Peanut Disease Control Field Trials, 2006: Experimental Fungicide Trials

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Peanut Disease Control Field Trials, 2006
Experimental Fungicide Trials

A. K. Hagan, K. L. Bowen, and H. L. Campbell

INTRODUCTION

Fungicides, cultural practices, and resistant cultivars are available for the control of damaging diseases and nematode pests that can limit peanut yield. A management program that incorporates these practices can enhance the control of diseases and nematode pests and can increase crop yield and profit potential.

In order to provide timely information concerning disease management practices, Alabama Agricultural Experiment Station personnel conducted foliar and soil-borne disease as well as nematode control trials at the Wiregrass Research and Extension Center (WREC) in Headland, Alabama, and at the Gulf Coast Research and Extension Center (GCREC) in Fairhope, Alabama. This report summarizes the results of those trials.

During the 2006 production season at the WREC, temperatures were at or above historical averages (Figure 1), and monthly rainfall totals were below historical averages in May, June, and July and near normal in August, September, and October, resulting in late season increase in disease severity (Figure 2). As a result, increases in leaf spot severity were observed in all trials near the end of the growing season whereas soil-borne disease incidence was reduced and little impact was observed on yield.

At the GCREC, temperatures were near normal throughout the entire growing season and rainfall was below historical averages in May, June, and July and near normal in August, September, and October. More consistent rainfall throughout the growing season led to above normal leaf spot severity and higher incidence of soil-borne diseases. However, little impact was observed on yield.

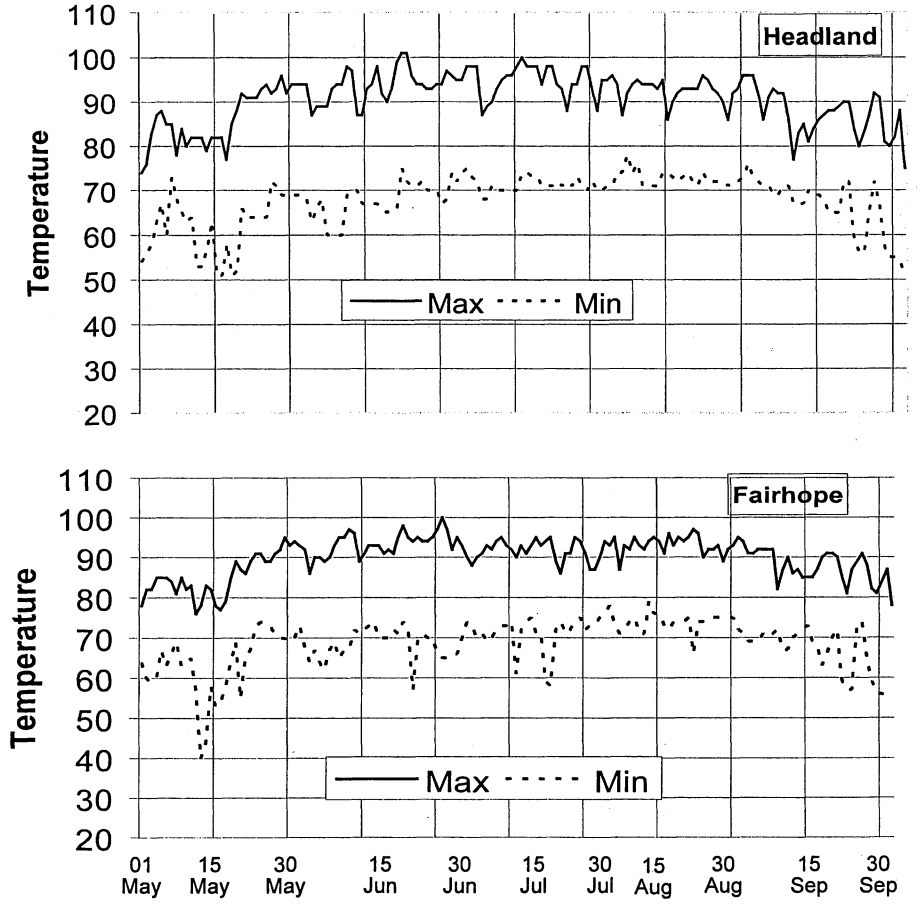
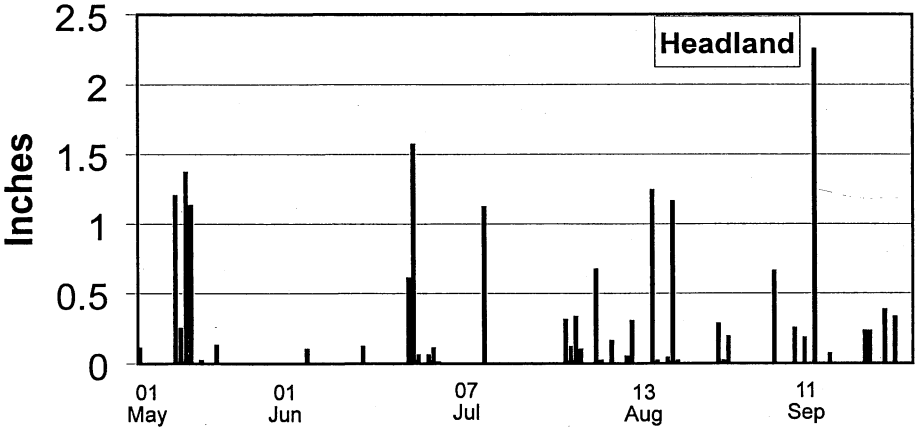
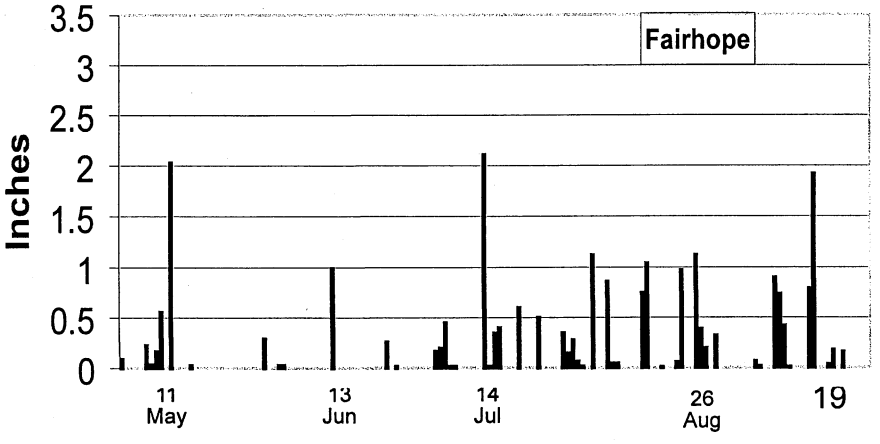


Figure 1. Daily minimum and maximum temperature (°F), May to October 2006.

Figure 2. Daily precipitation (inches), May to October 2006.





EVALUATION OF V-10116 AND V-10135 FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L. Bowen, and L. W. Wells

Objective: To evaluate the experimental fungicides V-10116 and V-10116 and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 26, July 11, July 26, August 8, August 22, September 5, and September 18, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 29 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 10.12 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October, resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated controls, late leaf spot was primarily observed late in the season. Leaf spot control obtained with the Bravo/Headline treatment was better than all other treatments except for the standard Bravo 720, Bravo/Abound, and Bravo/Moncut programs. The program that included V-10135 provided lower leaf spot control than all other programs. The programs that included Bravo/V-10116 (3.0 ounces) and V-10116 (4.0 ounces) gave similar results to that observed with the standard Bravo/Folicur program. The Bravo/Folicur + NIS program gave significantly better SSR control than the Bravo 720 standard, Bravo/V-10116 (3.0 ounces), Bravo/Headline, and V-10116/Headline programs. The recommended Bravo/Abound program yielded significantly more than the Bravo/V-10135 or the Bravo/V-10116 (3.0 ounces) program.

EVALUATION OF V-10116 AND V-10135 FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	——Disease ratings—— LS[2]	SSR[3]	Yield *lb/ac*
Bravo 720 24.0 fl oz	1-7	3.1[4]	6.5	4074
Bravo 720 24.0 fl oz V-10116 3.0 oz + NIS 0.125% v/v	1,2,7 3,4,5,6	4.3	6.2	3888
Bravo 720 24.0 fl oz V-10116 4.0 oz + NIS 0.125% v/v	1,2,7 3,4,5,6	4.2	4.7	4195
Bravo 720 24.0 fl oz Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 2,4 3,5,6	3.6	5.5	4316
Bravo 720 24.0 fl oz Headline 2.09EC 9.0 fl oz V-10116 4.0 oz + NIS 0.125% v/v	1,2,7 2,4 3,5,6	3.6	5.3	4259
Bravo 720 24.0 fl oz Headline 2.09 EC 9.0 fl oz	1,2,4,6,7 3,5	2.7	6.5	4114
V-10116 2.5 oz + NIS 0.125% v/v Headline 2.09 EC 9.0 fl oz	1,2,4,6,7 3,5	3.3	4.5	4267
V-10116 2.5 oz + NIS 0.125% v/v Headline 2.09 EC 9.0 fl oz	1,2,4,6,7 3,5	3.4	6.0	4187
V-10116 34DC 20.3 fl oz Headline 2.09 EC 9.0 fl oz	1,2,4,6,7 3,5	3.3	4.8	4235
Bravo 720 24.0 fl oz V-10135 16.0 oz	1,2,7 3,4,5,6	4.8	7.2	3654
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.2	5.3	4332
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz + NIS 0.125% v/v	1,2,7 3,4,5,6	4.0	3.3	4187
Bravo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	3.0	4.3	4542
Bravo 720 24.0 fl oz Bravo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	2.9	3.5	4187
LSD (P = 0.05)		**0.5**	**2.5**	**578**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF TOPGUARD AND SPECTRA FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L. Bowen, and L. W. Wells

Objective: To evaluate the new fungicides Topguard and Spectra and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 27, July 5, July 11, August 9, August 23, September 5, and September 18, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 28 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 10.2 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October, resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. The level of leaf spot control obtained with the Bravo/Abound treatment was significantly better than that provided by all other treatment programs except the standard Bravo 720 or Bravo/Moncut programs and the Tilt-Bravo (36 fluid ounces)/Abound/Tilt-Bravo/Bravo program. Poorest leaf spot control was observed with the standard Bravo/Folicur program. Incidence of SSR was lower than was seen in previous years. Disease ratings for nearly all fungicide programs were similar. However, Tilt/Bravo (36 fluid ounces)/Abound/Tilt/Bravo (24 fluid ounces)/Bravo regime gave better SSR control than the Bravo 720 standard and Bravo/Topguard (14 fluid ounces) programs. Yields for all fungicide treatments did not significantly differ.

EVALUATION OF TOPGUARD AND SPECTRA FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	——Disease ratings—— LS[2]	SSR[3]	Yield *lb/ac*
Bravo 720 24.0 fl oz	1-7	2.8[4]	5.5	3937
Bravo 720 24.0 fl oz Topguard 7.0 fl oz	1,2,6,7 3,4,5	3.7	4.7	3888
Bravo 720 24.0 fl oz Topguard 10.0 fl oz	1,2,6,7 3,4,5	3.4	3.5	3937
Bravo 720 24.0 fl oz Topguard 14.0 fl oz	1,2,6,7 3,4,5	3.2	5.0	3993
Bravo 720 24.0 fl oz Topguard 28.0 fl oz	1,2,6,7 3,4,5	3.2	4.0	4230
Bravo 720 24.0 fl oz Spectra 7.2 fl oz	1,2,4,6,7 3,5	3.6	3.8	4316
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.8	3.2	4445
Bravo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	2.5	4.3	4227
Bravo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	2.9	3.3	4133
Echo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 0.54 lb	1,2,7 3,4,5,6	3.2	3.2	4317
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz Bravo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,7 2,4,6 3,5	3.4	3.8	4463
Tilt/Bravo 36.0 fl oz Abound 2.08SC 18..2 fl oz Tilt/Bravo 24.0 fl oz Bravo 720 24.0 fl oz	1.5 3,5 4 6,7	2.8	2.7	4356
Headline 2.09 EC 9.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 12.0 fl oz Bravo 720 24.0 fl oz	1.5 3,5 4 6,7	3.7	3.7	4211
Tilt/Bravo 32.0 fl oz Abound 2.08SC 18.2 fl oz Tilt/Bravo 24.0 fl oz Bravo 720 24.0 fl oz	1.5 3,5 4 6,7	3.1	3.2	4195
Tilt/Bravo 24.0 fl oz Abound 2.08SC 18.2 fl oz Bravo 720 24.0 fl oz	1,2,4 3,5 6,7	3.0	3.5	4346
LSD (P = 0.05)		**0.4**	**2.2**	**626**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.

[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).

[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.

[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF EVITO AND EMINENT FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and L. W. Wells

Objective: To evaluate the new fungicides Evito and Eminent and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 26, July 5, July 11, August 8, August 22, September 5, and September 18, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre. Lorsban 15G was applied banded over the row with a four-row commercial granular applicator.

Early and late leaf spot were visually rated on September 28 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 9.8 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October, resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. All programs that included four applications of Folicur gave significantly poorer leaf spot control than all other treatments except the Echo/Evito/Folicur program. All other fungicide programs gave leaf spot control similar to that provided by the standard season-long Echo 720 program. Incidence of SSR was lower than had been seen in previous years. With the exception of Echo/Evito/Folicur and Headline/Folicur/Headline/Echo, the best SSR control was obtained with the Echo/Evito + Folicur program. Yields for Echo/Abound Echo/Folicur/Lorsban were significantly above that recorded for the Echo 720 standard. Otherwise, yield responses for the remaining fungicide programs and the Echo 720 standard were similar.

EVALUATION OF EVITO AND EMINENT FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	——Disease ratings—— LS[2]	SSR[3]	Yield *lb/ac*
Echo 720 24.0 fl oz	1-7	3.4[4]	3.8	3687
Echo 720 24.0 fl oz Evito 5.7 fl oz	1,2,4,6,7 3,5	3.3	3.8	4041
Echo 720 24.0 fl oz Evito 5.7 fl oz + NIS 0.25% v/v	1,2,4,6,7 3,5	3.1	3.0	4001
Echo 720 24.0 fl oz Evito 3.5 fl oz + Folicur 3.6F 3.6 fl oz	1,2,4,6,7 3,5	3.2	3.2	3985
Echo 720 24.0 fl oz Evito 5.7 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,5 4,6	4.0	4.8	4025
Echo 720 24.0 fl oz Evito 3.5 fl oz + Folicur 3.6F 3.6 fl oz	1,2,7 3,4,5,6	3.3	2.7	4074
Echo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.5	3.5	3816
Echo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	3.0	2.8	4380
Echo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.1	3.8	3945
Headline 2.09EC 6.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 9.0 fl oz Echo 720 24.0 fl oz	1,2 3,5 4 6,7	3.3	4.3	3961
Echo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz Lorsban 15G 13.3 lb	1,2,7 3,4,5,6 Pegging	4.5	2.8	4299
Echo 720 24.0 fl oz Folicur 3.6F 3.6 fl oz Lorsban 15G 13.3 lb	1,2,7 3,4,5,6 Pegging	4.5	3.3	3945
Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 12.0 fl oz Echo 720 24.0 fl oz	1.5 3,5 4 6,7	3.9	3.3	3993
Echo 720 24.0 fl oz Eminent 125SL 13.0 fl oz	1,2,7 3,4,5,6	3.2	4.0	3977
LSD (P = 0.05)		**0.5**	**1.6**	**509**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF PROVOST AND ABSOLUTE FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and L. W. Wells

Objective: To evaluate the new fungicides Provost and Absolute and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 25 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on June 1, June 21, July 6, July 17, August 22, and September 5. Fungicides were applied on a 14- to 21-day schedule on June 28, July 5, July 10, August 11, August 25, September 13, and September 26, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on October 4 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 13 immediately after plot inversion. Plots were harvested on October 24 and yields were reported at 9.8 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. Echo/Folcur and Headline/Folicur/Headline/Echo programs were significantly less effective in controlling leaf spot diseases than all other treatments. The remaining fungicide treatments gave similar leaf spot control. Incidence of southern stem rot was lower than had been seen in previous years. However, the best SSR control was observed with the Abound/Echo/Abound Proline/Echo/Provost compared with Echo season-long, Echo/Folicur, Echo/Moncut, and Headline/Folicur/Headline/Echo treatments. Yield response with Echo/Provost (5 fluid ounces) was significantly higher compared with the Echo/Provost (4 fluid ounces), Echo/Provost (10.7 fluid ounces), and Abound/Echo/Abound treatment regimes.

EVALUATION OF PROVOST AND ABSOLUTE FOR CONTROL OF PEANUT DISEASES IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	——Disease ratings—— LS[2]	SSR[3]	Yield *lb/ac*
Echo 720 24.0 fl oz	1-7	3.2[4]	4.3	3138
Echo 720 24.0 fl oz Provost 433SC 8.0 fl oz	1,2,7 3,4,5,6	2.8	3.8	3253
Proline 5.7 fl oz Echo 720 24.0 fl oz Provost 433SC 8.0 fl oz	In-furrow 1,2,7 3,4,5,6	2.8	2.0	3461
Echo 720 24.0 fl oz Provost 433SC 5.0 fl oz	1,2,7 3,4,5,6	2.9	2.8	3630
Echo 720 24.0 fl oz Provost 433SC 4.0 fl oz	1,2,7 3,4,5,6	3.0	3.2	3078
Absolute 500SC 3.5 fl oz + Induce 0.06% v/v Echo 720 24.0 fl oz	1,3,5 2,4,6,7	2.9	3.8	3233
Absolute 500SC 7.0 fl oz + Induce 0.06% v/v Echo 720 24.0 fl oz	1,3,5 2,4,6,7	3.0	3.5	3299
Echo 720 24.0 fl oz Provost 433SC 10.7 fl oz	1,2,7 3,4,5,6	3.0	2.8	3098
Echo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.8	4.8	3227
Abound 2.08SC 6.0 fl oz Echo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	In-furrow 1,2,4,6,7 3,5	2.9	1.8	3033
Echo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	2.9	2.6	3185
Echo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.1	4.7	3514
Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 12.0 fl oz Echo 720 24.0 fl oz	1.5 3,5 4 6,7	3.7	4.7	3291
LSD (P = 0.05)		**0.5**	**1.8**	**497**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF NEW AND EXPERIMENTAL FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and L. W. Wells

Objective: To evaluate new fungicides, Punch and Endura, and experimental fungicides, DPX LEM17 200SC and DPX LEM17 50WDG, and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 27, July 5, July 12, July 27, August 10, August 23, September 6, and September 20, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 28 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 10.0 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October, resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. Leaf spot control was significantly lower with DPX LEM17 50WDG than for all other treatment regimes. The Equus 720 full-season standard, DPX LEM17 200SC (23.9 fluid ounces), Punch + Equus/LEM17 200SC/Equus, and Bumper + Equus/Abound/Equus gave similar levels of leaf spot control. Treatments less effective in controlling leaf spot diseases than the Equus standard were Equus/Folicur, Equus/Equus + Moncut, Bumper + Equus/Folicur/Equus, and Endura. Incidence of southern stem rot (SSR) was lower than had been seen in previous years. Incidence was significantly higher for the Equus 720 standard compared with DPX LEM17 50WDG, DPX LEM17 200SC (16.8 fluid ounces), DPX LEM17 200SC (23.9 fluid ounces), and Endura. Yields for DPX LEM17 200SC + Punch and Bumper + Equus/Folicur/Equus treatments were significantly higher than those obtained with the Equus season-long standard and the DPX LEM17 200SC (23.9 fluid ounces) regime. Yield response with the majority of the other fungicide regimes was statistically similar.

EVALUATION OF NEW AND EXPERIMENTAL FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	–Disease ratings– LS[2]	SSR[3]	Yield *lb/ac*
Equus 720 24.0 fl oz	1-7	2.6[4]	5.5	3912
DPX LEM17 200SC 9.56 fl oz	1-7	3.2	3.8	4259
DPX LEM17 50WDG 4.0 oz	1-7	5.0	3.5	4085
DPX LEM17 200SC 16.8 fl oz	1-7	3.1	2.5	4122
DPX LEM17 200SC 23.9 fl oz	1-7	2.9	2.0	3824
Punch 5.0 fl oz + Equus 720 24.0 fl oz DPX LEM17 200SC 16.8 fl oz Equus 720 24.0 fl oz	1,2 3,5 4,6,7	2.8	4.0	4114
Bumper 2.0 fl oz + Equus 720 16.0 fl oz Abound 2.08SC 18.2 fl oz Equus 720 24.0 fl oz	1,2 3,5 4,6,7	2.8	4.3	4380
Bumper 2.0 fl oz + Equus 720 16.0 fl oz Folicur 3.6F 7.2 fl oz Equus 720 24.0 fl oz	1,2 3.5 4,6,7	3.8	3.8	4606
DPX LEM17 200SC 9.56 fl oz + Punch 5.0 fl oz	1-7	3.0	4.0	4630
Endura 8.0 oz	1-7	3.7	3.5	4477
Equus 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.3	5.2	4348
Equus 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	3.1	4.7	4485
Equus 720 24.0 fl oz Equus 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	4.1	4.7	4085
Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 12.0 fl oz Equus 720 24.0 fl oz	1.5 3.5 4 6,7	3.6	4.2	4259
LSD (P = 0.05)		**0.4**	**1.9**	**630**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF NEW FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and L. W. Wells

Objective: To evaluate new and experimental fungicides and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 29, July 5, July 12, July 27, August 9, August 23, September 6, and September 20, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 28 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 10.0 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October, resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. The best leaf spot control was with the Echo 720 full season and the Echo/Echo + Eminent treatment regimes. Echo/Folicur, Echo/Muscle, Echo/Tebuzol, Echo/Echo + Moncut, and both Echo/Artisan/Echo treatment regimes gave poorer control of leaf spot diseases than the season-long Echo standard. Leaf spot ratings for the remaining fungicide treatments were similar to those reported for the Echo standard. Incidence of southern stem rot (SSR), which was lower than was noted in previous years, was similar for all fungicide treatments. Yields were significantly higher for Headline/Artisan + Echo/Echo than for the Echo standard, Echo + PropiMax/Echo + Moncut, Echo/Echo + Folicur, Echo/Folicur, and Echo/Tebuzol programs. Echo/Echo + Eminent and Echo/Abound also had significantly higher yields compared with Echo + PropiMax/Echo + Moncut and Echo/Folicur.

EVALUATION OF NEW FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	—Disease ratings— LS[2]	SSR[3]	Yield *lb/ac*
Echo 720 24.0 fl oz	1-7	2.7[4]	4.3	4009
Echo 720 24.0 fl oz Echo 720 16.0 fl oz + Muscle 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.2	3.3	4195
Echo 720 24.0 fl oz Muscle 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.0	3.0	4404
Echo 720 24.0 fl oz Echo 720 16.0 fl oz + Eminent 125SL 26.0 fl oz	1,2,7 3,4,5,6	2.7	2.8	4638
Echo 720 24.0 fl oz Echo 720 16.0 fl oz + Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	2.9	3.0	4058
Echo 720 24.0 fl oz + PropiMax 2.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.2	3.3	3816
Echo 720 16.0 fl oz + Eminent 125SL 7.2 fl oz Echo 720 24.0 fl oz + Moncut 1.1 lb	1,2,4,6,7 3,5	3.3	2.7	4106
SA-010903 24.0 fl oz Echo 720 24.0 fl oz + Moncut 1.1 lb	1,2,4,6,7 3,5	3.3	4.2	4525
Echo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.7	3.3	3929
Echo 720 24.0 fl oz Abound 2.08SC 18.2 fl oz	1,2,4,6,7 3,5	2.8	3.2	4590
Echo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.6	4.5	4388
Headline 2.09EC 9.0 fl oz Artisan 3.6SE 13.0 fl oz + Echo 720 16.0 fl oz Echo 720 24.0 fl oz	1.5 3,4,5,6 7	3.2	2.8	4743
Echo 720 24.0 fl oz Artisan 3.6SE 32.0 fl oz Echo 720 24.0 fl oz	1,2 3,4 5,6,7	3.9	3.5	4711
Echo 720 24.0 fl oz Artisan 3.6SE 26.0 fl oz Echo 720 24.0 fl oz	1,2 3,4,5 6,7	4.0	4.2	4316
Echo 720 24.0 fl oz Abound 2.08SC 12.0 fl oz Artisan 3.6SE 13.0 fl oz + Echo 720 16.0 fl oz Echo 720 24.0 fl oz	1 2 3,4,5,6 7	3.0	2.8	4679
Echo 720 24.0 fl oz Tebuzol 7.2 fl oz	1,2,7 3,4,5,6	4.3	3.8	4017
LSD (P = 0.05)		**0.6**	**1.7**	**640**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

COMPARISON OF NEW FUNGICIDES FOR CONTROL OF LEAF SPOT AND SOUTHERN STEM ROT ON PEANUT IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and L. W. Wells

Objective: To evaluate new fungicides and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and for yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 27, July 13, July 27, August 10, August 24, September 6, and September 20, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 28 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 9.95 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October, resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. Equus/Headline, Equus/Abound, and MANA-TEB 3.6FL (14.4 fluid ounces) gave the best control of leaf spot diseases. The poorest leaf spot control was obtained with the MANA-TEB (7.2 fluid ounces) treatment regimes and the seven-application program with two rates of Folicur (7.2 and 14.4 fluid ounces). Incidence of southern stem rot (SSR) was lower than had been seen in previous years. Highest incidence of this disease was noted with Equus/MANA-TEB (15.5 fluid ounces). All other fungicide regimes gave the same level of SSR control. Yield response with the Equus/Abound program was superior to that obtained with the seven-application MANA-TEB 3.6FL (7.2 fluid ounces) program; all other fungicide regimes yielded similarly.

COMPARISON OF NEW FUNGICIDES FOR CONTROL OF LEAF SPOT AND SOUTHERN STEM ROT ON PEANUT IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	—Disease ratings— LS[2]	SSR[3]	Yield *lb/ac*
Folicur 3.6F 7.2 fl oz	1-7	4.4[4]	3.7	4106
Folicur 3.6F 14.4 fl oz	1-7	4.5	3.2	3920
MANA-TEB 3.6FL 7.2 fl oz	1-7	5.0	3.4	3833
MANA-TEB 3.6FL 14.4 fl oz	1-7	3.2	3.2	4404
MANA-TEB 20EW 15.5 fl oz	1-7	4.3	4.5	4477
MANA-TEB 20EW 31.0 fl oz	1-7	3.4	3.6	4201
Equus 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.0	4.2	3864
Equus 720SST 24.0 fl oz MANA-TEB 3.6FL 7.2 fl oz	1,2,7 3,4,5,6	4.4	5.6	4191
Equus 720SST 24.0 fl oz MANA-TEB 15.5 fl oz	1,2,7 3,4,5,6	4.0	10.0	4162
Bravo Weather Stik 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.3	3.7	3961
Equus 720 24.0 fl oz Abound 2.08SC 18.2 fl oz	1,2,4,6,7 3,5	2.9	3.6	4569
Equus 720SST 24.0 fl oz Headline 2.09EC 9.0 fl oz	1,2,4,6,7 3,5	2.8	4.6	4153
Equus 720 SST 24.0 fl oz Equus 720SST 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.5	2.8	4090
LSD (P = 0.05)		**0.6**	**3.2**	**710**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

COMPARISON OF NEW FUNGICIDES WITH CURRENTLY REGISTERED FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT IN SOUTHEAST ALABAMA, WREC

H. L. Campbell, A. K. Hagan, K. L. Bowen, and L. W. Wells

Objective: To evaluate new fungicides and experimental fungicides and compare them with currently registered fungicides for control of early leaf spot and southern stem rot and yield response in an irrigated peanut production system in southeast Alabama.

Methods: Peanut cultivar Carver was planted at the Wiregrass Research and Extension Center in Headland, Alabama, on May 20 in a field with a history of peanut production. The soil type was a Dothan sandy loam (OM<1 percent). Seed were sown at a rate of approximately five seed per foot of row. On March 7, the test area was paratilled and turned. On May 15, 1 quart per acre of Sonalan + 0.45 pint per acre of Strongarm were applied for postemergent weed control. On June 21, 1.5 pints per acre of Storm and 1.5 pints per acre of 2,4-DB were applied for weed control. Thrips were controlled with an in-furrow application of 6.5 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 3 feet apart arranged in a randomized complete block with six replications. The plots were arranged under a central pivot irrigation system and irrigated on May 30, June 12, June 30, July 10, July 19, August 30, and September 6. Fungicides were applied on a 14- to 21-day schedule on June 28, July 10, July 28, August 10, August 22, September 6, and September 21, using a four-row, tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 28 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 6 immediately after plot inversion. Plots were harvested on October 12 and yields were reported at 9.95 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through August. Rainfall increased in September and October resulting in late onset of leaf spot diseases.

While early leaf spot was observed early in the growing season on untreated control plots, late leaf spot was primarily observed late in the season. With the exception of MANA-Chlorthal 82.5 WDG, leaf spot ratings with the Bravo Weather Stik program were similar to those of the other fungicide programs. While both contain the same concentration of chlorothalonil, SSR incidence was lower for the Bravo Weather Stik than the Bravo Ultrex program. Yields for all fungicides were similar.

COMPARISON OF NEW FUNGICIDES WITH CURRENTLY REGISTERED FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT IN SOUTHEAST ALABAMA, WREC

Treatment and rate/ac	Application timing[1]	—Disease ratings— LS[2]	SSR[3]	Yield *lb/ac*
Bravo Weather Stik 24.0 fl oz	1-7	2.8[4]	5.2	3436
Equus 720SST 24.0 fl oz	1-7	3.2	7.7	3461
MANA-Chlorthal 720FL 24.0 fl oz	1-7	2.8	6.5	3445
MANA-Chlorthal 720FL alt 24.0 fl oz	1-7	3.0	6.8	3743
Bravo Ultrex 1.4 lb	1-7	3.1	8.3	3462
Equus 82WDG 1.4 lb	1-7	3.2	6.2	3840
MANA-Chlorthal 82.5WDG 1.4 lb	1-7	3.7	6.0	3737
Stratego 7.0 fl oz	1-7	2.9	5.8	3737
LSD (P = 0.05)		**0.4**	**2.6**	**NS**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[4] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF V-10116 AND V-10135 FOR CONTROL OF PEANUT DISEASES IN SOUTHWEST ALABAMA, GCREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and M. D. Pegues

Objective: To evaluate V-10116 and V-10135 and compare them with currently registered products for their efficacy in controlling leaf spot diseases and southern stem rot of peanut in a dryland peanut production system in southwest Alabama.

Methods: Peanut cultivar Georgia Green was planted on May 18 at the Gulf Coast Research and Extension Center near Fairhope, Alabama, in a field with a history of peanut production. The soil type was a Malbis fine sandy loam (OM<1 percent) and seed were sown at a rate of approximately five seed per foot of row in raised beds with bed knockers. On April 21, the test area was disked, ripped, and bedded. On June 26, 2 ounces per acre of Cadre + 0.225 ounce per acre of Strongarm + 1 pint per 25 gallons Induce were applied for postemergent weed control. On August 21, 1.0 ounce per acre of Tracer + 1.0 ounce per acre of Karate were applied for insect control. Thrips were controlled at planting with an in-furrow application of 6 to 7 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 38 inches apart arranged in a randomized complete block with six replications. Fungicides were applied on a 14-day schedule on June 26, July 10, July 24, August 8, August 21, September 5, and September 20 using a four-row, ATV-mounted CO_2 sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 22 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Rust was also rated on September 29 using the ICRISAT rust rating scale (1 = no disease, 2 = 10 percent leaves affected, 3 = 20 percent leaves affected, 4 = 30 percent leaves affected, 5 = 40 percent leaves affected, 6 = 50 percent leaves affected, 7 = 60 percent leaves affected, 8 = 70 percent leaves affected, 9 = plants severely affected, 80-100 percent leaves withering).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 2 immediately after plot inversion. Plots were harvested on October 13 and yields were reported at 10.15 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through July. Above normal rainfall in August and September led to a late season increase in foliar disease severity.

Poorest leaf spot and rust control was obtained with the program that included four applications of V-10135 (16 fluid ounces). Bravo/Folicur, Bravo/Folicur + NIS, and both Bravo/V-10116 + NIS treatments gave less effective control of leaf spot diseases than the Bravo standard. Better rust control was also provided by the Bravo standard and Bravo/Headline/Folicur compared with Bravo/Folicur as well as both Bravo/V-10116 +NIS and V-10116/Headline treatments. SSR severity was higher than had been observed in previous years. Bravo/Bravo + Moncut gave significantly better SSR control than V-10116 (2.56 fluid ounces) + NIS/Headline, Bravo/V-10135, Bravo/Headline, Bravo/V-10116 (3 ounces) + NIS, and the Bravo standard. The low incidence of SSR was reflected in the high yield obtained with the Bravo/Bravo + Moncut treatment. Yields for the Bravo/Abound, Bravo/Folicur +NIS, and Bravo/Headline/Folicur programs were similar to those recorded with Bravo/Bravo + Moncut.

EVALUATION OF V-10116 AND V-10135 FOR CONTROL OF PEANUT DISEASES IN SOUTHWEST ALABAMA, GCREC

Treatment and rate/ac	Application timing[1]	Disease ratings LS[2]	Rust[3]	SSR[4]	Yield *lb/ac*
Bravo 720 24.0 fl oz	1-7	2.9[5]	3.8	5.8	4802
Bravo 720 24.0 fl oz V-10116 3.0 oz + NIS 0.125% v/v	1,2,7 3,4,5,6	3.4	4.5	5.3	4886
Bravo 720 24.0 fl oz V-10116 4.0 oz + NIS 0.125% v/v	1,2,7 3,4,5,6	3.5	4.8	4.3	4519
Bravo 720 24.0 fl oz Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz	1,7 2,4 3,5,6	3.2	4.5	3.0	5353
Bravo 720 24.0 fl oz Headline 2.09EC 9.0 fl oz V-10116 4.0 oz + NIS 0.125% v/v	1,7 2,4 3,5,6	3.0	4.2	4.7	4795
Bravo 720 24.0 fl oz Headline 2.09EC 9.0 fl oz	1,2,4,6,7 3,5	2.9	3.8	5.5	4772
V-10116 2.5 oz + NIS 0.125% v/v Headline 2.09EC 9.0 fl oz	1,2,4,6,7 3,5	3.1	4.5	6.3	4221
V-10116 1.75 oz + NIS 0.125% v/v Headline 9.0 fl oz	1,2,4,6,7 3,5	3.0	4.2	4.7	4917
V-10116 34DC 20.3 fl oz Headline 2.09EC 9.0 fl oz	1,2,4,6,7 3,5	2.9	4.5	3.0	4749
Bravo 720 24.0 fl oz V-10135 16.0 fl oz	1,2,7 3,4,5,6	4.5	5.7	5.2	4802
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.3	4.7	4.5	4871
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz + NIS 0.125% v/v	1,2,7 3,4,5,6	3.3	4.3	4.0	5024
Bravo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	2.9	3.8	4.2	5506
Bravo 720 24.0 fl oz Bravo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.1	3.7	2.5	5536
LSD (P = 0.05)		**0.3**	**0.7**	**2.4**	**605**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Rust was rated using the ICRISAT 1-9 rating scale (1 = no disease, ...9 = plants severely affected, 80-100 percent leaves withering).
[4] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[5] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

COMPARISON OF NEW AND EXPERIMENTAL FUNGICIDES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and M. D. Pegues

Objective: To evaluate DPX LEM 17 200SC, Endura, and Punch and compare them with currently registered products for their efficacy in controlling leaf spot diseases and southern stem rot of peanut in a dryland peanut production system in southwest Alabama.

Methods: Peanut cultivar Georgia Green was planted on May 18 at the Gulf Coast Research and Extension Center near Fairhope, Alabama, in a field with a history of peanut production. The soil type was a Malbis fine sandy loam (OM<1 percent) and seed were sown at a rate of approximately five seed per foot of row in raised beds with bed knockers. On April 21, the test area was disked, ripped, and bedded. On June 26, 2 ounces per acre of Cadre + 0.225 ounce per acre of Strongarm + 1 pint per 25 gallons Induce were applied for postemergent weed control. On August 21, 1.0 ounce per acre of Tracer + 1.0 ounce per acre of Karate were applied for insect control. Thrips were controlled at planting with an in-furrow application of 6 to 7 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 38 inches apart arranged in a randomized complete block with six replications. Fungicides were applied on a 14- to 21-day schedule on June 26, July 10, July 24, August 7, August 21, September 5, and September 20 using a four-row, ATV-mounted, CO_2 sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 22 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Rust was also rated on September 29 using the ICRISAT rust rating scale (1 = no disease, 2 = 10 percent leaves affected, 3 = 20 percent leaves affected, 4 = 30 percent leaves affected, 5 = 40 percent leaves affected, 6 = 50 percent leaves affected, 7 = 60 percent leaves affected, 8 = 70 percent leaves affected, 9 = plants severely affected, 80-100 percent leaves withering).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 2 immediately after plot inversion. Plots were harvested on October 13 and yields were reported at 10.0 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through July. Above average rainfall in August and September led to a late season increase in foliar disease severity.

The DPX LEM 50WDG full season program gave significantly poorer leaf spot control compared with all other fungicide treatments. While significant differences in leaf spot control were noted between the remaining fungicide programs, all gave effective control of these diseases. Rust, which first appeared in late August, continued to intensify throughout September. The highest incidence of rust was also recorded for the DPX LEM 50WDG program. Rust ratings for the majority of the remaining fungicide treatments were similar with the most effective control provided by the Bravo standard, Punch + Bravo/DPX LEM17 200SC/Bravo, and Bravo/Moncut treatments. SSR severity was higher than in previous years. The best SSR control was obtained with DPX LEM17 200SC (both 16.8 and 23.9 fluid ounces) and both treatment levels had significantly lower SSR loci counts than the full-season Bravo standard. Other treatment programs that included applications of either formulation of DPX LEM17 also reduced SSR incidence compared with the Bravo standard. The DPX LEM17 200SC full season treatments (all rates) and the DPX LEM 200SC + Punch treatment regimes had the highest yields.

COMPARISON OF NEW AND EXPERIMENTAL FUNGICIDES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

Treatment and rate/ac	Application timing[1]	Disease ratings LS[2]	Rust[3]	SSR[4]	Yield *lb/ac*
Bravo 720 24.0 fl oz	1-7	2.9[5]	3.5	5.7	5506
DPX LEM 17 200SC 9.56 fl oz	1-7	3.3	4.2	2.8	6186
DPX LEM 17 50WDG 4.0 oz	1-7	4.3	5.3	2.2	5597
DPX LEM 17 200SC 16.8 fl oz	1-7	3.0	3.8	1.5	6038
DPX LEM 17 200SC 23.9 fl oz	1-7	3.0	3.8	1.5	6270
Punch 5.0 fl oz + Bravo 720 24.0 fl oz DPX LEM 17 200SC 16.8 fl oz Bravo 720 24.0 fl oz	1,2 3,5 4,6,7	3.0	3.7	2.5	5949
Tilt 3.6EC 2.0 fl oz + Bravo 16.0 fl oz Abound 2.08SC 18.2 fl oz Bravo 720 24.0 fl oz	1,2 3,5 4,6,7	3.6	4.2	4.5	5330
Tilt 3.6EC 2.0 fl oz + Bravo 720 16.0 fl oz Folicur 3.6F 7.2 fl oz Bravo 720 24.0 fl oz	1,2 3,5 4,6,7	3.4	4.3	4.3	5422
DPX LEM 17 200SC 9.56 fl oz + Punch 5.0 fl oz	1-7	2.9	3.8	2.2	6041
Endura 8.0 oz	1-7	3.0	4.0	4.8	5735
Bravo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.6	4.7	3.2	5911
Bravo 720 24.0 fl oz Bravo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	2.8	3.7	4.0	5506
Tilt/Bravo 24.0 fl oz Abound 2.08SC 18.2 fl oz Bravo 720 24.0 fl oz	1,2,4 3,5 6,7	3.0	4.3	3.3	5521
Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 12.0 fl oz Bravo 720 24.0 fl oz	1.5 3,5 4 6,7	3.3	4.7	3.3	5682
Tilt/Bravo 24.0 fl oz Abound 2.08SC 18.2 fl oz Tilt/Bravo 24.0 fl oz Bravo 720 24.0 fl oz	1.5 3,5 4 6,7	3.3	4.3	4.5	5666
LSD (P = 0.05)		**0.3**	**0.7**	**2.2**	**545**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Rust was rated using the ICRISAT 1-9 rating scale (1 = no disease, ...9 = plants severely affected, 80-100 percent leaves withering).
[4] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[5] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF NEW FUNGICIDES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and M. D. Pegues

Objective: To evaluate Evito and Eminent 125SL and compare them with currently registered products for their efficacy in controlling leaf spot diseases and southern stem rot of peanut in a dryland peanut production system in southwest Alabama.

Methods: Peanut cultivar Georgia Green was planted on May 18 at the Gulf Coast Research and Extension Center near Fairhope, Alabama, in a field with a history of peanut production. The soil type was a Malbis fine sandy loam (OM<1 percent) and seed were sown at a rate of approximately five seed per foot of row in raised beds with bed knockers. On April 21, the test area was disked, ripped, and bedded. On June 26, 2 ounces per acre of Cadre + 0.225 ounce per acre of Strongarm + 1 pint per 25 gallons Induce were applied for postemergent weed control. On August 21, 1.0 ounce per acre of Tracer + 1.0 ounce per acre of Karate were applied for insect control. Thrips were controlled at planting with an in-furrow application of 6 to 7 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 38 inches apart arranged in a randomized complete block with six replications. Fungicides were applied on a 14-day schedule on June 27, July 10, July 24, August 7, August 21, September 5, and September 20 using a four-row, ATV-mounted, CO_2 sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 26 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Rust was also rated on September 26 using the ICRISAT rust rating scale (1 = no disease, 2 = 10 percent leaves affected, 3 = 20 percent leaves affected, 4 = 30 percent leaves affected, 5 = 40 percent leaves affected, 6 = 50 percent leaves affected, 7 = 60 percent leaves affected, 8 = 70 percent leaves affected, 9 = plants severely affected, 80-100 percent leaves withering).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 5 immediately after plot inversion. Plots were harvested on October 13 and yields were reported at 10.2 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through July. Above normal rainfall in August and September led to a late season increase in foliar disease severity.

The Echo/Folicur and Echo/Muscle programs generally provided less leaf spot control than nearly all of the other fungicide programs, which usually provided similar control. Rust appeared in late August and progressively intensified through September. The highest incidence of rust was also obtained with the Echo/Folicur and Echo/Muscle programs. Lowest rust ratings were recorded for the Echo/Evito, Echo + PropiMax, and Echo/Echo + Eminent programs. SSR severity was higher than had been observed in previous years. Incidence of SSR was higher for Echo 720 full-season than all programs except for Echo/Evito, Echo/Evito + NIS, and Echo + PropiMax. The Echo/Echo + Muscle treatment regime yielded higher compared with the majority of fungicide programs screened.

EVALUATION OF NEW FUNGICIDES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

Treatment and rate/ac	Application timing[1]	——Disease ratings—— LS[2]	Rust[3]	SSR[4]	Yield *lb/ac*
Echo 720 24.0 fl oz	1-7	3.1[5]	4.2	6.8	4550
Echo 720 24.0 fl oz Evito 5.7 fl oz	1,2,4,6,7 3,5	3.3	3.7	5.8	4535
Echo 720 24.0 fl oz Evito 5.7 fl oz + NIS 0.25% v/v	1,2,4,6,7 3,5	3.3	3.8	4.8	5062
Echo 720 24.0 fl oz Evito + Folicur 3.6F 3.6 fl oz	1,2,4,6,7 3,5	3.1	4.2	3.8	4879
Echo 720 24.0 fl oz Evito 5.7 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,5 4,6	3.6	4.3	3.8	4925
Echo 720 24.0 fl oz Evito 3.5 fl oz + Folicur 3.6F	1,2,7 3,4,5,6	3.1	4.5	2.3	5284
Echo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	4.3	5.0	4.8	4764
Echo 24.0 fl oz Abound 2.08SC 18.2 fl oz	1,2,4,6,7 3,5	3.3	4.2	4.0	5062
Echo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.2	4.2	2.5	5368
Echo 720 16.0 fl oz + PropiMax 2.0 fl oz	1-7	3.1	3.7	5.8	4772
Echo 720 16.0 fl oz + Eminent 125SL 7.2 fl oz	1-7	3.0	3.8	4.7	4986
Echo 720 24.0 fl oz Echo 720 16.0 fl oz + Muscle 7.2 fl oz	1,2,7 3,4,5,6	3.0	4.3	3.3	5789
Echo 720 24.0 fl oz Muscle 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.8	4.7	3.5	5070
Echo 720 24.0 fl oz Echo 720 16.0 fl oz + Eminent 125SL 26.0 fl oz	1,2,7 3,4,5,6	3.1	3.7	2.2	5345
LSD (P = 0.05)		**0.4**	**0.7**	**2.0**	**612**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Rust was rated using the ICRISAT 1-9 rating scale (1 = no disease, ...9 = plants severely affected, 80-100 percent leaves withering).
[4] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[5] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF PROVOST AND ABSOLUTE FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and M. D. Pegues

Objective: To evaluate Provost and Absolute and compare them with currently registered products for their efficacy in controlling leaf spot diseases and southern stem rot of peanut in a dryland peanut production system in southwest Alabama.

Methods: Peanut cultivar Georgia Green was planted on May 16 at the Gulf Coast Research and Extension Center near Fairhope, Alabama, in a field with a history of peanut production. The soil type was a Malbis fine sandy loam (OM<1 percent) and seed were sown at a rate of approximately five seed per foot of row in raised beds with bed knockers. In-furrow applications of fungicides were applied at planting using a tractor-mounted CO_2 sprayer with 8001 nozzles calibrated to deliver 5 gallons per acre at 20 psi. On April 21, the test area was disked, ripped, and bedded. On May 18, 1.5 pints per acre of Dual Magnum were made for pre-emergent weed control. On June 26, 2 ounces per acre of Cadre + 0.225 ounce per acre of Strongarm + 1 pint per 25 gallons Induce were applied for postemergent weed control. On August 21, 1.0 ounce per acre of Tracer + 1.0 ounce per acre of Karate were applied for insect control. Thrips were controlled at planting with an in-furrow application of 6 to 7 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 38 inches apart arranged in a randomized complete block with six replications. Fungicides were applied on a 14- to 21-day schedule on June 26, July 5, July 10, July 24, August 8, August 21, September 5, and September 20 using a four-row, ATV-mounted, CO_2 sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 27 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Rust was also rated on September 27 using the ICRISAT rust rating scale (1 = no disease, 2 = 10 percent leaves affected, 3 = 20 percent leaves affected, 4 = 30 percent leaves affected, 5 = 40 percent leaves affected, 6 = 50 percent leaves affected, 7 = 60 percent leaves affected, 8 = 70 percent leaves affected, 9 = plants severely affected, 80-100 percent leaves withering).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 2 immediately after plot inversion. Plots were harvested on October 5 and yields were reported at 10.1 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through July. Above normal rainfall in August and September led to a late season increase in foliar disease severity.

All programs that included either Provost or Absolute gave better leaf spot control than did the standard Echo/Folicur standard; however, none were significantly better in controlling leaf spot diseases than the full season Echo program. Rust appeared in late August and progressively intensified through September. Proline/Echo/Provost gave significantly better control of rust than the Echo/Provost, Abound (IF)/Echo/Abound, Echo/Abound, and Headline/Folicur/Headline/Echo programs. Rust severity was significantly higher for Echo/Folicur than with all but one other fungicide program. SSR severity was higher than had been observed in previous years. Highest SSR loci counts were recorded for the full-season Echo 720 standard. Proline/Echo/Provost, which controlled SSR better than both of the Absolute programs, had SSR loci counts similar to those of the remaining fungicide programs. With the exception of the Echo/Provost (4 fluid ounces) treatment regime, all treatments that included Provost yielded higher than other treatments except the Echo/Folicur treatment and were significantly better than

the Echo-only program. All programs that included applications of Provost or Absolute had yields that were similar to those recorded for the standard Echo/Folicur program. The Provost programs also had significantly higher yield compared with the season-long Echo 720 standard.

EVALUATION OF PROVOST AND ABSOLUTE FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

Treatment and rate/ac	Application timing[1]	Disease ratings LS[2]	Rust[3]	SSR[4]	Yield *lb/ac*
Echo 720 24.0 fl oz	1-7	3.1[5]	3.8	6.2	3854
Echo 720 24.0 fl oz Provost 433SC 8.0 fl oz	1,2,7 3,4,5,6	3.0	3.7	3.5	4833
Proline 5.7 fl oz Echo 720 24.0 fl oz Provost 433SC 8.0 fl oz	In-furrow 1,2,7 3,4,5,6	2.9	3.5	2.0	4795
Echo 720 24.0 fl oz Provost 433SC 5.0 fl oz	1,2,7 3,4,5,6	2.9	3.8	3.8	4772
Echo 720 24.0 fl oz Provost 433SC 4.0 fl oz	1,2,7 3,4,5,6	3.0	3.8	3.8	4450
Absolute 500SC 3.5 fl oz + Induce 0.06% v/v Echo 720 24.0 fl oz	1,3,5 2,4,6,7	3.0	4.0	4.3	4450
Absolute 500SC 7.0 fl oz + Induce 0.06% v/v Echo 720 24.0 fl oz	1,3,5 2,4,6,7	3.0	4.0	4.0	4741
Echo 720 24.0 fl oz Provost 433SC 10.7 fl oz	1,2,7 3,4,5,6	3.0	4.2	3.2	4795
Echo 720 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.7	4.8	2.8	5009
Abound 2.08SC 6.0 fl oz Echo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	In-furrow 1,2,4,6,7 3,5	3.1	4.2	3.3	4460
Echo 720 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	2.9	4.2	3.5	4557
Echo 720 24.0 fl oz Echo 720 24.0 fl oz + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	2.9	3.7	2.7	4928
Headline 2.09EC 9.0 fl oz Folicur 3.6F 7.2 fl oz Headline 2.09EC 12.0 fl oz Echo 720 24.0 fl oz	1.5 3,5 4 6,7	3.2	4.5	3.7	4389
LSD (P = 0.05)		**0.2**	**0.6**	**1.8**	**689**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Rust was rated using the ICRISAT 1-9 rating scale (1 = no disease, ...9 = plants severely affected, 80-100 percent leaves withering).
[4] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[5] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

COMPARISON OF 14- AND 21-DAY CALENDAR SCHEDULES FOR PEANUT DISEASE CONTROL IN ALABAMA, GCREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and M. D. Pegues

Objective: To evaluate new and existing formulations of chlorothalonil and compare them at 14- and 21-day application intervals for their efficacy in controlling leaf spot diseases and southern stem rot of peanut in a dryland peanut production system in southwest Alabama.

Methods: Peanut cultivar Georgia Green was planted on May 16 at the Gulf Coast Research and Extension Center near Fairhope, Alabama, in a field with a history of peanut production. The soil type was a Malbis fine sandy loam (OM<1 percent) and seed were sown at a rate of approximately five seed per foot of row in raised beds with bed knockers. On April 21, the test area was disked, ripped, and bedded. On June 26, 2 ounces per acre of Cadre + 0.225 ounce per acre of Strongarm + 1 pint per 25 gallons Induce were applied for postemergent weed control. On August 21, 1.0 ounce per acre of Tracer + 1.0 ounce per acre of Karate were applied for insect control. Thrips were controlled at planting with an in-furrow application of 6 to 7 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 38 inches apart arranged in a randomized complete block with six replications. Fungicides were applied on a 14-day schedule on June 27, July 10, July 24, August 8, August 21, September 5, and September 20 and on a 21-day schedule on June 27, July 17, August 8, August 28, and September 20 using a four-row, ATV-mounted, CO_2 sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 26 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Rust was also rated on September 26 using the ICRISAT rust rating scale (1 = no disease, 2 = 10 percent leaves affected, 3 = 20 percent leaves affected, 4 = 30 percent leaves affected, 5 = 40 percent leaves affected, 6 = 50 percent leaves affected, 7 = 60 percent leaves affected, 8 = 70 percent leaves affected, 9 = plants severely affected, 80-100 percent leaves withering).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 3 immediately after plot inversion. Plots were harvested on October 6 and yields were reported at 10.0 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through July. Above normal rainfall in August and September led to a late season increase in foliar disease severity.

All programs gave similar levels of leaf spot control when applied at 14-day intervals. When applied at 21-day intervals, Equus 720SST controlled leaf spot significantly better than the Bravo Weather Stik. Overall, the 21-day treatments were surprisingly effective in controlling leaf spot diseases. Even though rust severity increased in August and September, there were no significant differences in rust ratings among the fungicide programs. SSR severity was higher than had been observed in previous years. Incidence of SSR was generally similar for all programs except for Echo 720 14-day. The 21-day regimes generally yielded higher than 14-day regimes.

COMPARISON OF 14- AND 21-DAY CALENDAR SCHEDULES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

Treatment and rate/ac	Application timing[1]	——Disease ratings—— LS[2]	Rust[3]	SSR[4]	Yield *lb/ac*
14-day calendar schedule					
Bravo Weather Stik 24.0 fl oz	1-7	2.92[5]	4.2	5.3	5322
Equus 720 SST 24.0 fl oz	1-7	2.83	4.0	5.0	5353
MANA-Chlorthal 24.0 fl oz	1-7	2.83	4.3	4.8	5559
MANA-Chlorthal-alt 24.0 fl oz	1-7	2.83	3.8	3.5	5659
Echo 720 24.0 fl oz	1-7	2.92	4.3	7.3	5062
21-day calendar schedule					
Bravo Weather Stik 24.0 fl oz	1-5	3.00	4.2	4.8	5643
Equus 720 SST 24.0 fl oz	1-5	2.67	4.2	5.8	5452
MANA-Chlorthal 24.0 fl oz	1-5	2.75	3.7	6.8	5919
MANA-Chlorthal-alt 24.0 fl oz	1-5	2.92	3.7	5.8	5513
Echo 720 24.0 fl oz	1-5	2.92	4.3	6.0	5926
LSD (P = 0.05)		**0.2**	**NS**	**2.5**	**509**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Rust was rated using the ICRISAT 1-9 rating scale (1 = no disease, ...9 = plants severely affected, 80-100 percent leaves withering).
[4] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[5] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

EVALUATION OF EXPERIMENTAL FUNGICIDES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

H. L. Campbell, A. K. Hagan, K. L Bowen, and M. D. Pegues

Objective: To evaluate new fungicides and compare them at 14-day application intervals for their efficacy in controlling leaf spot diseases and southern stem rot of peanut in a dryland peanut production system in southwest Alabama.

Methods: Peanut cultivar Georgia Green was planted on May 16 at the Gulf Coast Research and Extension Center near Fairhope, Alabama, in a field with a history of peanut production. The soil type was a Malbis fine sandy loam (OM<1 percent) and seed were sown at a rate of approximately five seed per foot of row in raised beds with bed knockers. On April 21, the test area was disked, ripped, and bedded. On June 26, 2 ounces per acre of Cadre + 0.225 ounce per acre of Strongarm + 1 pint per 25 gallons Induce were applied for postemergent weed control. On August 21, 1.0 ounce per acre of Tracer + 1.0 ounce per acre of Karate were applied for insect control. Thrips were controlled at planting with an in-furrow application of 6 to 7 pounds per acre of Temik 15G.

Plots consisted of four 30-foot rows spaced 38 inches apart arranged in a randomized complete block with six replications. Fungicides were applied on a 14-day schedule on June 27, July 10, July 24, August 8, August 21, September 5, and September 20 using a four-row, ATV-mounted, CO_2 sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre.

Early and late leaf spot were visually rated on September 26 using the Florida leaf spot scoring system [1 = no disease; 2 = very few lesions in upper canopy; 3 = few lesions in lower and upper canopy; 4 = some lesions with slight defoliation (≤ 10 percent); 5 = lesions noticeable in upper canopy with some defoliation (≤ 25 percent); 6 = lesions numerous with significant defoliation (≤ 50 percent); 7 = lesions numerous with heavy defoliation (≤ 75 percent); 8 = very numerous lesions on few remaining leaves with heavy defoliation (≤ 90 percent); 9 = very few remaining leaves covered with lesions (≤ 95 percent); 10 = completely defoliated or dead plants).

Rust was also rated on September 26 using the ICRISAT rust rating scale (1 = no disease, 2 = 10 percent leaves affected, 3 = 20 percent leaves affected, 4 = 30 percent leaves affected, 5 = 40 percent leaves affected, 6 = 50 percent leaves affected, 7 = 60 percent leaves affected, 8 = 70 percent leaves affected, 9 = plants severely affected, 80-100 percent leaves withering).

Counts of southern stem rot (SSR) hits (1 hit was defined as ≤ 1 foot of consecutive SSR-damaged plants) were made on October 3 immediately after plot inversion. Plots were harvested on October 6 and yields were reported at 10.0 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference (LSD) test (P = 0.05).

Results: During the 2006 peanut production season, temperatures were near normal and monthly rainfall totals were below normal through July. Above normal rainfall in August and September led to a late season increase in foliar disease severity.

Bravo/KFD-09-01 + Bravo controlled leaf spot diseases significantly better than Bravo full season, Bravo/Folicur, and Bravo/KFD-09-01. Even though rust severity increased in August and September, there were no significant differences in rust ratings between fungicide programs. Severity of SSR was higher than had been observed in previous years. Incidence of SSR was higher for Bravo full-season compared with Bravo/Folicur and Bravo/KFD-09-01 + Folicur. Yield was higher for Bravo/KFD-09-01 treatments than for the Bravo/Abound program. Otherwise, yields for the remaining fungicide programs were similar.

EVALUATION OF EXPERIMENTAL FUNGICIDES FOR PEANUT DISEASE CONTROL IN SOUTHWEST ALABAMA, GCREC

Treatment and rate/ac	Application timing[1]	Disease ratings LS[2]	Rust[3]	SSR[4]	Yield *lb/ac*
Bravo Weather Stik 24.0 fl oz Folicur 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.2[5]	4.7	3.0	5292
Bravo Weather Stik 24.0 fl oz KFD-09-01 3.6F 7.2 fl oz	1,2,7 3,4,5,6	3.3	4.7	3.8	5353
Bravo Weather Stik 24.0 fl oz KFD-09-01 3.6 F 7.2 fl oz + Topsin M 4.5F 5.0 fl oz	1,2,7 3,4,5,6	2.9	4.7	4.2	5284
Bravo Weather Stik 24.0 fl oz KFD-09-01 3.6F 7.2 fl oz + Bravo 720 24.0 fl oz	1,2,7 3,4,5,6	2.7	3.8	2.8	5682
Bravo Weather Stik 24.0 fl oz Abound 2.08SC 18.5 fl oz	1,2,4,6,7 3,5	2.9	4.0	4.2	4848
Bravo Weather Stik 24.0 fl oz	1-7	3.0	4.5	5.0	5292
LSD (P = 0.05)		**0.3**	**1.1**	**1.9**	**474**

[1] Fungicide applications were made at 14-day intervals unless otherwise indicated.
[2] Early and late leaf spot were assessed using the Florida leaf spot scoring system (1 = no disease;... 10 = completely dead plants).
[3] Rust was rated using the ICRISAT 1-9 rating scale (1 = no disease, ...9 = plants severely affected, 80-100 percent leaves withering).
[4] Southern stem rot incidence was expressed as the number of diseased plants per 60 feet of row.
[5] Mean separation within columns was according to Fisher's protected least significant difference (LSD) test (P = 0.05).

YIELD OF EXPERIMENTAL PEANUT LINES AND THEIR SENSITIVITY TO TSWV, LEAF SPOT DISEASES, AND WHITE MOLD, WREC

A. K. Hagan, H. L. Campbell, K. L. Bowen, B. Gamble, and J. Bostick

Objective: To assess the yield potential and the susceptibility of experimental runner and Virginia-type peanut cultivars to tomato spotted wilt, early and late leaf spot, and white mold in a well-rotated, irrigated production system in southeast Alabama.

Methods: On May 18, experimental runner peanut lines were planted at a rate of approximately six seed per foot of row in a field that was cropped to peanut after 2 years of cotton using conventional tillage practices in a Dothan fine sandy loam (OM<1 percent). Gypsum at a rate of 600 pounds per treated acre was applied on a 14-inch band over the row middles. Disease and weed control as well as soil fertility recommendations of the Alabama Cooperative Extension System were followed. The plot area was irrigated as needed. Escape weeds were pulled by hand. A randomized complete block design with four replications per peanut cultivar was used. Plots were four 20-foot rows spaced 3 feet apart. Fungicides were applied for the control of leaf spot diseases at 2-week intervals with a tractor-mounted boom sprayer with three TX-8 nozzles per row that delivered approximately 15 gallonslons of spray volume per acre.

Incidence of tomato spotted wilt virus (TSWV) was determined by counting the number of hits (1 hit was defined as ≤ 1 foot of consecutive diseased plant(s) per row). Ratings for TSWV were recorded on September 14, September 22, October 5, and October 25 for the maturity group 3, 4, 4.5, and 5 cultivars, respectively.

Early and late leaf spot (LS) were rated together using the Florida peanut leaf spot scoring system [1 = no disease, 2 = very few lesions in canopy, 3 = few lesions in lower and upper leaf canopy, 4 = some lesions in lower and upper canopy with light defoliation (≤10 percent), 5 = lesions noticeable in upper canopy with some defoliation (≤25 percent), 6 = lesions numerous with significant defoliation (≤50 percent), 7 = lesions numerous with heavy defoliation (≤75 percent), 8 = numerous lesions on few remaining leaves with severe defoliation (≤90 percent), 9 = very few remaining leaves covered with lesions and severe defoliation (≤95 percent), and 10 = plants defoliated or dead]. Final leaf spot ratings were taken on September 22, October 3, October 10, and October 25 for the maturity group 3, 4, 4.5, and 5 cultivars, respectively.

White mold hit counts (1 hit was defined as ≤ 1 foot of consecutive white mold-damaged plants per row), were collected immediately after plot inversion on September 22, October 3, October 10, and October 26 for the maturity group 3, 4, 4.5, and 5 cultivars, respectively.

Plots were harvested with a field combine. Yields were reported at 7 percent moisture. Significance of treatment effects were tested by analysis of variance and Fisher's protected least significant difference test (P=0.05).

Results: Monthly rainfall totals for May, June, and early July were below to well below the historical average, while afternoon temperatures, particularly in June and July, were above to well above the seasonal average for this location.

Significant differences in the incidence of TSWV and white mold as well as severity of leaf spt diseases were noted between peanut cultivars. Incidence of TSWV in TX033630 and N03091T was similar to the ratings for the susceptible standards Florunner and NC-7. In contrast, the disease resistant standard AP-3 had lower TSWV ratings than all experimental lines except for UF03514, GA 012517, and GA 012519. Both early and late leaf spot were noted on most experimental lines. Heaviest leaf spotting and noticeable defoliation was noted on GA 012519. Lowest LS ratings were recorded for the standard NC-7 and CRSP648. Incidence of white mold was higher on NC-7, however, than all lines except for N01013T and N03089. Most of the experimental lines had white mold hit counts that were similar to those of the disease resistant standard AP-3. Overall, yields declined as the incidence of TSWV increased. Typically, highest yields were recorded for the TSWV resistant lines such as UF03514, GA 012519, and the commercial cultivar AP-3.

In a rotation situation, TSWV has more impact on yield than either leaf spot diseases or white mold. The extreme susceptibility of the Florunner peanut to TSWV was clearly demonstrated. In contrast, the experimental peanut lines and AP-3 with the lowest TSWV ratings often had the highest yields. None of the Virginia experimental peanut lines was as resistant nor had the yield potential of the best experimental runner peanut cultivars.

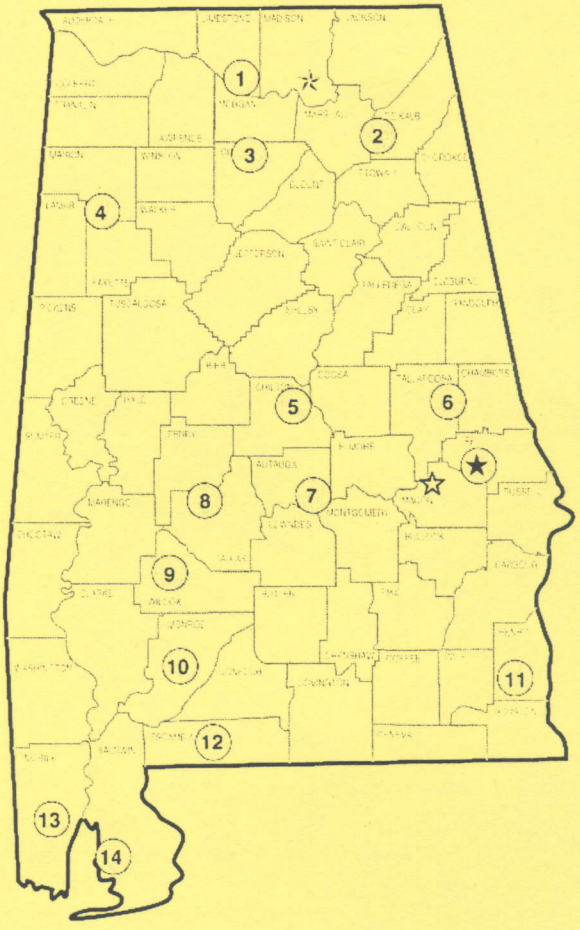
RESPONSE OF EXPERIMENTAL RUNNER AND VIRGINIA PEANUT LINES TO DISEASES, WREC

Peanut Line	Disease ratings			
	TSWV hits/60 ft row	Leaf spot ratings	White mold hits/60 ft row	Yield lb/ac
Maturity Group 3				
NC-7	23.0 abc [1]	2.8 hi	8.0 a	2577 i
GA 012535	17.8 de	3.8 efg	1.5 fg	5518 abc
VT976133	21.8 bcd	3.4 fgh	2.0 d-f	4265 efg
TX 033630	26.0 a	4.3 cde	0.0 g	4828 b-e
Maturity Group 4				
Florunner	25.5 ab	3.6 efg	4.0 b-f	3612 gh
UF03514	6.3 ij	3.5 e-h	0.5 fg	5825 a
UF05309	17.8 de	3.9 d-g	3.3 c-g	4774 b-f
UF06304	18.3 de	3.6 efg	3.0 c-g	4701 c-f
N03091T	22.0 a-d	3.1 ghi	4.8 a-e	3939 fgh
N01013T	1.8 de	4.3 cde	7.0 ab	3376 hi
N03089T	19.0 cde	2.8 hi	6.3 abc	3249 hi
CRSP925	15.8 ef	3.5 e-h	1.8 efg	3576 gh
Maturity Group 4.5				
AP-3	8.0 hij	4.1 c-f	3.0 c-g	5627 ab
CRSP648	13.0 fg	2.5 i	3.5 b-g	4701 c-f
Maturity Group 5				
GA 012519	5.3 j	5.8 a	5.3 a-d	5173 a-d
GA 012517	5.5 j	4.9 bc	2.3 d-g	4592 def

[1] Means in each column that are followed by the same letter were not significantly different according to ANOVA and Fisher's protected least significant difference (LSD) test (P=0.05).

Alabama's Agricultural Experiment Station
AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

★ Main Agricultural Experiment Station, Auburn.
☆ Alabama A&M University.
☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Research and Extension Center, Belle Mina
2. Sand Mountain Research and Extension Center, Crossville
3. North Alabama Horticulture Research Center, Cullman.
4. Upper Coastal Plain Agricultural Research Center, Winfield.
5. Chilton Research and Extension Center, Clanton.
6. Piedmont Substation, Camp Hill.
7. Prattville Agricultural Research Unit, Prattville.
8. Black Belt Research and Extension Center, Marion Junction
9. Lower Coastal Plain Substation, Camden
10. Monroeville Agricultural Research Unit, Monroeville.
11. Wiregrass Research and Extension Center, Headland.
12. Brewton Agricultural Research Unit, Brewton.
13. Ornamental Horticulture Research Center, Spring Hill
14. Gulf Coast Research and Extension Center, Fairhope.