



# PEANUT DISEASE CONTROL FIELD TRIALS, 2001

ENTOMOLOGY AND PLANT PATHOLOGY  
DEPARTMENTAL SERIES NO. 5  
MAY 2002

ALABAMA AGRICULTURAL EXPERIMENT STATION  
JOHN JENSON, INTERIM DIRECTOR  
AUBURN UNIVERSITY  
AUBURN, ALABAMA

PRINTED IN COOPERATION WITH  
THE ALABAMA COOPERATIVE EXTENSION SYSTEM  
(ALABAMA A&M UNIVERSITY  
AND AUBURN UNIVERSITY)

FIND THIS PUBLICATION ONLINE AT  
<http://www.ag.auburn.edu/resinfo/entplp/entplp5.pdf>



## Table of Contents

	Page
Acknowledgments	
Introduction .....	1
Evaluation of Headline and Moncut 70DF Applied at Varying Intervals for Control of Foliar and Soil-Borne Diseases of Peanut .....	3
Comparison of New and Experimental Fungicides for Control of Foliar and Soil-Borne Diseases of Peanut .....	5
Moncut 70DF with Abound 2SC or Folicur 3.6F Tank-Mixes for Control of Foliar and Soil-Borne Diseases of Peanut .....	7
Efficacy of In-Furrow Treatments of Selected Fungicides for Control of Southern Stem Rot on Peanut .....	9
Impact of In-Furrow and Foliar Applications of Abound 2.08SC on the Occurrence of Leaf Spot Diseases and Southern Stem Rot in Peanut .....	11
Comparison of New Fungicides with Recommended Programs for Control of Leaf Spot Diseases and Southern Stem Rot on Peanut .....	13
Control of Leaf Spot Diseases and Southern Stem Rot on Peanut with New Fungicides .....	15
In-Furrow Applications of Abound 2SC for Control of Leaf Spot Diseases and Southern Stem Rot on Peanut .....	17
Evaluation of Moncut 70DF with Recommended Spray Regimes for Control of Foliar and Soil-Borne Diseases of Peanut .....	19
Assessment of AU-PNUT Advisory for Disease Control on Conventional- and Reduced-Till Peanut .....	21
Impact of Application Interval on the Control of Leaf Spot Diseases on Peanut .....	26
Disease Severity on Experimental Peanut Lines .....	29
Disease Severity and Yield Response of Selected Peanut Cultivars under Recommended Fungicide Regimes .....	31
Severity of Leaf Spot Disease, Southern Stem Rot, and Tomato Spotted Wilt on Commercial Runner and Virginia-Type Peanut Lines .....	34
Recommended Fungicide Programs Evaluated for Control of Leaf Spot Diseases and Southern Stem Rot on Irrigated Peanut .....	36
Response of Dryland Peanuts to Recommended Fungicide Programs .....	39
Disease Severity and Yield Response of Selected Peanut Cultivars under Recommended Fungicide Regimes .....	42

*The information contained herein is available to all persons regardless of race,  
color, sex, or national origin.*

*Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, and other related acts, in cooperation with the U.S. Department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.*

## **Acknowledgments**

The following agencies provided financial support for the 2000 peanut disease research program:

BASF Corporation, Research Triangle Park, NC

BAYER Corporation, Research Triangle Park, NC

Gowan Corporation, Yuma, AZ

Griffin L.L.C., Valdosta, GA

Syngenta Crop Protection, Greensboro, NC

Sipcam Agro USA, Roswell, GA

# Peanut Disease Control Field Trials, 2001

A. K. Hagan, K. L. Bowen, H. L. Campbell, and M. E. Rivas-Davila<sup>1</sup>

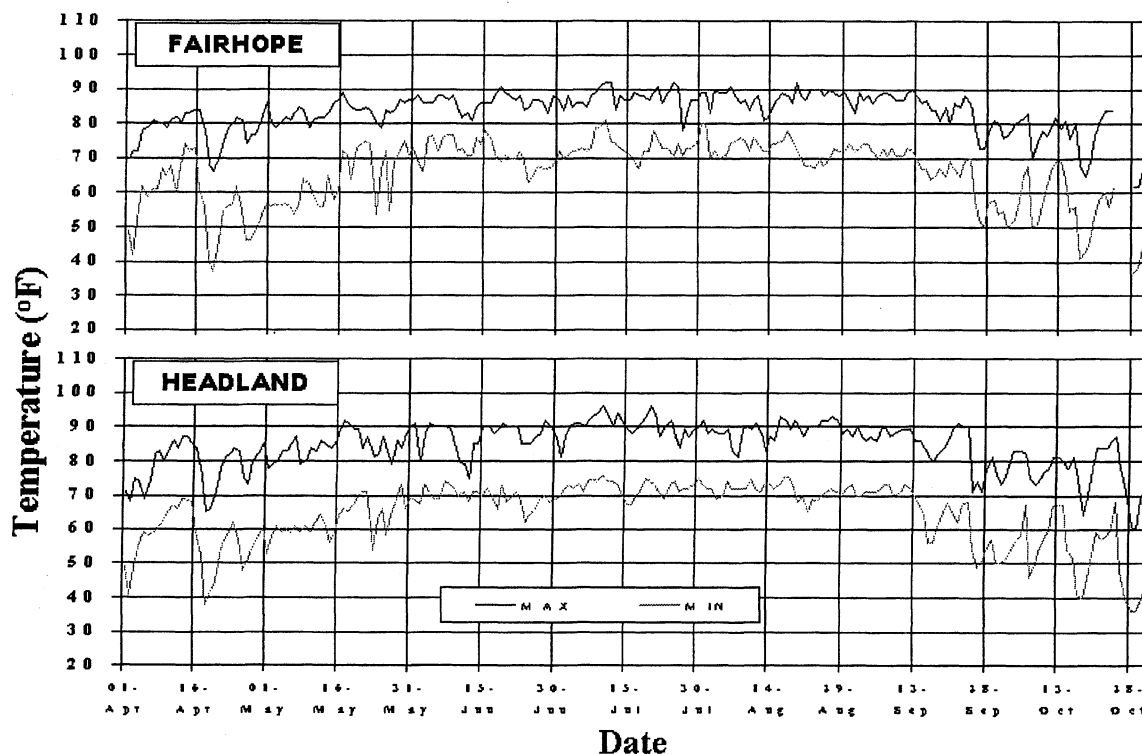
## Introduction

Fungicides, cultural practices, and resistant cultivars are available to aid in the control of specific diseases that affect peanut production. Management programs combining these practices can enhance disease control, resulting in more efficient peanut production.

In order to provide information on these management practices, Alabama Agricultural Experiment Station personnel conducted foliar and soil-borne disease trials at the Wiregrass Research and Extension Center in Headland, Alabama, and at the Gulf Coast Research and Extension Center in Fairhope, Alabama. This report summarizes the results of these trials.

During the 2001 peanut season temperatures were near normal (see Figure 1). While April and May were usually dry, rainfall totals for June, July, August and the first half of September were at or well above historical monthly averages for both research sites (see Figure 2).

Figure 1. Daily minimum and maximum temperature (°F), April to October 2001.

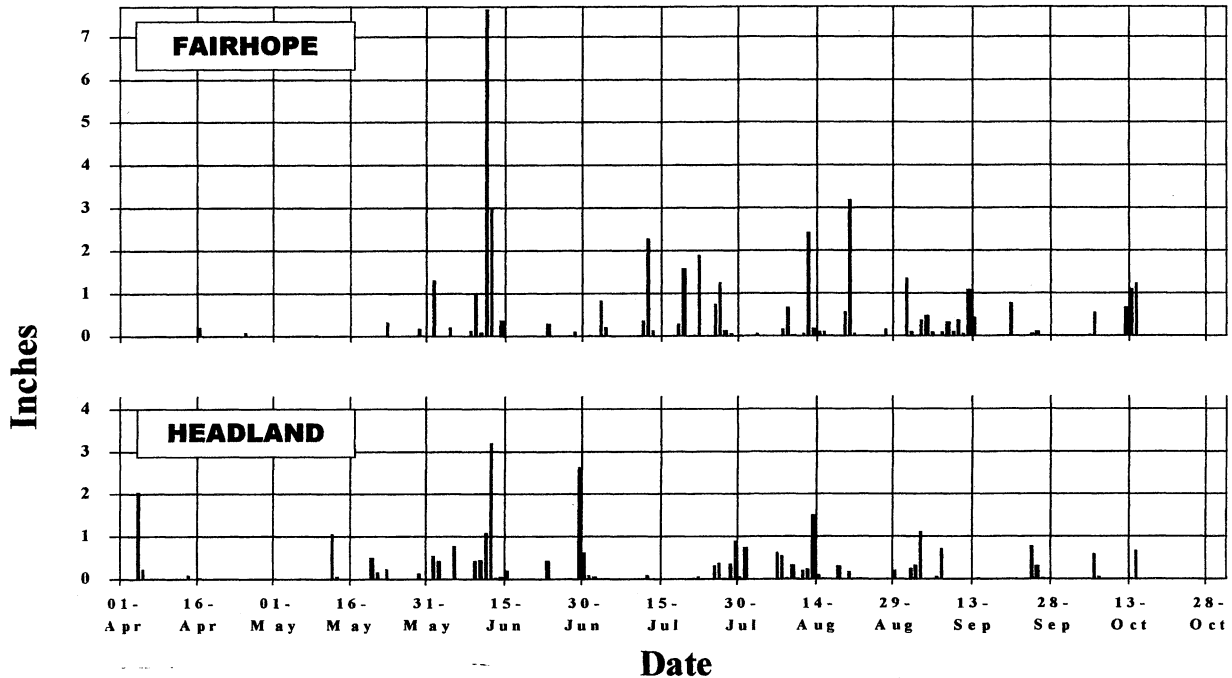


<sup>1</sup>Hagan and Bowen are Professors and Campbell and Rivas-Davila are Research Associates in the Auburn University Department of Entomology and Plant Pathology.

Despite favorable rainfall patterns, leaf spot (*Cercospora arachidicola* and *C. personatum*) severity was much lower than anticipated. Tomato spotted wilt virus (TSWV) incidence was relatively low and occurred mainly in early planted peanuts. Low levels of peanut rust (*Puccinia arachidis*) appeared just before harvest and caused little damage. Southern stem rot (*Sclerotium rolfsii*) incidence was not high at either location. Rhizoctonia limb rot (*Rhizoctonia solani*) was present in some trials at the Gulf Cost Research and Extension Center.

Overall, peanut yields were high on both irrigated and dry land fields.

Figure 2. Daily precipitation (inches) April to October 2001.



## Evaluation of Headline and Moncut 70DF Applied at Varying Intervals for Control of Foliar and Soil-Borne Diseases of Peanut

**Objective:** To assess the efficacy of candidate and registered fungicides applied under 14- or 21-day spray schedules for the control of foliar and soil-borne diseases in peanut.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan sandy loam (OM < 1%)

**Cultivar:** Georgia Green

### Planting:

**Date:** May 17, 2001

**Experimental Design:** Randomized complete block with six replications. Plot size was six 35-foot rows spaced 3 feet apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Field with history of peanut production.

### Cultural Practices:

**Herbicides:** Sonalan 1.5 pt + Dual 1.5 pt/ac (April 18), and Gramoxone Max 5.5 oz + 2,4 DB 1.5 pt + Basagran 0.5 pt/ac (June 18).

**Fungicides:** See table.

**Insecticides:** Karate 1.5 oz/ac (August 21).

**Nematicides:** Temik 15 lb/ac (May 17).

**Irrigation:** 1 inch applied on July 16. Center pivot system.

**Application of Treatments:** Fungicides were applied as a full canopy spray at a calibrated volume of 15 gallons per acre using a six-row tractor-mounted boom sprayer with TX8 nozzles. Applications were made at either two- or three-week intervals beginning June 19 and continuing through September 11.

**Disease Assessment:** Early and late leaf spot were visually rated on September 20 using the Florida leaf spot scoring system. Southern stem rot incidence (SSR) was assessed as the number of disease loci per 70 feet of row (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease). *Rhizoctonia* limb rot (RLR) was assessed using a 1 to 5 scale. SSR and RLR were evaluated on September 28 (first dig) and October 5 (second dig) immediately after plot inversion.

**Harvest:** Plots were harvested October 1 and October 8 and reported at 10.8% and 10.2% moisture, respectively.

**Summary:** When applied every two weeks, two, three, or four applications of Headline gave better control of leaf spot diseases than did Bravo Ultrex alone or Bravo Ultrex/Moncut 70 DF and Bravo Ultrex/Abound 2SC programs. When applied on a 21-day schedule, only the Bravo Ultrex/Headline/Moncut program had lower leaf spot ratings than those peanuts treated every two weeks with Bravo Ultrex alone.

Differences in SSR and RLR incidence were noted between the Bravo Ultrex-treated plots and those receiving applications of the other fungicides only at the second dig. Significant reductions in SSR incidence at the second digging were noted with all fungicide programs when compared with Bravo Ultrex alone. When compared with Bravo Ultrex alone, all programs except for those including four applications of Headline, Abound 2SC, and Folicur 3.6F at 21-day intervals gave better control of RLR at the second dig. Except for Bravo Ultrex/Moncut, yield for all fungicide programs applied every two weeks was significantly higher than that of the Bravo Ultrex-

treated peanut. In contrast, yield response obtained with the 21-day Headline and Folicur programs did not significantly differ from that noted with Bravo Ultrex alone.

**EFFECT OF HEADLINE AND MONCUT 70DF FUNGICIDES APPLIED AT VARYING INTERVALS FOR THE CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Treatment and Rate Per Acre	Application Timing	Leaf Spot <sup>1</sup>	Disease Ratings				Yield (lbs/ac)	
			SSR <sup>2</sup>		RLR <sup>3</sup>		1st dig	2nd dig
			1st dig	2nd dig	1st dig	2nd dig	1st dig	2nd dig
Untreated control		7.5 a	19.7 a	26.3 a	2.8 a	3.3 a	2434 e	2067 e
Bravo Ultrex 1.4 lb	1-7	4.5 bc	9.8 bc	16.5 b	2.2 bc	2.5b	3878 d	3906 d
Bravo Ultrex 1.4 lb Headline 2.09 EC 0.4 pt	1,6,7 2,3,4,5	3.0 g	11.8 b	11.3 c	2.5 ab	2.0 bc	4307 c	4521 bc
Bravo Ultrex 1.4 lb Headline 2.09 EC 0.56 pt	1 2-4@21 days	4.2 cd	9.5 bc	7.7 cde	2.5 ab	1.8 c	4452 bc	4252 cd
Bravo Ultrex 1.4 lb Folicur 3.5F 0.45 pt	1 2-4@21 days	4.8 b	7.5 cd	11.0 c	2.3 ab	2.2 bc	3726 d	3754 d
Bravo Ultrex 1.4 lb Headline 2.09 EC 0.4 pt	1,3,5,7 2,4,6	3.3 fg	8.3 b-d	8.7 c-e	2.3 c	1.8 c	4791 ab	4895 ab
Bravo Ultrex 1.4 lb Headline 2.09 EC 0.4 pt Moncut 70DF 1.1 lb	1,3,5,7 2,4,6 3,5	3.0 g	5.0 d	6.5 de	1.7 c	1.8 c	5081 a	5102 a
Bravo Ultrex 1.4 lb Abound 2.08 SC 1.2 pt	1,2,4,6,7 3,5	3.8 de	7.0 cd	9.8 cd	2.0 bc	2.0 bc	4549 bc	4653 a-c
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,6,7 2,3,4,5	3.7 ef	7.0 cd	7.8 cde	2.0 bc	1.8 c	4618 bc	4584 bc
Bravo Ultrex 1.4 lb Headline 2.09EC 0.76 pt + Moncut 70DF 1.1 lb	1,2,4,6,7 3,5	3.0 g	6.2 cd	5.5 e	1.7 c	1.7c	5054 a	5012 ab
Bravo Ultrex 1.4 lb Headline 2.09EC 0.76 pt + Moncut 70DF 1.1 lb	1 2-4@21 days	3.8 fg	7.0 cd	7.2 c-e	2.2 bc	1.8 c	4508 bc	4238 cd
Bravo Ultrex 1.4 lb Moncut 70DF 1.1 lb	1-7 3,5	4.8 b	6.7 cd	7.7 c-e	2.2 bc	1.7c	4300 c	4141 cd
<b>LSD (0.05)</b>		<b>0.5</b>	<b>3.7</b>	<b>4.3</b>	<b>0.6</b>	<b>0.6</b>	<b>362</b>	<b>513</b>

<sup>1</sup>Early and late leaf spot were assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= very few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.

<sup>3</sup>Rhizoctonia limb rot was assessed on a 1-5 scale (1= 0-10% damage of a given row length, 2= 11-25%, 3= 26-50%, 4= 51-75%, and 5= >75%).



## Comparison of New and Experimental Fungicides for Control of Foliar and Soil-Borne Diseases of Peanut

**Objective:** To assess the efficacy of candidate and registered fungicides applied under a 14-day spray schedule for the control of foliar and soil-borne diseases in peanut.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan sandy loam (OM <1%)

**Cultivar:** Georgia Green

### Planting:

**Date:** May 17, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was six 35-foot rows spaced 3 feet apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Field with a history of peanut production.

### Cultural Practices:

**Herbicides:** Sonalan 1.5 pt + Dual 1.5 pt/ac (April 18), and Gramoxone Max 5.5 oz + 2,4 DB 1.5 pt + Basagran 0.5 pt/ac (June 18).

**Fungicides:** See table.

**Insecticides:** Karate 1.5 oz/ac (August 21).

**Nematicides:** Temik 15 lb/ac (May 17).

**Irrigation:** 1 inch applied on July 16. Center pivot system.

**Application of Treatments:** Fungicides were applied as a full canopy spray at a calibrated volume of 15 gallons per acre using a six-row tractor-mounted boom sprayer with TX8 nozzles. Applications were made June 19, July 3, July 18, August 1, August 16, August 28, and September 11.

**Disease Assessment:** Early and late leaf spot were visually rated on September 20 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on September 28 (first dig) and October 5 (second dig) immediately after plot inversion (one locus is defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on October 1 (first dig) and October 8 (second dig). Yields were reported at 10.2% moisture.

**Summary:** Equus 720, Kocide 2000, and Bravo Ultrex gave similar levels of leaf spot disease control. Overall, combination programs of Equus plus Abound 2SC or Folicur 3.6F were the most effective in controlling leaf spot. At the first dig, SSR incidence in the plots treated with Abound 2SC or Folicur 3.6F did not differ from disease levels recorded in the plots treated with Equus 720 alone. Generally, peanuts treated with Abound 2SC and Folicur 3.6F suffered less damage than did those sprayed with Bravo Ultrex alone. At the second dig, significant reductions in SSR damage were obtained with the Equus DF/Abound 2SC, and Equus 720 + GX-7001/Abound programs when compared with Equus 720 or Bravo Ultrex alone. At both harvest dates, programs that included applications of Abound 2SC or Folicur 3.6F yielded significantly higher than those that were not treated with either fungicide. Highest overall yield was obtained with the Equus 720 + Kocide 4.5LF/Abound 2SC program. Yields in the plots treated season-long with Equus 720, Kocide 2000, Serenade + Kocide DF, and Bravo Ultrex were similar.

**EFFECT OF NEW AND EXPERIMENTAL FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Treatment and Rate per Acre	Application Timing	Disease Ratings		Yield (lbs/ac)	
		Leaf Spot <sup>1</sup>	Southern Stem Rot <sup>2</sup> 1st dig    2nd dig	1st dig	2nd dig
Untreated control		7.7 a	22.3 a    29.8 a	2226 f	1950 e
Equus 720 1.5 pt	1-7	5.2 b-d	11.0 c-e    17.0 bc	3450 cd	2841 d
Equus 720 1.5 pt Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	4.8 de	11.3 c-e    14.8 b-d	3948 ab	3733 bc
Equus DF 1.4 lb Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	4.3 ef	9.2 e    11.2 d	4058 ab	4086 ab
Equus 720 1 pt + Kocide 4.5 LF 1 pt Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	4.0 f	10.3 de    11.8 cd	4355 a	4328 a
Equus 720 1 pt + GX-7001 2 fl oz Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	3.2 g	11.0 c-e    11.0 d	4266 a	3851 abc
Equus 720 1.5 pt Folicur 3.6F 0.45 pt	1,6,7 2,3,4,5	3.8 f	9.5 e    14.5 b-d	4238 a	3885 a-c
Equus 720 1.5 pt GX-676 3 oz Abound 2.08SC 1.2 pt	1,2,4,6,7 1,2,3,4 3,5	4.8 de	13.2 b-d    14.7 b-d	3401 cde	3768 bc
Kocide 2000 2 lb	1-7	5.5 bc	13.8 b-d    14.5 b-d	3235 de	2924 d
Serenade 2 lb + Kocide DF 2 lb	1-7	5.5 bc	14.5 bc    17.5 b	3249 de	2959 d
Serendade 2 lb + Kocide DF 2 lb Folicur 3.6F 0.45 pt	1,3,5,7 2,4,6	5.0 cd	11.0 c-e    13.5 b-d	3699 bc	3450 c
Bravo Ultrex 1.4 lb	1-7	5.7 b	15.2 b    18.5 b	3000 e	2586 d
<b>LSD (0.05)</b>		<b>0.7</b>	<b>3.6</b> <b>5.2</b>	<b>434</b>	<b>483</b>

<sup>1</sup>Early and late leaf spot were assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= very few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.

## **Moncut 70DF with Abound 2SC or Folicur 3.6F Tank-mixes for Control of Foliar and Soil-Borne Diseases of Peanut**

**Objective:** To assess the efficacy of candidate and competitive fungicides applied under a 14-day schedule for control of foliar and soil-borne diseases in peanut.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan sandy loam (OM<1%)

**Cultivar:** Georgia Green

### **Planting:**

**Date:** May 9, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was six 35-foot rows spaced 3 feet.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Field with a history of peanut production.

### **Cultural Practices:**

**Herbicides:** Sonalan 1.5 pt + Dual 1.5 pt/ac (April 17), and Storm 1.5 pt + 2,4 DB 1.5 pt/ac (June 20).

**Fungicides:** See table.

**Insecticides:**

**Nematicides:** Temik 15 lb/ac (May 10).

**Irrigation:** 0.5 inch applied on May 31, and 1 inch July 10, and July 23. Center pivot irrigation system.

**Application of Treatments:** Fungicides were applied using a six-row tractor-mounted boom sprayer with TX8 nozzles calibrated to deliver 15 gallons per acre and were applied June 18, July 2, July 16, July 30, August 15, August 27, and September 10.

**Disease Assessment:** Early and late leaf spot were visually rated on September 20 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease) were made on September 21 (first dig) and September 28 (second dig) immediately after plot inversion.

**Harvest:** Plots were harvested on September 26 and October 2, and yields were reported at 10.2% and 10.1% moisture, respectively.

**Summary:** The Bravo Ultrex/Headline 2.09EC program provided the best leaf spot disease control. Generally, the levels of leaf spot control obtained with the remaining fungicide programs were similar. Headline 2.09EC had little activity against SSR. At the first dig, SSR incidence was significantly lower in the plots treated with Bravo Ultrex/Folicur 3.6F/Moncut 70DF and Bravo Ultrex/Moncut 70DF + Stratego (7.0 fluid ounces) than in those treated with Bravo Ultrex alone. When compared with Bravo Ultrex alone, significant reductions in SSR counts were obtained by the second digging date with the Bravo Ultrex/Moncut 70DF and with both Bravo Ultrex/Moncut 70DF + Stratego programs. At both digging dates, nearly all programs that included applications of Moncut 70DF, Abound 2SC, Headline 2.09 EC, and Folicur 3.6F yielded significantly higher than the season-long Bravo Ultrex standard.

**EFFECT OF NEW AND EXPERIMENTAL FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Treatment and Rate per Acre	Application Timing	Disease Ratings			Yield (lbs/ac)	
		Leaf Spot <sup>1</sup>	Southern Stem Rot <sup>2</sup>		1st dig	2nd dig
Untreated control		9.0 a	24.7 a	31.2 a	2288 c	1300 d
Bravo Ultrex 1.4 lb Moncut 70DF 1.1 lb	1-7 2,4	4.8 b-d	8.3 cd	5.8 d	4349 ab	4120 ab
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3,4,5,6	4.7 cd	6.2 cd	8.3 cd	4549 a	4148 ab
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt Moncut 70DF 0.54 lb	1,2,4,6,7 3,5 4,6	5.3 bc	6.0 d	9.5 b-d	4425 a	3968 bc
Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	4.5 d	9.8 cd	8.5 cd	4694 a	4508 ab
Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt Moncut 70DF 1.1 lb	1,2,4,5,6,7 3 5	4.8 b-d	9.0 cd	11.0 b-d	4708 a	4113 ab
Bravo Ultrex 1.4 lb Moncut 70DF 1.1 lb + Stratego 7.0 fl oz	1,2,4,6,7 3,5	5.5 b	7.8 d	8.0 d	4508 a	4556 ab
Bravo Ultrex 1.4 lb Moncut 70DF 0.86 lb + Stratego 14 fl oz	1,2,4,6,7 3,5	4.7cd	9.0 cd	6.2 d	4687 a	4570 ab
Bravo Ultrex 1.4 lb Headline 2.09EC 0.75 pt	1,6,7 2,3,4,5	3.0 e	18.3 b	14.2 b	4445 a	4687 a
Bravo Ultrex 1.4 lb	1-7	5.0 b-d	12.8 c	13.5 bc	3802 b	3353 c
<b>LSD (0.05)</b>		<b>0.7</b>	<b>4.7</b>	<b>5.5</b>	<b>571</b>	<b>661</b>

<sup>1</sup>Early and late leaf spot were assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= very few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.

## **Efficacy of In-Furrow Treatments of Selected Fungicides for Control of Southern Stem Rot on Peanut**

**Objective:** To assess the efficacy of candidate and competitive fungicides in furrow for control of soil-borne diseases in peanut.

**Location:** Wiregrass Research and Extension Center in Headland, AL

**Soil Type:** Dothan sandy loam (OM<1%)

**Cultivar:** Georgia Green

### **Planting:**

**Date:** May 9, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was four 35-foot rows spaced 3 feet apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Peanut-cotton-peanut rotation.

### **Cultural Practices:**

**Herbicides:** Sonalan 1.5 pt + Dual 1.5 pt/ac (April 17), and Storm 1.5 pt + 2,4 DB 1.5 pt/ac (June 20).

**Fungicides:** See table.

**Insecticides:**

**Nematicides:** Temik 10 lb/ac (May 9).

**Irrigation:** 0.5 inch applied on May 31 and 1 inch on July 10 and July 23. Center pivot system.

**Application of Treatments:** In-furrow fungicide applications were made at planting using a tractor-mounted CO<sub>2</sub> sprayer with 8001 nozzles calibrated to deliver 5 gallons per acre. Foliar fungicide applications were made on June 18, July 2, July 16, July 30, August 15, August 27, and September 10.

**Disease Assessment:** Counts of southern stem rot (SSR) loci were made immediately after plot inversion on September 21 (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on September 27. Yield was reported at 10.4% moisture.

**Summary:** The only treatment that significantly reduced SSR loci counts compared to Bravo Ultrex alone was the Bravo Ultrex/Abound 2SC program. Yields in the plots receiving in-furrow applications of Terraclor 15G, Terraclor 2E, Terraclor 4F, Moncut 70DF, and/or Botran 75W were similar to those of the Bravo Ultrex standard. In contrast, significant yield gains were obtained with both of the Bravo Ultrex/Abound 2SC programs.

**EFFECT OF FUNGICIDE IN-FURROW TREATMENTS ON SOUTHERN STEM ROT AND ON YIELD,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Treatment and Rate per Acre	Application Timing	Southern Stem Rot <sup>1</sup>	Yield (lbs/ac)
Untreated control		19.3 a <sup>2</sup>	2599 d
Bravo Ultrex 1.4 lb	1-7	12.3 b	3968 c
Terraclor 15G 10 lb Bravo Ultrex 1.4 lb	in-furrow 1-7	12.0 bc	4044 c
Terraclor 2E 96 fl oz Bravo Ultrex 1.4 lb	in-furrow 1-7	10.3 bc	4113 c
Terraclor 4F 48 fl oz Bravo Ultrex 1.4 lb	in-furrow 1-7	10.7 bc	4162 bc
Botran 75W 12 oz Bravo Ultrex 1.4 lb	in-furrow 1-7	11.7 bc	4093 c
Moncut 70DF 7.1 oz Bravo Ultrex 1.4 lb	in-furrow 1-7	13.0 b	4127 c
Botran 75W 4 oz + Moncut 70DF 4.3 oz Bravo Ultrex 1.4 lb	in-furrow 1-7	12.2 bc	4162 bc
Abound 2.08SC 7.7 fl oz Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt	in-furrow 1,2,4,6,7 3,5	11.8 bc	4653 ab
Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	7.7 c	4832 a
<b>LSD (0.05)</b>		<b>4.6</b>	<b>503</b>

<sup>1</sup>Southern stem rot counts, which were taken immediately after plot inversion (135 DAP), are expressed as the number of disease loci per 70 ft of row.

## **Impact of In-Furrow and Foliar Applications of Abound 2.08SC on the Occurrence of Leaf Spot Diseases and Southern Stem Rot in Peanut**

**Objective:** To assess the efficacy of foliar and in-furrow fungicide application for control of foliar and soil-borne diseases in peanut.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan sandy loam (OM <1%)

**Cultivar:** Georgia Green

### **Planting:**

**Date:** May 9, 2001

**Experimental Design:** Randomized complete block design six replications. Plots size was four 35-foot rows spaced 3 feet apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Cotton-peanut rotation.

### **Cultural Practices:**

**Herbicides:** Sonalan 1.5 pt + Dual 1.5 pt/ac (April 17), and Storm 1.5 pt + 2,4 DB 1.5 pt/ac (June 20).

**Fungicides:** See table.

**Insecticides:** See nematicides.

**Nematicides:** Temik 10 lb/ac on band (May 9).

**Irrigation:** 0.5 inch applied on May 31, and 1 inch on July 10 and July 23. Center pivot irrigation system.

**Application of Treatments:** In-furrow applications were made at planting at 5 gallons per acre using a tractor-mounted CO<sub>2</sub> sprayer with 8001 nozzles. Foliar fungicide applications were made at two-week intervals (June 18, July 2, July 16, July 30, August 15, August 27, and September 10) and were applied as a full canopy spray at a calibrated volume of 15 gallons per acre using a four-row tractor-mounted boom sprayer with TX8 nozzles.

**Disease Assessment:** Early and late leaf spot were visually rated on August 14 and September 20 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on September 21 immediately after plot inversion (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on September 26. Yields were reported at 10.2% moisture.

**Summary:** The in-furrow treatments of Abound 2SC had no influence on the severity of leaf spot diseases or SSR at the end of the growing season and did not appreciably increase peanut yield. Regimes that included two or three foliar applications of Tilt + Bravo or Abound 2SC gave better control of leaf spot diseases than did the standard season-long Bravo Ultrex or Bravo Ultrex/Folicur 3.6F programs. In addition, SSR incidence was significantly lower in the plots receiving two or three foliar applications of the 0.8 and 1.2 pints per acre rates of Abound 2SC, or four applications of Folicur 3.6F than in the season-long Bravo Ultrex program. Yields in the plots treated with Bravo Ultrex alone or Tilt + Bravo/Bravo were significantly lower than those programs that included two to four mid-season Abound 2SC and/or Folicur 3.6F applications.

**EFFECT OF IN-FURROW AND FOLIAR APPLICATIONS OF ABOUND 2.08SC  
ON LEAF SPOT SEVERITY, SOUTHERN STEM ROT INCIDENCE, AND YIELD OF PEANUT,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Treatment and Rate per Acre	Application Timing	Leaf Spot <sup>1</sup>	Southern Stem Rot <sup>2</sup>	Yield (lbs/ac)
Untreated control		8.5 a	23.7 a	2579 g
Abound 2.08SC 7.7 fl oz	in-furrow at planting	3.2 g	10.5 c-e	4598 a-c
Tilt 3.6 EC 2 fl oz + Bravo 720 1.0 pt	1,2,4			
Abound 2.08SC 1.2 pt	3,5			
Bravo 720 1.5 pt	6,7			
Abound 2.08SC 7.7 fl oz + Ridomil Gold 4EC 8 fl oz	in-furrow at planting	3.3 fg	6.8 ef	4756 ab
Tilt 3.6EC 2 fl oz + Bravo 720 1.0 pt	1,2,4			
Abound 2.08 SC 1.2 pt	3,5			
Bravo 720 1.5 pt	6,7			
Abound 2.08SC 7.7 fl oz	in-furrow at planting	4.5 c-e	12.5 b-d	4190 de
Tilt 3.6EC 2 fl oz + Bravo 720 1.0 pt	1,2,4			
Bravo 720 1.5 pt	3,5,6,7			
Tilt 3.6EC 2 fl oz + Bravo 720 1.0 pt	1,2,4	4.5 c-e	13.8 bc	3498 f
Bravo 720 1.5 pt	3,5,6,7			
Tilt 3.6 EC 2 fl oz + Bravo 720 1.0 pt	1,2,4	3.3 fg	10.3 c-f	4971 a
Abound 2.08SC 1.2 pt	3,5			
Bravo 720 1.5 pt	6,7			
Abound 2.08SC 7.7 fl oz	in-furrow at planting	5.0 bc	7.3 ef	4459 b-d
Bravo 720 1.5 pt	1,2,7,8			
Folicur 3.6F 0.45 pt	3,4,5,6			
Bravo 720 1.5 pt	1,2,7,8	5.0 bc	7.0 ef	4224 cd
Folicur 3.6F 0.45 pt	3,4,5,6			
Abound 2.08SC 7.7 fl oz	in-furrow at planting	3.8 e-g	11.5 b-d	4307 cd
Tilt 3.6EC 2 fl oz + Bravo 720 1.0 pt	1,2,4			
Abound 2.08SC 0.8 pt	3,5			
Bravo 720 1.5 pt	6,7,8			
Abound 2.08SC 7.7 fl oz	in-furrow at planting	4.0 d-f	9.7 d-f	4577 a-d
Tilt 3.6EC 2 fl oz + Bravo 720 1.0 pt	1,2			
Abound 2.08SC 0.8 pt	3,4,5			
Bravo 720 1.5 pt	6,7,8			
Abound 2.08SC 7.7 fl oz	in-furrow at planting	4.3 c-e	6.3 f	4722 ab
Tilt 3.6 EC 2 fl oz + Bravo 720 1.0 pt	1,2			
Abound 2.08SC 0.8 pt	3,5			
Folicur 3.6F 0.45 pt	4,6			
Bravo 720 1.5 pt	7			
PropiMax 2 fl oz + Bravo 720 1 pt	1,2	4.7 cd	12.7 b-d	3685 f
Bravo 720 1.5 pt	3,4,5,6,7,8			
Bravo 720 1.5 pt	1-7	5.5 b	15.2 b	3795 ef
<b>LSD (0.05)</b>		<b>3.4</b>	<b>4.0</b>	<b>400</b>

<sup>1</sup>Early and late leaf spot were assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.



## Comparison of New Fungicides with Recommended Programs for Control of Leaf Spot Diseases and Southern Stem Rot on Peanut

**Objective:** To assess the efficacy of candidate and registered fungicides applied under a 14-day spray schedule for the control of foliar and soil-borne diseases in peanut.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan sandy loam (OM <1%)

**Cultivar:** Georgia Green

### Planting:

**Date:** May 17, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was six 35-foot rows spaced 3 feet.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Field with a history of peanut production.

### Cultural Practices:

**Herbicides:** Sonalan 1.5 pt + Dual 1.5 pt/ac (April 18) and Gramoxone Max 5.5 oz + 2,4 DB 1.5 pt + Basagran 0.5 pt/ac (June 18).

**Fungicides:** See table.

**Insecticides:** Karate 1.5 oz/ac (August 21).

**Nematicides:** Temik 15 lb/ac (May 17).

**Irrigation:** 1 inch applied on July 16. Center pivot irrigation system.

**Application of Treatments:** Fungicide applications were made with a six-row tractor-mounted boom sprayer with TX8 nozzles and were applied as a full canopy spray at a calibrated volume of 15 gallons per acre. Applications were made June 19, July 3, July 18, August 1, August 16, August 28, and September 11.

**Disease Assessment:** Early and late leaf spot were visually rated on September 20 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on September 28 (first dig) and October 4 (second dig) immediately after plot inversion (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on October 1 (first dig) and October 8 (second dig). Yields were reported at 10.2% moisture.

**Summary:** Bravo/Headline gave better leaf spot control than most other treatment regimes. The programs that included AMS21619 0.31 pt, Stratego (applications 2 and 4), Abound 2SC, and Stratego (full season) also gave significantly better control of leaf spot than the Bravo Ultrex standard. The Bravo Ultrex/Montero programs gave poorer control of leaf spot diseases than those that included applications of AMS21619, Folicur 3.6F, Abound 2SC, or Stratego alone. When compared with the Bravo Ultrex standard, significant reductions in SSR incidence were obtained at both rating dates with Abound 2SC, Moncut 70DF, and the higher rate of Montero. Yields were significantly higher in the plots treated with Folicur 3.6F, Abound 2SC, Moncut 70DF, Headline, and Montero than those reported for the Bravo Ultrex standard. Yield gains were also obtained at both digging dates with the low rate of AMS21619 and at the second date with the high rate of the same fungicide. Yields in the Stratego-treated plots were similar to those in the Bravo Ultrex standard plots.

**EFFECT OF FUNGICIDE PROGRAMS ON LEAF SPOT SEVERITY, SOUTHERN STEM ROT INCIDENCE,  
AND YIELD OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Treatment and Rate per Acre	Application Timing	Disease Ratings			Yield (lbs/ac)	
		Leaf Spot <sup>1</sup>	Southern 1st dig	Stem Rot <sup>2</sup> 2nd dig	1st dig	2nd dig
Untreated control		7.3 a	17.2 a-d	27.7 a	2233 g	1659 d
Bravo Ultrex 1.4 lb	1-7	3.8 b-d	16.8 a-d	18.7 b	3000 f	2759 c
Bravo Ultrex 1.4 lb AMS21619 480SC 0.31 pt	1,2,7 3,4,5,6	3.0 ef	14.5 d-e	15.5 b-d	3540 c-e	3512 b
Bravo Ultrex 1.4 lb AMS 21619 480SC 0.36 pt	1,2,7 3,4,5,6	3.2 d-f	16.8 a-d	12.3 c-e	3256 d-f	3305 b
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3,4,5,6	3.7 c-e	12.2 d-f	12.5 c-e	3643 b-d	3498 b
Bravo Ultrex 1.4 lb Stratego 0.88 pt	1,3,5,6,7 2,4	2.8 fg	19.7 a	17.7 b	2924 f	2779 c
Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	3.0 ef	9.2 f	12.0 de	3996 ab	3927 b
Bravo Ultrex 1.4 lb Moncut 70DF 1.1 lb	1-7 3,5	3.8 b-d	9.7 ef	6.5 f	4176 a	4010 a
Bravo Ultrex 1.4 lb Headline 2.09EC 0.75 pt	1,6,7 2,3,4,5	2.2 g	17.5 a-c	15.3 b-d	3657 b-d	3526 b
Stratego 0.44 pt	1-7	3.0 ef	18.8 ab	18.8 b	3042 f	2841 c
Bravo Ultrex 1.4 lb Stratego 0.88 pt	1,2,3,5,7 4,6	4.0 bc	17.5 a-c	16.8 bc	3187 ef	2772 c
Bravo Ultrex 1.4 lb Montero 25.6 fl oz	1,2,4,6,7 3,5	4.5 b	12.8 c-f	8.7 ef	3892 a-c	3588 b
Bravo Ultrex 1.4 lb Montero 32.0 fl oz	1,2,4,6,7 3,5	4.5 b	9.7 ef	6.8 f	4134 a	4120 a
<b>LSD (0.05)</b>		<b>0.8</b>	<b>5.0</b>	<b>4.6</b>	<b>403</b>	<b>338</b>

<sup>1</sup>Early and late leaf spot were assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= very few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.

## **Control of Leaf Spot Diseases and Southern Stem Rot on Peanut with New Fungicides**

**Objective:** To assess the efficacy of candidate and registered fungicides applied under a 14-day spray schedule for the control of foliar and soil-borne diseases on peanut.

**Location:** Gulf Coast Research and Extension Center, Fairhope, AL

**Soil Type:** Malbis fine sandy loam (OM <1%)

**Cultivar:** Georgia Green

### **Planting:**

**Date:** May 21, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was six 35-foot rows spaced 38 in apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Field with no history of peanut production.

### **Cultural Practices:**

**Herbicides:** Gramoxone Ultra 10 oz + Basagran 0.5 pt/ac + Activate 1 pt/50 gal (June 8), Strom 1.5 pt + Butyrac 175 1 pt/ac + Activete 1 pt/50 gal (June 25), and Select 10 oz + Prime Oil 1 pt/ac (July 23).

**Fungicides:** See table.

**Insecticides:** Temik 15G 6 lb/ac in furrow.

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Fungicides were applied as a full canopy spray at a calibrated volume of 20 gallons per acre using a six-row tractor-mounted boom sprayer with TX8 nozzles. Applications were made on June 27, July 9, July 23, August 6, August 17, August 29, and September 17.

**Disease Assessment:** Early and late leaf spot were visually rated on September 25 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on October 9 (first dig) and October 19 (second dig) immediately after plot inversion (one locus is defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on October 18 and October 25. Yields were reported at 10% moisture.

**Summary:** Low levels of peanut rust also appeared just before harvest. All of the fungicide programs gave similar levels of leaf spot control. Typically, symptoms were restricted to light spotting in the lower and upper canopy and little or no noticeable defoliation even on the unsprayed control. Equus 720 with four applications of Folicur 3.6F provided the best control of SSR. In spite of low leaf spot ratings and SSR pressure, significant increases in pod yields that were above those recorded in the plots treated with Equus DF or Equus 720 alone were obtained with the Equus 720/Headline/Folicur, Equus 720/BAS 510, Equus 720/Folicur 3.6F, and Equus 720/Abound 2SC programs.

**EFFECT OF NEW FUNGICIDES ON LEAF SPOT SEVERITY, SOUTHERN STEM ROT INCIDENCE,  
AND YIELD OF PEANUT, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Treatment and Rate per Acre	Application Timing	Disease Ratings			Yield (lbs/ac)	
		Leaf Spot <sup>1</sup>	Southern Stem Rot <sup>2</sup> 1st dig	2nd dig	1st dig	2nd dig
Untreated Control		3.8 a	8.2 a	7.5 a	4250 d	5605 f
Equus 720 1.5 pt	1-7	2.5 b	4.3 b	3.2 cd	4361 cd	6014 d-f
Headline 2.09EC 0.75 pt Folicur 3.6F 0.45 pt Equus 720 1.5 pt	1,2 3,4,5,6 7	2.7 b	4.3 b	3.3 b-d	4773 a-d	6396 b-d
Equus 720 1.5 pt Headline 2.09EC 0.75 pt	1,6,7 2,3,4,5	2.5 b	3.7 b	3.2 cd	4379 b-d	6165 c-f
Equus 720 1.5 pt Headline 2.09EC 0.75 pt Moncut 50W 1.5 lb	1,3,5,7 2,4,6 3,5	2.7 b	3.8 bc	3.5 b-d	4848 a-c	6571 a-d
Equus 720 1.5 pt Headline 2.09EC 0.75 pt Folicur 3.6F 0.45 pt	1,7 2,4,6 3,5	2.7 b	3.5 bc	3.0 d	4658 a-c	7160 a
Equus 720 1.5 pt BAS 510 00F 9.1 oz	1,6,7 2,3,4,5	2.5 b	4.5 b	3.3 b-d	4782 a-c	7135 ab
Equus 720 1.5 pt Folicur 3.6F 0.45 pt	1,6,7 2,3,4,5	2.5 b	2.8 c	2.8 d	4953 a	6889 a-c
Equus 720 1.5 pt Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	2.5 b	3.7 bc	3.5 b-d	4830 a-c	7029 ab
Equus 720 1.0pt+Kocide4.5LF 1.0pt Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	2.3 b	4.7 b	4.5 b	4551 a-d	6658 a-d
Equus 720 1.0pt+GX-7001 2 fl oz Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	2.3 b	3.8 bc	3.0 d	4700 a-d	5741 ef
Equus DF 1.4 lb Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	2.7 b	3.5 bc	3.2 cd	4890 ab	6119 d-f
Equus DF 1.4 lb	1-7	2.5 b	4.5 b	4.3 bc	4714 a-d	6126 d-f
<b>LSD (0.05)</b>		<b>0.6</b>	<b>1.4</b>	<b>1.3</b>	<b>525</b>	<b>740</b>

<sup>1</sup>Early and late leaf spot were assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.

## **In-Furrow Applications of Abound 2SC for Control of Leaf Spot Diseases and Southern Stem Rot on Peanut**

**Objective:** To assess the efficacy of candidate and registered fungicides applied under a 14-day schedule and/or in-furrow for the control of foliar and soil-borne diseases in peanut.

**Location:** Gulf Coast Research and Extension Center, Fairhope, AL

**Soil Type:** Malbis fine sandy loam (OM <1%)

**Cultivar:** Georgia Green

### **Planting:**

**Date:** April 17, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was four 35-foot rows spaced 38 in apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** Field with no previous history of peanut production.

### **Cultural Practices:**

**Herbicides:** Pre-emergence: Prowl EC 2 pt/ac (April 17). Storm 1.5 pt/ac + Activate 1 pt/50 gal (May 29, and June 19), 2,4-DB 12 oz/ac (June 19), and Select 10 oz + Prime Oil 1 pt/ac (July 23).

**Fungicides:** See table.

**Insecticides:** Temik 6 lb/ac (April 17) in furrow.

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Fungicides were applied at planting using a tractor-mounted CO<sub>2</sub> sprayer with 8001 nozzles. Foliar applications were applied as a full canopy spray at a calibrated volume of 20 gallons per acre and were made on June 5, June 20, July 5, July 16, August 6, August 17, and August 29.

**Disease Assessment:** Early and late leaf spot were visually rated on August 14 and September 16 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) were made on September 17 immediately after plot inversion (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on September 26. Yields were reported at 10% moisture.

**Summary:** With a leaf spot rating of 4.0, the untreated control suffered only moderate spotting on the leaves and light defoliation. Although some programs gave statistically better leaf spot control than others, actual differences in the level of leaf spotting were minor. No improvement in leaf spot control was noted in the plots receiving in-furrow treatments of Abound compared with those that were not treated. The incidence of SSR was lower in all of the fungicide-treated plots than the untreated control. The lowest SSR damage levels were noted in the plots treated with the Bravo 720/Folicur 3.6F program. Yields obtained with Bravo 720 alone did not significantly differ from those of the other fungicide programs or the untreated control. Again, the in-furrow applications of Abound 2SC did not have a significant impact on SSR or peanut yield.

**EFFECT OF FUNGICIDE IN-FURROW APPLICATIONS OF ABOUND 2SC ON LEAF SPOT, SOUTHERN STEM ROT, AND YIELD, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Treatment and Rate per Acre	Application Timing	Leaf Spot <sup>1</sup>	Southern Stem Rot <sup>2</sup>	Yield (lbs/ac)
Untreated Control		4.0 a	8.0 a	5872 ab
Abound 2SC 7.7 fl oz Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Abound 2SC 1.2 pt Bravo 720 1.5 pt	in-furrow at planting 1,2,4 3,5 6,7	2.7 bc	3.5 cd	5957 a
Abound 2SC 7.7 fl oz + Ridomil Gold 4EC 8 fl oz Tilt 3.6Ec 2 fl oz + Bravo 720 1 pt Abound 2SC 1.2 pt Bravo 720 1.5 pt	in-furrow at planting 1,2,4 3,5 6,7	2.3 c	4.3 bc	5888 ab
Abound 2SC 7.7 fl oz Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Bravo 720 1.5 pt	in-furrow at planting 1,2,4 3,5,6,7	2.3 c	4.7 bc	5367 d
Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Bravo 720 1.5 pt	1,2,4 3,5,6,7	2.7 bc	5.0 bc	5849 a-c
Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Abound 2SC 1.2 pt Bravo 720 1.5 pt	1,2,4 3,5 6,7	2.5 bc	4.8 bc	5420 cd
Abound 2SC 7.7 fl oz Bravo 720 1.5 pt Folicur 3.6F 0.45 pt	in-furrow at planting 1,2,7 3,4,5,6	2.7 bc	3.5 cd	5502 b-d
Bravo 720 1.5 pt Folicur 3.6F 0.45 pt	1,2,7 3,4,5,6	2.7 bc	2.3 d	5475 b-d
Abound 2SC 7.7 fl oz Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Abound 2SC 0.8 pt Bravo 720 1.5 pt	in-furrow at planting 1,2,4 3,5 6,7	2.3 c	5.3 b	5518 b-d
Abound 2SC 7.7 fl oz Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Abound 2SC 0.8 pt Bravo 720 1.5 pt	in-furrow at planting 1,2 3,4,5 6,7	3.0 b	5.3 b	5475 b-d
Abound 2SC 7.7 fl oz Tilt 3.6EC 2 fl oz + Bravo 720 1 pt Abound 2SC 0.8 pt Folicur 3.6F 0.45 pt Bravo 720 1.5 pt	in-furrow at planting 1,2 3,5 4,6 7	2.8 bc	4.0 bc	6029 a
Bravo 720 1.5 pt	1-7	2.7 bc	4.2 bc	5852 ab
<b>LSD (0.05)</b>		<b>0.5</b>	<b>1.6</b>	<b>430</b>

<sup>1</sup>Early and late leaf spot assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.

## Evaluation of Moncut 70DF with Recommended Spray Regimes for Control of Foliar and Soil-Borne Diseases of Peanut

**Objective:** To assess the efficacy of candidate and registered fungicides applied under a 14-day foliar spray schedule for the control of foliar and soil-borne diseases in peanut.

**Location:** Gulf Coast Research and Extension Center, Fairhope, AL

**Soil Type:** Malbis fine sandy loam (OM <1%)

**Cultivar:** Georgia Green

### Planting:

**Date:** May 21, 2001

**Experimental Design:** Randomized complete block design with six replications. Plot size was six 35-foot rows spaced 38 in apart.

**Land Preparation:** Moldboard plow and disk harrow.

**Seeding Rate:** Five seed per foot of row.

**Crop History:** No history of peanut production.

### Cultural Practices:

**Herbicides:** Gramoxone Ultra 10 oz + Basagran 0.5 pt/ac + Activate 1 pt/50 gal (June 8), Storm 1.5 pt + Butyrac 175 1 pt + Activate 1 pt/50 gal (June 25), and Select 10 oz + Prime Oil 1 pt/ac (July 23).

**Fungicides:** See table.

**Insecticides:** Temik 6 lb/ac (May 21) in furrow.

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Fungicides were applied as a full canopy spray at a calibrated volume of 20 gallons per acre using a six-row tractor-mounted boom sprayer with TX8 nozzles. Applications were made on June 27, July 9, July 23, August 7, August 24, September 7, and September 17.

**Disease Assessment:** Early and late leaf spot were visually rated on September 25 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made immediately after plot inversion on October 9 and October 19 (one locus was defined as  $\leq 1$  ft of consecutive symptoms and signs of the disease).

**Harvest:** Plots were harvested on October 18. Yields were reported at 10% moisture.

**Summary:** With the exception of the Bravo/Folicur regime, all of the treatment regimes gave significantly better control of leaf spot than the untreated control. None of fungicide programs significantly differed from the level of leaf spot control provided by Bravo Ultrex applied alone. When compared to Bravo Ultrex alone, significantly lower SSR incidence was obtained with Bravo Ultrex/Moncut 70DF, Bravo Ultrex/Folicur/Moncut, Bravo Ultrex/Abound programs at the first dig and with Bravo Ultrex/Folicur at the second dig. Due to low disease incidence, yield results were above expectation, and few differences were observed between any of the treatment regimes at both the first and second dig.

**EFFECT OF MONCUT 70DF WITH RECOMMENDED SPRAY REGIMES FOR CONTROL  
OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,  
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Treatment and Rate per Acre	Application Timing	Disease Ratings			Yield (lbs/ac)	
		Leaf Spot <sup>1</sup>	Southern 1st dig	Stem Rot <sup>2</sup> 2nd dig	1st dig	2nd dig
Untreated Control		3.5 a	7.2 a	4.7 a	4917 a-c	5968 de
Bravo Ultrex 1.4 lb Moncut 70DF 1.1 lb	1-7 2,4	2.3 c	3.0 c	2.8 c-e	4492 b-e	6242 b-d
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3,4,5,6	3.0 ab	3.3 bc	2.3 e	5031 ab	5312 e
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt Moncut 70DF 0.54 lb	1,2,4,6,7 3,5 4,6	2.3 c	2.7 c	2.5 de	4145 e	6621 a-d
Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt	1,2,4,6,7 3,5	2.3 c	3.0 c	3.5 bc	5043 ab	6127 c-e
Bravo Ultrex 1.4 lb Abound 2.08SC 1.2 pt Moncut 70DF 1.1 lb	1,2,4,5,6,7 3 5	2.8 bc	3.8 bc	2.5 de	4325 de	7029 ab
Bravo Ultrex 1.4 lb Moncut 70DF 1.1 lb + Stratego 7 fl oz	1,2,4,6,7 3,5	2.5 bc	3.0 c	2.7 de	4861 a-d	6286 b-d
Bravo Ultrex 1.4 lb Moncut 70DF 0.86 lb + Stratego 14 fl oz	1,2,4,6,7 3,5	2.8 bc	4.5 b	2.7 de	4396 c-e	7327 a
Bravo Ultrex 1.4 lb Headline 2.09EC 0.75 pt	1,6,7 2,3,4,5	2.5 bc	3.5 bc	3.8 b	5176 a	6983 a-c
Bravo Ultrex 1.4 lb	1-7	2.5 bc	4.5 b	3.2 b-d	4705a-e	7381 a
<b>LSD (0.05)</b>		<b>0.6</b>	<b>1.4</b>	<b>0.8</b>	<b>571</b>	<b>891</b>

<sup>1</sup>Early and late leaf spot assessed using the Florida leaf spot scoring system (1= no disease, 2= very few lesions in lower canopy, 3= few lesions in lower and upper canopy, 4= some lesions with slight defoliation, 5= lesions noticeable in upper canopy with some defoliation, 6= lesions numerous with significant defoliation, 7= lesions numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with heavy defoliation, 9= few remaining leaves covered with lesions, and 10= plants dead).

<sup>2</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 70 ft of row.



## Assessment of AU-PNUT Advisory for Disease Control on Conventional- and Reduced-Till Peanut

**Objective:** To compare the effectiveness of recommended fungicide programs for the control of leaf spot diseases, southern stem rot, and *Rhizoctonia* limb rot on selected cultivars in conventional and reduced tillage production systems.

**Location:** Wiregrass Research and Extension, Headland, AL

**Soil Type:** Dothan fine sandy loam (OM<1%)

**Cultivar:** Virugard, Georgia Green, and C99R

### Planting:

**Date:** May 18, 2001

**Experimental Design:** Split plot design with peanut cultivars as whole plots and fungicide programs as subplots. The whole plots were randomized in four complete blocks. Individual subplots, which consisted of four 30-foot rows spaced 3 feet apart, were randomized within each whole plot.

**Land Preparation:** Conventional and reduced tillage practices.

**Seeding Rate:** Six seed per foot of row.

**Crop History:** Peanut-cotton-peanut rotation. History of southern stem rot (SSR) and peanut root-knot damage on previous peanut crops.

### Cultural Practices:

**Herbicides:** Sonalan 1.5 + Dual 1.5 pt/ac (April 18) and Gramoxone Max 5.5 oz + 2,4 DB 1.5 pt + Basagran 0.5 pt/ac + Non-ionic surfactant (June 18).

**Fungicides:** See table.

**Insecticides:** See nematicides.

**Nematicides:** Temik 15 G 15 lb/ac (May 18).

**Irrigation:** None.

**Application of Treatments:** Applications of Bravo Ultrex at 1.4 pounds per acre and Folicur 3.6F at 0.45 pint per acre were scheduled using the standard 14-day calendar program or according to the AU-PNUT disease advisory. The standard (14-day) calendar program application dates were 1= June 25, 2= July 9, 3= July 23, 4= August 6, 5= August 20, and 6= September 4. Applications were scheduled using AU-PNUT on 1= June 25, 2= July 20, 3= August 2, 4= August 14, and 5= August 29. Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Early and late leaf spot were rated simultaneously using the Florida peanut leaf spot scoring system where 1= no disease, 2= very few lesions on leaves in lower canopy, 3= few lesions on leaves in lower and upper canopy, 4= some lesion in lower and upper canopy with light defoliation, 5= lesions noticeable in upper canopy with some ( $\leq 25\%$ ) defoliation, 6= lesions numerous with significant ( $\leq 50\%$ ) defoliation, 7= lesions numerous with heavy ( $\leq 75\%$ ) defoliation, 8= numerous lesions on few remaining leaves, 9= very few remaining leaves covered with lesions, and 10= plants dead. Leaf spot ratings were logged on September 14 on Virugard, September 31 on Georgia Green, and October 17 on C-99R. Southern stem rot (SSR) loci counts (1 locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on September 14 for Virugard, October 1 for Georgia Green, and October 17 for C-99R.

**Harvest:** The windrows were harvested with a field combine three days after plot inversion. Yields were reported at 7% moisture.

**Summary:** Southern stem rot and, particularly, peanut root-knot nematode pressure in the plot areas were high. Galling and rotting of the pegs and pods, especially on Georgia Green and C-99R, was so severe that damage attributed to peanut root-knot and southern stem rot was difficult to distinguish.

On average, the conventional-till Virugard suffered significantly less leaf spot damage than did either C-99R or Georgia Green (Table 1). No significant differences in leaf spot ratings were seen between the calendar and advisory programs on any of the three cultivars or among the fungicide programs.

When averaged across all fungicide treatments, SSR hit counts recorded on the three peanut cultivars produced using conventional tillage practices did not differ significantly (Table 2). Regardless of fungicide program, application timing and number had no impact on SSR means across cultivars. No significant impact of fungicide treatment or scheduling in the incidence of SSR was observed on either Georgia Green or C-99R. On Virugard, the calendar Bravo Ultrex/Folicur 3.6F program significantly reduced SSR incidence, compared with the same fungicides applied according to the AU-Pnut advisory.

Mean yields for Virugard, Georgia Green, and C-99R across all fungicide treatments were statistically similar (Table 3). No significant differences due to fungicide programs or scheduling on mean yield across cultivars were observed either when looking at each of the individual cultivars.

On average, in the reduced-till plots Virugard suffered significantly less leaf spot than did Georgia Green or C-99R (Table 4). Mean disease ratings across cultivars for the both of the calendar and advisory programs, however, were similar. On Virugard, the lowest leaf spot rating was recorded with Bravo Ultrex/Folicur 3.6F applied according to the AU-PNUT advisory. On Georgia Green and C-99R, no significant differences in leaf spot severity were noted between the calendar and advisory programs.

Among the three peanut cultivars, SSR hit counts were significantly lower on C-99R than on Georgia Green, while the counts for Virugard were intermediate between the two (Table 5). When averaged across all peanut cultivars, calendar applications of the Bravo Ultrex/Folicur 3.6F program had the least SSR damage levels. On individual cultivars, the calendar Bravo Ultrex/Folicur 3.6F program gave better control of SSR on Virugard and C-99R than the same fungicides applied according to the AU-PNUT leaf spot advisory. Also on Virugard, the calendar and advisory Bravo Ultrex programs suffered significantly higher stem rot damage than the plots treated with Bravo Ultrex/Folicur 3.6F on the calendar schedule.

Due to the exceptionally high nematode pressure, the yields of all three cultivars were greatly reduced. However, yield of Virugard was significantly higher than yields recorded for C-99R or Georgia Green (Table 6). Georgia Green also yielded significantly less than C-99R. Mean yields obtained across cultivars with the calendar Bravo Ultrex/Folicur 3.6F program were significantly higher compared with those of peanuts treated according to the AU-PNUT advisory. Mean yield recorded for the Bravo Ultrex calendar and advisory programs was similar. Yields were similar among fungicide programs on Georgia Green and C-99R, but not on Virugard.

In conclusion, when applied on a standard 14-day calendar schedule and according to the AU-PNUT leaf spot advisory, both Bravo Ultrex and Bravo Ultrex/Folicur 3.6F proved equally effective in controlling leaf spot diseases on all three peanut cultivars. Due to the experimental design, no clear conclusions can be made concerning the impact of tillage practices on the severity of leaf spot diseases. A severe root-knot nematode infestation greatly complicated the assessment of southern stem rot incidence on all peanut cultivars. Also, high root-knot nematode populations could have suppressed the activity of Folicur 3.6F against southern stem rot or could have greatly increased plant susceptibility to attack by *Sclerotium rolfsii*. With the exception of the reduced-till Virugard, the Bravo Ultrex/Folicur 3.6F calendar and advisory programs demonstrated little activity against southern stem rot. When grown using reduced till practices, the yields of all three cultivars were considerably lower than the same cultivars produced using conventional tillage. Either the reduced-till practices were responsible for the poor yield response, or root-knot nematodes may be more damaging to reduced-till than to conventional-till peanuts.

**TABLE 1. CONTROL OF LEAF SPOT<sup>1</sup> DISEASES OF CONVENTIONAL-TILL PEANUTS:  
COMPARISON OF AU-PNUT ADVISORY WITH CALENDAR PROGRAM  
FOR SCHEDULING APPLICATIONS OF BRAVO ULTREX OR FOLICUR 3.6F,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL 2001**

Program and Rate per Acre	Scheduling	Spray Timing	Peanut Cultivar			Mean <sup>4</sup>
			VirusGard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	Calendar	1,2 3-6 <sup>2</sup>	4.0 a	6.5 a	4.8 a	5.1 a
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	AU-PNUT	1 2-5 <sup>3</sup>	4.0 a	6.3 a	5.0 a	5.1 a
Bravo Ultrex 1.4 lb	Calendar	1-6 <sup>2</sup>	3.8 a	5.8 a	6.3 a	5.3 a
Bravo Ultrex 1.4 lb	AU-PNUT	1-5 <sup>3</sup>	4.0 a	5.5 a	6.3 a	5.3 a
<b>LSD (0.05)</b>			<b>1</b>	<b>1.4</b>	<b>1.4</b>	<b>0.7</b>
<b>Mean</b>			<b>3.9</b>	<b>6.3</b>	<b>5.3</b>	

<sup>1</sup> Leaf spot was rated using the 1-10 Florida leaf spot scoring system.

<sup>2</sup> Calendar program application dates were 1= Jun 25, 2= Jul 9, 3= Jul 23, 4= Aug 6, 5= Aug 20, and 6= Sep 4.

<sup>3</sup> AU-PNUT application dates were 1= Jun 25, 2= Jul 20, 3= Aug 2, 4= Aug 14, and 5= Aug 29.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

**TABLE 2. CONTROL OF SOUTHERN STEM ROT<sup>1</sup> ON CONVENTIONAL-TILL PEANUTS:  
COMPARISON OF AU-PNUT ADVISORY WITH CALENDAR PROGRAM  
FOR SCHEDULING APPLICATIONS OF BRAVO ULTREX OR FOLICUR 3.6F,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL 2001**

Program and Rate per Acre	Scheduling	Spray Timing	Peanut Cultivar			Mean
			VirusGard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	Calendar	1,2 3-6 <sup>2</sup>	13.0 b	22.8 a	11.5 a	15.8 a
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	AU-PNUT	1 2-5 <sup>3</sup>	23.8 a	17.5 a	18.0 a	19.8 a
Bravo Ultrex 1.4 lb	Calendar	1-6 <sup>2</sup>	20.0 ab	17.5 a	19.0 a	18.8 a
Bravo Ultrex 1.4 lb	AU-PNUT	1-5 <sup>3</sup>	19.0 ab	24.3 a	19.8 a	21.0 a
<b>LSD (0.05)</b>			<b>10.3</b>	<b>13.5</b>	<b>9</b>	<b>6.1</b>
<b>Mean</b>			<b>18.9</b>	<b>20.5</b>	<b>17.1</b>	

<sup>1</sup> Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 60 ft of row.

<sup>2</sup> Calendar program application dates were 1= Jun 25, 2= Jul 9, 3= Jul 23, 4= Aug 6, 5= Aug 20, and 6= Sep 4.

<sup>3</sup> AU-PNUT application dates were 1= Jun 25, 2= Jul 20, 3= Aug 2, 4= Aug 14, and 5= Aug 29.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

**TABLE 3. YIELD<sup>1</sup> OF CONVENTIONAL-TILL PEANUTS:  
COMPARISON OF AU-PNUT ADVISORY WITH CALENDAR PROGRAM  
FOR SCHEDULING APPLICATIONS OF BRAVO ULTREX OR FOLICUR 3.6F,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL 2001**

Program and Rate per Acre	Scheduling	Spray Timing	Peanut Cultivar			Mean
			ViruGard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	Calendar	1,2 3-6 <sup>2</sup>	3110 a	3243 a	3267 a	3207 a
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	AU-PNUT	1 2-5 <sup>3</sup>	2977 a	2856 a	3461a	3098 a
Bravo Ultrex 1.4 lb	Calendar	1-6 <sup>2</sup>	3436 a	3122 a	3545 a	3368 a
Bravo Ultrex 1.4 lb	AU-PNUT	1-5 <sup>3</sup>	3219 a	3061 a	3436 a	3239 a
<b>LSD (0.05)</b>			<b>796</b>	<b>1016</b>	<b>850</b>	<b>480</b>
<b>Mean</b>			<b>3185 a</b>	<b>3421 a</b>	<b>3076 a</b>	

<sup>1</sup>Yield of peanut in pounds per acre.

<sup>2</sup>Calendar program application dates were 1= Jun 25, 2= Jul 9, 3= Jul 23, 4= Aug 6, 5= Aug 20, and 6= Sep 4.

<sup>3</sup>AU-PNUT application dates were 1= Jun 25, 2= Jul 20, 3= Aug 2, 4= Aug 14, and 5= Aug 29.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

**TABLE 4. CONTROL OF LEAF SPOT<sup>1</sup> DISEASES OF REDUCED-TILL PEANUTS:  
COMPARISON OF AU-PNUT ADVISORY WITH CALENDAR PROGRAM  
FOR SCHEDULING APPLICATIONS OF BRAVO ULTREX OR FOLICUR 3.6F,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL 2001**

Program and Rate per Acre	Scheduling	Spray Timing	Peanut Cultivar			Mean
			ViruGard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	Calendar	1,2 3-6 <sup>2</sup>	3.0 bc	5.0 a	5.0 a	4.3 a
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	AU-PNUT	1 2-5 <sup>3</sup>	2.5 c	4.8 a	5.0 a	4.1 a
Bravo Ultrex 1.4 lb	Calendar	1-6 <sup>2</sup>	3.3 ab	5.3 a	5.5 a	4.7 a
Bravo Ultrex 1.4 lb	AU-PNUT	1-5 <sup>3</sup>	3.8 a	3.8 a	4.8 a	5.3 a
<b>LSD (0.05)</b>			<b>0.7</b>	<b>1.9</b>	<b>1.5</b>	<b>0.7</b>
<b>Mean</b>			<b>3.1</b>	<b>4.7</b>	<b>5.1</b>	

<sup>1</sup>Leaf spot was rated using the 1-10 Florida leaf spot scoring system.

<sup>2</sup>Calendar program application dates were 1= Jun 25, 2= Jul 9, 3= Jul 23, 4= Aug 6, 5= Aug 20, and 6= Sep 4.

<sup>3</sup>AU-PNUT application dates were 1= Jun 25, 2= Jul 20, 3= Aug 2, 4= Aug 14, and 5= Aug 29.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

**TABLE 5. CONTROL OF SOUTHERN STEM ROT<sup>1</sup> ON REDUCED-TILL PEANUTS:  
COMPARISON OF AU-PNUT ADVISORY WITH CALENDAR PROGRAM  
FOR SCHEDULING APPLICATIONS OF BRAVO ULTREX OR FOLICUR 3.6F,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL 2001**

Program and Rate per Acre	Scheduling	Spray Timing	Peanut Cultivar			Mean
			ViruGard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	Calendar	1,2 3-6	14.5 b	19.8 b	26.5 ab	<b>20.3 b</b>
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	AU-PNUT	1 2-5 <sup>3</sup>	26.5 a	30.5 ab	28.5 a	<b>28.5 a</b>
Bravo Ultrex 1.4 lb	Calendar	1-6 <sup>2</sup>	25.3 a	32.8 a	21.8 ab	<b>26.6 a</b>
Bravo Ultrex 1.4 lb	AU-PNUT	1-5 <sup>3</sup>	31.5 a	24.5 b	23.5 ab	<b>21.0 a</b>
<b>LSD (0.05)</b>			<b>10.2</b>	<b>7.4</b>	<b>6.9</b>	<b>5.0</b>
<b>Mean</b>			<b>24.4</b>	<b>28.6</b>	<b>23.4</b>	

<sup>1</sup>Southern stem rot lesions taken at plot inversion are expressed as the number of disease loci per 60 ft of row.

<sup>2</sup>Calendar program application dates were 1= Jun 25, 2= Jul 9, 3= Jul 23, 4= Aug 6, 5= Aug 20, and 6= Sep 4.

<sup>3</sup>AU-PNUT application dates were 1= Jun 25, 2= Jul 20, 3= Aug 2, 4= Aug 14, and 5= Aug 29.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

**TABLE 6. YIELD<sup>1</sup> OF REDUCED-TILL PEANUTS:  
COMPARISON OF AU-PNUT ADVISORY WITH CALENDAR PROGRAM  
FOR SCHEDULING APPLICATIONS OF BRAVO ULTREX OR FOLICUR 3.6F,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL 2001**

Program and Rate per Acre	Scheduling	Spray Timing	Peanut Cultivar			Mean
			ViruGard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	Calendar	1,2 3-6	3025 a	1755 a	2360 a	<b>2380 a</b>
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	AU-PNUT	1 2-5 <sup>3</sup>	2456 ab	1609 a	2081 a	<b>2049 b</b>
Bravo Ultrex 1.4 lb	Calendar	1-6 <sup>2</sup>	2565 ab	1597 a	2202 a	<b>2122 ab</b>
Bravo Ultrex 1.4 lb	AU-PNUT	1-5 <sup>3</sup>	1954 b	1706 a	2190 a	<b>1950 b</b>
<b>LSD (0.05)</b>			<b>644</b>	<b>523</b>	<b>586</b>	<b>322</b>
<b>Mean</b>			<b>2500</b>	<b>1667</b>	<b>2208</b>	

<sup>1</sup>Yield of peanut in pounds per acre.

<sup>2</sup>Calendar program application dates were 1= Jun 25, 2= Jul 9, 3= Jul 23, 4= Aug 6, 5= Aug 20, and 6= Sep 4.

<sup>3</sup>AU-PNUT application dates were 1= Jun 25, 2= Jul 20, 3= Aug 2, 4= Aug 14, and 5= Aug 29.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

## Impact of Application Interval on the Control of Leaf Spot Diseases on Peanut

**Objective:** Determine whether extending the interval between fungicide applications from 14 to 21 or 28 days has a significant impact on the control of foliar and soil-borne diseases on the disease-resistant cultivar Georgia Green.

**Location:** Gulf Coast Research and Extension Center, Fairhope, AL

**Soil Type:** Malbis sandy loam (OM<1%)

**Cultivar:** Georgia Green

### Planting:

**Date:** May 21, 2001

**Experimental Design:** Split plot design with peanut cultivars as the whole plot and fungicide programs as the subplot. Whole plots were randomized in six complete blocks. Individual subplots, which consisted of two 30-foot rows spaced 3 feet apart, were randomized within each whole plot.

**Land Preparation:** Conventional tillage practices. Fertilizer (0-23-23) 171 lb + sulfur 10 lb + boron 0.5 lb/ac was incorporated on April 6, and granular *Rhizobium* 9.5 lb/ac on May 21.

**Seeding Rate:** Six seed per foot of row.

**Crop History:** No prior history of peanut production.

### Cultural Practices:

**Herbicides:** Pre-plant: Prowl 2 pt/ac (May 4). Post-plant: Gramoxone Ultra 10 oz + Basagran 0.5 pt/ac + Activate 1 pt/50 gal (June 8), Storm 1.5 pt + Butyrac 175 1 pt/ac + Activate 1 pt/50 gal (June 25), and Select 10 oz + Prime Oil 1 pt/ac (July 23).

**Fungicides:** See table.

**Insecticides:** Temik 15G 6.7 lb/ac (May 21).

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre. Spray dates for treatments applied were as follows:

14-day intervals: June 28, July 11, July 23, August 8, August 23, September 7, and September 17.

21-day intervals: June 28, July 16, August 7, August 28, and September 17.

28-day intervals: June 28, July 23, August 23, and September 17.

**Disease Assessment:** Early and late leaf spot were rated simultaneously using the Florida peanut leaf spot scoring system. Severity of peanut rust was also evaluated using the above rating scale. Leaf spot and rust ratings were logged on September 29. Southern stem rot (SSR) and *Rhizoctonia* limb rot loci counts (one locus was defined as  $\leq 1$  ft) of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on October 10.

**Harvest:** The windrows were harvested with a field combine on October 19. Yields are reported at 7% moisture.

**Summary:** Across all fungicide treatment regimes, leaf spot ratings significantly increased from 3.6 to 4.5 as treatment intervals lengthened from 14 to 28 days, respectively. At all treatment intervals, peanuts treated with Bravo Ultrex/Folicur 3.6F and Kocide2000+Bravo Ultrex/Folicur 3.6F often suffered from significantly heavier

leaf spotting and defoliation compared with those treated with Kocide 2000 + Bravo Ultrex or Bravo Ultrex/Abound 2SC (see table). When applied every 14 days, Bravo Ultrex controlled leaf spot better than Bravo Ultrex/Folicur 3.6F. However, similar leaf spot control was obtained with both programs at the 21- and 28-day treatment intervals. Kocide 2000 + Bravo Ultrex/Folicur 3.6F was less effective than Bravo Ultrex against leaf spot diseases when applied at 14- and 21-day intervals, but 28-day treatments gave similar levels of disease control.

When averaged across all fungicide regimes, severity of peanut rust increased as treatment interval progressively lengthened from 14- to 21- and finally 28-day intervals (see table). On the peanuts treated with a fungicide every 14 days, scattered rust pustules were seen on a handful of leaves. In contrast, considerable rusting and premature leaf scorching was seen on the peanuts treated at 28-day intervals. Bravo Ultrex/Abound 2SC gave the most consistent and effective rust control. Bravo Ultrex alone, Kocide 2000 + Bravo Ultrex tank-mixture, and Bravo Ultrex/Abound 2SC generally gave better rust control than did Kocide 2000 + Bravo Ultrex/Folicur 3.6F.

Application interval did not have a significant impact on average peanut yield. At the 14- and 21-day intervals, similar yields were obtained with each fungicide regime. When applied at 28-day intervals, Bravo Ultrex/Folicur 3.6F-treated peanut yielded significantly higher compared with those treated with Kocide 2000 + Bravo Ultrex. Yields of the peanuts treated with Bravo Ultrex/Folicur 3.6F were not significantly above yields of those treated with Bravo Ultrex/Abound 2SC, Kocide 2000 + Bravo Ultrex/Folicur 3.6F, and Bravo Ultrex alone.

**EFFECT OF APPLICATION INTERVAL ON THE CONTROL OF LEAF SPOT DISEASES  
WITH SELECTED FUNGICIDE REGIMES ON GEORGIA GREEN PEANUT,  
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Fungicide Program and Rate per Acre	Dates <sup>1</sup>	Leaf Spot <sup>2</sup>	Southern Stem Rot <sup>3</sup>	Yield (lbs/ac)
<b>14-Day Application Interval</b>				
Bravo Ultrex 1.4 lb	1,2,7	4.5 a	2.0 b	5827 a
Folicur 3.6F 0.45 pt	3-6			
Kocide 2000 1.0 lb + Bravo Ultrex 1.0 lb	1,2,7	4.5 a	3.0 a	5825 a
Folicur 3.6F 0.45 pt	3-6			
Kocide 2000 1.0 lb + Bravo Ultrex 1.0 lb	1-7	3.3 b	2.0 b	5330 a
Bravo Ultrex 1.4 lb	1,2,4,6,7	3.0 b	1.3 b	5781 a
Abound 2SC 1.2 pt	3,5			
Bravo Ultrex 1.4 lb	1-7	2.8 b	1.5 b	5252 a
<b>LSD (0.05)</b>		<b>0.8</b>	<b>0.9</b>	<b>662</b>
<b>Mean</b>		<b>3.6</b>	<b>2.0</b>	<b>5603</b>
<b>21-Day Application Interval</b>				
Bravo Ultrex 1.4 lb	1,5	4.2 ab	2.3 cd	4954 a
Folicur 3.6F 0.45 pt	2,3,4			
Kocide 2000 1.0 lb + Bravo Ultrex 1.0 lb	1,5	4.8 a	4.0 a	5384 a
Folicur 3.6F 0.45 pt	2,3,4			
Kocide 2000 1.0 lb + Bravo Ultrex 1.0 lb	1-5	3.7 b	3.7 ab	5166 a
Bravo Ultrex 1.4 lb	1,4,5	3.5 b	1.7 b	5722 a
Abound 2SC 1.2 pt	2,3			
Bravo Ultrex 1.4 lb	1-5	3.8 b	3.0 bc	5453 a
<b>LSD (0.05)</b>		<b>0.7</b>	<b>0.9</b>	<b>1032</b>
<b>Mean</b>		<b>4.0</b>	<b>3.0</b>	<b>5336</b>
<b>28-Day Application Interval</b>				
Bravo Ultrex 1.4 lb	1,4	4.8 a	4.0 ab	5774 a
Folicur 3.6F 0.45 pt	2,3			
Kocide 2000 1.0 lb + Bravo Ultrex 1.0 lb	1,4	5.2 a	4.5 a	5443 ab
Folicur 3.6F 0.45 pt	2,3			
Kocide 2000 1.0 lb + Bravo Ultrex 1.0 lb	1-4	4.2 bc	3.3 b	5258 b
Bravo Ultrex 1.4 lb	1,4	3.7 c	1.5 c	5686 ab
Abound 2SC 1.2 pt	2,3			
Bravo Ultrex 1.4 lb	1-4	4.8 ab	4.7 a	5325 ab
<b>LSD (0.05)</b>		<b>0.8</b>	<b>0.9</b>	<b>458</b>
<b>Mean</b>		<b>4.5</b>	<b>4.5</b>	<b>5497</b>

<sup>1</sup>Spray dates for treatments applied at 14-day intervals were 1= Jun 28, 2= Jul 11, 3= Jul 23, 4= Aug 8, 5= Aug 23, 6= Sep 7, and 7= Sep 17; at 21-day intervals were 1= Jun 28, 2= Jul 16, 3= Aug 7, 4= Aug 28, and 5= Sep 17; and at 28-day intervals were 1= Jun 28, 2= Jul 23, 3= Aug 23, and 4= Sep 17.

<sup>2</sup>Early and late leaf spot were rated using the 1-10 Florida leaf spot scoring system where 1= no disease, 2= very few lesions on leaves in lower canopy, 3= few lesions on leaves in lower and upper canopy, 4= some lesion in lower and upper canopy with light defoliation, 5= lesions noticeable in upper canopy with some ( $\leq 25\%$ ) defoliation, 6= lesions numerous with significant ( $\leq 50\%$ ) defoliation, 7= lesions numerous with heavy ( $\leq 75\%$ ) defoliation, 8= numerous lesions on few remaining leaves, 9= very few remaining leaves covered with lesions, and 10= plants dead.

<sup>3</sup>Peanut rust was rated using the 1-10 Florida leaf spot scoring system.



## Disease Severity on Experimental Peanut Lines

**Objective:** To assess the susceptibility of peanut lines to leaf spot, southern stem rot, and TSWV.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan fine sandy loam (OM<1%)

**Cultivars:** NC-7, Florunner, UF 98326, UF 97102, UF 98511, GA 942516, GA 962533, GA 962569, TP 301-1-8, TX 977006, TX 977053, and GA Green.

### Planting:

**Date:** April 30, 2001

**Experimental Design:** The experimental design was a randomized complete block with four replications. Individual plots were two 30-foot rows spaced 3 feet apart.

**Land Preparation:** Conventional tillage practices. Lime 100 lb/ac, Gypsum 600 lb/ac (April 30), and Solubor 1.5 lb/ac (July 16).

**Seeding Rate:** Six seed per foot of row.

**Crop History:** Cotton-cotton-peanut rotation.

### Cultural Practices:

**Herbicides:** Sonalan 1qt + Strongarm 0.45 oz/ac.

**Fungicides:** Applications of Bravo Ultrex at 1.4 lb/ac (June 4, June 19, July 2, August 28, and September 11), and Folicur 3.6F at 0.45 pt/ac (July 2, July 16, July 30, and August 15).

**Insecticides:** Temik 15G 6.5 lb/ac (April 30), and Karate Z 1.0 oz/ac (July 30 and August 15).

**Nematicides:** None.

**Irrigation:** 0.6 inch applied on April 27, 0.75 on June 26, 1.2 on July 10, and 1.0 on July 17 and September 19.

**Application of Treatments:** Fungicides were applied with a tractor-mounted boom sprayer with TX-8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Counts of tomato spotted wilt (TSWV) loci (one locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made on August 29 for the early maturing, September 8 for intermediate, and October 1 for the late maturing peanut lines. Southern stem rot (SSR) loci counts (one locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on August 30, September 14, and October 1.

**Harvest:** Plots were harvested on September 5 (early maturing), September 17 (intermediate), and October 4 (late maturing). Yields were reported at 7% moisture.

**Summary:** Significant differences in the severity of TSWV, leaf spot diseases, SSR, and yield were noted between the commercial and experimental peanut lines. Overall, TSWV pressure in 2001 was lower than observed in the previous two years. With the exception of TP 301-1-8, TX 977006, and TX 977053, TSWV severity on the remaining experimental peanut lines was significantly below the levels recorded for the TSWV-susceptible commercial lines NC-7 and Florunner. TSWV ratings for the remaining experimental lines did not significantly differ from those of the partially resistant Georgia Green peanut. While early leaf spot was the predominant leaf spot disease, some late leaf spot symptoms were also observed developing in the lower canopy just prior to inversion. The heaviest leaf spot damage was noted on the experimental lines TX 97706 and TX 977053. Leaf spot severity on the remaining experimental lines was similar to that seen on the commercial lines Florunner and Georgia Green.

While overall SSR pressure in this trial was relatively low, hit counts for all of the experimental lines except for TP 301-1-8 were significantly below the counts recorded on the susceptible standard Florunner but similar to those noted for the partially resistant lines Georgia Green and NC-7. Among the commercial lines, the highest and lowest yields were recorded for Georgia Green and Florunner, respectively. With the exception of TP 301-1-8, yields of all of the remaining experimental lines were similar to those of Georgia Green. In contrast, Florunner yielded less than all of the experimental lines except for TP 301-1-8 and UF 98511.

**REACTION OF PEANUT LINES TO FOLIAR AND SOILBORNE DISEASES,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Peanut Line	Peanut Type <sup>1</sup>	TSWV <sup>2</sup>	Leaf Spot <sup>3</sup>	Southern Stem Rot <sup>2</sup>	Yield (lbs/ac)
NC-7 (E) <sup>4</sup>	V	21.8 a <sup>5</sup>	2.0 d	1.8 b	5073 bc
Florunner (M)	R	21.3 a	2.3 cd	8.3 a	4692 cd
UF 98326 (L)	R	9.8 bc	2.3 cd	0.8 b	5654 ab
UF 97102 (M)	R	13.3 b	3.0 bc	3.0 b	5754 a
UF 98511 (L)	R	11.3 b	3.0 bc	3.0 b	5100 bc
GA 942516 (L)	R	10.8 b	3.0 bc	1.5 b	5518 ab
GA 962533 (M)	R	5.0 c	3.3 b	1.8 b	5999 a
GA 962569 (E)	R	11.0 b	3.3 b	0.8 b	5844 a
TP 301-1-8 (M)	R	19.8 a	2.3 cd	6.8 a	4102 d
TX 977006 (M)	R	21.0 a	4.5 a	2.8 b	5754 a
TX 977053 (M)	R	22.0 a	5.0 a	2.0 b	5454 ab
GA Green (M)	R	9.0 bc	2.8 b-d	3.0 b	5672 ab
<b>LSD (0.05)</b>		<b>4.8</b>	<b>0.8</b>	<b>2.9</b>	<b>607</b>

<sup>1</sup> Peanut Type: R = runner-type and V = Virginia-type peanut.

<sup>2</sup> Numbers of loci of recorded per 60 ft of row.

<sup>3</sup> Early and late leaf spot were rated together using the Florida leaf spot scoring system where 1= no disease, 2= very few leaf spots in lower canopy, 3= few leaf spots in lower and upper canopy, 4= some leaf spots with slight defoliation, 5= spotting noticeable in upper canopy with moderate defoliation, 6= spotting heavy with significant defoliation, 7= many leaves spotted with heavy defoliation, 8= numerous spots on few remaining leaves with heavy defoliation, 9= very few leaves remaining, and 10= plants dead.

<sup>4</sup> Peanut Maturity Group: E= early maturing (126-140 DAP), M= intermediate maturing (130-145 DAP), and L= late maturing (140-165 DAP).

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

## **Disease Severity and Yield Response of Selected Peanut Cultivars under Recommended Fungicide Regimes**

**Objective:** To determine the yield response, adaptability, and susceptibility of selected peanut cultivars to leaf spot diseases, southern stem rot, peanut rust, and tomato spotted wilt.

**Location:** Gulf Coast Research and Extension Center, Fairhope, AL

**Soil Type:** Malbis sandy loam (OM<1%)

**Cultivars:** Agra Tech 1-1, Agra Tech 201, C-99R, Georgia Green, Southern Runner, Andru 93, and Virugard.

### **Planting:**

**Date:** May 23, 2001

**Experimental Design:** Split plot design with peanut cultivars as the whole plot and fungicide programs as the subplot. Whole plots were randomized in six complete blocks. Individual subplots, which consisted of two 30-foot rows spaced 3 feet apart, were randomized within each whole plot.

**Land Preparation:** Conventional tillage practices in a field. Fertilizer (0-23-23) 171 lb + sulfur 10 lb + boron 0.5 lb/ac was incorporated on April 6.

**Seeding Rate:** Six seed per foot of row.

**Crop History:** No prior history of peanut production.

### **Cultural Practices:**

**Herbicides:** Preplant: Prowl 2 pt/ac (May 7). Post-plant: Gramoxone Ultra 10 oz + Basagran 0.5 pt/ac + Activate 1 pt/50 gal (June 8), Storm 1.5 pt + Butyrac 175 1 pt/ac + Activate 1 pt/50 gal (June 21), and Select 13.2 fl oz + Prime Oil 1 pt/ac (July 23).

**Fungicides:** See table.

**Insecticides:** Temik 15G 6.7 lb/ac (May 23).

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Fungicide treatments were made on June 28, July 10, July 23, August 6, August 17, August 29, and September 17. Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Early and late leaf spot were rated simultaneously using the Florida peanut leaf spot scoring system. The above rating scale was also used to assess the severity of peanut rust. Leaf spot and peanut rust ratings were logged on September 14 on Virugard, AgraTech 1-1, and Andru 93 (early maturity); September 29 on Georgia Green and AgraTech 201 (intermediate maturity); and October 16 on C-99R and Southern Runner (late maturity). Southern stem rot (SSR) and *Rhizoctonia limb rot loci* counts (one locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on September 26 for Virugard, AgraTech 1-1, and Andru 93; October 10 for Georgia Green and AgraTech 201; and October 24 for C-99R and Southern Runner.

**Harvest:** The windrows were harvested three days after inversion. Yields were reported at 7% moisture.

**Summary:** Significant differences in the leaf spot and peanut rust ratings of the seven peanut cultivars were observed on the peanuts treated with Bravo Ultrex alone and the Folicur 3.6F program. Among the early maturing peanuts treated with Bravo Ultrex alone, the least leaf spotting and premature defoliation was noted on AgraTech 1-1. Also, the leaf spot rating for the Bravo Ultrex-treated Virugard was significantly below that recorded for

Andru 93 treated season long with the same fungicide. When these same three cultivars were sprayed with Folicur 3.6F, AgraTech 1-1 had lower leaf spot ratings than Andru 93 but not Virugard. Peanut rust, which first appeared in late August or early September, caused relatively little damage on all of the early maturing peanut cultivars. On AgraTech 1-1 and Andru 93, some rust pustules were seen on leaves in the lower and mid canopy, but no disease-related leaf shed was seen. Fungicide treatment appeared to have little impact on the development of rust on both of the above cultivars. No rust symptoms were seen on the leaves of the Virugard peanut treated with either Bravo Ultrex alone or Folicur 3.6F. The intermediate cultivars AgraTech 201 and Georgia Green proved to be more sensitive to leaf spot diseases than the early maturing AgraTech 1-1 and, to a lesser extent, Virugard. When treated with the Folicur 3.6F program but not Bravo Ultrex alone, leaf spot and defoliation levels were higher on AgraTech 201 than on Georgia Green. Regardless of fungicide treatment, rust severity on the AgraTech 201 and Georgia Green peanuts were similar. Regardless of fungicide treatment, rust severity was generally higher on AgraTech 201 and Georgia Green than on the earlier maturing AgraTech 1-1, Andru 93, and Virugard.

Leaf spot severity on the late maturing peanuts Southern Runner and C-99R was higher than ratings recorded for AgraTech 1-1 and Virugard but not for Andru 93, Georgia Green, and AgraTech 201. Regardless of fungicide treatment, AgraTech 201 had higher rust ratings than did either C-99R or Southern Runner.

Bravo Ultrex-treated Virugard peanuts had lower *Rhizoctonia* limb rot ratings than AgraTech 1-1, Andru 93, C-99R, and Southern Runner. When treated with Bravo Ultrex alone, no significant differences in limb rot damage were noted between the latter five peanut cultivars, AgraTech 201, and Georgia Green. In addition, *Rhizoctonia* limb rot damage levels on all cultivars treated with Folicur 3.6F were similar.

The incidence of southern stem rot was minimal, so the data are not shown.

No significant differences in yield were noted among the cultivars treated with Bravo Ultrex. For the Folicur 3.6F-treated peanuts, yield for Virugard was significantly lower than AgraTech 1-1. Otherwise, yields of AgraTech 1-1 and Virugard did not significantly differ from those of the remaining five peanut cultivars.

**DISEASE LEVEL AND YIELDS OF SELECTED PEANUT CULTIVARS PRODUCED USING RECOMMENDED FUNGICIDE PROGRAMS, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Peanut Cultivar	Maturity	Fungicide Program		Fungicide Program	
		Bravo Ultrex	Folicur 3.6F	Bravo Ultrex	Folicur 3.6F
		—Leaf Spot Diseases—		—Peanut Rust—	
Agra Tech 1-1	E	2.6 c	3.3 d	2 cd	1.7 b-d
Agra Tech 201	M	5.5 a	6.2 a	4.2 a	3.8 a
C-99R	L	5.5 a	6.2 a	2.8 a-c	2.0 bc
Georgia Green	M	4.5 ab	4.8 bc	3.5 ab	3.5 a
Southern Runner	L	5.3 a	5.5 ab	2.3 b-d	2.3 b
Andru 93	E	5.3 a	5.3 bc	2.3 b-d	1.3 cd
Virugard	E	4.0 b	4.0 cd	1.0 d	1.0 d
<b>LSD (0.05)</b>		<b>1.2</b>	<b>1.1</b>	<b>1.5</b>	<b>0.8</b>
<b>Mean</b>		<b>4.6</b>	<b>5.1</b>	<b>2.7</b>	<b>2.5</b>
		—Rhizoctonia limb rot <sup>4</sup> —		—Yield (lbs/ac)—	
AgraTech 1-1	E	15 a	14 a	4663 a	5175 a
AgraTech 201	M	10 ab	4 a	4600 a	4875 ab
C-99R	L	15 a	9 a	4523 a	4503 ab
Georgia Green	M	11 ab	7 a	4475 a	4312 ab
Southern Runner	L	21 a	10 a	4082 a	3904 ab
Andru 93	E	15 a	12 a	4360 a	4977 ab
Virugard	E	2 b	4 a	3422 a	3485 b
<b>LSD (0.05)</b>		<b>11.6</b>	<b>13.6</b>	<b>1403</b>	<b>1566</b>
<b>Mean</b>		<b>12</b>	<b>9</b>	<b>4332</b>	<b>4467</b>

<sup>1</sup>Early leaf spot, late leaf spot, and peanut rust were rated simultaneously using the Florida peanut leaf spot scoring system where 1= no disease, 2= very few lesions on leaves in lower canopy, 3= few lesions on leaves in lower and upper canopy, 4= some lesion in lower and upper canopy with light defoliation, 5= lesions noticeable in upper canopy with some (< 25%) defoliation, 6= lesions numerous with significant (< 50%) defoliation, 7= lesions numerous with heavy (< 75%) defoliation, 8= numerous lesions on few remaining leaves, 9= very few remaining leaves covered with lesions, and 10= plants dead.

<sup>2</sup>Bravo Ultrex program consisted of seven applications of Bravo Ultrex at 1.4 lb/ac made at two-week intervals.

<sup>3</sup>Folicur 3.6F regime included two applications of Bravo Ultrex at 1.4 lb/ac followed by four applications of Folicur 3.6F at 0.45 pt/ac, and a final treatment of Bravo Ultrex at 1.4 lb/ac.

<sup>4</sup>Rhizoctonia limb rot counts were recorded as the number of loci per 60 ft of row.

## Severity of Leaf Spot Disease, Southern Stem Rot, and Tomato Spotted Wilt on Commercial Runner and Virginia-Type Peanut Lines

**Objective:** To assess the susceptibility of peanut lines to leaf spot, southern stem rot, and tomato spotted wilt.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan fine sandy loam (OM<1%)

**Cultivars:** AgraTech 1-1, AgraTech VC-2, Andru 93, NC-7, VA-C 92R, Virugard, VT 940419P, AgraTech 201, C 156-47, EXP 9899-02, Florunner, GA 952508, Georgia Bold, Georgia Green, Georgia HI-Oil, Gregory, NC-12C, NC V11, SunOleic 97R, VA 98R, Florida C 99R, Florida MDR 98, and Southern Runner

### Planting:

**Date:** April 30, 2001

**Experimental Design:** Randomized complete block with four replications. Individual plots consisted of two 20-foot rows spaced 3 feet apart.

**Land Preparation:** Conventional tillage practices. Lime 100 lb/ac, Gypsum 600 lb/ac (April 30), and Solubor 1.5 lb/ac (July 16).

**Seeding Rate:** Six seed per foot of row.

**Crop History:** Cotton-cotton-peanut rotation.

### Cultural Practices:

**Herbicides:** Sonalan 1qt + Strongarm 0.45 oz/ac.

**Fungicides:** Bravo Ultrex 1.4 lb/ac (June 4, June 19, August 28, and September 11), and Folicur 3.6F 0.45 pt/ac (July 2, July 16, July 30, and August 15).

**Insecticides:** Temik 15G 6.5 lb/ac (April 30), and Karate Z 1.0 oz/ac (July 30 and August 15).

**Nematicides:** None.

**Irrigation:** 0.6 inch applied on April 27, 0.75 on June 26, 1.2 on July 10, and 1.0 on July 17 and September 19.

**Application of Treatments:** Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Counts of tomato spotted wilt (TSWV) loci (one locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made on August 29 for the early maturing, September 8 for the intermediate, and October 1 for the late maturing peanut lines. Southern stem rot (SSR) loci counts (one locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on August 29 (early), September 14 (intermediate), and October 1 (late maturing).

**Harvest:** Plots were harvested with a field combine three to five days after inversion. Yields are reported at 7% moisture.

**Summary:** Significant differences in the severity of TSWV, leaf spot diseases, SSR, and yield were noted between the commercial peanut lines. Overall TSWV pressure was considerably lower than that observed in the previous two years. The least TSWV was noted on runner-type peanuts GA 952508, Virugard, C 156-47, Georgia Green, and Florida C-99R. Among all runner-type peanuts, highest TSWV severity was observed on Florunner, SunOleic 97R, and Georgia Bold. The only Virginia-type peanut that suffered significantly less TSWV damage than the NC-7 standard was NC VII. Despite frequent rains throughout the growing season, early and late leaf spot severity was lower than expected. Damage on cultivars AgraTech VC-2, Gregory, and VA 98R with the

highest leaf spot rating was limited to leaf spotting in the lower and upper canopy, as well as light defoliation. The lowest leaf spot ratings were noted on the runner-type cultivars Georgia Green, GA 952508, Georgia Bold, and Southern Runner. Due to the cotton-cotton-peanut rotation, SSR pressure was also low. Heaviest SSR damage was observed on the runner-type peanuts Andru 93 and Florunner, as well as the Virginia-type peanuts VA 98R, NC-12C, and NC VII. On the remaining runner and Virginia-type peanut cultivars, SSR damage levels were minimal. The runner-type peanut cultivars with the highest yields included C 156-47, Georgia Green, EXP 9899-02, and C 99-R. Gregory had the highest yield of the Virginia-type cultivars.

**REACTION OF PEANUT LINES BY MATURITY TYPE TO FOLIAR AND SOIL-BORNE DISEASES,  
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Peanut Line	Peanut Type <sup>1</sup>	TSWV <sup>2</sup>	Leaf Spot <sup>3</sup>	Southern Stem Rot <sup>2</sup>	Yield (lbs/ac)
<b>Early Maturity (mature 126-140 DAP)</b>					
AgraTech 1-1	R	13.8 a-f	3.5 ab	0.8 h	4828 gh
AgraTech VC-2	V	9.8 d-i	4.0 a	1.8 e-h	5127 e-h
Andru 93	R	12.8 b-g	3.0 b-d	3.3 d-g	4528 h
NC-7	V	16.5 a-d	3.0 b-d	1.3 f-h	5227 c-h
VA-C92R	V	14.8 a-e	3.5 ab	0.8 h	5372 b-g
Virugard	R	5.5 hi	3.8 ab	1.0 gh	5191 g-h
VT940419P	V	14.5 a-e	3.3 a-c	0.8 h	5400 a-g
<b>Intermediate Maturity (mature 130-145 DAP)</b>					
AgraTech 201	R	10.5 d-i	3.5 ab	3.5 d-f	5935 a-d
C 156-47	R	6.3 g-i	3.3 a-c	1.5 e-h	6162 a
EXP 9899-02	R	11.7 c-h	3.7 ab	1.8 e-h	5999 a-c
Florunner	R	20.0 a	3.8 ab	7.3 ab	4528 h
GA 952508	R	4.8 i	2.5 c-e	1.0 gh	5890 a-e
Georgia Bold	R	19.5 ab	2.3 de	3.0 d-h	5509 a-g
Georgia Green	R	8.8 e-i	2.5 c-e	3.3 d-g	6071 ab
Georgia HI-Oil	R	10.5 d-i	3.8 ab	2.5 d-h	5881 a-e
Gregory	V	11.8 c-h	4.0 a	2.3 e-h	5990 a-c
NC-12C	V	20.3 a	3.3 a-c	6.3 bc	5073 f-h
NCV11	V	6.7 g-i	3.0 b-d	7.0 a-c	5663 a-f
SunOleic 97R	R	18.0 a-c	3.0 b-d	3.8 de	5200 d-h
VA 98R	V	14.8 a-e	4.0 a	9.3 a	5055 f-h
<b>Late Maturity (mature 140-165 DAP)</b>					
Florida C 99R	R	7.5 f-i	3.0 b-d	1.3 f-h	5944 a-d
Florida MDR 98	R	15.5 a-e	3.3 a-c	2.0 e-h	3458 i
Southern Runner	R	11.8 c-h	2.0 e	4.8 cd	4801 gh
<b>LSD (0.05)</b>		<b>6.9</b>	<b>0.9</b>	<b>2.3</b>	<b>785</b>

<sup>1</sup> Peanut Type: R = runner-type and V = Virginia-type peanut.

<sup>2</sup> Numbers of loci of recorded per 60 ft of row.

<sup>3</sup> Early and late leaf spot were rated together using the Florida leaf spot scoring system where 1= no disease, 2= very few leaf spots in lower canopy, 3= few leaf spots in lower and upper canopy, 4= some leaf spots with slight defoliation, 5= spotting noticeable in upper canopy with moderate defoliation, 6= spotting heavy with significant defoliation, 7= many leaves spotted with heavy defoliation, 8= numerous spots on few remaining leaves with heavy defoliation, 9= very few leaves remaining, and 10= plants dead.

Means in each column followed by the same letter do not significantly differ according to Fisher's protected least significant difference test.

## Recommended Fungicide Programs Evaluated for Control of Leaf Spot Diseases and Southern Stem Rot on Irrigated Peanut

**Objective:** Compare the effectiveness of recommended fungicide programs for the control of leaf spot diseases and peanut rust as well as southern stem rot and *Rhizoctonia* limb rot on selected cultivars of peanut under irrigation.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan fine sandy loam (OM<1%)

**Cultivars:** Virugard, Georgia Green, and C-99R

### Planting:

**Date:** May 18, 2001

**Experimental Design:** The whole plots were randomized in six complete blocks. Individual subplots, which consisted of two 30-foot rows spaced 3-feet apart, were randomized within each whole plot.

**Land Preparation:** Conventional tillage practices.

**Seeding Rate:** Six seed per foot of row.

**Crop History:** Peanut-cotton-peanut rotation. Test site had a history of southern stem rot and peanut root-knot damage on previous peanut crops.

### Cultural Practices:

**Herbicides:** Sonalan 1.5 + Dual 1.5 pt/ac (April 18), and Gramoxone Max 5.5 oz + 2,4 DB 1.5 pt + Basagran 0.5 pt/ac + Non-ionic surfactant (June 18).

**Fungicides:** See table.

**Insecticides:** Temik 5 lb/ac (May 17).

**Nematicides:** None.

**Irrigation:** 1 inch applied on July 16.

**Application of Treatments:** Applications were made on June 25, July 9, July 23, August 6, August 20, and September 4. Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Early and late leaf spot were rated simultaneously using the Florida peanut leaf spot scoring system. Leaf spot ratings were logged on September 14 on Virugard, September 29 on Georgia Green, and October 17 on C-99R. Southern stem rot (SSR) loci counts (one locus was defined as  $\leq 1$  ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on September 14 for Virugard, October 1 for Georgia Green, and October 17 for C-99R.

**Harvest:** Windrows were harvested with a field combine three to five days after inversion. Yields were reported at 7% moisture.

**Summary:** Given the frequent rain showers and history of peanut production on this site, overall leaf spot severity was low. Early leaf spot was the predominate leaf spot disease observed. The Bravo Ultrex/Abound (1.6 pints per acre) program gave better control of leaf spot diseases than did the Bravo Ultrex alone. Bravo Ultrex alone proved equally effective in controlling leaf spot diseases as the remaining fungicide programs. All of the fungicide programs gave better control of SSR than Bravo Ultrex alone. The level of SSR control obtained with the programs that included Folicur 3.6F, Moncut 50W, and Abound 2SC did not significantly differ. Yields of the peanuts treated with Folicur 3.6F, Moncut 50W, or Abound 2SC were significantly above those recorded for peanuts receiving



applications of Bravo Ultrex alone. Highest yield gains were obtained with the Bravo Ultrex/Moncut four-spray program. Yield responses noted with the latter program were similar to those seen with the Bravo Ultrex/Folicur and both Bravo Ultrex/Abound programs.

**TABLE 1. EFFECT OF RECOMMENDED FUNGICIDE PROGRAMS FOR CONTROL OF LEAF SPOT DISEASES<sup>1</sup> ON IRRIGATED PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2 3-6	3.2 a	4.0 a	3.7 b	3.6 ab
Bravo Ultrex 1.4 lb Bravo Ultrex + Moncut 50W 1.4 + 2 lb	1,2,4,5,6 3	2.7 a	5.3 a	3.8 ab	3.9 a
Bravo Ultrex 1.4 lb Bravo Ultrex lb + Moncut 50W 1.4 + 0.5	1,2 3,4,5,6	3.0 a	4.2 a	3.3 b	3.5 ab
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6 3,5	3.0 a	4.7 a	4.0 ab	3.8 ab
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6 3,5	2.5 a	4.0 a	3.5 b	3.3 b
Bravo Ultrex 1.4 lb	1-6	3.0 a	4.7 a	4.5 a	4.1 a
<b>LSD (0.05)</b>		<b>0.7</b>	<b>1.3</b>	<b>0.8</b>	<b>0.6</b>
<b>Mean</b>		<b>2.9</b>	<b>4.5</b>	<b>3.8</b>	

<sup>1</sup>Early and late leaf spot were rated together using the Florida leaf spot scoring system where 1= no disease, 2= very few lesions on leaves in lower canopy, 3= few lesions on leaves in lower and upper canopy, 4= some lesion in lower and upper canopy with light defoliation, 5= lesions noticeable in upper canopy with some ( $\leq 25\%$ ) defoliation, 6= lesions numerous with significant ( $\leq 50\%$ ) defoliation, 7= lesions numerous with heavy ( $\leq 75\%$ ) defoliation, 8= numerous lesions on few remaining leaves, 9= very few remaining leaves covered with lesions, and 10= plants dead. Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

**TABLE 2. EFFECT OF RECOMMENDED FUNGICIDE PROGRAMS FOR CONTROL OF SOUTHERN STEM ROT<sup>1</sup> ON IRRIGATED PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2 3-6	7.5 b	15.3 ab	10.3 b	11.1 b
Bravo Ultrex 1.4 lb Bravo Ultrex +Moncut 50W 1.4+2 lb	1,2,4,5,6 3	6.3 b	11.7 ab	14.3 b	10.8 b
Bravo Ultrex 1.4 lb Bravo Ultrex +Moncut 50W 1.4+0.5 lb	1,2 3,4,5,6	5.8 b	9.8 b	10.0 b	8.6 b
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6 3,5	10.0 b	11.7 ab	14.0 b	11.9 b
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6 3,5	8.2 b	9.8 b	16.0 ab	11.3 b
Bravo Ultrex 1.4 lb	1-6	18.5 a	19.5 a	22.7 a	20.2 a
<b>LSD (0.05)</b>		<b>5.6</b>	<b>9.3</b>	<b>8.1</b>	<b>3.1</b>
<b>Mean</b>		<b>9.4</b>	<b>13.0</b>	<b>14.6</b>	

<sup>1</sup>Numbers of loci of Southern stem rot recorded per 60 ft of row.

Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

**TABLE 3. EFFECT OF RECOMMENDED FUNGICIDE PROGRAMS ON YIELD<sup>1</sup> ON IRRIGATED PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2 3-6	3880 a	3646 bc	3662 ab	3730 ab
Bravo Ultrex 1.4 lb Bravo Ultrex +Moncut 50W 1.4+2 lb	1,2,4,5,6 3	3840 a	3816 ab	3428 ab	3695 b
Bravo Ultrex 1.4 lb Bravo Ultrex +Moncut 50W 1.4+0.5 lb	1,2 3-6	3824 a	4348 a	3783 a	3985 a
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6 3,5	3872 a	3904 ab	3412 ab	3730 ab
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6 3,5	3896 a	4098 ab	3364 ab	3786 a
Bravo Ultrex 1.4 lb	1-6	3267 b	3186 c	3033 b	3162 c
<b>LSD (0.05)</b>		<b>476</b>	<b>554</b>	<b>725</b>	<b>290</b>
<b>Mean</b>		<b>3763</b>	<b>3833</b>	<b>3447</b>	

<sup>1</sup>Yield was measured in pounds per acre.

Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

## Response of Dryland Peanuts to Recommended Fungicide Programs

**Objective:** Compare the effectiveness of recommended fungicide programs for control of leaf spot diseases and peanut rust as well as southern stem rot and *Rhizoctonia* limb rot on selected cultivars of peanut in a dryland production system.

**Location:** Wiregrass Research and Extension Center, Headland, AL

**Soil Type:** Dothan fine sandy loam (OM<1%)

**Cultivars:** Virugard, Georgia Green, and C-99R

### Planting:

**Date:** May 18, 2001

**Experimental Design:** A split plot design with peanut lines as the whole plot and fungicide programs as the subplot was used. The whole plots were randomized in four complete blocks. Individual subplots, which consisted of two 30-foot rows spaced 3 feet apart, were randomized within each whole plot.

**Land Preparation:** Conventional tillage practices.

**Seeding Rate:** Six seed per foot of row.

**Crop History:** Peanut-cotton-follow-peanut.

### Cultural Practices:

**Herbicides:** Sonalan 1 qt/ac (May 7).

**Fungicides:** See table.

**Insecticides:** Temik 5 lb/ac (May 16).

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Applications were made on June 26, July 10, July 24, August 7, August 21, and September 5. Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Early and late leaf spot were rated simultaneously using the Florida peanut leaf spot scoring system. Leaf spot ratings were logged on September 14 on Virugard, September 29 on Georgia Green, and October 16 on C-99R. Southern stem rot (SSR) loci counts (one locus was defined as < 1 ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on September 14 for Virugard, October 1 for Georgia Green, and October 17 for C-99R.

**Harvest:** The windrows were harvested with a field combine three days after inversion. Yields were reported at 7% moisture.

**Summary:** Early leaf spot was the predominate leaf spot disease observed. In means across cultivars, programs that included both rates of Abound 2SC and Folicur 3.6F gave better leaf spot control than did the seven-spray Bravo Ultrex standard, but the programs that included Moncut 50W did not. When compared with the Bravo Ultrex alone, means across cultivars of peanuts treated with Folicur 3.6F, the high rate of Abound, and both treatments of Moncut 50W significantly reduced the number of SSR loci counts. The Bravo Ultrex/Folicur 3.6F program provided better SSR control than either rate of Abound 2SC. Overall, yields obtained with all fungicide programs were excellent, particularly for non-irrigated peanuts. The improved control of leaf spot diseases and/or SSR obtained with the Folicur 3.6, Moncut 50W, and Abound 2SC programs was not reflected in higher yields. Yield of peanuts treated season long with Bravo Ultrex was similar to peanuts recorded for peanuts receiving applications of Folicur 3.6, Moncut 50W, and Abound 2SC.

**TABLE 1. EFFECT OF RECOMMENDED FUNGICIDES FOR CONTROL OF LEAF SPOT DISEASES<sup>1</sup> ON DRYLAND PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3-6	4.3 a	6.0 ab	4.8 a	5.0 bc
Bravo Ultrex 1.4 lb Moncut 50W 2.0 lb	1-7 3	4.5 a	6.8 a	5.0 a	5.4 a
Bravo Ultrex 1.4 lb Moncut 50W 0.5 lb	1-7 3-6	4.0 a	6.3 a	5.0 a	5.1 ab
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6,7 3,5	4.3 a	5.3 b	4.5 a	4.7 c
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6,7 3,5	3.5 a	6.3 a	4.8 a	4.8 bc
Bravo Ultrex 1.4 lb	1-7	4.3 a	6.8 a	5.3 a	5.4 a
<b>LSD (0.05)</b>		<b>1.0</b>	<b>0.8</b>	<b>1.1</b>	<b>0.4</b>
<b>Mean</b>		<b>4.1</b>	<b>6.2</b>	<b>4.9</b>	

<sup>1</sup>Early and late leaf spot were rated together using the Florida leaf spot scoring system where 1= no disease, 2= very few lesions on leaves in lower canopy, 3= few lesions on leaves in lower and upper canopy, 4= some lesion in lower and upper canopy with light defoliation, 5= lesions noticeable in upper canopy with some ( $\leq 25\%$ ) defoliation, 6= lesions numerous with significant ( $\leq 50\%$ ) defoliation, 7= lesions numerous with heavy ( $\leq 75\%$ ) defoliation, 8= numerous lesions on few remaining leaves, 9= very few remaining leaves covered with lesions, and 10= plants dead. Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

**TABLE 2. EFFECT OF RECOMMENDED FUNGICIDES FOR CONTROL OF SOUTHERN STEM ROT<sup>1</sup> ON DRYLAND PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3-6	0.5 c	1.5 bc	3.0 b	1.7 c
Bravo Ultrex 1.4 lb Moncut 50W 2.0 lb	1-7 3	4.0 bc	0.8 c	4.8 b	3.2 bc
Bravo Ultrex 1.4 lb Moncut 50W 0.5 lb	1-7 3-6	3.8 bc	2.5 bc	5.3 b	3.8 bc
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6,7 3-5	8.3 a	4.3 abc	3.5 b	5.3 ab
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6,7 3,5	2.8 bc	5.8 ab	4.5 b	4.3 b
Bravo Ultrex 1.4 lb	1-7	4.8 ab	7.3 a	10.8 a	7.6 a
<b>LSD (0.05)</b>		<b>4.2</b>	<b>4.3</b>	<b>3.7</b>	<b>2.4</b>
<b>Mean</b>		<b>4.0</b>	<b>3.7</b>	<b>5.3</b>	

<sup>1</sup>Numbers of loci of Southern stem rot recorded per 60 ft of row.

<sup>2</sup>Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

**TABLE 3. EFFECT OF RECOMMENDED FUNGICIDES ON YIELD<sup>1</sup> OF DRYLAND PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3-6	4465 a	4368 a	5130 a	4655 a
Bravo Ultrex 1.4 lb Moncut 50W 2.0 lb	1-7 3	4332 a	4840 a	4247 a	4473 a
Bravo Ultrex 1.4 lb Moncut 50W 0.5 lb	1-7 3-6	4513 a	4731 a	4441 a	4562 a
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6,7 3,5	4767 a	4707 a	4659 a	4711 a
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6,7 3,5	4852 a	5070 a	4380 a	4767 a
Bravo Ultrex 1.4 lb	1-7	4634 a	4332 a	4404 a	4457 a
<b>LSD (0.05)</b>		<b>808</b>	<b>739</b>	<b>898</b>	<b>453</b>
<b>Mean</b>		<b>4594</b>	<b>4675</b>	<b>4544</b>	

<sup>1</sup>Yield was measured in pounds per acre.

Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

## Disease Severity and Yield Response of Selected Peanut Cultivars under Recommended Fungicide Regimes

**Objective:** Compare the effectiveness of recommended fungicide programs for the control of leaf spot diseases and peanut rust as well as southern stem rot and *Rhizoctonia* limb rot on selected cultivars of peanut.

**Location:** Gulf Coast Research and Extension Center, Fairhope, AL

**Soil Type:** Malbis sandy loam (OM<1%)

**Cultivars:** Virugard, Georgia Green, and C-99R

### Planting:

**Date:** May 23, 2001

**Experimental Design:** A split plot design with peanut cultivars as the whole plot and fungicide programs as the subplot was used. Whole plots were randomized in six complete blocks. Individual subplots, which consisted of two 30-foot rows spaced 3 feet apart, were randomized within each whole plot.

**Land Preparation:** 171 lb/ac of 0-23-23 fertilizer blended with 10 lb/ac of sulfur and 0.5 lb/ac of boron was incorporated.

**Seeding Rate:** Six seed per foot of row.

**Crop History:**

### Cultural Practices:

**Herbicides:** Pre-plant: Prowl 2 pt/ac (May 4). Post-plant: Gramoxone Ultra 10 oz + Basagran 0.5 pt/ac + Activate 1 pt/50 gal (June 8), Storm 1.5 pt + Butyrac 175 1 pt/ac + Activate 1 pt/50 gal (June 25), and Select 10 fl oz + 1pt/ac of Prime Oil (July 23).

**Fungicides:** See table.

**Insecticides:** Temik 15G 6 lb/ac (May 21).

**Nematicides:** None.

**Irrigation:** None.

**Application of Treatments:** Fungicide treatments were made on June 28, July 11, August 3, August 17, August 28, September 7, and September 17. Fungicides were applied with a tractor-mounted boom sprayer with TX8 hollow cone nozzles calibrated to deliver 15 gallons per acre.

**Disease Assessment:** Early and late leaf spot were rated simultaneously using the Florida peanut leaf spot scoring system. Leaf spot and peanut rust ratings were logged on September 14 on Virugard, September 29 on Georgia Green, and October 16 on C-99R. *Rhizoctonia* limb rot (RLR) loci counts (one locus was defined as < 1 ft of consecutive symptomatic plant(s) per row) were made immediately after plot inversion on September 26 for Virugard, October 10 for Georgia Green, and October 24 for C-99R.

**Harvest:** The windrows were harvested on October 10 (Virugard), October 22 (Georgia Green), and October 31 (C-99R). Yields were reported at 7% moisture.

**Summary:** Despite favorable rainfall patterns, leaf spot pressure was much lower than anticipated. Of the three cultivars, Georgia Green suffered significantly lower leaf spot damage than did either Virugard or C-99R (Table 1). When averaged across all cultivars, Bravo Ultrex/Abound 2SC 1.2 pt, and Bravo Ultrex/Folicur 3.6F gave poorer control of leaf spot diseases than the standard seven-spray Bravo Ultrex program. Leaf spot ratings for the peanuts treated with Bravo Ultrex alone were similar to the results obtained with both Bravo Ultrex/Moncut 50W programs and Bravo Ultrex/Abound 1.6 pt. On the individual cultivars, level of leaf spot control obtained with all of

the fungicide programs did not differ significantly from Bravo Ultrex alone, with exception of Bravo Ultrex/About 1.2 pt on Virugard and C-99R and Bravo Ultrex/ Folicur 3.6F on Georgia Green and C-99R.

Rhizoctonia limb rot ratings for all three cultivars were similar (Table 2). When averaged across all cultivars, RLR level in any of the fungicides programs significantly differed from Bravo Ultrex alone. However, Bravo Ultrex/Folicur 3.6F and Bravo Ultrex/low rate Moncut significantly reduced the severity of RLR compared with Bravo Ultrex/About 2SC 1.6 pt. On the individual cultivars, level of RLR control obtained with all of the fungicide programs on Virugard and C-99R did not differ significantly. On Georgia Green, the higher Rhizoctonia limb rot level was obtained with the Bravo Ultrex/low rate of About 2SC program.

When averaged across all fungicide treatments, yields recorded for Virugard, Georgia Green, and C-99R were very similar (Table 3). Mean yield across cultivars of the Bravo Ultrex-treated peanuts did not differ significantly from those treated with About 2SC, Moncut 50W, and Folicur 3.6F. On individual peanut cultivars, no differences in yield were noted between the six fungicide programs.

**TABLE 1. EFFICACY OF RECOMMENDED FUNGICIDES FOR CONTROL OF LEAF SPOT DISEASES<sup>1</sup> ON DRYLAND PEANUT, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3-6	4.3 ab	4.0 a	5.0 a	4.4 a
Bravo Ultrex 1.4 lb Moncut 50W 2.0 lb	1-7 3	3.7 b	2.5 b	3.5 c	3.2 d
Bravo Ultrex 1.4 lb Moncut 50W 0.5 lb	1-7 3,4,5,6	3.8 b	2.5 b	3.8 c	3.4 cd
Bravo Ultrex 1.4 lb About 2SC 1.2 pt	1,2,4,6,7 3,5	4.8 a	3.0 b	4.7 ab	4.2 ab
Bravo Ultrex 1.4 lb About 2SC 1.6 pt	1,2,4,6,7 3,5	4.2 ab	2.8 b	4.2 bc	3.7 bc
Bravo Ultrex 1.4 lb	1-7	3.7 b	2.8 b	3.7 c	3.4 cd
<b>LSD (0.05)</b>		<b>0.8</b>	<b>0.9</b>	<b>0.7</b>	<b>0.5</b>
<b>Mean</b>		<b>4.1</b>	<b>2.9</b>	<b>4.1</b>	

<sup>1</sup>Early and late leaf spot were rated together using the Florida leaf spot scoring system where 1= no disease, 2= very few lesions on leaves in lower canopy, 3= few lesions on leaves in lower and upper canopy, 4= some lesion in lower and upper canopy with light defoliation, 5= lesions noticeable in upper canopy with some ( $\leq 25\%$ ) defoliation, 6= lesions numerous with significant ( $\leq 50\%$ ) defoliation, 7= lesions numerous with heavy ( $\leq 75\%$ ) defoliation, 8= numerous lesions on few remaining leaves, 9= very few remaining leaves covered with lesions, and 10= plants dead. Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

**TABLE 2. EFFICACY OF RECOMMENDED FUNGICIDE REGIMES ON CONTROL OF RHIZOCTONIA LIMB ROT<sup>1</sup> ON DRYLAND PEANUT, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3-6	1.5 a	2.2 b	2.7 a	2.1 b
Bravo Ultrex 1.4 lb Moncut 50W 2.0 lb	1-7 3	3.7 a	3.7 ab	5.7 a	4.3 ab
Bravo Ultrex 1.4 lb Moncut 50W 0.5 lb	1-7 3,4,5,6	1.0 a	1.8 b	4.5 a	2.4 b
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6,7 3,5	2.8 a	8.8 a	5.5 a	5.5 ab
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6,7 3,5	4.5 a	7 ab	7.7 a	6.4 a
Bravo Ultrex 1.4 lb	1-7	6.2 a	2 b	6.8 a	5.2 ab
<b>LSD (0.05)</b>		<b>6.5</b>	<b>5.6</b>	<b>6.9</b>	<b>3.6</b>
<b>Mean</b>		<b>3.3</b>	<b>4.2</b>	<b>5.5</b>	

<sup>1</sup> Numbers of loci of Southern stem rot recorded per 60 ft of row.

Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.

**TABLE 3. EFFECT OF RECOMMENDED FUNGICIDES ON YIELD<sup>1</sup> OF DRYLAND PEANUT CULTIVARS, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2001**

Fungicide Program and Rate per Acre	Application Timing	Peanut Cultivar			Mean
		Virugard	Georgia Green	C-99R	
Bravo Ultrex 1.4 lb Folicur 3.6F 0.45 pt	1,2,7 3-6	4731 a	5645 a	6292 a	5556 a
Bravo Ultrex 1.4 lb Moncut 50W 2.0 lb	1-7 3	4892 a	5504 a	5752 a	5383 a
Bravo Ultrex 1.4 lb Moncut 50W 0.5 lb	1-7 3,4,5,6	4937 a	5443 a	6344 a	5575 a
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	1,2,4,6,7 3,5	5139 a	4878 a	6320 a	5446 a
Bravo Ultrex 1.4 lb Abound 2SC 1.6 pt	1,2,4,6,7 3,5	4840 a	5541 a	6058 a	5446 a
Bravo Ultrex 1.4 lb	1-7	4888 a	4703 a	6439 a	5344 a
<b>LSD (0.05)</b>		<b>426</b>	<b>952</b>	<b>863</b>	<b>418</b>
<b>Mean</b>		<b>4905</b>	<b>5269</b>	<b>6201</b>	

<sup>1</sup> Yield was measured in pounds per acre.

Means within each column followed by the same letter do not significantly differ according with Fisher's least significance difference test.





