oz/A) on 27 July.
6. Insecticides: Temik 15G, (5 lb/A) in furrow on 11 May
7. Nematicides: None
8. Planting Info: GA-06G, 7 seed/ft on 11 May
9. Harvest Dates: Dug - 29 Sept Picked - 5 Oct

E. SUMMARY:

Substantial leaf spot and stem rot developed and this was a good test to differentiate treatments, although some products did not perform as well as expected.

MISCELLANEOUS TEST IV, 2010
LANG FARM, SOUTH FIELD

Treatments	App's	Rate/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield
			18-Aug	29-Sep	24-Aug	27-Sep	26-Aug	(lb/A)
1. Untreated			22.8	58.0	4.6	7.9	1.4	2646
2. Q8Y48 240Sc	1 - 7	18 fl oz	1.2	7.2	2.1	2.2	1.6	4548
3. Headline 2.09	1.5	9.0 fl oz	8.4	15.6	2.0	2.8	0.4	4249
Fontelis	3 - 5	16.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
4. QFA61	1 & 2	14.5 fl oz	14.4	33.6	1.7	2.7	0.8	3348
Provost	3 - 5	8.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
5. Headline 2.09	1.5	9.0 fl oz	23.6	50.8	1.7	2.1	0.6	2776
Provost	3 - 5	8.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
6. Headline 2.09	1.5	9.0 fl oz	25.6	52.0	1.7	2.8	0.6	2904
Bravo W'stik	3 - 7	1.5 pt						
7. Headline 2.09	1.5	9.0 fl oz	7.2	6.8	2.0	2.6	1.2	4795
Fontelis***	3 - 5	16.0 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
8. Headline 2.09	1.5	9.0 fl oz	8.8	28.8	1.8	2.3	1.2	3154
Folicur 3.6F	3 - 5	7.2 fl oz						
+ Bravo		1.5 pt						
Bravo W'stik	6 & 7	1.5 pt						
9. Headline 2.09	1.5	9.0 fl oz	7.6	30.0	1.8	2.6	1.2	3668
Folicur 3.6F	3 - 5	7.2 fl oz						
+ Kinetic		1 qt/100 gal						
Bravo W'stik	3 - 7	1.5 pt						
10. Headline 2.09	1.5	9.0 fl oz	7.6	28.0	1.8	2.0	0.6	3621
Folicur 3.6F***	3 - 5	7.2 fl oz						
Bravo W'stik	3 - 7	1.5 pt						
11. Headline 2.09	1.5	9.0 fl oz	6.0	22.8	2.0	3.1	1.4	3976
Convoy	3 - 5	16 fl oz						
+ Bravo		1.5 pt						
Bravo W'stik	6 & 7	1.5 pt						

MISCELLANEOUS TEST IV, 2010
LANG FARM, SOUTH FIELD

Treatments	App's	Rate/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield
			18-Aug	29-Sep	24-Aug	27-Sep	26-Aug	(lb/A)
12.Headline 2.09	1.5	9.0 fl oz	4.4	17.2	1.8	3.2	1.0	3752
Convoy	3 - 5	16.0 fl oz						
Bravo W'stik	3 - 7	1.5 pt						
13.Headline 2.09	1.5	9.0 fl oz	3.6	12.8	1.8	3.1	0.8	4420
Convoy	3 - 5	16.0 fl oz						
+ Kinetic		1 qt/100 gal						
Bravo W'stik	3 - 7	1.5 pt						
14.Headline 2.09	1.5	9.0 fl oz	8.8	30.4	1.9	3.6	0.2	3984
Artisan	3 & 4	26.0 fl oz						
+ Bravo		16 fl oz						
Bravo W'stik	5	16 fl oz						
+ Topsin		5.0 fl oz						
15.Headline 2.09	1.5	9.0 fl oz	7.2	20.4	2.1	3.9	0.6	3877
Artisan	3 & 4	32.0 fl oz						
+ Bravo		16. fl oz						
Bravo W'stik	5	16.0 fl oz						
+ Topsin		5.0 fl oz						
16.Headline 2.09	1.5	9.0 fl oz	5.2	27.6	1.9	3.7	0.8	3932
NAI-3404	3 & 4	45 fl oz						
Bravo W'stik	5	16.0 fl oz						
+ Topsin		5.0 fl oz						
17.Headline 2.09	1.5	9.0 fl oz	6.8	27.2	1.9	3.4	1.4	4147
NAI-3404	3 & 4	55.0 fl oz						
Bravo W'stik	5	16.0 fl oz						
+ Topsin		5.0 fl oz						
LSD(P<0.5)			8.0	10.4	0.3	0.6	1.3	814

*****Bold indicates Night Spray, ie. Applied just prior to daylight.**

¹ & ³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

²Florida 1 - 10 scale where 1=no disease and 10=dead plant.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF PEANUT SOILBORNE DISEASES

A. PURPOSE: To evaluate the comparative efficacy of labeled fungicides for the control of southern stem rot on GA-06G peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with five replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: GA-06G

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
2. Belt-pack spray treatments (1-7) were applied on 16 June, 30 June, 15 July, 27 July, 11 August, 24 August, and 8 Sept. Also treatment was applied to spray (1.5) on 24 June. This test was not cover-sprayed.

D. ADDITIONAL INFORMATION:

- 1: Location: Lang Farm, South Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 5 May
4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 7 May
POST: 24DB, Butoxone 175 (28 oz/A) on 27 July.
6. Insecticides: Temik 15G, (5 lb/A) in furrow on 10 May
7. Nematicides: None
8. Planting Info: GA-06G, 7 seed/ft on 10 May
9. Harvest Dates: Dug - 29 Sept Picked - 5 Oct

E. SUMMARY:

Severe disease pressure was present and the triazole fungicides were not as effective as would be expected. Artisan had the lowest stem rot levels and highest yield in the test, although it still had significant stem rot present.

MISCELLANEOUS TEST III, 2010
LANG FARM, SOUTH FIELD

Treatments	App's	Rate/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield (lb/A)
			18-Aug	29-Sep	24-Aug	27-Sep	26-Aug	
1. Nontreated			31.2	68.2	4.7	8.0	0.8	2209
2. Equus 720	1 - 7	1.5 pt	34.0	62.8	2.3	4.6	1.2	2692
3. Equus 720 Folicur 3.6	1, 2, 7 3 - 6	1.5 pt 7.2 fl oz	18.4	48.8	2.4	6.0	0.8	3043
4. Equus 720 Orius 3.6F	1, 2, 7 3 - 6	1.5 pt 7.2 fl oz	20.8	61.6	2.7	6.1	1.6	2904
5. Equus 720 Orius 20AQ	1, 2, 7 3 - 6	1.5 pt 15.5 fl oz	18.4	60.8	2.2	5.5	0.8	2800
6. Equus 720 Bumper 41.8EC	1, 2, 7 3 - 6	1.5 pt 2.5 fl oz	32.4	54.4	2.6	5.4	0.4	2608
7. Equus 720 Bumper 41.8EC	1, 2, 7 3 - 6	1.5 pt 4.0 fl oz	34.8	67.2	2.0	5.1	1.2	2396
8. Equus 720 Orius 3.6F + Bumper 41.8EC	1, 2, 7 3 - 6	1.5 pt 3.6 fl oz 2.5 fl oz	16.0	57.2	2.1	5.1	3.2	3000
9. Equus 720 Orius 20AQ + Bumper 41.8EC	1, 2, 7 3 - 6	1.5 pt 7.8 fl oz 2.5 fl oz	23.6	52.0	2.1	5.4	1.6	3174
10. Equus 720 Orius 3.6F + Bumper 41.8EC	1, 2, 7 3 - 6	1.5 pt 3.6 fl oz 4.0 fl oz	30.8	58.8	1.8	4.6	4.0	2344
11. Equus 720 Orius 20AQ + Bumper 41.8EC	1, 2, 7 3 - 6	1.5 pt 7.8 fl oz 4.0 fl oz	28.8	56.4	2.2	4.7	1.6	2524
12. Equus 720 Orius 3.6F + Bumper 41.8EC	1, 2, 7 3 & 5 4 & 6	1.5 pt 7.2 fl oz 4.0 fl oz	17.6	50.8	2.5	5.7	0.4	3000

MISCELLANEOUS TEST III, 2010
LANG FARM, SOUTH FIELD

Treatments	App's	Rate/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield
			18-Aug	29-Sep	24-Aug	27-Sep	26-Aug	(lb/A)
13. Equus 720	1, 2, 7	1.5 pt	23.2	56.8	2.7	5.8	2.0	3020
Orius 20AQ	3 & 5	15.5 fl oz						
+ Bumper 418EC	4 & 6	4.0 fl oz						
14. Equus 720	1, 2, 7	1.5 pt	24.8	59.2	2.9	6.5	1.2	2980
Quash 50WDG	3 - 6	2.5 oz						
15. Equus 720	1, 2, 7	1.5 pt	18.0	52.8	2.0	5.4	2.4	2898
Quash 50WDG	3 - 6	4.0 oz						
16. Equus 720	1, 2, 4, 6, 7	1.5 pt	9.6	31.6	2.0	5.5	1.2	4440
Artisan	3 & 5	32.0 fl oz						
LSD(P<0.5)			15.1	15.7	0.6	0.8	2.6	722

^{1 & 3}Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

²Florida 1 -1 0 scale where 1=no disease and 10=dead plant.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF PEANUT SOILBORNE DISEASES

A. PURPOSE: To evaluate the comparative efficacy of labeled fungicides for the control of southern stem rot on GA-06G peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with five replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: GA-06G

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
2. Belt-pack spray treatments (1-7) were applied on 16 June, 30 June, 15 July, 28 July, 11 August, 23 August, and 8 Sept. This test was not cover-sprayed.

D. ADDITIONAL INFORMATION:

- 1: Location: Lang Farm, South Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 5 May
4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 Apr.
POST: 24DB, Butoxone 175 (28 oz/A) on 27 July.
6. Insecticides: Temik 15G, (5 lb/A) in furrow on 11 May
7. Nematicides: Temik 15G, (10 lb/A) in 16" band on 11 May.
8. Planting Info: GA-06G, 7 seed/ft on 11 May
9. Harvest Dates: Dug - 29 Sept Picked - 5 Oct

E. SUMMARY:

Severe disease pressure was present and the fungicide programs were not as effective as would be expected. Differences in control were seen among fungicide programs that resulted in significant yield differences.

MISCELLANEOUS TEST II, 2010
LANG FARM, SOUTH FIELD

Treatments	App's	Rate/A	White Mold ¹		Leaf Spot ²		TSWV ³	Yield (lb/A)
			18-Aug	29-Sep	24-Aug	27-Sep	26-Aug	
1. Bravo W'stik	1 - 7	1.5 pt	46.4	68.8	2.6	5.7	1.6	2210
2. Bravo W'stik Evito 480SC + COC	1, 2, 4, 6, 7 3 & 5	1.5 pt 5.7 fl oz 0.25% v/v	45.6	63.2	2.4	4.2	0.4	2678
3. Bravo W'stik Evito T	1, 2, 4, 6, 7 3 & 5	1.5 pt 11.2 fl oz	31.6	52.4	2.1	3.1	1.6	3206
4. Bravo W'stik Evito 480SC + ARY0921	1, 2, 4, 6, 7 3 & 5	1.5 pt 5.7 fl oz 11.4 fl oz	38.0	56.8	2.1	3.1	1.2	2855
5. Bravo W'stik Evito 480 + ARY0922	1, 2, 4, 6, 7 3 & 5	1.5 pt 5.7 fl oz 11.4 fl oz	40.4	60.8	2.2	4.3	0.4	2866
6. Bravo W'stik Evito 480 + Kinetic	1, 2, 4, 6, 7 3 & 5	1.5 pt 5.7 fl oz 9 oz/100 gal	24.8	43.2	2.2	4.4	0.8	3488
7. Catamaran	1 - 7	3.0 pt	47.6	59.6	2.2	3.0	1.6	2605
8. Bravo W'stik	1 - 7	1.22 pt	42.4	65.2	2.5	4.3	2.0	1978
9. LBG 61FT	1 - 7	3.0 pt	29.6	63.6	2.3	3.8	0.8	2782
10. Tegrol	1 - 7	5.51 oz	27.2	67.2	2.5	6.6	2.0	2044
11. Bravo W'stik + Tegrol	1 - 7	1.22 pt 5.51 oz	44.0	72.4	1.9	3.0	1.2	1801
12. Bravo W'stik + Tegrol + Prophyte	1 - 7	1.22 pt 5.51 oz 2.26 pt	25.6	52.8	1.8	2.5	1.6	2753
13. Bravo W'stik LBG 61FT	1, 2, 7 3 - 6	1.5 pt 3.5 pt	40.0	64.4	2.9	4.9	1.2	2564
14. Bravo W'stik Folicur	1, 2, 7 3 - 6	1.5 pt 7.2 fl oz	38.8	70.8	2.7	6.3	2.0	2100

MISCELLANEOUS TEST II, 2010
LANG FARM, SOUTH FIELD

Treatments	App's	Rate/A	W. Mold ¹		Leaf Spot ²		TSWV ³	Yield (lb/A)
			18-Aug	27-Sep	24-Aug	27-Sep	26-Aug	
15.Catamaran	1 - 7	4.0 pt	39.6	58.4	2.3	2.7	0.8	2808
16.Bravo W'stik Abound	1, 2, 4, 6, 7 3 & 5	1.5 pt 18.0 fl oz	37.6	60.0	1.9	2.5	2.0	2849
17.Untreated			56.4	76.0	4.2	7.8	1.2	1716
LSD(P<0.5)			23.3	20.2	0.6	1.2	n.s.	996

¹ & ³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

²Florida 1 - 10 scale where 1=no disease and 10=dead plant.

EVALUATION OF VARIOUS FUNGICIDE PROGRAMS ADAPTED FOR LOW, MEDIUM OR HIGH RISK OF FUNGAL DISEASES IN A HIGH RISK FIELD

- A. **PURPOSE:** To evaluate the comparative efficacy of 3 risk levels of 3 different fungicide programs in a field at high risk of fungal diseases, mainly leaf spot and stem rot.
- B. **EXPERIMENTAL DESIGN:**
1. Split-split plot with cultivar being whole plots, risk level sub-plots and individual treatments being sub-sub-plots, with four replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. There are eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: GA-07W and GA-06G
- C. **APPLICATION OF TREATMENTS:**
1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
 2. Belt-pack spray treatments (1-7) were applied on 16 June, 30 June, 14 July, 26 July, 9 August, 23 August, and 30 August. Also treatments were applied to spray (1.5, 3.5 and 6.5) on 24 June, 21 July, and 1 Sept. This test was not cover-sprayed with chlorothalonil.
- D. **ADDITIONAL INFORMATION:**
1. Location: Lang Farm, South Field CPES Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 5 May
 4. Soil Fertility: pH - 5.9 P - 76 K - 64 Ca - 762 Mg - 72
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A), 22 Apr.
POST: 24 DB, Butoxone 175 (0.28 oz/A) 27 July.
 6. Insecticides: Temik 15G, (5 lb/A) in furrow on 11 May
 7. Nematicides: None
 8. Planting Info: GA-07W and GA-06G, 7 seed/ft on 11 May
 9. Harvest Dates: Dug – 29 Sept Picked - 5 Oct
- E. **SUMMARY:** Severe stem rot occurred and overwhelmed most treatments causing low yields. Leaf spot responded according to risk/input level, and even at lowest inputs probably was not damaging. There was a notable difference between cultivars with GA-07W having less stem rot and higher yield under the severe disease pressure in this trial.

RISK INDEX TEST, 2010
LANG, SOUTH FIELD

GA-06G			White Mold¹		Leaf Spot²		TSWV³	Yield
Treatments	App's	Rate/A	Mid	29-Sep	24-Aug	28-Sep	26-Aug	(lb/A)
Fungicide Treatments								
LOW RISK								
1. Tilt/Bravo	2	2.25 pt	42.0	47.5	2.1	4.6	1.5	2915
Bravo W'stik	3.5 & 5	16 fl oz						
+ Abound		12 fl oz						
Bravo W'stik	6.5	1.5 pt						
2. Bravo W'stik	2 & 6.5	1.5 pt	39.0	52.0	2.7	4.9	1.5	2821
Evito	3.5 & 5	5.7 oz						
3. Bravo W'stik	2 & 6.5	1.5 pt	37.5	53.0	2.4	5.1	1.5	2770
Provost	3.5 & 5	8.0 oz						
LSD(P<0.5)			n.s.	n.s.	n.s.	0.4	n.s.	n.s.
MODERATE RISK								
1. Tilt/Bravo	1.5 & 4	2.25 pt	32.0	43.5	2.0	3.6	3.5	3256
Abound	3 & 5	18 fl oz						
Bravo W'stik	6.5	1.5 pt						
2. Bravo W'stik	1.5, 4 & 6.5	1.5 pt	42.0	69.0	2.3	4.7	0.5	2272
Evito	3, 5	5.7 oz						
3. Bravo W'stik	1.5 & 6.5	1.5 pt	48.5	61.5	2.0	4.3	1.5	2494
Provost	3, 4 & 5	8.0 oz						
LSD(P<0.5)			n.s.	18.8	n.s.	0.5	2.6	n.s.
HIGH RISK								
1. Tilt/Bravo	1, 2, 4	1.5 pt	31.5	39.0	2.0	2.0	2.5	3409
Abound	3 & 5	18 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
2. Bravo W'stik	1, 2, 4, 6, 7	1.5 pt	50.5	57.0	2.3	3.3	0.5	2592
Evito	3 & 5	5.7 oz						
3. Bravo W'stik	1, 2, & 7	1.5 pt	37.0	51.0	1.9	2.5	2.5	2592
Provost	3 - 6	8.0 oz						
LSD(P<0.5)			n.s.	n.s.	n.s.	0.4	n.s.	n.s.

¹ & ³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

²Florida 1 - 10 scale where 1=no disease and 10=dead plant.

RISK INDEX TEST, 2010

LANG, SOUTH FIELD

GA-07W			White Mold¹		Leaf Spot²		TSWV³	Yield
Treatments	App's	Rate/A	Mid	29-Sep	24-Aug	28-Sep	26-Aug	(lb/A)
Fungicide Treatments								
LOW RISK								
1. Tilt/Bravo	2	2.25 pt	24.5	29.5	2.7	4.8	0.0	3790
Bravo W'stik	3.5 & 5	16 fl oz						
+ Abound		12 fl oz						
Bravo W'stik	6.5	1.5 pt						
2. Bravo W'stik	2 & 6.5	1.5 pt	30.5	34.0	2.4	5.2	1.5	3150
Evito	3.5 & 5	5.7 oz						
3. Bravo W'stik	2 & 6.5	1.5 pt	18.5	34.0	2.2	4.9	2.0	3140
Provost	3.5 & 5	8.0 oz						
LSD(P<0.5)			n.s.	n.s.	0.4	n.s.	n.s.	639
MODERATE RISK								
1. Tilt/Bravo	1.5 & 4	2.25 pt	17.0	24.5	2.3	3.4	2.0	4614
Abound	3 & 5	18 fl oz						
Bravo W'stik	6.5	1.5 pt						
2. Bravo W'stik	1.5, 4 & 6.5	1.5 pt	26.0	38.5	2.5	4.3	1.5	3877
Evito	3, 5	5.7 oz						
3. Bravo W'stik	1.5 & 6.5	1.5 pt	20.5	38.5	2.3	4.8	2.0	3641
Provost	3, 4 & 5	8.0 oz						
LSD(P<0.5)			n.s.	n.s.	n.s.	0.9	n.s.	n.s.
HIGH RISK								
1. Tilt/Bravo	1, 2, 4	1.5 pt	27.5	26.0	2.0	3.2	4.0	3920
Abound	3 & 5	18 fl oz						
Bravo W'stik	6 & 7	1.5 pt						
2. Bravo W'stik	1, 2, 4, 6, 7	1.5 pt	46.0	42.0	2.7	4.0	1.0	3401
Evito	3 & 5	5.7 oz						
3. Bravo W'stik	1, 2, & 7	1.5 pt	30.0	33.0	2.5	4.2	0.0	3456
Provost	3 - 6	8.0 oz						
LSD(P<0.5)			12.2	13.1	n.s.	n.s.	3.1	n.s.

¹ & ³ Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

² Florida 1 - 10 scale where 1=no disease and 10=dead plant.

OFFICIAL DAILY RAINFALL 2010
LANG/RIGDON FARM

Rainfall							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
1			0.1				
2					0.2		
4		3.1					
5		0.1	0.4				
7					1.1		
8	1.8						
11				0.3			
12				0.8			
14					0.2		
15					0.5		
16			0.1		1.6		
17		0.9	0.1		0.4		
19					0.4		
21			0.5				
22					0.1		
24	0.5						
25	1.2			0.3	0.6	0.3	
26					0.4		
27			1.7			0.9	
28					0.8	0.1	0.5
29			0.2				
30	0.2				0.1		
31		0.4		0.5			
TOTAL	3.7	4.5	3.1	1.9	6.3	1.3	0.5
Irrigation							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
3			0.7				
5					0.7		
6					0.6		
7						0.6	
10			0.6				
12					0.6		
14		0.6					
19		0.5					
21				0.6		0.6	
23				0.6			
26				0.6			
28		0.6					
29				0.6			
Total	0.0	1.7	1.3	2.4	1.9	1.2	0.0
Rain + Irrigation							
	3.7	6.2	4.4	4.3	8.2	2.5	0.5

EVALUATION OF FUNGICIDES APPLIED IN DIFFERENT SPRAY VOLUMES AND PRESSURES AT DAY OR AT NIGHT FOR THE CONTROL OF PEANUT DISEASES

A. PURPOSE: To evaluate the comparative efficacy of Bravo and Headline on foliar and soilborne diseases when applied at night or day in various spray volumes and pressures.

B. EXPERIMENTAL DESIGN:

1. Split-split plot with fungicide being whole plots, spray timing sub-plots, and spray volume being sub-sub-plots, with four replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: Tifguard

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 20 GPA, 11002VS (2, 18 inch apart) at 26 GPA and A111003VS (2, 18 inch apart) at 38 GPA.
2. Sprays 1, 2, and 7 were day coversprays of Bravo applied by tractor while sprays 3-6 (Bravo WeatherStik and Headline 2.09EC) were applied as indicated in the table.

D. ADDITIONAL INFORMATION:

- 1: Location: Blackshank Farm, Pond Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut – 2007
3. Land Preparation: Moldboard plowed and marked rows on 29 March
4. Soil Fertility: pH -6.3 P - 58 K - 16 Ca - 358 Mg - 40
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1 pt/A), 22 April
6. Insecticides: Temik 15G, (5 lb/A) in furrow on 27 April
7. Nematicides: Temik 15G, (10 lb/A) in 16” band on 27 April.
8. Planting Info: Tifguard, 7 seed/ft on 27 April
9. Harvest Dates: Dug - 29 Sep Picked – 4 Oct

E. SUMMARY: Headline gave better control of leaf spot than Bravo with all application methods and day and night sprays gave similar control. Headline applications at day did not give significant control of stem rot, but night sprays had less disease than day sprays at harvest. Yields were only higher with night sprays applied in 26 GPA.

Effect of fungicide, spray timing and sprayer nozzle on leaf spot, stem rot and peanut yield at Blackshank Farm, 2010.^a

Fungicide	Spray timing	Spray set up ^b	Rate/A	Pressure	Leaf spot ^c	Stem rot ^d (%)	Stem rot at digging ^e (%)	Yield (kg/ha)
Bravo	Day	TX-SS6	1.5 pt	40 psi	4.9	30.2	31.0	2,254
Bravo	Day	11003VS	1.5 pt	30 psi	4.8	30.0	31.0	2,291
Bravo	Day	AI11003VS	1.5 pt	50 psi	4.5	29.0	29.5	2,262
Bravo	Night	TX-SS6	1.5 pt	40 psi	4.5	23.0	24.0	2,066
Bravo	Night	11003VS	1.5 pt	30 psi	4.4	23.0	28.0	2,425
Bravo	Night	AI11003VS	1.5 pt	50 psi	4.1	28.0	28.0	2,204
Headline	Day	TX-SS6	9.0 fl oz	40 psi	3.0	28.0	29.5	2,216
Headline	Day	11003VS	9.0 fl oz	30 psi	3.0	23.5	23.5	2,225
Headline	Day	AI11003VS	9.0 fl oz	50 psi	2.9	23.0	23.5	2,333
Headline	Night	TX-SS6	9.0 fl oz	40 psi	2.9	11.5	20.5	2,462
Headline	Night	11003VS	9.0 fl oz	30 psi	2.8	19.5	12.5	2,800
Headline	Night	AI11003VS	9.0 fl oz	50 psi	2.9	15.0	15.5	2,579
LSD _{0.05}					0.8	8.7	7.7	397

^a Sprays 1, 2 and 7 were day coversprays of Bravo applied by tractor while sprays 3 to 6 were applied as indicated in the table. Fungicide treatments were Bravo W'Stik and Headline 2.09EC.

^b The spray nozzles were set up to spray at following rates: TX-SS6 (3, 12 in apart) at 20 GPA, 11003VS (2, 18 in apart) at 26 GPA and AI11003VS (2, 18 in apart) at 38 GPA;

^c Florida 1- 10 severity scale and disease assessment was one day before digging;

^d Stem rot was rated one week before digging;

^e Stem rot was rated immediately after digging and inverting.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF PEANUT SOILBORNE DISEASES

A. PURPOSE: To evaluate the comparative efficacy of labeled fungicides for the control of southern stem rot on Tifguard peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with five replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: Tifguard

C. APPLICATION OF TREATMENTS:

1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
2. Belt-pack spray treatments (1-7) were applied on 1 June, 23 June, 7 July, 21 July, 4 August, 18 August, and 1 Sept. Also treatment was applied to spray (1.5) on 16 June. This test was not cover sprayed.

D. ADDITIONAL INFORMATION:

- 1: Location: Blackshank Farm, CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 29 March
4. Soil Fertility: pH – 6.3 P - 58 K - 16 Ca - 358 Mg - 40
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 Apr.
POST: 24DB, Butoxone 175 (28 oz/A) on 27 July.
6. Insecticides: Temik 15G, (5 lb/A) in furrow on 28 April
7. Nematicides: Thimet 20G, (4.3 lb/A) in furrow on 28 April
8. Planting Info: Tifguard, 7 seed/ft on 28 April
9. Harvest Dates: Dug - 29 Sept Picked – 5 Oct

E: SUMMARY:

Disease pressure was relatively low in this test, but differences were present among treatments. The delayed leaf spot applications (timing 1.5) held up well.

SIPCAM FUNGICIDE TEST, 2010
BLACKSHANK FARM, POND FIELD

TREATMENTS	APP'S	RATE/A	Plants/ft ¹		Width ²	TSWV ³	White Mold ⁴	Leaf Spot ⁵	Yield (lb/A)
			13-May	21-May	21-Jun	22-Jul	31-Aug	25-Aug	
1. Echo 720	1 - 7	1.5 pt	.	.	.	2.0	24.0	4.1	3438
2. Echo 720	1.5	1.0 pt	.	.	.	0.8	7.2	3.2	4269
+ Eminent 125SL		7.2 oz							
Echo 720	3 - 6	1.0 pt							
+ Muscle 3.6F		7.2 oz							
Echo 720	7	1.5 pt							
3. Echo 720	1.5	12 oz	.	.	.	0.8	5.6	3.1	4077
+ Eminent 125SL		5.4 oz							
Echo 720	3 - 6	1.0 pt							
+ Muscle 3.6F		7.2 oz							
Echo 720	7	1.5 pt							
4. Headline	1.5	9.0 oz	.	.	.	0.0	2.8	2.5	4071
Echo 720	3 - 6	1.0 pt							
+ Muscle 3.6F		7.2 oz							
Echo 720	7	1.5 pt							
5. Echo 720	1 & 2	1.0 pt	.	.	.	0.8	4.8	3.7	4141
+ Eminent 125SL		7.2 oz							
Echo 720	3 - 6	1.0 pt							
+ Muscle 3.6F		7.2 oz							
Echo 720	7	1.5 pt							
6. Echo 720	1.5	1.0 pt	.	.	.	1.2	6.0	2.9	3920
+ Eminent 125SL		7.2 oz							
SA-0120305	3 - 6	2.0 pt							
Echo 720	7	1.5 pt							
7. Echo 720	1.5	1.0 pt	.	.	.	1.2	4.4	2.9	4414
+ Eminent 125SL		7.2 oz							
SA-0120305	3 - 6	2.0 pt							
Echo 720	7	1.5 pt							

SIPCAM FUNGICIDE TEST, 2010
BLACKSHANK FARM, POND FIELD

TREATMENTS	APP'S	RATE/A	Plants/ft ¹		Width ² 21-Jun	TSWV ³ 22-Jul	White Mold ⁴ 31-Aug	Leaf Spot ⁵ 25-Aug	Yield (lb/A)
			13-May	21-May					
8. Actinogrow AG	In Furrow	3.0 oz	3.4	3.3	46.4	1.2	5.2	2.9	4501
Echo 720	1.5	1.0 pt							
+ Eminent 25SL		7.2 oz							
Echo 720	3 - 6	1.0 pt							
+ Muscle 3.6F		7.2 oz							
Echo 720	7	1.5 pt							
9. Actinogrow AG	In furrow	3.0 oz	3.2	3.4	52.1	1.2	8.8	4.0	4252
Echo 720	1 - 7	1.5 pt							
10. Non-treated			3.2	3.3	46.1	0.4	10.4	4.8	3502
LSD(P<0.5)			n.s.	n.s.	n.s.	1.5	10.0	0.5	939

¹Stand count is the number of emerged plants per foot of row on 13 May and 21 May.

²Average plant width (measured in cm), mean of 6 plants per plot.

³&⁴Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

⁵Florida 1 - 10 scale where 1=no disease and 10=dead plant.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF PEANUT SOILBORNE DISEASES

A. PURPOSE: To evaluate the efficacy of RDL-29 (Iprodione) for the control of southern stem rot and peanut root knot nematodes on GA-06G peanut.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with five replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. There eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: GA-06G

C. APPLICATION OF TREATMENTS:

1. Equipment: The T-Band sprays were applied in a 6 inch band (3.72 GPA) centered over the open furrow at planting.
2. Coversprays of chlorothalonil (1-7) were applied on 2 June, 17 June, 13 July, 23 July, 18 August, and 23 August. The 45 DAP was sprayed on 28 June and 66 DAP was sprayed on 16 July.

D. ADDITIONAL INFORMATION:

- 1: Location: Blackshank Farm, CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 29 March
4. Soil Fertility: pH – 6.4 P - 85 K - 17 Ca - 362 Mg - 48
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan EC (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 Apr
6. Insecticides: Thimet 20G, (4.3 lb/A) in furrow on 27 Apr
7. Nematicides:
8. Planting Info: GA-06G, 6 seed/ft on 27 Apr
9. Harvest Dates: Dug - 29 Sept Picked – 4 Oct

E. SUMMARY:

This test had serious plant growth issues due to unknown causes, although it was probably a accidental herbicide overdose. Data was collected on plant stands, and some treatments receiving a T-band of RDL-29 had reduced plant emergence. There were no consistent differences in populations of any nematode species, and there were some treatment-related black lesions on some of the foliage. Yield data was not taken due to the plant stunting and abnormal growth.

DEVGEN TEST I, 2010
Blackshank Farm, Wood Field

Treatments	App's	Rate/A	Plants/ft ¹		TSWV ²	Black Lesions ³
			11-May	18-May	20-Aug	15-Sep
1. Nontreated			2.0	2.2	0.8	11.2
2. Temik	Band @ plant	10.0 lb	2.1	2.3	2.0	11.8
3. Temik	Band @ plant	10.0 lb	2.1	2.1	1.6	9.8
Temik	Band @ 45 DAP	10.0 lb				
4. Temik	Band @ plant	10.0 lb	2.0	2.1	1.2	20.4
RDL-29	45 DAP	3.0 pt				
5. Temik	Band @ plant	10.0 lb	2.0	2.3	1.2	22.4
RDL-29	45 & 66 DAP	3.0 pt				
6. RDL-29	45 & 66 DAP	3.0 pt	2.1	2.2	0.8	22.4
7. RDL-29	T-Band @ plant	3.0 pt	1.7	1.9	0.0	24.0
RDL-29	45 DAP	3.0 pt				
8. RDL-29	T-Band @ plant	2.0 pt	2.0	2.1	1.2	24.0
RDL-29	45 DAP	2.0 pt				
9. RDL-29	T-Band @ plant	2.0 pt	1.7	2.0	2.0	29.6
RDL-29	45 & 66 DAP	2.0 pt				
10. RDL-29	45 & 66 DAP	3.0 pt	2.0	2.1	1.2	45.8
	NIGHT SPRAY					
LSD (P<0.5)			0.4	n.s.	1.7	13.0

¹Stand count is the number of emerged plants per foot of row on 24 May and 1 June.

²Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

³Dark black lesions resembling late leaf spot but are not.

DEVGEN TEST I, 2010
Blackshank Farm, Woods Field

Treatments	App's	Rate/A	Rootknot ⁴		
			18-May	14-Jul	17-Sep
1. Nontreated			0.0	0.4	29.8
2. Temik	Band @ plant	10.0 lb	0.0	0.0	28.4
3. Temik	Band @ plant	10.0 lb	.	0.0	92.4
Temik	Band @ 45 DAP	10.0 lb			
4. Temik	Band @ plant	10.0 lb	.	0.0	23.4
RDL-29	45 DAP	3.0 pt			
5. Temik	Band @ plant	10.0 lb	.	0.2	34.8
RDL-29	45 & 66 DAP	3.0 pt			
6. RDL-29	45 & 66 DAP	3.0 pt	.	0.2	22.8
7. RDL-29	T-Band @ plant	3.0 pt	0.0	0.0	40.0
RDL-29	45 DAP	3.0 pt			
8. RDL-29	T-Band @ plant	2.0 pt	0.0	0.0	67.2
RDL-29	45 DAP	2.0 pt			
9. RDL-29	T-Band @ plant	2.0 pt	.	0.0	49.4
RDL-29	45 & 66 DAP	2.0 pt			
10. RDL-29	45 & 66 DAP	3.0 pt	.	0.2	49.4
	NIGHT SPRAY				
LSD (P<0.5)			n.s.	n.s.	56.1

⁴Populations of root knot nematode per 100 cm³ of soil.

DEVGEN TEST I, 2010
Blackshank Farm, Woods Field

			Lesions ⁵		
Treatments	App's	Rate/A	18-May	14-Jul	17-Sep
1. Nontreated			0.0	0.0	0.0
2. Temik	Band @ plant	10.0 lb	0.0	0.0	0.0
3. Temik	Band @ plant	10.0 lb	.	0.0	0.0
Temik	Band @ 45 DAP	10.0 lb			
4. Temik	Band @ plant	10.0 lb	.	0.0	0.0
RDL-29	45 DAP	3.0 pt			
5. Temik	Band @ plant	10.0 lb	.	0.0	0.0
RDL-29	45 & 66 DAP	3.0 pt			
6. RDL-29	45 & 66 DAP	3.0 pt	.	0.0	0.0
7. RDL-29	T-Band @ plant	3.0 pt	0.0	0.0	0.0
RDL-29	45 DAP	3.0 pt			
8. RDL-29	T-Band @ plant	2.0 pt	0.0	0.0	0.0
RDL-29	45 DAP	2.0 pt			
9. RDL-29	T-Band @ plant	2.0 pt	.	0.0	0.0
RDL-29	45 & 66 DAP	2.0 pt			
10. RDL-29	45 & 66 DAP	3.0 pt	.	0.0	0.0
	NIGHT SPRAY				
LSD (P<0.5)			n.s.	n.s.	n.s.

⁵Populations of lesion nematode per 100 cm³ of soil.

DEVGEN TEST I, 2010
Blackshank Farm, Woods Field

Treatments	App's	Rate/A	Ring ⁶		
			18-May	14-Jul	17-Sep
1. Nontreated			0.4	13.4	122.6
2. Temik	Band @ plant	10.0 lb	0.0	4.8	76.2
3. Temik	Band @ plant	10.0 lb	.	24.8	90.6
Temik	Band @ 45 DAP	10.0 lb			
4. Temik	Band @ plant	10.0 lb	.	28.0	92.2
RDL-29	45 DAP	3.0 pt			
5. Temik	Band @ plant	10.0 lb	.	29.0	85.6
RDL-29	45 & 66 DAP	3.0 pt			
6. RDL-29	45 & 66 DAP	3.0 pt	.	38.6	37.0
7. RDL-29	T-Band @ plant	3.0 pt	0.6	19.2	61.6
RDL-29	45 DAP	3.0 pt			
8. RDL-29	T-Band @ plant	2.0 pt	0.8	6.4	141.8
RDL-29	45 DAP	2.0 pt			
9. RDL-29	T-Band @ plant	2.0 pt	.	9.4	113.6
RDL-29	45 & 66 DAP	2.0 pt			
10. RDL-29	45 & 66 DAP	3.0 pt	.	12.8	47.6
	NIGHT SPRAY				
LSD (P<0.5)			n.s.	29.2	95.1

⁶Populations of ring nematode per 100 cm³ of soil.

EVALUATION OF EXPERIMENTAL PEANUT SEED TREATMENTS

- A. PURPOSE: To evaluate the comparative efficacy of labeled and experimental peanut seed treatments.
- B. EXPERIMENTAL DESIGN:
1. Randomized complete blocks with six replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. There are eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: GA-Green
- C. APPLICATION OF TREATMENTS:
1. Equipment: Midseason spray treatments were applied with a CO₂ pressurized belt-pack sprayer using 2 liter bottles and a 20 GPA broadcast boom with three Conejet TX-SS6 nozzles per row at 40 PSI.
 2. Cover sprays of chlorothalonil (1-7) were applied on 2 June, 17 June, 13 July, 23 July, 5 August, 18 August and 31 August. Convoy (2 pt/A) was applied on (60 DAP) 12 July and (90 DAP) on 11 August.
- D. ADDITIONAL INFORMATION:
- 1: Location: Blackshank Farm, CPES Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 29 March
 4. Soil Fertility: pH - 6.7 P - 74 K - 23 Ca - 411 Mg - 66
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 Apr
POST
 6. Insecticides: Thimet 20G, (4.3 lb/A) in furrow on 27 Apr
 7. Nematicides: Temik 15G, (10 lb/A), 16" band, 11 May
 8. Planting Info: GA-Green, 6 seed/ft on 27 Apr
 9. Harvest Dates: Dug - 13 Sept Picked - 17 Sept
- E. SUMMARY:
- All seed treatments did a good job of protecting the young plants and establishing a uniform stand. There were no visible differences in plant growth, and the almost complete lack of TSWV (even on the somewhat susceptible cultivar Georgia Green with a sparse stand), resulted in few yield differences. Overall yields were low due to poor growth resulting from root knot nematode damage.

CHEMTURA SEED TREATMENT TEST 1, 2010
Blackshank Farm, Woods Field

Treatments	Rate/100 lb	Plants/ft ¹		Plants/Width ²	TSWV ³	Yield
		11-May	18-May	21-Jun	20-Aug	(lb/A)
1. Non-treated		1.7	1.5	30.6	2.3	1491
2. Dynasty PD	4.0 oz	3.4	3.3	35.0	2.3	1786
3. Trilex Star	4.0 oz	3.2	3.2	34.2	1.7	2072
4. UBI 4378	4.0 oz	3.3	3.1	34.8	3.0	1936
5. UBI 4379	4.0 oz	3.4	3.1	30.9	3.0	1650
6. UBI 4380	4.0 oz	3.3	3.2	32.6	2.7	1573
7. UBI 4381	4.0 oz	3.4	3.2	34.5	1.0	2173
8. UBI 4382	4.0 oz	3.4	3.2	33.6	2.0	1820
9. UBI 4383	4.0 oz	3.6	3.1	34.1	2.3	1926
LSD (P<0.5)		0.3	0.3	n.s	n.s.	650

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

²Average plant width (measured in cm), mean of 6 plants per plot.

³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

EVALUATION OF CULTIVARS AND BREEDING LINES FOR DISEASE RESISTANCE

- A. **PURPOSE:** To evaluate the relative susceptibility of peanut breeding lines and cultivars to major peanut diseases in Georgia.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with four replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. Eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production, but fumigated prior to planting with methyl bromide (400 lb/A MBC 33, tarped). Six plants per plot were inoculated with *Sclerotium rolfsii* at midseason, and length of each disease locus measured at digging.
 5. Variety: Multiple varieties
- C. **APPLICATION OF TREATMENTS:**
1. This test was sprayed with Chlorothalonil 720 (1.5 pt/A) on 23 Jul, 5 Aug, and 18 Aug.
- D. **ADDITIONAL INFORMATION:**
- 1: Location: Blackshank Farm, CPES Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 22 April
 4. Soil Fertility: pH – 6.5 P - 29 K - 32 Ca - 431 Mg - 59
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan (2 pt/A) + Dual Magnum (1.2 pt/A) on 30 April. And
Mythel Bromide
POST: Cadre 70 DF (1.44 oz/A) + crop oil (1 qt/A) on 8 July.
 6. Insecticides: Sprayed Acephate 755 (1 lb/A) on 30 July.
 7. Planting Info: Different varieties, 5 seed/ft on 20 May.
 8. Harvest Dates: Dug – 14 Oct Picked – 18 Oct
- E. **SUMMARY:** Significant white mold developed in the test, but overall uniformity of plant growth and disease development was not as uniform as in some years. Resistant cultivars like York showed a high percent of inoculation sites with no disease as in previous years, as did several others including Bailey which was evaluated in this test for the first time. Leaf spot was very light due to the dry weather.

MULTI-STATE DISEASE EVALUATION, 2010
BLACKSHANK FARM

Genotype	Percent¹	White Mold²		Leafspot³	Yield lb/A
	Zeroes	No Zeroes	All	Jan. 10	
C740-1-43-5-T	25.0	56.0	42.3	2.7	1724
C740-2-12-4-R	12.5	78.9	69.8	2.5	1525
CB6-3	12.5	82.8	68.9	3.1	2202
CB6-5	20.8	63.5	52.1	2.9	2596
C1207-5-4	29.2	60.0	43.5	5.4	2481
C1207-5-5	25.0	52.2	37.9	3.4	2148
C1321-1-1	16.7	58.3	51.7	4.1	2523
C1321-1-4	8.3	67.6	61.9	2.8	2831
C1427-15	12.5	61.9	56.0	4.5	2118
C1427-1-3	25.0	67.4	52.3	3.6	2444
C1494-1-1	29.2	58.9	43.1	3.4	2813
C1494-1-2	33.3	76.3	51.3	5.4	2674
C1494-1-5	29.2	64.8	45.8	4.4	2874
C1500-3-6	41.7	54.9	35.0	4.6	2402
C1500-4-4	8.3	76.6	70.6	4.1	2208
C1500-1-11	25.0	71.2	53.3	4.1	1991
C875-2-5-20	12.5	68.7	58.3	5.1	2347
C1804-1-26	45.8	67.1	35.0	4.4	2559
C1804-2-31	20.8	56.6	47.7	3.1	2257
C1805-3-43	29.2	67.4	49.4	2.6	3049
UF0831	8.3	48.1	44.2	3.4	1845
UF09303	12.5	73.0	62.1	3.5	2239
UF10301	25.0	56.6	30.6	3.9	3073
UF10302	29.2	58.6	41.3	3.5	2977
UF113	62.5	53.6	17.5	4.4	2589
04007-3-1-1-1	12.5	86.4	77.9	5.1	1640
04JOR-11-6-2-1	16.7	70.1	59.0	4.8	2341
04JOR-17-20-1-1	41.7	66.4	40.2	4.0	2354
04JOR-17-4-2-2	4.2	97.8	94.4	5.3	1658
04JOR-11-8-2-1	50.0	63.8	34.4	4.3	2275
GA082511	37.5	55.1	37.1	3.0	3279
GA082513	37.5	43.5	27.5	3.1	2735
GA082514	33.3	44.7	31.9	2.8	2692
GA082519	8.3	66.1	60.8	4.3	2402
GA082521	20.8	60.5	51.3	3.3	2638
GA082522	8.3	57.7	52.9	3.3	2662
GA082524	20.8	57.8	46.0	3.8	3043
GA082546	20.8	67.3	52.7	3.7	2341
GA082548	16.7	67.2	55.2	4.0	1912
GA082549	4.2	76.0	72.5	3.4	2190
GA082550	8.3	71.7	65.8	3.3	1537

MULTI-STATE DISEASE EVALUATION, 2010
BLACKSHANK FARM

Genotype	Percent¹	White Mold²		Leafspot³	Yield lb/A
	Zeroes	No Zeroes	All		
GA052529	33.3	34.2	23.1	3.0	2226
GA052533	54.2	61.3	28.5	3.6	3110
1048-120T	4.2	71.7	70.4	5.4	1476
1048-362T	25.0	71.6	53.1	4.1	1682
1048-192T	12.5	54.9	46.9	4.1	2704
1050-52	16.7	66.1	54.0	3.1	2650
SEQ 910	66.7	35.7	10.2	3.6	3249
SEQ 925	29.2	49.4	37.5	3.8	2602
GA-09B	12.5	80.2	71.0	4.9	2045
Florida Fancy	16.7	63.8	53.1	3.3	2275
Florida 07	12.5	76.3	66.5	4.9	2475
GA-08V	4.2	68.8	66.7	4.6	2299
Bailey	66.7	46.3	15.4	3.3	2868
Georgia Greener	8.3	73.3	67.1	4.8	1688
GA-06G	12.5	74.3	65.2	3.7	2220
Tifguard	12.5	70.2	62.1	2.9	2081
GA-07W	12.5	57.8	50.8	3.4	2245
Georgia Green	41.7	68.0	38.5	4.8	2105
York	50.0	57.8	32.3	2.8	2384
AP-4	16.7	66.2	57.3	4.9	2190
GA-02C	41.7	61.3	31.5	4.0	2105
LSD (P<0.5)	57.9	45.3	52.8	1.4	1479

¹Percent of plants inoculated with *S.rolfsii* that had no disease.

²Average length of white mold "hits" (cm) calculated with and without "0's".

³Florida 1-10 scale where 1=no disease and 10=dead plant.

EVALUATION OF ORGANIC PEANUT SEED TREATMENTS

A. PURPOSE: To evaluate the comparative efficacy of organic peanut seed treatments.

B. EXPERIMENTAL DESIGN:

1. Randomized complete blocks with seven replicates.
2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
3. Eight foot alleyways between blocks.
4. Plots were established in an area with a history of continuous peanut production.
5. Variety: GA-Green

C. APPLICATION OF TREATMENTS:

1. Cover sprays of chlorothalonil (1-7) were applied on 2 Jun, 17 Jun, 13 Jul, 23 Jul, 5 Aug, 18 Aug, and 30 Aug. Convoy was also applied at 12 July and 11 Aug.

D. ADDITIONAL INFORMATION:

- 1: Location: Blackshank Farm, Irr/Non Field CPES Tifton, GA 31794
2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
3. Land Preparation: Moldboard plowed and marked rows on 29 March
4. Soil Fertility: pH – 6.3 P - 37 K - 42 Ca - 408 Mg - 59
Soil type: Tifton loamy sand, 2 - 5 % slope
5. Herbicides: PPI: Sonalan (2 pt/A) + Dual Magnum (1.25 pt/A) on 22 April.
POST:
6. Insecticides: Temik 15G, (10 lb/A) in 16" band on 11 May.
7. Nematicides: Thimet 20G, (4.3 lb/A) in furrow on 28 April.
8. Planting Info: GA-Green, 6 seed/ft on 28 April
9. Harvest Dates: Dug - 20 Sep Picked - 24 Sep

E: SUMMARY:

The only treatment to significantly increase plant stands was the commercial standard, Trilex Star. None of the organic seed treatments had an effect on stand establishment. The levels of TSWV were also very low, and there were no differences in pod yield.

ORGANIC SEED TREATMENT TEST, 2010
BLACKSHANK FARM, IRR/NON FIELD

TREATMENTS	RATE/100 lb	Plants/ft ¹		Dead Plants/Plot ²	TSWV ³	Plant Width ⁴	Yield
		13-May	21-May	21-May	20-Aug	21-Jun	(lb/A)
1. Nontreated		1.6	1.7	0.5	5.3	37.2	1496
2. Trilex Star	4.0 oz	3.3	3.1	0.5	2.0	36.2	1699
3. CUS04 (w/Pepsi)	4.0 oz	1.8	1.8	1.0	4.7	39.7	1559
4. Kodiak HB	4.0 oz	1.9	1.8	0.0	5.0	38.1	1496
5. CUS04 (no Pepsi)	4.0 oz	1.8	1.8	0.7	5.7	39.8	1762
LSD(P<0.5)		0.5	0.5	n.s.	n.s.	n.s.	n.s.

¹Stand count is the number of emerged plants per foot of row on 13 May and 21 May.

²The number of dead or dying plants per plot (50 row feet) on 21 May.

³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

⁴Average plant width (measured in cm), mean of 6 plants per plot.

EVALUATION OF BIOLOGICAL FUNGICIDES APPLIED
IN FURROW FOR DISEASE CONTROL ON PEANUTS

- A. **PURPOSE:** To evaluate the comparative efficacy of in furrow, biological fungicides against peanuts and soil borne diseases.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with seven replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. Eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: Tifguard
- C. **APPLICATION OF TREATMENTS:**
1. Equipment: In furrow sprays were applied with an 80015E tip at 22 PSI for a total volume of 3.7 GPA at time of planting.
 2. The test was coversprayed with seven applications of Chlorothalonil on 2 June, 17 June, 12 July, 23 July, 5 August, 18 August, and 30 August. Treatment 6 (sprays 3 – 6) were applied with a belt-pack sprayer at 40 GPA. Prior to sprays 3 and 5 this treatment also received corn meal (400 lb/A) spread uniformly over the rows.
- D. **ADDITIONAL INFORMATION:**
- 1: Location: Blackshank Farm, Irr/Non Field Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 29 March
 4. Soil Fertility: pH - 6.3 P - 37 K - 42 Ca - 408 Mg - 59
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan (2 pt/A) + Dual Magnum (1.25 pt/A) on 30 April.
POST:
 6. Insecticides: None
 7. Nematicides: Thimet 20G, (4.3 lb/A) in furrow on 28 April.
 8. Planting Info: Tifguard, 6 seed/ft on 28 April
 9. Harvest Dates: Dug - 20 Sep Picked - 23 Sep
- E. **SUMMARY:**

None of the biocontrol agents reduced stem rot compared to the non-treated plots or increased yield.

AGRAQUEST IN FURROW TEST, 2010
Blackshank Farm, IRR/NON Field

Treatments	App's	Rate/A	Plants/ft ¹		White Mold ²	TSWV ³	Plant Width ⁴	White Mold ⁵	Yield (lb/A)
			13-May	21-May	19-Aug	20-Aug	21-Jun	Harvest	
1. Non-treated			2.4	3.0	22.3	2.0	41.9	42.6	1755
2. Serenade Soil	In furrow	2.2 fl oz	2.6	3.1	27.7	0.9	42.9	46.0	1701
3. Serenade Soil	in furrow	7.7 fl oz	2.5	3.0	21.7	2.6	37.7	34.6	1715
4. Serenade Soil	In furrow	13.2 fl oz	2.4	3.0	26.0	1.1	38.5	46.0	1552
5. Abound	In furrow	6.0 fl oz	2.6	3.0	24.9	1.1	40.7	39.7	1740
6. EXP-1	3 – 6	4.0 gal	2.6	3.0	23.7	2.3	.	45.1	1610
LSD (P<0.5)			n.s.	n.s.	n.s.	n.s.	3.6	8.2	n.s.

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

^{2,3 & 5}Percent of row feet infected, based on disease loci (up to 12" of linear row) per plot.

⁴Average plant width (measured in cm), mean of 6 plants per plot.

EVALUATION OF FUNGICIDES APPLIED IN FURROW OR AT EARLY EMERGENCE FOR PEANUT DISEASE CONTROL

- A. **PURPOSE:** To evaluate the comparative efficacy of fungicides applied in furrow or at early emergence for the control of seedling, foliar, and soil borne diseases.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with seven replicates. All plots were sprayed with chlorothalonil for foliar diseases, although spray 1 and 2 were omitted to evaluate early season leaf spot.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. Eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: Tifguard
- C. **APPLICATION OF TREATMENTS:**
1. Equipment: In furrow sprays were applied with an 80015E tip at 22 PSI for a total volume of 3.7 GPA. The early emergence spray was applied 13 May in 40 GPA with a single 8010 nozzle in a 4" band.
 2. All plots were traveled by tractor and cover sprayed with Bravo (1.5 pt/A) on 13 July, 23 July, 5 August, 18 August, and 31 August. Trt # 6 was sprayed with Bravo by back pack on 14 June and 29 June. Trt # 6 also received 400 lb/A cornmeal in a 16" band on 14 July plus QRD-145A, 4 gal/A in 40 gal H₂O/A in a 6" band. The QRD-145A was reapplied on 28 Aug and 24 August.
- D. **ADDITIONAL INFORMATION:**
- 1: Location: Blackshank Farm, Irr/Non Field Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 29 March
 4. Soil Fertility: pH - 6.3 P - 37 K - 42 Ca - 408 Mg - 59
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan (2 pt/A) + Dual Magnum (1.25 pt/A) on 22 April.
POST:
 6. Insecticides: None
 7. Nematicides: Thimet 20G, (4.3 lb/A) in furrow on 28 April.
 8. Planting Info: Tifguard, 6 seed/ft on 28 April
 9. Harvest Dates: Dug - 20 Sep Picked - 23 Sep

E: SUMMARY:

The in furrow applications slightly delayed plant emergence, but the plant stand were not significantly different by week 3. There was some control of leafspot from both the in furrow and the early emergence sprays of Proline and Propulse, however leaf spot pressure was not heavy. Stem rot was severe in this trial, and while the in furrow sprays provided some suppression, the early emergence sprays gave a good level of control and yield increase. This was remarkable in that the plots received only chlorothalonil between this very early spray and harvest.

**BAYER IN FURROW TEST I, 2010
BLACKSHANK FARM, IRR/NON FIELD**

TREATMENTS	APP'S	RATE	Plants/ft ¹		White Mold ²	
			13-May	21-May	19-Aug	Harvest
1. Non-treated			2.4	3.0	38.4	52.9
2. Propulse	In furrow*	13.7 fl oz	1.6	2.8	32.0	43.3
3. Proline	In furrow*	5.7 fl oz	1.5	3.0	24.7	48.0
4. Propulse	Emergence**	13.7 fl oz	2.5	2.8	13.8	29.3
5. Proline	Emergence**	5.7 fl oz	2.2	2.9	15.6	25.3
6. Bravo	(+ corn meal)		2.6	2.8	66.7	68.2
LSD(P<0.5)			0.5	n.s.	8.5	8.4

See next page

**BAYER IN FURROW TEST I, 2010
BLACKSHANK FARM, IRR/NON FIELD**

TREATMENTS	APP'S	RATE	Leaf Spot ³			Width ⁴	TSWV ⁵	Yield (lb/A)
			27-Jul	25-Aug	17-Sep	21-Jun	20-Aug	
1. Non-treated			1.1	2.1	3.4	.	1.1	1293
2. Propulse	In furrow*	13.7 fl oz	1.1	1.7	2.3	38.9	1.8	1660
3. Proline	In furrow*	5.7 fl oz	1.0	1.6	2.5	37.9	1.1	1410
4. Propulse	Emergence**	13.7 fl oz	1.1	1.7	2.6	.	1.6	2293
5. Proline	Emergence**	5.7 fl oz	1.0	1.7	2.7	.	2.9	2208
6. Bravo	(+ corn meal)		1.0	1.6	2.8	39.2	0.9	944
LSD(P<0.5)			n.s.	0.2	0.3	n.s.	2.0	312

*=in furrow applications applied in 3.75 GPA and mixed in 2 L volume.
(TP 80015E flat fan nozzle w/100 mesh t-ball check valve at 22 psi).

**=Applied in a narrow band (2-4 inches) directly over the row with a single 80-10 nozzle in a total spray volume of 40 GPA.

***=All plots will be cover-sprayed with Bravo, but omit sprays 1 and 2. The exception is Trt 6 which will be sprayed with Bravo by back pack.

NOTE: Corn meal was applied to this plot in error resulting in the white mold outbreak in the Aug 19 rating.

¹Stand count is the number of emerged plants per foot of row on 24 May and 1 June.

^{2, & 5}Percent of row feet infected, based on disease loci (up to 12" of linear row) per plot.

³Florida 1 - 10 scale where 1=no disease and 10=dead plant.

⁴Average plant width (measured in cm), mean of 6 plants per plot.

EVALUATION OF EXPERIMENTAL PEANUT SEED TREATMENTS

- A. PURPOSE: To evaluate the comparative efficacy of labeled and experimental peanut seed treatments.
- B. EXPERIMENTAL DESIGN:
1. Randomized complete blocks with nine replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. There are eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: GA-Green
- C. APPLICATION OF TREATMENTS:
1. All plots were coversprayed with Chlorothalonil 720 (1.5 pt/A) on 2 June, 17 June, 13 July, 23 July, 5 August, 18 August and 31 August, and Convoy (2 pt/A) on 12 July and 11 August.
- D. ADDITIONAL INFORMATION:
1. Location: Blackshank Farm, CPES Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 29 March
 4. Soil Fertility: pH – 6.3 P - 37 K - 42 Ca - 408 Mg - 59
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan (2 pt/A) + Dual Magnum (1.25 pt/A)
on 22 April
POST:
 6. Insecticides: Thimet 20G, (4.3 lb/A) in furrow on 27 Apr
 7. Nematicides: None
 8. Planting Info: GA-Green, 6 seed/ft on 27 April
 9. Harvest Dates: Dug – 20 Sept Picked – 24 Sept
- E. SUMMARY:

All seed treatments did a good job of protecting the young plants and establishing a uniform stand, especially compared to the non-treated seed. There were no visible differences in plant growth, and the almost complete lack of TSWV (even on the somewhat susceptible cultivar Georgia Green with a sparse stand), resulted in few yield differences among the treatments, but most were higher than the non-treated.

CHEMTURA SEED TREATMENT TEST II, 2010

Blackshank Farm, Irr/Non Field

Treatments	Rate/100 lb	Plants/ft ¹		Plants/Width ²	TSWV ³	Yield
		11-May	18-May	21-Jun	20-Aug	(lb/A)
1. Non-treated		1.5	2.0	41.1	8.9	1859
2. Dynasty PD	4.0 oz	2.5	3.4	40.6	4.9	2428
3. Trilex Star	4.0 oz	2.5	3.2	43.2	6.0	2093
4. UBI 4378	4.0 oz	2.7	3.4	45.3	4.4	2372
5. UBI 4379	4.0 oz	2.5	3.2	43.6	5.1	2416
6. UBI 4380	4.0 oz	2.8	3.4	42.5	5.3	2247
7. UBI 4381	4.0 oz	2.7	3.2	43.7	5.1	2327
8. UBI 4382	4.0 oz	2.8	3.3	42.1	4.0	2545
9. UBI 4383	4.0 oz	2.4	3.4	42.2	6.2	2214
LSD (P<0.5)		0.5	0.4	3.8	4.0	462

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

²Average plant width (measured in cm), mean of 6 plants per plot.

³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

EVALUATION OF CULTIVAR SUSCEPTIBILITY TO CYLINDROCLADIUM BLACK ROT

- A. PURPOSE: To evaluate the comparative susceptibility of cultivars to *Cylindrocladium* black rot.
- B. EXPERIMENTAL DESIGN:
1. Split plot, with whole plots being cultivars and sub-plots being inoculated versus non-inoculated with *C. parasiticum* (four replicates).
 2. One two- row bed (15 x 6 ft) per plot, 36 inch row spacing
 3. Eight foot alleyways between blocks
 4. Plots were established in an area with a history of continuous peanut production, but fumigated prior to planting with methyl bromide (400 lb/A MBC 33, tarped).
 5. Variety: Various
- C. APPLICATION OF TREATMENTS:
1. Plots were inoculated on 4 June w/ microsclerotia from a hand sprayer and immediately watered in.
- D. ADDITIONAL INFORMATION:
1. Location: Blackshank Farm, Banana Field Tifton, GA 31794
 2. Crop History: Peanut - 2009, Peanut 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked on 29 March.
 4. Soil Fertility: pH – 6.5 P - 29 K - 32 Ca - 430 Mg -59
Soil type: Tifton loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Sonalan (2 pt /A) + Dual Magnum (1.25 pt/A) on
POST:
 6. Insecticides: None
 7. Nematicides: Thimet 20G, (4.3 lb/A) in furrow on 20 May
 8. Planting Info: GA-06G, 5 seed/ft on 20 May
 9. Harvest Dates: Dug – 14 Oct Picked – 18 Oct
- E. SUMMARY: Due to the very hot weather little disease developed and it was very late in the season. Therefore effects on yield were minimal due to the small size of the disease loci, but relative disease levels are still useful.

CBR CULTIVAR TEST, 2010
BLACKSHANK FARM, BANANA FIELD

Cultivars	Inoculated with CBR		Non- inoculated	
	CBR¹	Yield (lb/A)	CBR¹	Yield (lb/A)
GA052529	25.6	3860	0.0	3328
SEQ 910	35.0	4162	10.0	4283
SEQ 925	45.0	3364	0.6	3061
GA-09B	30.0	3884	3.8	3775
Florida Fancy	36.3	3533	5.6	3606
Florida 07	19.4	3303	0.6	3485
GA-08V	22.5	3691	0.6	3727
Bailey	11.3	3182	0.0	3618
Georgia Greener	9.4	3303	0.0	3485
Ga-06G	21.9	3715	2.5	4259
Tifguard	34.4	4477	0.6	3461
GA-07W	12.5	3691	0.0	3146
GA-02C	16.7	3017	0.0	2565
LSD (P<0.5)	14.0	1292	2.6	1280

¹Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

OFFICIAL DAILY RAINFALL 2010
BLACKSHANK FARM

<u>Rainfall</u>							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
2		0.4					
4		3.1					
7					0.8		
8	1.5						
11				0.2		0.2	
12				0.5			
15					0.8		
16					0.6		
17		0.9					
19					0.3		
20		0.2					
21	0.1						
25	1.9						
31				0.3			
Total	3.5	4.6	0.0	1.0	2.5	0.2	0.0

<u>Irrigation</u>							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
2					0.5	1.0	
5					1.0		
6				1.0			
7						1.0	1.0
10			1.0		1.0	1.0	
13		1.0					
14						1.0	
16						1.0	
19				1.0			
21		1.0				1.0	1.0
22				1.0			
24			1.0			1.0	
27		1.0		1.0			
29				1.0			
Total	0.0	3.0	2.0	5.0	2.5	7.0	2.0
Rain & Irr	3.5	7.6	2.0	6.0	5.0	7.2	2.0

RESPONSE OF TIFGUARD AND SISTER LINE C74-19-25 TO CBR AND ROOT KNOT NEMATODES WITH PROTHIOCONAZOLE AND/OR VAPAM

- A. **PURPOSE:** To evaluate the response to Tifguard and sister line C74-19-25 to Prothioconazole and Vapam treatments under CBR and nematode pressure.
- B. **EXPERIMENTAL DESIGN:**
1. Split plot design with cultivars being whole plots and fungicides as subplots, 6 replications.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. There are eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production and know populations of *C. parasiticum* and *M. arenaria*.
 5. Variety: Tifguard and C74-19-25
- C. **APPLICATION OF TREATMENTS:**
1. Equipment: In furrow sprays applied with an 80015E tip at 22 PSI and 3.7 GPA. Vapam was injected about 8 inches deep with a single shank directly below the row 2 weeks before planting.
 2. Belt-pack spray treatments (3-6) were applied on 14 Jul, 28 Jul, 11 Aug, and 25 Aug. Bravo was sprayed on 23 Jun, 7 Jul, 19 Jul, 5 Aug, 18 Aug, 7 Sep and 23 Sep and also Moncut was sprayed on 19 Jul.
- D. **ADDITIONAL INFORMATION:**
1. Location: Attapulgis Research and Education Center, Attapulgis, GA
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 28 April
 4. Soil Fertility: pH - 6.0 P - 25 K - 40 Ca - 309 Mg - 48
Soil type: Northfolk loamy sand
 5. Herbicides: PPI: Prowl (1qt/A), Valor (3oz/A), Strongarm (.45oz/A) on 17 May
POST: 24D-B (1pt/A) on 7 July, and Select (16oz/A) on 29 July
 6. Insecticides: Tracer (2 oz/A) on 15 July, ASANA (6 oz/A) on 2 August, Karate 2 (25oz/A) 20 August, Intrepid 2F (7.5 oz/A) on 31 August
 7. Nematicides: Temik 15 G (9.5 lb/A) in a 16" band on 16 July.
 8. Planting Info: Tifguard and C74-19-25, 7 seed/ft on 17 May
 9. Harvest Dates: Dug – 7 Oct Picked – 13 Oct
- E. **SUMMARY:** Nematode pressure was significant in this trial and Tifguard had greatly reduced damage levels and much higher yields than C74-19-25. However, no CBR occurred and there were only minor differences in the other factors evaluated.

TIFGUARD NEMATODE-CBR TEST, 2010
ATTAPULGUS

Cultivar 724-19-25			Plants/ft¹		TSWV²	White Mold³	Gall Index⁴	Yield
Treatments	App's	Rate/A	1-Jun	7-Jun				(lb/A)
1. Proline 480SC Provost 433SC	In furrow 3 - 6	5.7 fl oz 10.3 fl oz	2.1	2.1	0.7	1.3	2.5	4022
2. Provost 433SC	3 - 6	10.3 fl oz	1.9	.	1.0	1.7	2.4	3833
3. Vapam	PP injected	15 GPA	1.9	.	0.3	3.0	2.3	4080
4. Proline 480Sc Provost 433SC + Vapam	In furrow 3 - 6 PP injected	5.7 fl oz 10.3 fl oz 15 GPA	1.5	1.5	0.7	0.7	2.3	4303
5. Nontreated			2.1	.	1.7	4.3	1.9	3775
LSD(P<0.5)		0.2	0.4	n.s.	n.s.	1.8	n.s.	n.s.

Tifguard			Plants/ft¹		TSWV²	White Mold³	Gall Index⁴	Yield
Treatments	App's	Rate/A	1-Jun	7-Jun				(lb/A)
1. Proline 480SC Provost 433SC	In furrow 3 - 6	5.7 fl oz 10.3 fl oz	2.7	2.6	0.3	1.3	0.1	5314
2. Provost 433SC	3 - 6	10.3 fl oz	2.8	.	0.0	1.7	0.4	5150
3. Vapam	PP injected	15 GPA	2.7	.	0.7	4.3	0.3	5043
4. Proline 480Sc Provost 433SC + Vapam	In furrow 3 - 6 PP injected	5.7 fl oz 10.3 fl oz 15 GPA	2.9	2.6	0.7	2.7	0.4	5508
5. Nontreated			2.7	.	0.7	4.0	0.4	5000
LSD(P<0.5)			0.2	n.s.	n.s.	2.1	n.s.	n.s.

¹Stand count is the number of emerged plants per foot of row on 1 June and 7 June.

² & ³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

⁴Root galling on a 0-10 scale where 0=no galling, 1=1-10%, 2=11-20%, etc.

EVALUATION OF FUNGICIDES FOR THE CONTROL OF CYLINDROCLADIUM BLACK ROT

- A. **PURPOSE:** To evaluate the comparative efficacy of various fungicides against peanut soil borne diseases, mainly *Cylindrocladium* black rot.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with five replicates.
 2. One two- row bed (25 x 6 ft) per plot, 36 inch row spacing
 3. Eight foot alleyways between blocks
 4. Plots were established in an area with a history of CBR and peanut production.
 5. Variety: Tifguard
- C. **APPLICATION OF TREATMENTS:**
1. All plots were traveled by tractor and cover sprayed with Bravo (1.5 pt/A) on an approximately 2-week schedule, 23 Jun, 7 Jul, 19 Jul, 5 Aug, 18 Aug, 7 Sep and 23 Sep and Moncut 70W (1.4 lb/A), 19 Jul at about 60 DAP. Night sprays # 8 and # 9 treatments were applied on 15 Jul, 29 Jul, 11 Aug, and 26 Aug. Belt-pack spray treatments (3-6) were applied on 14 Jul, 28 Jul, 11 Aug, and 25 Aug.
 2. In furrow treatments were applied with an 80015E tip at 22 PSI for a total volume of 3.7 GPA. The early emergence spray was applied 1 June in 40 GPA with a single 8010 nozzle in a 4" band.
- D. **ADDITIONAL INFORMATION:**
1. Location: Attapulgus Research and Education Center, Attapulgus, GA
 2. Crop History: Peanut - 2009, Peanut 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 28 April
 4. Soil Fertility: pH – 6.0 P - 25 K - 40 Ca - 309 Mg -48
Soil type: Northfolk loamy sand
 5. Herbicides: PPI: Prowl (1qt/A), Valor (3oz/A), Strongarm (.45oz/A) on 17 May
POST: 24D-B (1pt/A) on 7 July, and Select (16oz/A) on 29 July
 6. Insecticides: Tracer (2 oz/A) on 15 July, ASANA (6 oz/A) on 2 August, Karate 2 (25oz/A) 20 August, Intrepid 2F (7.5 oz/A) on 31 August
 7. Nematicides: Temik 15 G (9.5 lb/A) in a 16" band on 16 July
 8. Planting Info: Tifguard, 6 seed/ft on 17 May
 9. Harvest Dates: Dug – 7 Oct Picked – 13 Oct
- E. **SUMMARY:** Due to the very hot weather virtually no CBR was present, which was the main objective of the study. Yields were highly variable as well.

FUNGICIDE CBR TEST I, ATTAPULGUS, 2010
OLD NEMATODE/CBR FIELD

Treatments	App's	Rate/A	Plants/ft ¹		TSWV ²	White	Plant/Width ⁴	Yield
			1-Jun	7-Jun		Mold ³		
1. Propulse 400SC	In furrow	13.7 fl oz	2.1	2.1	0.4	0.8	21.3	4803
2. Temik 15G	In furrow	5.0 lb	2.4	2.1	0.4	2.4	24.8	4513
3. Propulse 400SC	In furrow	13.7 fl oz	2.0	2.0	0.0	2.8	22.9	4116
Temik 15G	In furrow	5.0 lb						
4. Propulse 400SC	Early emergence	13.7 fl oz	2.4	.	1.6	1.2	24.8	5036
5. Propulse 400SC	In furrow	13.7 fl oz	2.1	2.1	0.0	0.4	25.2	4554
Temik 15G	In furrow	5.0 lb						
Temik 15G	Pegging	10.0 lb						
6. Fontelis	In furrow	16 fl oz	2.3	2.2	0.4	1.2	23.8	4739
Fontelis	3 & 5	16 fl oz						
7. Fontelis	In furrow	23 fl oz	2.1	2.1	0.8	2.4	23.7	3942
Fontelis	3 & 5	16 fl oz						
8. Proline 480SC	In furrow	5.7 fl oz	1.7	1.8	0.8	1.2	22.3	4321
Provost 433SC	3 - 6	10.7 fl oz						
9. Proline 480SC	In furrow	5.7 fl oz	1.6	1.7	0.8	0.8	19.3	4025
Provost 433SC	3 - 6 (Night)	10.7 fl oz						
10. Nontreated			2.1	.	1.6	4.4	25.5	4013
LSD(P<0.5)			0.4	0.4	n.s.	2.5	4.3	n.s.

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

² & ³Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

⁴Average plant width (measured in cm), mean of 6 plants per plot.

EVALUATION OF EXPERIMENTAL PEANUT SEED TREATMENTS

- A. **PURPOSE:** To evaluate the comparative efficacy of labeled and experimental peanut seed treatments.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with six replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing.
 3. There are eight foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: GA-Green
- C. **APPLICATION OF TREATMENTS:**
- 1.. Cover sprays of Bravo 1.5 pt/A were applied on 30 June, 14 July, 28 July, 11 August, 25 August, 8 Sept and 22 Sept and Moncut 70W (1.4 lb/A) was applied July 28..
- D. **ADDITIONAL INFORMATION:**
- 1: Location: Attapulcus Research and Education Center, Attapulcus, GA
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 11 May
 4. Soil Fertility: pH – 6.0 P - 48 K - 37 Ca - 320 Mg - 41
Soil type: Northfolk loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Prowl (1qt/A), Valor (3oz/A), Strongarm (.45oz/A) was applied on 17 May
POST: 24D-B (1pt/A) on 7 July, and Select (16oz/A) on 29 July
 6. Insecticides: Tracer (2 oz/A) on 15 July, Asana (6 oz/A) on 2 August, Karate 2 (25oz/A) 20 August, Intrepid 2F (7.5 oz/A) on 31 August
 7. Nematicides: Temik 15G, (10 lb/A) in 16" band on 19 May
 8. Planting Info: GA-Green, 6 seed/ft on 19 May
 9. Harvest Dates: Dug – 7 Oct Picked - 13 Oct
- E: **SUMMARY:** All seed treatments did a good job of protecting the young plants and establishing a uniform stand. However, the conditions for emergence were excellent and soil temperatures were very favorable, so there was very little seed or seedling disease present in this trial. There were no visible differences in plant growth, and the almost complete lack of TSWV (even on the somewhat susceptible cultivar Georgia Green with a sparse stand), resulted in no yield differences among the treatments. Severe damage from root knot nematode was also present and greatly reduced pod yields.

CHEMTURA SEED TREATMENT TEST III, 2010
Attapulgus, GA

Treatments	Rate/100 lb	Plants/ft ¹		Plants/Width ²	TSWV ³	White Mold ⁴	Yield
		1-Jun	7-Jun	22-Jun	2-Sep	7-Oct	(lb/A)
1. Nontreated		2.5	2.4	30.5	3.0	21.7	2028
2. Dynasty PD	4.0 oz	2.5	2.5	32.6	1.7	18.3	1854
3. Trilex Star	4.0 oz	2.5	2.5	32.3	3.0	19.7	2246
4. UBI 4378	4.0 oz	2.7	2.6	32.1	0.7	12.7	2381
5. UBI 4379	4.0 oz	2.6	2.5	30.1	2.0	14.3	2312
6. UBI 4380	4.0 oz	2.6	2.4	32.3	2.3	20.3	1754
7. UBI 4381	4.0 oz	2.5	2.6	29.5	2.0	17.3	2207
8. UBI 4382	4.0 oz	2.6	2.5	30.7	1.7	20.0	2039
9. UBI 4383	4.0 oz	2.5	2.6	29.9	2.3	20.3	2125
LSD (P<0.5)		n.s.	0.2	n.s	2.1	6.6	n.s.

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

²Average plant width (measured in cm), mean of 6 plants per plot.

^{3 & 4}Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

EVALUATION OF FUNGICIDES FOR THE CONTROL OF CYLINDROCLADIUM BLACK ROT

- A. **PURPOSE:** To evaluate the comparative efficacy of various fungicides against peanut soil borne diseases, mainly *Cylindrocladium* black rot.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with six replicates.
 2. One two- row bed (25 x 6 ft) per plot, 36 inch row spacing
 3. Eight foot alleyways between blocks
 4. Plots were established in an area with a history of peanut production and soil borne diseases.
 5. Variety: Tifguard
- C. **APPLICATION OF TREATMENTS:**
1. All plots were traveled by tractor and cover sprayed with Bravo (1.5 pt/A) on an approximately 2-week schedule on 23 June, 7 July, 19 July, 5 August, 18 August, 7 September and 23 September. Night sprays # 8 and # 9 treatments were applied on 15 Jul, 29 Jul, 11 Aug, and 26 Aug. Moncut 70W (1.4 lb/A) was sprayed at about 60 DAP. Belt-pack spray treatments (3-6) were applied on 14 Jul, 28 Jul, 11 Aug, and 25 Aug.
 2. In furrow sprays were applied with an 80015E tip at 22 PSI for a total volume of 3.7 GPA. The early emergence spray was applied 13 May in 40 GPA with a single 8010 nozzle in a 4" band.
- D. **ADDITIONAL INFORMATION:**
1. Location: Attapulgus Research and Education Center, Attapulgus, GA
 2. Crop History: Peanut - 2009, Peanut 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 11 May
 4. Soil Fertility: pH – 6.0 P - 48 K - 37 Ca - 320 Mg -41
Soil type: Northfolk loamy sand
 5. Herbicides: PPI: Prowl (1qt/A), Valor (3oz/A), Strongarm (.45oz/A) on 17 May
POST: 24D-B (1pt/A) on 7 July, and Select (16oz/A) on 29 July
 6. Insecticides: Tracer (2 oz/A) on 15 July, ASANA (6 oz/A) on 2 August, Karate 2 (25oz/A) 20 August, Intrepid 2F (7.5 oz/A) on 31 August
 7. Nematicides: Temik 15 G (9.5 lb/A) in a 16" band on 16 July
 8. Planting Info: Tifguard, 6 seed/ft on 17 May
 9. Harvest Dates: Dug – 7 Oct Picked – 13 Oct
- E. **SUMMARY:** The main target disease in this test was CBR and almost no disease developed due to the hot weather. Some stem rot did occur in spite of the Moncut application, and some differences in control and yield were observed in the trial.

FUNGICIDE CBR TEST II, ATTAPULGUS, 2010
NEW CBR FIELD

Treatments	App's	Rate/A	Plants/ft ¹		TSWV ²	Plants/Width ³	White Mold ⁴	Yield (lb/A)
			1-Jun	7-Jun	2-Sep	22-Jun	7-Oct	
1. Propulse 400SC	In furrow	13.7 fl oz	2.8	2.6	1.0	30.9	14.0	4245
2. Temik 15G	In furrow	5.0 lb	2.9	2.6	1.0	36.0	16.0	4235
3. Propulse 400Sc	In furrow	13.7 fl oz	2.7	2.5	0.3	35.1	17.3	4211
Temik 15G	In furrow	5.0 lb						
4. Propulse 400SC	Early emergence	13.7 fl oz	.	2.5	0.3	31.5	9.0	4951
5. Propulse 400SC	In furrow	13.7 fl oz	2.6	2.5	1.3	36.3	18.3	4632
Temik 15G	In furrow	5.0 lb						
Temik 15G	Pegging	10.0 lb						
6. Fontelis	In furrow	16 fl oz	2.5	2.6	1.0	32.7	4.7	5213
Fontelis	3 & 5	16 fl oz						
7. Fontelis	In furrow	23 fl oz	2.8	2.6	1.3	30.4	4.7	5208
Fontelis	3 & 5	16 fl oz						
8. Proline 480SC	In furrow	5.7 fl oz	2.7	2.7	0.3	30.2	2.3	5261
Provost 433SC	3 - 6	10.7 fl oz						
9. Proline 480SC	In furrow	5.7 fl oz	2.6	2.5	0.0	29.9	7.3	5005
Provost 433SC	3 - 6 (Night)	10.7 fl oz						
10. Non-treated			.	2.5	2.3	29.3	9.7	4482
LSD (P<0.5)			0.4	0.2	1.3	2.6	5.9	608

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

² & ⁴Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

³Average plant width (measured in cm), mean of 6 plants per plot.

EVALUATION OF VARIOUS FUNGICIDES FOR THE CONTROL OF CYLINDROCLADIUM BLACK ROT

- A. **PURPOSE:** To evaluate the comparative effects of various fungicides against peanut soil borne diseases, mainly *Cylindrocladium* black rot.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with six replicates.
 2. One two-row bed (25 x 6 ft) per plot, 36-inch row spacing, 8 foot alleyways between blocks.
 4. Plots were established in an area with a history of continuous peanut production.
 5. Variety: Tifguard
- C. **APPLICATION OF TREATMENTS:**
1. Equipment: In furrow sprays were applied with an 80015E tip at 22 PSI, total volume of 3.7 GPA.
 2. Early emergence treatments were applied on 30 June. Belt-pack sprays (3 & 4) were applied on 14 Jul, 11 Aug. All plots were traveled by tractor and cover sprayed with Bravo (1.5 pt/A) on 23 Jun, 7 Jul, 19 Jul, 5 Aug, 18 August, 7 Sep, and 23 Sep. Also Moncut 70W (1.4 lb/A) on 19 Jul.
- D. **ADDITIONAL INFORMATION:**
- 1: Location: Attapulgus Research and Education Center, Attapulgus, GA
 2. Crop History: Peanut - 2009, Peanut - 2008, Peanut - 2007
 3. Land Preparation: Moldboard plowed and marked rows on 11 May
 4. Soil Fertility: pH -6.0 P - 48 K - 37 Ca - 320 Mg - 41
Soil type: Northfolk loamy sand, 2 - 5 % slope
 5. Herbicides: PPI: Prowl (1qt/A), Valor (3oz/A), Strongarm (.45oz/A) was applied on 17 May
POST: 24D-B (1pt/A) on 7 July, and Select (16oz/A) on 29 July
 6. Insecticides: Tracer (2 oz/A) on 15 July, ASANA (6 oz/A) on 2 August, Karate 2 (25oz/A) 20 August, Intrepid 2F (7.5 oz/A) on 31 August
 7. Nematicides: Temik 15 G (9.5 lb/A) in a 16" band on 16 July
 8. Planting Info: Tifguard 7 seed/ft on 17 May (70F at 4" deep)
 9. Harvest Dates: Dug - 7 Oct Picked - 13 Oct
- E. **SUMMARY:** The main target disease in this test was CBR and almost no disease developed due to the hot weather. Some stem rot did occur in spite of the Moncut application, and some differences in control and yield were observed in the trial.

DUPONT CBR TEST, ATTAPULGUS, 2010
NEW CBR FIELD

Treatments	App's	Rate/A	Plants/ft ¹		Plants/Width ²	TSWV ³	White Mold ⁴	Yield (lb/A)
			1-Jun	7-Jun	22-Jun	2-Sep	7-Oct	
1. Fontelis	In furrow	16 fl oz	2.9	2.8	31.2	0.7	6.0	5048
Fontelis	3 & 5	16 fl oz						
2. Fontelis	In furrow	23 fl oz	2.8	2.5	31.1	1.3	4.7	5519
Fontelis	3 & 5	16 fl oz						
3. YT669	In furrow	18.9 fl oz	3.0	2.6	31.8	0.7	5.0	5014
Fontelis	3 & 5	16 fl oz						
4. Q8Y78	In furrow	23 fl oz	2.9	2.7	31.5	0.7	5.7	5227
Fontelis	3 & 5	16 fl oz						
5. Proline 480SC	In furrow	5.7 fl oz	2.9	2.7	30.6	0.7	5.0	5043
Fontelis	3 & 5	16 fl oz						
6. Non-treated			3.0	2.8	31.1	1.3	11.3	4554
LSD (P<0.5)			n.s.	0.3	n.s.	n.s.	4.6	655

¹Stand count is the number of emerged plants per foot of row on 11 May and 18 May.

²Average plant width (measured in cm), mean of 6 plants per plot.

³ & ⁴Percent of row feet infected based on disease loci (up to 12" of linear row) per plot.

OFFICIAL DAILY RAINFALL 2010
ATTAPULGUS FARM

Rainfall							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
1			0.7	0.1			
2					0.3		
3					0.1		
4		3.7					
5			0.2	0.4			
6							
7							
8	0.6	0.1					
9							
10				0.2			
11							
12					0.4		
13					0.1		
14			0.8	0.2	0.1		
15				0.1	2.1		
16		0.4		0.4	0.1		
17		0.1		0.7			
18		0.1	0.1		0.1		
19							
20	0.3		1.3				
21					0.4		
22					0.2		
23							
24	0.8						
25	2.3	0.2				0.1	
26						0.5	
27					0.2	1.8	
28							
29		0.3	0.4				
30	3.8	0.6	1.7				
31				0.3			
TOTAL	7.8	5.5	8.6	2.4	3.7	2.4	

<u>Irrigation</u>							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
1						0.5	
4							0.5
5						0.5	
7	0.5						
9				0.5		0.5	
10			0.5		0.5		0.5
11		0.5					0.5
13	0.5	0.5					
14			0.5			0.5	0.5
16	0.5					0.5	
17			0.5				
18							0.5
19		0.5					
20						0.5	
21		0.5					
22	0.5					0.5	
23				0.5			
24		0.5				0.5	
25			0.5		0.5		
26				0.5			
27							
28		0.5	0.5	0.5			
30				0.5	0.5	0.5	
Total	2.0	3.0	2.5	2.5	1.5	4.5	2.5
<u>Rain + Irrigation</u>							
	9.8	8.5	11.1	4.9	5.2	6.7	2.5

EVALUATION OF VARIOUS FUNGICIDES FOR SCAB CONTROL ON WICHITA PECAN (NORTH BLOCK)

- A. **PURPOSE:** To evaluate the comparative efficacy of registered and experimental fungicides against pecan foliar and nut diseases, mainly scab, on a standard commercial cultivar.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with four replicates.
 2. Each replication consisted of single-tree treatments.
 3. The orchard was established in 1988 with alternating rows of Wichita and Desirable trees planted on a 40 x 40 ft spacing running north and south. This test consisted of Wichita trees only.
- C. **APPLICATION OF TREATMENTS:**
1. **Equipment:** All spray treatments were applied with a Durand Wayland PTO-driven air-blast sprayer (AF-100-32) delivering 95 gallon per acre at 125 PSI traveling 2 MPH.
 2. **Calendar-based spray treatments** (1 - 10) were applied on 12 Apr, 26 Apr, 10 May, 24 May, 7 Jun, 21 Jun, 5 Jul, 19 July, 2 Aug, and 16 Aug.
- D. **ADDITIONAL INFORMATION:**
1. **Location:** Ponder Farm, CPES, Tifton, GA 31794
 2. **Soil Fertility:** pH - 6.0 P - 65 K - 71 Ca - 810 Mg - 44
Soil type: Tifton loamy sand, 2 - 5 % slope
 4. **Herbicide strips:** Buccaneer Plus (4 qt/A) on 16 May, 26 July, & 5 Sep
 5. **Insecticides:** Intrepid (8 oz/A) 26 May and 9 June
 6. **Harvest Information:** Wichita trees were shaken with a Savage Model 2138 PTO-driven trunk shaker on 10 Nov. A 50 nut sample was collected from each tree on 4 Nov to determine yield and quality.
- E: **SUMMARY:** Severe scab developed in this trial with 60% scab severity on nuts by late July and 100% loss by September. All treatments gave significant control, with the Quadris Top being particularly effective on nut scab. Both Quadris Top and Luna Sensation gave superior leaf scab control as well. This was a very good, definitive trial for evaluating scab efficacy.

PECAN FUNGICIDE TEST, 2010
PONDER FARM, WICHITA (NORTH BLOCK)

Treatments	Rate/A	App's	Leaf Inc. ¹		Leaf Sev ²		Nut Inc. ³	
			9-Jun	26-Jul	9-Jun	26-Jul	28-Jul	24-Sep
1. Quilt Excel 2.2 Super Tin 80WP + Elast 400F	14.0 fl oz 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	27.1	32.0	2.8	4.6	22.1	95.4
2. Quadris Top 2.71 Super Tin 80WP + Elast 400F	8 fl oz 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	17.7	10.6	1.8	2.0	15.6	42.4
3. Quadris Top 2.71 Super Tin 80WP + Elast 400F	10 fl oz 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	4.0	7.8	0.5	0.8	16.0	63.9
4. Super Tin 80WP + Elast 400F Quadris Top 2.71	3.75 oz 25.0 fl oz 8 fl oz	1-3,8-10 4-7	19.9	18.3	2.2	3.3	16.0	68.8
5. Super Tin 80WP + Elast 400F Quadris Top 2.71	3.75 oz 25.0 fl oz 10 fl oz	1-3,8-10 4-7	27.5	16.7	3.5	2.5	9.1	42.7
6. Super Tin 80WP + Elast 400F Quilt Excel 2.2	3.75 oz 25.0 fl oz 14.0 fl oz	1-3,8-10 4-7	26.9	17.8	3.3	2.7	44.2	83.3
7. Absolute 500SC + Induce Super Tin 80WP + Elast 400F	5.0 fl oz 0.06% v/v 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	16.8	12.7	1.7	2.2	51.4	95.8
8. Stratego + Induce Super Tin 80WP + Elast 400F	10.0 fl oz 0.06% v/v 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	20.5	18.5	2.1	2.8	62.9	95.8
9. Luna Sensation + Induce Super Tin 80WP + Elast 400F	5.0 fl oz 0.06% v/v 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	14.9	6.8	1.5	1.0	39.1	91.7
10. Quash 50W Super Tin 80WP + Elast 400F	3.5 oz 3.75 oz 25.0 fl oz	1,3,5,7,9 2,4,6,8,10	39.2	20.2	5.0	3.6	69.8	100.0

PECAN FUNGICIDE TEST, 2010
PONDER FARM, WICHITA (NORTH BLOCK)

Treatments	Rate/A	App's	Leaf Inc. ¹		Leaf Sev ²		Nut Inc. ³	
			9-Jun	26-Jul	9-Jun	26-Jul	28-Jul	24-Sep
11.Quash 50W	2.5 oz	1,3,5,7,9	49.2	45.8	6.4	8.3	96.5	100.0
Super Tin 80 WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
12.Agri Tin 4F	6.0 fl oz	1-10	38.0	16.4	4.1	2.7	84.0	95.8
+ Phostrol	2.5 pt							
13.Super Tin 80WP	3.75 oz	1-10	54.4	46.0	5.9	6.2	68.5	100.0
+ Elast 400F	25.0 fl oz							
14.Nontreated			69.7	68.5	9.7	9.6	100.0	100.0
LSD (P<0.5)			12.0	12.01	1.6	1.9	23.1	18.3

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

PECAN FUNGICIDE TEST, 2010
PONDER FARM, WICHITA (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Sev ⁴		Leaf Ret ⁵
			28-Jul	24-Sep	4-Nov
1. Quilt Excel 2.2	14.0 fl oz	1,3,5,7,9	0.9	18.5	91.3
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
2. Quadris Top 2.71	8 fl oz	1,3,5,7,9	0.6	4.6	95.3
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
3. Quadris Top 2.71	10 fl oz	1,3,5,7,9	0.7	9.9	94.5
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
4. Super Tin 80WP	3.75 oz	1-3,8-10	0.7	8.4	93.8
+ Elast 400F	25.0 fl oz				
Quadris Top 2.71	8 fl oz	4-7			
5. Super Tin 80WP	3.75 oz	1-3,8-10	0.5	4.0	95.0
+ Elast 400F	25.0 fl oz				
Quadris Top 2.71	10 fl oz	4-7			
6. Super Tin 80WP	3.75 oz	1-3,8-10	3.9	12.9	93.3
+ Elast 400F	25.0 fl oz				
Quilt Excel 2.2	14.0 fl oz	4-7			
7. Absolute 500SC	5.0 fl oz	1,3,5,7,9	4.2	25.6	93.8
+ Induce	0.06% v/v				
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
8. Stratego	10.0 fl oz	1,3,5,7,9	5.0	35.3	93.8
+ Induce	0.06% v/v				
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
9. Luna Sensation	5.0 fl oz	1,3,5,7,9	3.0	25.4	93.3
+ Induce	0.06% v/v				
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
10. Quash 50W	3.5 oz	1,3,5,7,9	4.0	29.4	97.0
Super Tin 80WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				

PECAN FUNGICIDE TEST, 2010
PONDER FARM, WICHITA (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Sev ⁴		Leaf Ret ⁵
			28-Jul	24-Sep	4-Nov
11.Quash 50W	2.5 oz	1,3,5,7,9	9.5	54.6	68.8
Super Tin 80 WP	3.75 oz	2,4,6,8,10			
+ Elast 400F	25.0 fl oz				
12.Agri Tin 4F	6.0 fl oz	1-10	7.0	33.8	90.8
+ Phostrol	2.5 pt				
13.Super Tin 80WP	3.75 oz	1-10	3.7	28.6	85.8
+ Elast 400F	25.0 fl oz				
14.Nontreated			60.6	99.6	27.5
LSD (P<0.5)			4.2	10.5	15.1

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵Based on a visual assessment of the percent retention (0-100) of foliage on whole trees.

PECAN FUNGICIDE TEST, 2010
PONDER FARM, WICHITA (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Evaluations						
			Size and Fill		Kernel color				
			nuts/lb	% fill	Dark	Med	Light	Gold	Wafers
1. Quilt Excel 2.2	14.0 fl oz	1,3,5,7,9	60.5	53.6	0.7	3.5	3.9	83.3	8.5
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
2. Quadris Top 2.71	8 fl oz	1,3,5,7,9	57.9	53.6	2.5	2.8	6.5	84.2	4.0
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
3. Quadris Top 2.71	10 fl oz	1,3,5,7,9	56.0	57.2	2.5	7.7	2.0	87.8	0.0
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
4. Super Tin 80WP	3.75 oz	1-3,8-10	63.6	52.4	2.3	4.8	3.0	82.4	7.6
+ Elast 400F	25.0 fl oz								
Quadris Top 2.71	8 fl oz	4-7							
5. Super Tin 80WP	3.75 oz	1-3,8-10	46.2	56.8	5.7	4.0	8.8	80.8	0.7
+ Elast 400F	25.0 fl oz								
Quadris Top 2.71	10 fl oz	4-7							
6. Super Tin 80WP	3.75 oz	1-3,8-10	60.6	53.6	2.0	6.5	5.0	76.0	10.5
+ Elast 400F	25.0 fl oz								
Quilt Excel 2.2	14.0 fl oz	4-7							
7. Absolute 500SC	5.0 fl oz	1,3,5,7,9	64.1	52.7	2.7	9.0	4.7	71.5	12.2
+ Induce	0.06% v/v								
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
8. Stratego	10.0 fl oz	1,3,5,7,9	75.8	50.4	6.4	3.3	3.3	69.0	18.0
+ Induce	0.06% v/v								
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
9. Luna Sensation	5.0 fl oz	1,3,5,7,9	55.2	54.6	2.8	0.0	1.5	91.9	3.7
+ Induce	0.06% v/v								
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
10. Quash 50W	3.5 oz	1,3,5,7,9	63.5	52.7	3.0	3.0	2.4	81.3	10.3
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								

PECAN FUNGICIDE TEST, 2010
PONDER FARM, WICHITA (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Evaluations						
			Size and Fill		Kernel color				
			nuts/lb	% fill	Dark	Med	Light	Gold	Wafers
11.Quash 50W	2.5 oz	1,3,5,7,9	94.6	42.7	1.6	0.0	0.0	71.8	26.6
Super Tin 80 WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
12.Agri Tin 4F	6.0 fl oz	1-10	62.5	53.7	0.3	3.5	8.5	84.9	6.0
+ Phostrol	2.5 pt								
13.Super Tin 80WP	3.75 oz	1-10	71.1	50.2	4.3	6.3	7.0	67.5	11.4
+ Elast 400F	25.0 fl oz								
14.Nontreated			164.4	32.5	10.4	1.7	5.4	11.4	54.4
LSD (P<0.5)			20.9	7.2	6.8	7.4	8.5	25.7	20.0

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵Based on a visual assessment of the percent retention (0-100) of foliage on whole trees.

EVALUATION OF VARIOUS FUNGICIDES FOR SCAB CONTROL ON DESIRABLE PECAN (NORTH BLOCK)

A **PURPOSE:** To evaluate the comparative efficacy of registered and experimental fungicides against pecan foliar and nut diseases, mainly scab, on a standard commercial cultivar.

B. **EXPERIMENTAL DESIGN:**

1. Randomized complete blocks with four replicates.
2. Each replication consisted of single-tree treatments.
3. The orchard was established in 1988 with alternating rows of Wichita and Desirable trees planted on a 40 x 40 ft spacing running north and south. This test consisted of Desirable trees only.

C. **APPLICATION OF TREATMENTS:**

1. **Equipment:** All spray treatments were applied with a Durand Wayland PTO-driven air-blast sprayer (AF-100-32) delivering 95 gallon per acre at 125 PSI traveling 2 MPH.
2. Calendar-based spray treatments (1 - 10) were applied on 12 Apr, 26 Apr, 10 May, 24 May, 7 Jun, 21 Jun, 5 Jul, 19 Jul, 2 August and 16 August.

D. **ADDITIONAL INFORMATION:**

1. **Location:** Ponder Farm, CPES, Tifton, GA 31794
2. **Soil Fertility:** pH - 6.0 P - 65 K - 71 Ca - 810 Mg - 44
 Soil type: Tifton loamy sand, 2 - 5 % slope
4. **Herbicide strips:** Buccaneer Plus (4 qt/A) on 16 May, 26 July, & 5 Sep
5. **Insecticides:** Intrepid (8 oz/A) 26 May and 9 June
6. **Harvest Information:** Desirable trees were shaken with a Savage Model 2138 PTO-driven trunk shaker on 10 Nov. A 50 nut sample was collected from each tree on 18 Nov to determine yield and quality.

E: **SUMMARY:** This test had moderate scab pressure with a final nut scab severity of 45%. All treatments significantly reduced final disease levels, but disease incidence ratings (which are more definitive in less severe epidemics) showed clear differences among treatments in terms of efficacy. Some foliar anthracnose also occurred and all treatments reduced those symptoms. The foliage also exhibited a late-season bronzing that apparently was related to treatments as well.

PECAN FUNGICIDE TEST, 2010
PONDER FARM, DESIRABLE (NORTH BLOCK)

Treatments	Rate/A	App's	Leaf Inc. ¹		Leaf Sev ²		Nut Inc. ³	
			9-Jun	26-Jul	9-Jun	26-Jul	28-Jul	24-Sep
1. Quilt Excel 2.2	14.0 fl oz	1,3,5,7,9	7.9	7.8	1.2	1.1	1.4	20.8
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
2. Quadris Top 2.71	8 fl oz	1,3,5,7,9	2.2	0.7	0.3	0.1	0.0	10.6
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
3. Quadris Top 2.71	10 fl oz	1,3,5,7,9	3.0	2.2	0.3	0.4	0.0	4.2
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
4. Super Tin 80WP	3.75 oz	1-3,8-10	9.1	3.8	1.0	0.8	0.0	29.2
+ Elast 400F	25.0 fl oz							
Quadris Top 2.71	8 fl oz	4-7						
5. Super Tin 80WP	3.75 oz	1-3,8-10	4.8	1.6	0.6	0.3	0.0	0.0
+ Elast 400F	25.0 fl oz							
Quadris Top 2.71	10 fl oz	4-7						
6. Super Tin 80WP	3.75 oz	1-3,8-10	4.8	0.6	0.8	0.1	0.0	12.5
+ Elast 400F	25.0 fl oz							
Quilt Excel 2.2	14.0 fl oz	4-7						
7. Absolute 500SC	5.0 fl oz	1,3,5,7,9	7.0	1.9	0.9	0.2	0.0	20.8
+ Induce	0.06% v/v							
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
8. Stratego	10.0 fl oz	1,3,5,7,9	5.2	1.9	0.6	0.4	0.0	47.2
+ Induce	0.06% v/v							
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
9. Luna Sensation	5.0 fl oz	1,3,5,7,9	4.0	1.3	0.5	0.2	11.1	56.3
+ Induce	0.06% v/v							
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							

PECAN FUNGICIDE TEST, 2010
PONDER FARM, DESIRABLE (NORTH BLOCK)

Treatments	Rate/A	App's	Leaf Inc. ¹		Leaf Sev ²		Nut Inc. ³	
			9-Jun	26-Jul	9-Jun	26-Jul	28-Jul	24-Sep
10.Quash 50W	3.5 oz	1,3,5,7,9	7.7	1.9	1.1	0.2	7.3	76.0
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
11.Quash 50W	2.5 oz	1,3,5,7,9	18.1	5.2	2.8	0.8	19.8	91.7
Super Tin 80 WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
12.Agri Tin 4F	6.0 fl oz	1-10	13.3	6.1	1.4	0.8	4.2	55.6
+ Phostrol	2.5 pt							
13.Super Tin 80WP	3.75 oz	1-10	21.3	11.8	2.4	1.9	0.0	62.5
+ Elast 400F	25.0 fl oz							
14.Nontreated			62.5	49.8	7.3	8.8	99.0	100.0
LSD (P<0.5)			8.06	6.0	1.1	1.1	8.6	20.5

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵Leaf Inc. Antrac.=leaf anthracnose incidence, based on ratings of 6 terminals per tree (percentage of leaflets on middle leaf with any anthracnose.

⁶Leaf Bronze=leaf bronzing, based on middle leaf of 6 terminals per tree using a scale of 0 - 100.

PECAN FUNGICIDE TEST, 2010
PONDER FARM, DESIRABLE (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Sev ⁴		Anthrac ⁵	Bronz ⁶	Leaf Ret ⁷
			28-Jul	24-Sep		2-Sep	4-Nov
1. Quilt Excel 2.2	14.0 fl oz	1,3,5,7,9	0.0	4.1	10.8	24.4	85.8
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
2. Quadris Top 2.71	8 fl oz	1,3,5,7,9	0.0	0.6	4.8	7.8	83.8
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
3. Quadris Top 2.71	10 fl oz	1,3,5,7,9	0.0	0.4	8.5	9.3	88.3
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
4. Super Tin 80WP	3.75 oz	1-3,8-10	0.0	3.2	6.8	2.1	70.0
+ Elast 400F	25.0 fl oz						
Quadris Top 2.71	8 fl oz	4-7					
5. Super Tin 80WP	3.75 oz	1-3,8-10	0.0	0.0	6.7	3.2	87.5
+ Elast 400F	25.0 fl oz						
Quadris Top 2.71	10 fl oz	4-7					
6. Super Tin 80WP	3.75 oz	1-3,8-10	0.0	1.7	8.7	14.0	82.5
+ Elast 400F	25.0 fl oz						
Quilt Excel 2.2	14.0 fl oz	4-7					
7. Absolute 500SC	5.0 fl oz	1,3,5,7,9	0.0	3.0	10.2	22.3	80.0
+ Induce	0.06% v/v						
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
8. Stratego	10.0 fl oz	1,3,5,7,9	0.0	7.2	6.8	21.3	73.8
+ Induce	0.06% v/v						
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
9. Luna Sensation	5.0 fl oz	1,3,5,7,9	0.5	7.3	6.9	23.1	88.8
+ Induce	0.06% v/v						
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						

PECAN FUNGICIDE TEST, 2010
PONDER FARM, DESIRABLE (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Sev ⁴		Anthrac ⁵	Bronz ⁶	Leaf Ret ⁷
			28-Jul	24-Sep		2-Sep	4-Nov
10.Quash 50W	3.5 oz	1,3,5,7,9	0.3	10.1	9.8	31.3	70.0
Super Tin 80WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
11.Quash 50W	2.5 oz	1,3,5,7,9	0.8	20.9	13.4	25.9	60.0
Super Tin 80 WP	3.75 oz	2,4,6,8,10					
+ Elast 400F	25.0 fl oz						
12.Agri Tin 4F	6.0 fl oz	1-10	0.0	6.4	7.2	13.5	77.5
+ Phostrol	2.5 pt						
13.Super Tin 80WP	3.75 oz	1-10	0.0	8.2	10.7	28.1	83.8
+ Elast 400F	25.0 fl oz						
14.Nontreated			13.3	44.6	23.9	1.3	42.5
LSD (P<0.5)			0.8	5.7	3.3	5.9	17.9

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵Leaf Inc. Antrac.=leaf anthracnose incidence, based on ratings of 6 terminals per tree (percentage of leaflets on middle leaf with any anthracnose).

⁶Leaf Bronze=leaf bronzing, based on middle leaf of 6 terminals per tree using a scale of 0 - 100.

⁷Based on a visual assessment of the percent retention (0-100) of foliage on whole trees.

PECAN FUNGICIDE TEST, 2010
PONDER FARM, DESIRABLE (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Evaluations						
			Size and Fill		Kernel color				
			nuts/lb	% fill	Dark	Med	Light	Gold	Wafers
1. Quilt Excel 2.2	14.0 fl oz	1,3,5,7,9	39.6	51.4	0.7	0.0	3.3	95.3	0.7
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
2. Quadris Top 2.71	8 fl oz	1,3,5,7,9	36.6	49.6	0.0	0.0	0.0	99.0	1.0
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
3. Quadris Top 2.71	10 fl oz	1,3,5,7,9	36.5	52.0	1.0	10.0	0.0	89.0	0.0
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
4. Super Tin 80WP	3.75 oz	1-3,8-10	39.8	48.5	3.8	0.0	0.0	92.5	3.7
+ Elast 400F	25.0 fl oz								
Quadris Top 2.71	8 fl oz	4-7							
5. Super Tin 80WP	3.75 oz	1-3,8-10	38.0	50.3	0.7	0.0	0.0	98.7	0.7
+ Elast 400F	25.0 fl oz								
Quadris Top 2.71	10 fl oz	4-7							
6. Super Tin 80WP	3.75 oz	1-3,8-10	37.2	50.8	0.5	13.0	0.0	86.5	0.0
+ Elast 400F	25.0 fl oz								
Quilt Excel 2.2	14.0 fl oz	4-7							
7. Absolute 500SC	5.0 fl oz	1,3,5,7,9	40.0	49.0	4.8	5.0	3.3	84.2	2.7
+ Induce	0.06% v/v								
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
8. Stratego	10.0 fl oz	1,3,5,7,9	41.1	47.9	5.3	10.3	5.3	74.7	4.3
+ Induce	0.06% v/v								
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
9. Luna Sensation	5.0 fl oz	1,3,5,7,9	39.3	50.3	3.4	0.0	0.0	94.9	1.7
+ Induce	0.06% v/v								
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								

PECAN FUNGICIDE TEST, 2010
PONDER FARM, DESIRABLE (NORTH BLOCK)

Treatments	Rate/A	App's	Nut Evaluations						
			Size and Fill		Kernel color				
			nuts/lb	% fill	Dark	Med	Light	Gold	Wafers
10.Quash 50W	3.5 oz	1,3,5,7,9	42.7	50.1	2.8	9.3	6.5	79.8	1.8
Super Tin 80WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
11.Quash 50W	2.5 oz	1,3,5,7,9	45.4	48.3	5.6	16.4	3.0	68.3	5.3
Super Tin 80 WP	3.75 oz	2,4,6,8,10							
+ Elast 400F	25.0 fl oz								
12.Agri Tin 4F	6.0 fl oz	1-10	41.0	51.0	6.2	5.0	3.3	83.5	2.0
+ Phostrol	2.5 pt								
13.Super Tin 80WP	3.75 oz	1-10	41.9	51.1	1.0	3.3	5.0	90.0	0.7
+ Elast 400F	25.0 fl oz								
14.Nontreated			65.1	49.0	6.6	5.0	20.1	49.2	19.1
LSD (P<0.5)			6.6	3.1	8.1	14.9	12.2	25.8	5.9

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵Leaf Inc. Antrac.=leaf anthracnose incidence, based on ratings of 6 terminals per tree (percentage of leaflets on middle leaf with any anthracnose).

⁶Leaf Bronze=leaf bronzing, based on middle leaf of 6 terminals per tree using a scale of 0 - 100.

⁷Based on a visual assessment of the percent retention (0-100) of foliage on whole trees.

PECAN FUNGICIDE TEST II (DESIRABLE PECAN SOUTH BLOCK)

- A. **PURPOSE:** To evaluate the comparative efficacy of registered and experimental fungicides against pecan foliar and nut diseases, mainly scab, on a standard commercial cultivar.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with six replicates.
 2. Each replication consisted of single-tree treatments.
 3. The orchard was established in 1988 planted on a 40 x 40 ft spacing running north and south. This test consisted of Desirable trees only.
- C. **APPLICATION OF TREATMENTS:**
1. **Equipment:** All spray treatments were applied with a Durand Wayland PTO-driven air-blast sprayer (AF-100-32) delivering 95 gallon per acre at 125 PSI traveling 2 MPH.
 2. **Calendar-based spray treatments** (1 - 10) were applied on 13 Apr, 27 Apr, 11 May, 25 May, 8 Jun, 22 Jun, 6 Jul, 20 July, 3 Aug, and 17 Aug.
- D. **ADDITIONAL INFORMATION:**
1. **Location:** Ponder Farm, CPES, Tifton, GA 31794
 2. **Soil Fertility:** pH - 6.0 P - 65 K - 71 Ca - 810 Mg - 44
Soil type: Tifton loamy sand, 2 - 5 % slope
 4. **Herbicide strips:** Buccaneer Plus (4 qt/A) on 16 May, 26 July, & 5 Sep
 5. **Insecticides:** Intrepid (8 oz/A) 26 May and 9 June
 6. **Harvest Information:** Desirable trees were shaken with a Savage Model 2138 PTO-driven trunk shaker on 11 Nov. Nuts were weighed and sampled from individual trees on 18 Nov to determine yield and quality.
- E: **SUMMARY:** This test had moderate scab pressure with a final nut scab severity of 54%. All treatments significantly reduced final disease levels, and disease severity ratings showed clear differences among treatments in terms of efficacy. Some foliar anthracnose also occurred and all treatments reduced those symptoms.

PECAN FUNGICIDE TEST II, 2010
PONDER FARM, DESIRABLE (SOUTH BLOCK)

Treatments	Rate/A	App's	Leaf Inc. ¹		Leaf Sev ²		Nut Inc. ³	
			2-Jun	20-Jul	2-Jun	20-Jul	30-Jul	28-Sep
1. Sovran	3.2 oz	1 - 3	13.7	13.5	1.2	1.7	51.7	66.7
Super Tin 80WP	3.75 oz	4 - 10						
+ Elast 400F	25.0 fl oz							
2. Super Tin 80WP	3.75 oz	1 - 10	42.1	33.1	7.7	5.5	14.4	60.0
+ Elast 400F	25.0 fl oz							
3. Serenade	6.0 qt.	1 - 10	48.8	49.5	7.8	10.1	85.7	92.0
4. Serenade	6.0 qt.	1 - 10	39.6	30.5	5.2	3.7	96.7	86.2
+ Kocide 3000	1.75 lb							
5. Kocide 3000	1.75 lb	1 - 10	42.0	41.3	6.7	7.6	90.0	95.6
6. ProPhyt	2.5 pt.	1 - 3,5,7,9	38.0	30.8	5.0	4.1	58.3	90.0
Super Tin 80WP	3.75 oz	4,6,8,10						
+ Elast 400F	25.0 fl oz							
7. LBG-61	2.0 pt.	1 - 3	28.9	27.5	3.8	3.6	36.7	80.0
Super Tin 80WP	3.75 oz	4,6,8,10						
+ Elast 400F	25.0 fl oz							
LBG-61	2.5 pt.	5,7,9						
8. Eminent 125SL	16.0 fl oz	1,3,5,7,9	45.0	34.3	6.2	6.3	70.0	90.0
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
9. BmJ	4.2 oz	1 - 10	52.3	53.7	7.9	9.1	100.0	100.0
10.Topguard 1.04	10.0 fl oz	1 - 3	48.4	43.1	5.9	6.3	41.7	66.7
Super Tin 80WP	3.75 oz	4 - 10						
+ Elast 400F	25.0 fl oz							
11.Topguard 1.04	14.0 fl oz	1 - 3	25.0	24.0	3.3	3.8	36.7	45.0
Super Tin 80WP	3.75 oz	4 - 10						
+ Elast 400F	25.0 fl oz							
12.Super Tin 80WP	3.75 oz	1 - 3, 8 - 10	32.4	31.8	4.5	5.1	67.8	86.7
+ Elast 400F	25.0 fl oz							
Topguard 1.04	10.0 fl oz	4 - 7						

PECAN FUNGICIDE TEST II, 2010
PONDER FARM, DESIRABLE (SOUTH BLOCK)

Treatments	Rate/A	App's	Leaf Inc. ¹		Leaf Sev ²		Nut Inc. ³	
			2-Jun	20-Jul	2-Jun	20-Jul	30-Jul	28-Sep
13.Super Tin 80WP	3.75 oz	1 - 3, 8 - 10	43.2	40.4	5.9	6.1	95.6	90.0
+ Elast 400F	25.0 fl oz							
Topguard 1.04	14.0 fl oz	4 - 7						
14.Super Tin 80WP	7.5 oz	1,3,5,7,9	26.2	27.3	3.4	4.2	31.3	62.5
Elast 400F	50.0 fl oz	2,4,6,8,10						
15.Enable 2F	4.0 fl oz	1 - 10	38.9	46.8	5.0	6.8	61.1	93.3
+ Elast 400F	25.0 fl oz							
16.Enable 2F	8.0 fl oz	1,3,5,7,9	46.6	45.5	6.7	8.5	82.2	96.7
Elast 400F	50.0 fl oz	2,4,6,8,10						
17.Nontreated			57.6	63.5	10.5	12.0	91.7	95.7
LSD (P<0.5)			12.9	12.3	2.2	2.5	18.9	17.7

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

PECAN FUNGICIDE TEST II, 2010
PONDER FARM, DESIRABLE (SOUTH BLOCK)

Treatments	Rate/A	App's	Nut Sev ⁴		Anthracnose ⁵	Leaf Ret ⁶
			30-Jul	28-Sep		4-Nov
1. Sovran	3.2 oz	1 - 3	4.1	13.2	2.4	35.0
Super Tin 80WP	3.75 oz	4 - 10				
+ Elast 400F	25.0 fl oz					
2. Super Tin 80WP	3.75 oz	1 - 10	0.7	4.5	1.7	40.0
+ Elast 400F	25.0 fl oz					
3. Serenade	6.0 qt.	1 - 10	16.9	16.3	4.0	16.0
4. Serenade	6.0 qt.	1 - 10	11.6	18.8	4.6	25.0
+ Kocide 3000	1.75 lb					
5. Kocide 3000	1.75 lb	1 - 10	13.7	16.2	3.3	17.0
6. ProPhyt	2.5 pt.	1 - 3,5,7,9	4.5	14.3	3.1	40.0
Super Tin 80WP	3.75 oz	4,6,8,10				
+ Elast 400F	25.0 fl oz					
7. LBG-61	2.0 pt.	1 - 3	2.4	16.7	3.2	39.0
Super Tin 80WP	3.75 oz	4,6,8,10				
+ Elast 400F	25.0 fl oz					
LBG-61	2.5 pt.	5,7,9				
8. Eminent 125SL	16.0 fl oz	1,3,5,7,9	6.3	11.7	2.5	34.0
Super Tin 80WP	3.75 oz	2,4,6,8,10				
+ Elast 400F	25.0 fl oz					
9. BmJ	4.2 oz	1 - 10	28.6	25.2	5.3	36.0
10. Topguard 1.04	10.0 fl oz	1 - 3	3.3	7.6	2.4	49.0
Super Tin 80WP	3.75 oz	4 - 10				
+ Elast 400F	25.0 fl oz					
11. Topguard 1.04	14.0 fl oz	1 - 3	1.9	3.2	2.2	34.0
Super Tin 80WP	3.75 oz	4 - 10				
+ Elast 400F	25.0 fl oz					
12. Super Tin 80WP	3.75 oz	1 - 3, 8 - 10	7.9	9.8	2.3	35.0
+ Elast 400F	25.0 fl oz					
Topguard 1.04	10.0 fl oz	4 - 7				

PECAN FUNGICIDE TEST II, 2010
PONDER FARM, DESIRABLE (SOUTH BLOCK)

Treatments	Rate/A	App's	Nut Sev ⁴		Anthracnose ⁵	Leaf Ret ⁶ 4-Nov
			30-Jul	28-Sep		
13.Super Tin 80WP + Elast 400F Topguard 1.04	3.75 oz 25.0 fl oz 14.0 fl oz	1 - 3, 8 - 10 4 - 7	11.8	17.0	3.6	49.0
14.Super Tin 80WP Elast 400F	7.5 oz 50.0 fl oz	1,3,5,7,9 2,4,6,8,10	2.8	8.8	3.4	42.5
15.Enable 2F + Elast 400F	4.0 fl oz 25.0 fl oz	1 - 10	4.2	14.2	3.9	37.0
16.Enable 2F Elast 400F	8.0 fl oz 50.0 fl oz	1,3,5,7,9 2,4,6,8,10	5.3	10.9	2.2	37.0
17.Nontreated			36.9	54.0	8.5	13.0
LSD (P<0.5)			4.9	6.6	1.5	27.1

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵ Anthracnose = leaf anthracnose incidence, based on ratings of 6 terminals per tree
(percentage of leaflets on middle leaf with any anthracnose.)

⁶Based on a visual assessment of the percent retention (0-100) of foliage on whole trees.

PECAN FUNGICIDE TEST II, 2010
PONDER FARM, DESIRABLE (SOUTH BLOCK)

Treatments	Rate/A	App's	Nut Evaluations					
			Size and Fill		Kernel color			
			nuts/lb	% fill	Dark	Med	Light	Gold
1. Sovran	3.2 oz	1 - 3	52.0	48.5	5.0	4.4	2.0	82.0
Super Tin 80WP	3.75 oz	4 - 10						
+ Elast 400F	25.0 fl oz							
2. Super Tin 80WP	3.75 oz	1 - 10	47.3	50.0	6.8	0.0	0.0	90.3
+ Elast 400F	25.0 fl oz							
3. Serenade	6.0 qt.	1 - 10	59.2	46.3	16.9	0.0	0.0	62.1
4. Serenade	6.0 qt.	1 - 10	51.0	48.6	3.8	1.0	0.0	90.5
+ Kocide 3000	1.75 lb							
5. Kocide 3000	1.75 lb	1 - 10	53.1	45.7	13.7	0.0	0.0	64.0
6. ProPhyt	2.5 pt.	1 - 3,5,7,9	51.7	48.0	5.2	0.0	0.0	88.6
Super Tin 80WP	3.75 oz	4,6,8,10						
+ Elast 400F	25.0 fl oz							
7. LBG-61	2.0 pt.	1 - 3	47.7	49.5	8.8	0.0	0.0	88.0
Super Tin 80WP	3.75 oz	4,6,8,10						
+ Elast 400F	25.0 fl oz							
LBG-61	2.5 pt.	5,7,9						
8. Eminent 125SL	16.0 fl oz	1,3,5,7,9	52.2	49.1	6.6	0.0	0.0	85.1
Super Tin 80WP	3.75 oz	2,4,6,8,10						
+ Elast 400F	25.0 fl oz							
9. BmJ	4.2 oz	1 - 10	58.5	44.7	7.4	0.0	0.0	78.4
10.Topguard 1.04	10.0 fl oz	1 - 3	49.8	49.8	9.6	0.0	0.0	87.2
Super Tin 80WP	3.75 oz	4 - 10						
+ Elast 400F	25.0 fl oz							
11.Topguard 1.04	14.0 fl oz	1 - 3	49.7	49.7	6.4	0.0	0.0	87.8
Super Tin 80WP	3.75 oz	4 - 10						
+ Elast 400F	25.0 fl oz							
12.Super Tin 80WP	3.75 oz	1 - 3, 8 - 10	50.0	50.2	6.2	0.0	0.0	91.2
+ Elast 400F	25.0 fl oz							
		4 - 7						
Topguard 1.04	10.0 fl oz							

PECAN FUNGICIDE TEST II, 2010
PONDER FARM, DESIRABLE (SOUTH BLOCK)

Treatments	Rate/A	App's	Nut Evaluations					
			Size and Fill		Kernel color			
			nuts/lb	% fill	Dark	Med	Light	Gold
13.Super Tin 80WP	3.75 oz	1 - 3, 8 - 10	54.1	48.4	6.7	0.0	0.0	78.7
+ Elast 400F	25.0 fl oz							
Topguard 1.04	14.0 fl oz	4 - 7						
14.Super Tin 80WP	7.5 oz	1,3,5,7,9	48.8	49.2	7.5	0.0	0.0	89.0
Elast 400F	50.0 fl oz	2,4,6,8,10						
15.Enable 2F	4.0 fl oz	1 - 10	52.8	48.4	4.2	0.0	0.0	87.5
+ Elast 400F	25.0 fl oz							
16.Enable 2F	8.0 fl oz	1,3,5,7,9	50.6	48.0	10.7	5.0	0.0	79.6
Elast 400F	50.0 fl oz	2,4,6,8,10						
17.Nontreated			56.0	48.5	9.0	0.0	0.0	83.7
LSD (P<0.5)			6.6	4.1	7.8	4.6	1.9	12.3

¹Based on rating six terminal per tree. Incidence is the % of leaflets on middle leaf on each terminal with any scab present.

²Based on rating six terminal per tree. Severity is the % of middle leaf area covered with scab.

³Based on rating six nut clusters per tree. Incidence is the % of nuts with any scab.

⁴Based on rating six nut clusters per tree. Severity is the % of shuck area covered with scab.

⁵Leaf Inc. Antrac.=leaf anthracnose incidence, based on ratings of 6 terminals per tree (percentage of leaflets on middle leaf with any anthracnose.

⁶Based on a visual assessment of the percent retention (0-100) of foliage on whole trees.

PHOSPHITE TRUNK SPRAY TEST (NORTH BLOCK)

- A. **PURPOSE:** To evaluate the efficacy of phosphite fungicides applied as a trunk spray to pecan trees of different ages for systemic uptake and control of pecan scab.
- B. **EXPERIMENTAL DESIGN:**
1. Randomized complete blocks with four replicates.
 2. Each replication consisted of single-tree treatments.
 3. The orchard was established in 2007 with alternating rows of Wichita and Desirable trees planted on a 40 x 40 ft spacing running north and south. Trees used in this study had been replanted in the last 1-2 years (6-8 ft trees at planting) or 8 years ago.
- C. **APPLICATION OF TREATMENTS:**
1. Equipment: Sprayed on the trunk to a height of 4-5 ft to run-off with a hand sprayer.
 2. Calendar-based sprays (3) were applied on 13 April, 27 April, and 11 May.
- D. **ADDITIONAL INFORMATION:**
1. Location: Ponder Farm, CPES, Tifton, GA 31794
 2. Soil Fertility: pH - 6.0 P - 65 K - 71 Ca - 810 Mg - 44
Soil type: Tifton loamy sand, 2 - 5 % slope
 4. Herbicide strips: Buccaneer Plus (4 qt/A) on 16 May, 26 July, & 5 Sep
 5. Insecticides: Intrepid (8 oz/A) 26 May and 9 June
 6. Harvest Information: No nuts were collected.
- E: **SUMMARY:** Sprays applied to very young trees moved very effectively into the tree and up into the foliage. In fact there was significant foliar damage to the bottom, oldest leaves, and to a lesser degree the mid-canopy leaves. The treatments were very effective on foliar scab on both Desirable and Wichita. Sprays applied to either 8-year-old or 22-year-old trees had no effect on scab or any phytotoxicity.

PECAN FUNGICIDE TRUNK SPRAY TEST I, 2010
DESIRABLE AND WICHITA, NORTH BLOCK, YOUNGEST TREES

DESIRABLE TREES							
Treatments	App's	Leaf Inc Bottom.¹	Leaf Sev Bottom²	Leaf Inc Middle.³	Leaf Sev Middle⁴	Leaf Inc Top⁵	Leaf Sev Top⁶
		26-Jul	26-Jul	26-Jul	26-Jul	26-Jul	26-Jul
1. Untreated		34.6	4.7	11.2	2.7	18.7	3.4
2. Agri-fos	1 - 3	1.9	0.4	0.0	0.0	0.0	0.0
+ Pentra-Bark							
LSD(P<0.5)		23.9	3.2	9.0	2.3	11.7	2.1

WICHITA TREES							
Treatments	App's	Leaf Inc Bottom.¹	Leaf Sev Bottom²	Leaf Inc Middle.³	Leaf Sev Middle⁴	Leaf Inc Top⁵	Leaf Sev Top⁶
		26-Jul	26-Jul	26-Jul	26-Jul	26-Jul	26-Jul
1. Untreated		51.3	5.6	43.6	4.9	28.6	4.0
2. Agri-fos	1 - 3	9.0	1.6	3.3	0.4	1.9	0.4
+ Pentra-Bark							
LSD(P<0.5)		30.0	4.2	21.6	2.3	19.9	3.3

^{1, 3, 5} Leaf Inc.=Leaf scab incidence, based on ratings of 6 terminals per tree.
Incidence is the percentage of middle leaflet area covered with scab.

^{2, 4, 6} Leaf Severity=Leaf severity, based on ratings of 6 terminals per tree.
Severity is the percentage of leaf area covered with scab.

NOTE: Bottom, middle and top refer to the relative portion of the total tree canopy.

PECAN FUNGICIDE TRUNK SPRAY TEST I, 2010
DESIRABLE AND WICHITA, NORTH BLOCK, SMALLER TREES

**LEAF INJURY¹ -
DESIRABLE TREES**

Treatments	App's	Bottom 3-May	Middle 3-May	Top 3-May
1. Untreated		0.0	0.5	0.0
2. Agri-fos + Pentra-Bark	1 - 3	8.5	1.7	0.2
LSD(P<0.5)		6.9	n.s.	n.s.

**LEAF INJURY¹ -
WICHITA TREES**

Treatments	App's	Bottom 3-May	Middle 3-May	Top 3-May
1. Untreated		0.5	0.0	0.0
2. Agri-fos + Pentra-Bark	1 - 3	17.5	1.7	0.0
LSD(P<0.5)		n.s.	n.s.	n.s.

¹ Leaf injury from the Agri-fos application, rated as the percent of leaves exhibiting distinct brown, necrotic lesions. The bottom, middle and top third of the canopy were rated separately.

PECAN FUNGICIDE TRUNK SPRAY TEST II, 2010
DESIRABLE, SOUTH BLOCK, MID-SIZE TREES

Treatments	App's	Leaf Inc.¹	Leaf Sev²	Nut Inc.³	Nut Sev⁴
		22-Jul	22-Jul	30-Jul	30-Jul
1. Untreated		28.0	3.6	100.0	28.2
2. Agri-fos + Pentra-Bark	1 - 3	27.9	4.0	94.2	39.6
LSD(P<0.5)		n.s.	n.s.	n.s.	8.8

¹Leaf Inc.=Leaf scab incidence, based on ratings of 6 terminals per tree.

Incidence is the percentage of middle leaflet area covered with scab.

²Leaf Severity=Leaf severity, based on ratings of 6 terminals per tree.

Incidence is the percentage of leaves covered with scab.

³Nut Inc.=Nut scab incidence, based on ratings of 6 nut clusters per tree.

Incidence is the percentage of nuts with any scab.

⁴Nut Sev=Nut scab severity, based on ratings of 6 nut clusters per tree.

Severity is the percentage of shuck area covered with scab.

PECAN RETAIN SPRAY TEST (SOUTH BLOCK)

- A. PURPOSE: To evaluate the effects of Retain on nut retention when applied to pecan trees.
- B. EXPERIMENTAL DESIGN:
1. Randomized complete blocks with five replicates.
 2. Each replication consisted of four treatments.
 3. The orchard was established in 1988 trees planted on a 40 x 40 ft spacing running north and south. This test consists of Desirable trees only.
- C. APPLICATION OF TREATMENTS:
1. Equipment: All spray treatments were applied with a Durand Wayland PTO-driven air-blast sprayer (AF-100-32) delivering 95 gallon per acre at 125 PSI traveling 2 MPH.
 2. Calendar-based spray treatments (1 - 10) were applied on 13 Apr, 27 Apr, 11 May, 25 May, 8 Jun, 22 Jun, 6 Jul, 20 July, 3 Aug, and 17 Aug. One application of Retain was sprayed on 9 May.
- D. ADDITIONAL INFORMATION:
1. Location: Ponder Farm, CPES, Tifton, GA 31794
 2. Soil Fertility: pH - 6.0 P - 65 K - 71 Ca - 810 Mg - 44
Soil type: Tifton loamy sand, 2 - 5 % slope
 4. Herbicide strips: Buccaneer Plus (4 qt/A) on 16 May, 26 July, & 5 Sep
 5. Harvest Information: No nuts were collected.
- E. SUMMARY: The trees treated with Retain actually had fewer nuts per cluster after the June drop in two of the three rates evaluated. Unexpected levels of early season scab compromised later season nut evaluations.

PECAN RETAIN TEST, 2010
PONDER FARM, DESIRABLE, SOUTH ORCHARD

Treatments	Rate/A	App's	Nut Retention¹ 2-Jul
1. Untreated			60.3
2. Retain	166 g	1 app, early May	46.7
3. Retain	250 g	1 app, early May	52.9
4. Retain	333 g	1 app, early May	48.8
LSD(P<0.5)			8.1

¹Nut Retention=Based on % of nuts left on tree.

OFFICIAL DAILY RAINFALL 2010
PONDER FARM, TY TY, GA

Rainfall							
DATE	APR	MAY	JUN	JUL	AUG	SEP	OCT
1			0.1	0.1	0.1		
2					0.1		
3		1.2	0.5				
4		2.6			0.3		
5			0.6				
6					0.1		
7					0.5		
8	1.5						
11				0.2		0.2	
12				0.3			
13					0.1		
14				0.8	0.2		
15				0.9	1.3		
16		0.2	0.2		1.2		
17		0.4	0.2		0.2		
18					0.6		
19			0.5				
20	0.1		0.2		0.3		
21			0.8				
22					0.2		
24	0.5				0.5		
25	1.5	0.4					
26						0.1	
27			2.2	0.3		1.3	
28				0.1	0.3		0.7
29		0.3	0.8				
30	0.2	0.3					
31				0.5			
TOTAL	3.8	5.4	6.1	3.2	6	1.6	0.7

Irrigation was applied as needed on all trees on North and South side of Orchard.