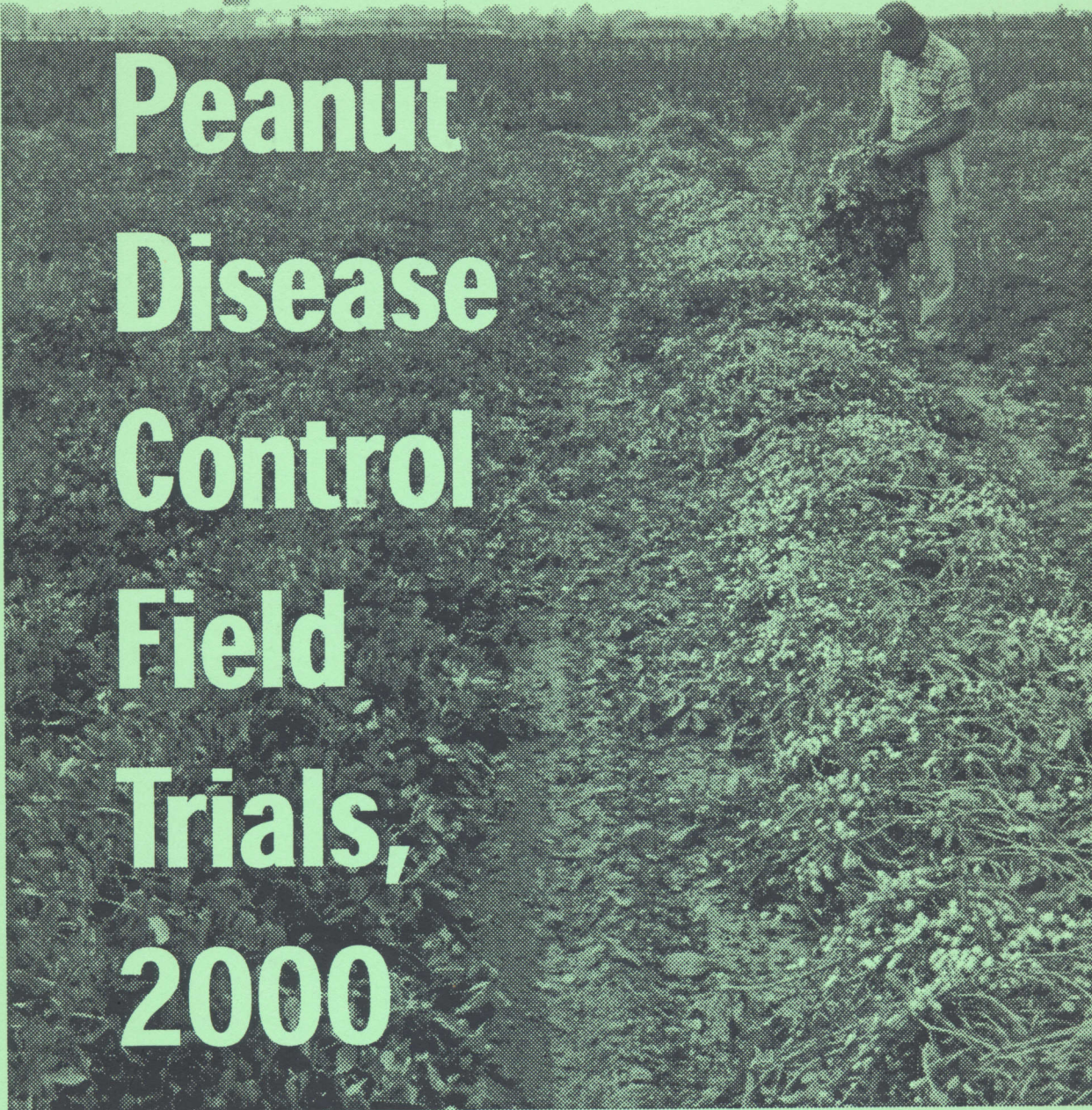


Peanut Disease Control Field Trials, 2000



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Luther Waters, Director

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

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Peanut Disease Control Field Trials, 2000

A. K. Hagan, K. L. Bowen, H. L. Campbell, and M. E. Rivas-Davila¹

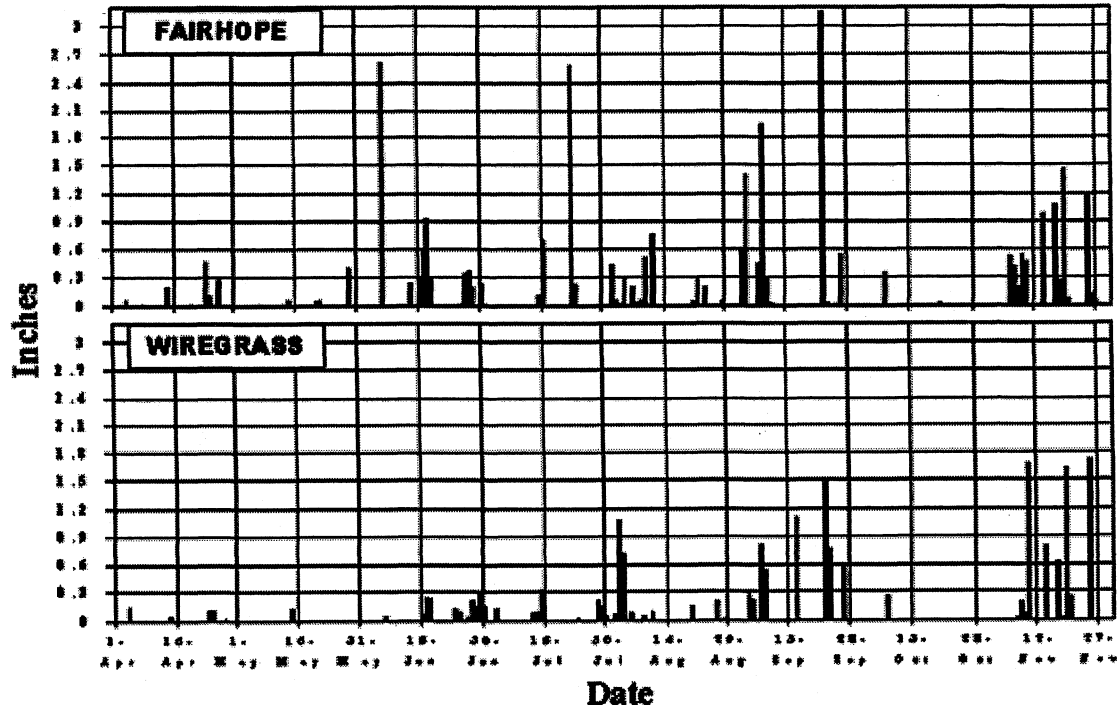
Introduction

The variety of fungicides available for disease control on peanuts makes it difficult for growers to select the most efficient treatment to use. In order to provide information on the effectiveness of various fungicides, disease trials were conducted by Alabama Agricultural Experiment Station personnel in 2000 on peanut in Alabama. This report summarizes the results of these trials.

The disease trials were located at the Wiregrass Research and Extension Center, Headland, Alabama, and the Gulf Coast Research and Extension Center, Fairhope, Alabama. These trials evaluated the efficacy of current and new fungicides for controlling foliar and soil-borne diseases of peanut and their effect on crop production in Alabama.

In the Wiregrass Region of Alabama, the 2000 growing season was the driest in a century. Only 6 inches of rain were recorded at the Wiregrass Research and Extension Center (WREC) during the months of April, May, June, July, and August (Figure 1). In addition, day temperatures in part of June and July often ranged between 95

Figure 1. Daily precipitation (inches) April to November 2000.



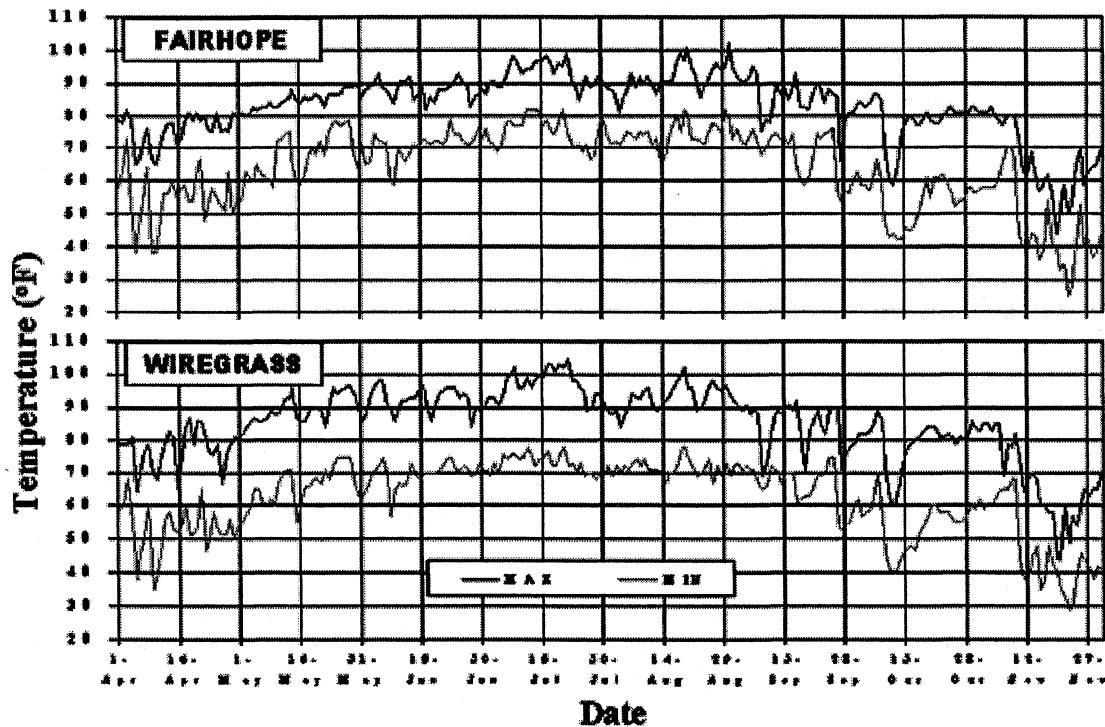
¹Hagan and Bowen are Professors and Campbell and Rivas-Davila are Research Associates in the Auburn University Department of Entomology and Plant Pathology.

and 100 F° (Figure 2). Consequently, the yield of peanut, especially those grown without the benefit of irrigation, was extremely low. As indicated by SMK values between 50 and 60, crop quality was also quite poor.

Rainfall patterns at the Gulf Coast Research and Extension Center (GCREC) were more conducive to growing peanuts. However, a late August-September drought also limited peanut yield.

As was observed in 1999, the development of leaf spot diseases was limited by dry weather patterns at both test locations. Also, peanut rust was not observed at either location. The development of southern stem rot in some trials, especially at the WREC, may have been limited by drought conditions. Rhizoctonia limb rot did not cause significant damage in trials at either location.

Figure 2. Daily minimum and maximum temperature (°F), April to November 2000.



Reaction of Experimental Peanut Lines to Common Diseases

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

Target diseases include early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), southern stem rot (*Sclerotium rolfsii*), and TSWV (Tomato Spotted Wilt Virus).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivars: NC 7, Florunner, VT 940419P, UF 98326, UF 97102, UF 98511, GA 942511, GA 952540, GA 952533, TP 301-1-8, TP296-4-4

Planting:

Date: May 3, 2000

Experimental Design: Randomized complete block design with four replications. Plot size was two 20-foot (6.1 m) rows spaced 3 feet (0.9 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Six seed per foot of row.

Crop History: Peanut-corn-peanut rotation.

Cultural Practices:

Herbicides: Pre-plant: Sonalan 1 quart + Pursuit 70DG 1.44 ounces per acre.

Fungicides: Bravo Ultrex 1.4 pounds per acre (June 28 and July 13).

Folicur 3.6F 0.45 pint per acre (July 26, August 10, August 24, and September 8).

Insecticides: Temik 15G 6.7 pounds in-furrow at planting. Lorsban 15G 13.3 pounds per acre (June 6).

Nematicides: None.

Irrigation Applied: As needed with a side-roll system.

Application of Treatments: Fungicides were applied as full canopy spray at a spray volume of 15 gallons per acre on the dates indicated above.

Disease Assessment: Early and late leaf spot were visually rated on September 7 (early maturity [E]), September 13 (intermediate [M]), and September 27 (late maturity [L]) using the Florida leaf spot scoring system. Counts of TSWV severity was assessed by determining the number of disease loci (one locus was defined as ≤ 1 foot of consecutive symptoms plants per row) and southern stem rot (SSR) loci (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease) were made on the same days as early and late leaf spot.

Harvest: Plants were dug on September 7 (E), September 13 (M), and September 28 (L) and harvested with a combine two to three days later. Yields were reported at 7% moisture.

Summary: Unusually low rainfall totals for May, June, July, and August suppressed the development of early and late leaf spot, especially on the early maturing (E) cultivars but the dry weather in May probably contributed to the unusually high incidence of TSWV.

Significant differences in the level of TSWV, leaf spot diseases, SSR, and pod yields were seen between the commercial standards (NC-7 and Florunner) and the experimental peanut lines. The lowest incidence of TSWV was seen on UF 97102, UF 98511, GA 942540, and GA 962533, while the highest virus ratings were recorded for the susceptible standards Florunner and NC-7. TSWV ratings for TP 301-1-8, TP 296-4-4, and VT 940419P did not differ significantly from those noted for the two commercial standards. Above average rainfall in late September did increase the level of leaf spot disease, particularly late leaf spot, on the late-maturing (L) peanut

lines but appeared to have no impact on the severity of SSR. On the majority of the early and intermediate maturity lines, light to moderate spotting of the leaves along with little or no premature leaf shed was seen. SSR loci counts for the runner-type experimental lines UF 98326, UF 97102, UF 98511, GA 962533, TP 301-1-8, and TP 296-4-4 were statistically similar to the counts recorded for the runner standard Florunner. However, SSR incidence on GA 942511 and GA 962533 was significantly lower than damage levels seen on Florunner. Similar SSR loci counts were noted on the Virginia standard NC-7 and the lone Virginia-type entry VT 940419P.

With the exception of GA 942511, yields increased as the incidence of TSWV declined. Florunner yielded significantly less than all of the runner-type experimental lines except TP 301-1-8 and TP 296-4-4. Yields of the Virginia-type commercial standard and the one experimental line were similar.

**REACTION OF PEANUT CULTIVARS TO FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000**

Cultivar (Maturity ¹)	Leaf Spot Rating ²	TSWV Rating ³	Southern Stem Rot Rating ⁴	Yield (lbs/ac)
NC 7 (E)	3.3 EF ⁵	30.8 A	3.3 EF	3911 B-D
Florunner (M)	3.5 D-F	32.3 A	11 A-C	2741 EF
VT 940419 P (E)	3.0 EF	26.8 AB	2.8 EF	3630 CD
UF 98326 (L)	5.5 AB	20.3 B-D	8.0 B-D	4320 AB
UF 97102 (M)	4.8 BC	19.3 CD	7.0 C-F	4320 AB
UF 98511 (M)	4.0 C-E	16.5 D	11.8 AB	4066 BC
GA 942511 (L)	4.0 C-E	22.8 B-D	6.0 D-F	4465 AB
GA 952540 (L)	6.0 A	18.0 D	2.5 F	3303
GA 952533 (M)	4.5 B-D	18.3 D	7.3 B-E	4982 A
TP 301-1-8 (M)	2.5 F	27.0 AB	13.5 A	2468 F
TP296-4-4 (M)	2.8 F	25.8 A-C	10.8 A-C	2677 EF
LSD (0.05)	1.05	7.2	4.6	675

¹Peanut maturity group: E = early maturing, M = intermediate, and L = late maturing cultivar.

²Early and late leaf spot was assessed on September 7 (E), September 13 (M), and September 27 (L), based on 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 = lesion numerous with heavy defoliation, 8 = very numerous lesions on few remaining leaves with very heavy defoliation, 9 = very few remaining leaves covered with lesions, 10 = plants dead).

³Number of TSWV loci per 40 feet of row.

⁴Number of southern stem loci per 40 feet of row.

⁵Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Effect of Seeding Rate on the Incidence of TSWV in Peanut

Objective: To study the effect of seeding rate of the peanut cultivars Florunner and Georgia Green to TSWV. Target disease was TSWV (Tomato Spotted Wilt Virus).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivars: Florunner and Georgia Green

Planting:

Date: May 3, 2000

Experimental Design: Randomized complete block design with four replications. Plot size was two 20-foot (6.1 m) rows spaced 3 feet (0.9 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: See table.

Crop History: Peanut-corn/cotton-peanut.

Cultural Practices:

Herbicides: Pre-plant: Sonalan 1 quart + Pursuit 70DG 1.44 ounces per acre.

Fungicides: Bravo Ultrex 1.4 pounds per acre (June 28 and July 13).

Folicur 3.6F 0.45 pint per acre (July 26, August 10, August 24, and September 8).

Insecticides: Temik 15G 6.7 pounds in-furrow at planting. Lorsban 15G 13.3 pounds per acre (June 6).

Nematicides: Temik 15G 6.7 pounds banded over row middle at planting.

Irrigation Applied: As needed.

Application of Treatments: Fungicides were applied as full canopy spray at the volume of 15 gallons per acre on the dates indicated above.

Disease Assessment: Counts of TSWV severity were assessed by determining the number of disease loci (one locus was defined as ≤ 1 foot of consecutive symptoms plants per row) on September 7.

Harvest: Plots were dug on September 13 and picked with a combine on September 16. Yields were reported at 7% moisture.

Summary: For Florunner peanut, seeding rate had no significant impact on the incidence of TSWV, and yields across the three seeding rates were similar. Surprisingly, TSWV levels in Georgia Green were higher at the four-seed per foot rate than at the higher or lower seeding rates. As was the case with the Florunner peanut, yield of Georgia Green was similar across all seeding rates. Overall, the incidence of TSWV was significantly lower in Georgia Green than in Florunner. Although the differences were not always significant, Georgia Green substantially outyielded Florunner.

EFFECT OF SEEDING RATE OF THE PEANUT CULTIVARS FLORUNNER AND GEORGIA GREEN ON TSWV INCIDENCE AND YIELD, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000

Cultivar	Seeding Rate	TSWV Rating ¹	Yield lbs/ac	Cultivar	Seeding Rate	TSWV Rating	Yield lbs/ac
Florunner	6 seed/ft	30.8 A ²	3557 C	Georgia Green	6 seed/ft	12.3 C	4882 A
Florunner	4 seed/ft	26.8 A	3666 BC	Georgia Green	4 seed/ft	19.0 B	4683 A
Florunner	3 seed/ft	27.3 A	3766 BC	Georgia Green	3 seed/ft	11.0 C	4547 A-C
LSD (0.05)		—	—			5.7	1029

¹TSWV was assessed on September 7 as the number of TSWV loci per 40 feet of row.

²Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Reaction of Commercial Peanut Lines to Several Fungal and Viral Diseases

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

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), southern stem rot (*Sclerotium rolfsii*), and TSWV (Tomato Spotted Wilt Virus).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivars: Agratech 1-1, AgraTech 201, AgraTech VC-2, Andru 93, C-99 R, Florida 98, Florunner, GA Bold, GA Green, GA Hi Oil, GK7 High Oil, Gregory, NC7, NC-VII, NC12C, Southern Runner, SunOleic 97 R, VA 93 B, VA 98 R, VA-C 92 R, and Virugard

Planting:

Date: May 3, 2000

Experimental Design: Randomized complete block design with four replications. Plot size was two 20-foot (6.1 m) rows spaced 3 feet (0.9 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Six seed per foot of row.

Crop History: Peanut-Cotton-Peanut.

Cultural Practices:

Herbicides: Pre-plant: Sonalan 1 quart + Pursuit 70DG 1.44 ounces per acre.

Fungicides: Bravo Ultrex 1.4 pounds per acre (June 28 and July 13).

Folicur 3.6F 0.45 pint per acre (July 26, August 10, August 24, and September 8).

Insecticides: Temik 15G 6.7 pounds in-furrow at planting and Lorsban 15G 13.3 pounds per acre (June 6).

Nematicides: None.

Irrigation Applied: As needed with side-roll system.

Application of Treatments: Fungicides were applied as full canopy spray at a spray volume of 15 gallons per acre on the dates indicated above.

Disease Assessment: Early and late leaf spot were visually rated on September 3 (early maturity [E]), September 7 (intermediate [M]), and September 26 (late maturity [L]) using the Florida leaf spot scoring system. Counts of TSWV severity was assessed by determining the number of disease loci (one locus was defined as ≤ 1 foot of consecutive symptoms plants) and southern stem rot (SSR) loci (one locus was defined as ≤ 1 foot of consecutive symptoms and signs of the disease) were made on the same days as early and late leaf spot.

Harvest: Plants were dug on September 5 (E), September 12 (M), and September 28 (L) and harvested on September 11 (E), September 14 and 18 (M), and October 2 (L). Yields were reported at 7 % moisture.

Summary: Unusually low rainfall totals for May, June, July, and August helped suppress the development of early and late leaf spot, especially on the early maturing (E) cultivars, but the dry weather in May probably contributed to the severity of TSWV. Above average rainfall in late September did increase the level of leaf spot diseases, particularly late leaf spot, but not SSR on the late-maturing peanuts.

Significant differences in the level of TSWV, severity of leaf spot diseases and SSR, and pod yields were noted among the 21 peanut cultivars. The most extensive and intensive TSWV symptom development was seen in the runner type-peanuts Andru 93, Georgia Bold, and SunOleic 97R. Runner-type cultivars, which had the lowest TSWV infection levels, included Virugard, Georgia High Oil, C-99R, and Gregory. No significant differences in TSWV intensity were noted among the Virginia-type peanuts. Among the runner-type peanuts, the late maturing C-99R, FL MDR 98, and Southern Runner had among the highest leaf spot ratings, while the earlier maturing Andru 93 and SunOleic 97R suffered the least leaf spot damage. Of the Virginia-

type peanut lines, NC-VII and VA-C 92R had the lowest leaf spot ratings. As indicated by leaf spot ratings of 4.5, NC 12C and AgraTech VC-2 suffered from moderate leaf spotting in the lower and mid-canopy as well as light defoliation. Of the runner peanuts, the least SSR damage was noted on runner-type cultivars Virugard, AgraTech 1-1, and Georgia High Oil and Virginia lines VA 93B, NC-7, and NC 12C. Overall, the heaviest SSR damage was seen on the runner-type peanuts Florunner and AgraTech 201.

The best yielding runner-type peanuts included Virugard, AgraTech 1-1, Gregory, Georgia Hi Oil, Georgia Green, and C-99R. Yields of several of the Virginia-type peanuts such as NC-VII, VA-C 92R, AgraTech VC-2 did not significantly differ from that of the top yielding runner peanut, Virugard. As has been seen in previous years, the most TSWV-susceptible runner-type cultivars, such as Florunner and SunOleic 97R, have among the lowest pod yields, while many of the highest yielding lines, such as Virugard, Georgia Hi Oil, and C-99R, are partially resistant to this disease.

**EFFECT ON COMMERCIAL PEANUT LINES TO LEAF SPOT DISEASES, SOUTHERN STEM ROT, AND TSWV
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 1999**

Cultivar (Maturity) ¹	Peanut Type ²	Leaf Spot Rating ³	Southern Stem Rot Ratings ⁴	TSWV ⁵	Yield lbs/ac
AgraTech 1-1 (E)	R	3.5 B-F ⁶	1.5 F-H	24.0 C-F	4565A-C
AgraTech 201 (M)	R	4.3 A-C	9.5 AB	21.3 E-G	3875 C-G
AgraTech VC-2 (E)	V	4.5 AB	2.8 E-H	24.5 C-F	4175 B-F
Andru 93(E)	R	3.0 D-F	3.3 D-H	35.7 A	3594 FG
C-99 R (L)	R	5.3 A	4.5 C-G	14.8 GH	4447 A-E
Florida 98 (L)	R	4.5 AB	2.3 F-H	25.8 B-F	4075 B-F
Flourunner (M)	R	3.8 B-E	13.3 A	28.3 B-D	2523 H
Georgia Bold (M)	R	3.5 B-F	4.5 C-G	31.5 AB	3911 C-G
Georgia Green (M)	R	4.0 B-D	6.5 B-E	21.0 E-G	4538 A-D
GA Hi Oil (M)	R	3.3 C-F	1.5 F-H	12.0 H	4783 AB
GK7 High Oil (M)	R	3.5 B-F	7.3 B-D	23.3 D-F	3312 G
Gregory (M)	R	3.5 B-F	4.5 C-G	15.5 GH	4737 AB
NC 7 (E)	V	3.8 B-E	1.5 F-H	27.5 B-E	3920 C-G
NC-VII (M)	V	2.8 EF	5.3 C-F	23.5 D-F	4420 A-E
NC 12C (M)	V	4.5 AB	1.7 F-H	23.5 D-F	3721 E-G
Southern Runner (L)	R	4.3 A-C	4.8 C-G	20.3 FG	3866 C-G
SunOleic 97R (M)	R	2.5 F	8.3 BC	30.3 A-C	3194 GH
VA 93B (E)	V	3.8 B-E	0.3 G	23.3 D-F	3920 C-G
VA 98R (M)	V	3.5 B-F	7.3 B-D	23.3 D-F	3802 D-G
VA-C92R (E)	V	2.8 EF	2.8 E-H	24.0 C-F	4483 A-D
ViruGard (E)	R	4.5 AB	0.8 GH	13.5 H	5037 A
LSD (0.05)		1.0	4.0	3.9	759

¹Peanut maturity group: E = early maturing, M = intermediate, and L = late maturing cultivar.

²Peanut type: R = runner-type and V = Virginia type peanut cultivar.

³Early and late leaf spot was assessed based on 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 = lesion numerous with heavy defoliation, 8 = very numerous lesions on few remaining leaves with very heavy defoliation, 9 = very few remaining leaves covered with lesions, 10 = plants dead).

⁴Southern stem rot loci per 40 feet row.

⁵Number of TSWV loci per 40 feet of row.

⁶Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Recommended Fungicide Regimes on Selected Peanut Cultivars for the Control of Leaf Spot Diseases and Southern Stem Rot

Objective: To compare the effectiveness of recommended fungicide programs for the control of leaf spot diseases and southern stem rot on selected cultivars of peanut.

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

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

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

Cultivars: Georgia Green, ViruGard, and Southern Runner

Planting:

Date: April 26, 2000

Experimental Design: Randomized complete block design consisting of six replications with peanut cultivar as the whole plot and fungicide treatments as the split plot. Individual fungicide split plots consisted of four 30-foot (9.1 m) rows spaced 38 inches (0.97 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Five to six seed per row foot.

Crop History: Field with history of peanut production.

Cultural Practices:

Herbicides: Pre-plant incorporated: Prowl 2 pints + Dual Magnum 1.5 pints per acre (April 26).

Basagran 2 pints + Penetrator 1 pint per acre (May 25).

Classic 0.5 ounces per acre + Activate 1 pint per 50 gallons of water (July 5)

Fungicides: See tables.

Insecticides: Temik 5-6 pounds per acre in-furrow (April 26).

Lorsban 15G 13 pounds per acre banded over row (June 13).

Karate 3 ounces per acre (September 20).

Nematicides: None.

Irrigation Applied: None.

Application of Treatments: Fungicides were applied at a spray volume of 20 gallons per acre with a four-row tractor-mounted boom sprayer with TX-8 cone nozzles mounted on 18-inch centers. Sprays were made on June 2, June 14, June 28, July 12, July 26, August 8, and August 22.

Disease Assessment: On September 18, early and late leaf spot were rated using the Florida peanut leaf spot scoring system. On September 18, counts of southern stem rot (SSR) loci (one locus was defined as ≤ 1 ft of consecutive stem rot) were recorded.

Harvest: Plants were dug October 10 and harvested on October 13. Yields were reported at 7% moisture.

Summary: With the exception of the month of September, monthly rainfall totals were unusually low throughout the growing season. Consequently, overall disease pressure was low and the crop often suffered from the effects of drought-related stress.

The extended drought greatly suppressed the onset and spread of early and late leaf spot. As indicated by disease ratings of 2.5 or below, only a handful of spots were noted on the foliage of the three cultivars screened (Table 1). No differences in the level of leaf spot diseases was noted between Georgia Green, Southern Runner, and ViruGard. In addition, the leaf spot ratings recorded for the six recommended fungicide programs on each of the above peanut cultivars were quite similar (Table 1).

Southern stem rot (SSR) levels were also low. On Southern Runner and ViruGard, SSR hit counts recorded for the six recommended fungicide programs did not significantly differ (Table 2). Only on Georgia

Green, where the Abound 1.2 pints per acre program reduced disease levels below that of Bravo Ultrex alone and Bravo Ultrex/Moncut, were significant differences in disease control noted between the recommended fungicide programs. SSR levels on Georgia Green, Southern Runner, and ViruGard were similar across the six recommended fungicide programs.

As expected, few significant differences in yield among the recommended fungicide programs were seen on the three peanut cultivars. On Georgia Green, yields in the plots treated with the 1.2 pints per acre rate of Abound 2SC were higher than those obtained with the season-long Bravo Ultrex program (Table 3). On Southern Runner and ViruGard, the 1.6 pints per acre rate of Abound 2SC outyielded all of the other fungicide programs. Across all treatments, the yield of Georgia Green and ViruGard were significantly higher than those recorded for Southern Runner.

Across all cultivars, no significant differences in leaf spot control were seen between the recommended fungicide programs (Table 1). Although SSR pressure was low, the 1.2 pints per acre rate of Abound 2SC, gave better control of this disease than did the Bravo Ultrex/Moncut 50W program (Table 2). However, similar SSR damage levels were recorded for the standard Bravo Ultrex, Folicur 3.6F, the high rate of Abound 2SC, Montero, and Moncut 50W programs. Significant yield gains were obtained only with the program that included applications of the high rate of Abound 2SC (Table 3).

TABLE 1. EFFECT OF RECOMMENDED FUNGICIDE REGIMES ON LEAF SPOT DISEASES¹, GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 1999

Fungicide Program	Rate Per Acre	Spray Timing ²	Peanut Cultivar			Mean
			Georgia Green	Southern Runner	Viruguard	
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	1,2,7 3-6	1.8 A ³	1.8 A	1.8 A	1.8 A
Bravo Ultrex Moncut 50W	1.4 lb 2.0 lb	1-7 3	1.3 A	1.5 A	1.5 A	1.4 A
Bravo Ultrex	1.4 lb	1-7	1.5 A	2.5 A	1.5 A	1.8 A
Bravo Ultrex Abound 2SC	1.4 lb 1.2 pt	1,2,4,6,7 3,5	1.8 A	2.0 A	1.3 A	1.7 A
Bravo Ultrex Montero	1.4 lb see label	1,3,5,6,7 2,4	1.8 A	2.3 A	2.0 A	2.0 A
Bravo Ultrex Abound 2SC	1.4 lb 1.6 pt	1,2,4,6,7 3,5	1.5 A	2.0 A	1.8 A	1.8 A
LSD (0.05)			1.1	1.3	0.9	0.6
Mean			1.6	2.0	1.6	

¹ Early and late leaf spot was rated using the Florida peanut leaf spot scoring system (1=no disease, 2=very few lesions on leaves in the lower canopy, 3=few lesions on leaves in lower and upper canopy, 4=some lesions in lower and upper canopy 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=numerous lesions on few remaining leaves with very heavy defoliation, 9=very few remaining leaves covered with lesions, and 10=plants dead).

² Spray timing was as follows: 1=June 2, 2=June 14, 3=June 28, 4=July 12, 5=July 26, 6=August 8, 7=August 22.

³ Means within each column are separated by the least significant difference (LSD) test.

**TABLE 2. EFFECT OF RECOMMENDED FUNGICIDE REGIMES ON SOUTHERN STEM ROT¹,
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 1999**

Fungicide Program	Rate Per Acre	Spray Timing ²	Peanut Cultivar			Mean
			Georgia Green	Southern Runner	Viruguard	
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	1,2,7 3-6	2.7 AB ³	2.8 A	2.5 A	2.7 AB
Bravo Ultrex Moncut 50W	1.4 lb 2.0 lb	1-7 3	4.8 A	4.0 A	3.8 A	4.2 A
Bravo Ultrex	1.4 lb	1-7	4.7 A	3.3 A	4.0 A	4.0 A
Bravo Ultrex Abound 2SC	1.4 lb 1.2 pt	1,2,4,6,7 3,5	2.3 B	2.2 A	2.3 A	2.3 B
Bravo Ultrex Montero	1.4 lb see label	1,3,5,6,7 2,4	3.7 AB	3.3 A	2.7 A	3.2 AB
Bravo Ultrex Abound 2SC	1.4 lb 1.6 pt	1,2,4,6,7 3,5	3.8 AB	2.2 A	3.7 A	3.2 AB
LSD (0.05)			2.2	2.4	2.4	1.6
Mean			3.7	3.0	3.2	

¹ Southern stem rot counts were recorded as the number of loci per 60 ft of row.

² Spray timing was as follows: 1=June 2, 2=June 14, 3=June 28, 4=July 12, 5=July 26, 6=August 8, 7=August 22.

³ Means within each column are separated by the least significant difference (LSD) test.

**TABLE 3. EFFECT OF RECOMMENDED FUNGICIDE REGIMES ON YIELD¹,
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 1999**

Fungicide Program	Rate Per Acre	Spray Timing ²	Peanut Cultivar			Mean
			Georgia Green	Southern Runner	Viruguard	
Bravo Ultrex Folicur 3.6F	1.4 0.45 pt	1,2,7 3-6	3468 AB ³	2841 B	3447 AB	3252 AB
Bravo Ultrex Moncut 50W	1.4 2.0 lb	1-7 3	3322 AB	2692 B	3301 AB	3105 AB
Bravo Ultrex	1.4 lb	1-7	2986 B	2682 B	3026 B	2898 B
Bravo Ultrex Abound 2SC	1.4 lb 1.2 pt	1,2,4,6,7 3,5	3619 A	2902 B	3450 AB	3324 AB
Bravo Ultrex Montero	1.4 lb see label	1,3,5,6,7 2,4	3460 AB	2638 B	3248 AB	3115 AB
Bravo Ultrex Abound 2SC	1.4 lb 1.6 pt	1,2,4,6,7 3,5	3443 AB	3307 A	3603 A	3451 A
LSD (0.05)			501	347	437	409
Mean			3383	2844	3346	

¹ Yield is reported in pounds per acre.

² Spray timing was as follows: 1=June 2, 2=June 14, 3=June 28, 4=July 12, 5=July 26, 6=August 8, 7=August 22.

³ Means within each column are separated by the least significant difference (LSD) test.

Performance of Recommended Fungicide Treatment Regimes on Selected Cultivars of Peanut at the WGREC

Objective: To compare the effectiveness of recommended fungicide programs for the control of leaf spot diseases and southern stem rot on selected cultivars of peanut.

Target diseases include early leaf spot (*Cercospora arachidicola*), late leaf spot, (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivars: Georgia Green, ViruGard, and Southern Runner

Planting:

Date: May 18, 2000

Experimental Design: A split-plot design with peanut cultivars as the whole plot and fungicide treatment regimes as the subplot was used. The whole plots were randomized within six complete blocks.

Individual subplots, which consisted of four 30-foot (9.1 m) rows, spaced 3 feet (0.9 m) apart, were also randomized within each whole plot.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Five to six seeds per foot of row.

Crop History: Field with history of peanut production.

Cultural Practices:

Herbicides: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre incorporated (April 18).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 22).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds in-furrow.

Nematicides: Temik 15G 7 pounds banded over center of seed furrow.

Irrigation Applied: Pivot irrigation system. Approximately 1 inch on May 13, May 19, June 7, June 15, June 28, July 22, August 12, August 18, and August 29.

Application of Treatments: Treatments were broadcast as a full canopy spray using a tractor-mounted boom sprayer with TX-8 nozzles located on 18-inch centers in a spray volume of approximately 15 gallons per acre. Applications were made on June 27, July 11, July 25, August 8, August 22, and September 5.

Disease Assessment: Early and late leaf spot were rated on September 28 on ViruGard, October 12 on Georgia Green, and on October 26 on Southern Runner using the Florida peanut leaf spot scoring system. Counts of southern stem rot (SSR) loci (one locus was defined as \leq 1-ft of consecutive stem rot damaged plant(s) in a row) were made immediately after plot inversion on October 3 on ViruGard, October 12 on Georgia Green, and October 26 on Southern Runner.

Harvest: Plants were dug on October 3 (ViruGard), October 12 (Georgia Green), and October 26 (Southern Runner). Two to three days later, the windrows were picked with a combine.

Summary: Due to nearly summer-long drought conditions, leaf spot pressure on Georgia Green, Southern Runner and ViruGard was very low. On the early maturing cultivar ViruGard, no differences in leaf spot ratings were noted across the six fungicide programs (Table 1). On the other hand, significant differences in the level of leaf spot control provided by the six fungicide programs were seen on Georgia Green and Southern Runner. Although the leaf spot ratings for the Bravo/Moncut program were higher than those recorded for the two Bravo Ultrex/Abound and the Bravo Ultrex/Montero programs, damage was limited to moderate leaf spotting in the lower and upper canopy. For Southern Runner, the low rate of Bravo Ultrex/Abound and the Bravo Ultrex/Montero programs gave better control of leaf spot diseases than the Bravo Ultrex program.

Significant differences in the level of southern stem rot damage were observed among the six fungicide programs on all three peanut cultivars. The highest damage on all three cultivars was seen on the peanuts treated with Bravo Ultrex alone (Table 2). On Georgia Green and Southern Runner, the Bravo Ultrex/Moncut program failed to significantly reduce the incidence of southern stem rot when compared with the Bravo Ultrex standard. Disease incidence on the Bravo Ultrex/Folicur 3.6F-treated peanuts was significantly lower than that on for the Bravo Ultrex standard on Southern Runner and ViruGard. Both of the Bravo Ultrex/Abound programs, as well as the Bravo Ultrex/Montero program, significantly reduced southern stem rot incidence across all three cultivars.

Although significant reductions in southern stem rot damage on ViruGard were obtained with the programs that included Abound 2SC, Folicur 3.6F, and Montero, yields were similar across all fungicide programs (Table 3). On Georgia Green, both Abound 2SC programs yielded significantly higher than the Bravo Ultrex/Folicur 3.6F. When compared with the Bravo Ultrex standard, significant yield gains for the Southern Runner peanut were obtained only with the Bravo/Abound 2SC program.

TABLE 1. EFFECT OF RECOMMENDED FUNGICIDE REGIMES ON LEAF SPOT DISEASES¹, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 1999

Fungicide Program	Rate Per Acre	Spray Timing ²	Peanut Cultivar			Mean
			Georgia Green	Southern Runner	Viruguard	
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	1,2 3,4,5,6	2.6 B ³	3.2 A-C	2.8 A	2.9 BC
Bravo Ultrex Moncut 50W	1.4 lb 2.0 lb	1 to 6 3	3.6 A	3.8 AB	3.2 A	3.5 A
Bravo Ultrex	1.4 lb	1 to 6	3.0 AB	4.0 A	3.0 A	3.4 AB
Bravo Ultrex Abound 2SC	1.4 lb 1.2 pt	1,2,4,6 3,5	2.2 B	2.5 C	3.0 A	2.6 C
Bravo Ultrex Montero	1.4 lb see label	1,2,4,6 3,5	2.6 B	2.8 BC	3.0 A	2.8 C
Bravo Ultrex Abound 2SC	1.4 lb 1.6 pt	1,2,4,6 3,5	2.6 B	3.0 A-C	3.2 A	2.9 BC
LSD (0.05)			0.9	1	0.9	0.5
Mean			2.8	3.2	3	

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

²Spray timing was as follows: 1 = June 27, 2 = July 11, 3 = July 25, 4 = August 8, 5 = August 22, 6 = September 5.

³Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

TABLE 2. EFFECT OF RECOMMENDED FUNGICIDE REGIMES ON SOUTHERN STEM ROT¹, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 1999

Fungicide Program	Rate Per Acre	Spray Timing ²	Peanut Cultivar			Mean
			Georgia Green	Southern Runner	Viruguard	
Bravo Ultrex	1.4 lb	1,2	7.0 AB ³	8.5 BC	4.7 B	6.7 BC
Folicur 3.6F	0.45 pt	3,4,5,6				
Bravo Ultrex	1.4 lb	1 to 6	9.7 A	11.8 AB	3.3 B	8.3 B
Moncut 50W	2.0 lb	3				
Bravo Ultrex	1.4 lb	1 to 6	12.0 A	14.7 A	10.5 A	12.4 A
Bravo Ultrex	1.4 lb	1,2,4,6	2.8 B	4.0 C	3.2 B	3.3 D
Abound 2SC	1.2 pt	3,5				
Bravo Ultrex	1.4 lb	1,2,4,6	3.7 B	5.3 C	3.0 B	4.0 D
Montero	see label	3,5				
Bravo Ultrex	1.4 lb	1,2,4,6	3.8 B	7 BC	2.5 B	4.4 CD
Abound 2SC	1.6 pt	3,5				
LSD (0.05)			5.5	5	2.7	2.5
Mean			6.5	8.6	4.5	

¹Southern stem rot counts were expressed as the number of diseased loci per 60 ft of row.

²Spray timing was as follows: 1 = June 27, 2 = July 11, 3 = July 25, 4 = August 8, 5 = August 22, 6 = September 5.

³Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

TABLE 3. EFFECT OF RECOMMENDED FUNGICIDE REGIMES ON YIELD¹, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 1999

Fungicide Program	Rate Per Acre	Spray Timing ²	Peanut Cultivar			Mean
			Georgia Green	Southern Runner	Viruguard	
Bravo Ultrex	1.4 lb	1,2	3436 C ³	3993 B	4292 A	3907 C
Folicur 3.6F	0.45 pt	3,4,5				
Bravo Ultrex	1.4 lb	1 to 6	3485 BC	4058 B	4368 A	3970 BC
Moncut 50W	2.0 lb	3				
Bravo Ultrex	1.4 lb	1 to 6	3524 A-C	4025 B	4227 A	3949 BC
Bravo Ultrex	1.4 lb	1,2,4,6	4154 A	4679 A	4509 A	4447 A
Abound 2SC	1.2 pt	3,5				
Bravo Ultrex	1.4 lb	1,2,4,6	3840 A-C	4203 AB	4453 A	4165 A-C
Montero	see label	3,5				
Bravo Ultrex	1.4 lb	1,2,4,6	4082 AB	4574 AB	4534 A	4396 AB
Abound 2SC	1.6 pt	3,5				
LSD (0.05)			632	593	423	456
Mean			3760	4255	4397	

¹Yield was measured in pounds per acre.

²Spray timing was as follows: 1 = June 27, 2 = July 11, 3 = July 25, 4 = August 8, 5 = August 22, 6 = September 5.

³Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Effect of Placement on the Efficacy of Moncut 50W for the Control of Southern Stem Rot and on the Yield of Peanut

Objective: To assess the effectiveness of banded and broadcast applications of Moncut 50W fungicide for the control of peanut diseases.

Target diseases include early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 18, 2000

Experimental Design: Randomized complete block design with six replications. Individual plots consisted of four 30-foot (9.1 m) rows spaced 3 feet (0.9 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Six seed per foot of row.

Crop History: Field with history of peanut production.

Cultural Practices:

Herbicides: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre incorporated (April 18).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 22).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds in-furrow.

Nematicides: Temik 15G 7 pounds banded over center of seed furrow.

Irrigation Applied: Center-pivot irrigation system. Approximately 1 inch of water was applied on May 13, May 19, June 7, June 15, June 28, July 22, August 12, August 18, and August 29.

Application of Treatments: Broadcast applications were made at a spray volume of 12 gallons per acre using a tractor-mounted sprayer with TX-8 nozzles spaced at 18-inch intervals along the four-row boom. Using a twin roller pump, Moncut 50W was applied at the rate of 2 pounds per treated acre on a 12-inch band at a spray volume of 12 gallons per treated acre with a single TX-8 nozzle located directly over the row center. Simultaneously, Bravo Ultrex at 1.4 pounds per acre was broadcast over the peanut canopy at a spray volume of 12 gallons per acre using the equipment described above. A narrow band application of Moncut 50W was made with two TX-8 nozzles mounted on a T fitting attached to a drop tube, which was set to drag through the upper peanut canopy and deliver the fungicide directly to the root collar and surrounding area. Spray dates were June 27, July 11, July 25, August 8, August 22, and September 5. Again, Bravo Ultrex at 1.4 pounds per acre was broadcast simultaneously over the peanut canopy.

Disease Assessment: On October 12, early and late leaf spot were rated using the Florida peanut leaf spot scoring system. On October 12, counts of southern stem rot (SSR) loci (one locus was defined as 1 foot of consecutive stem rot damaged plant(s) in a row) were made immediately after plot inversion.

Harvest: Plants were dug on October 12. Two to three days later, the windrows of dried peanut vines were combined.

Summary: The leaf spot ratings for all of the banded and broadcast treatment regimes were statistically similar. Due to the extended drought, symptoms were limited to light spotting of the leaves in the lower and to some extent upper canopy. No premature leaf shed was observed.

A significant difference in the incidence of SSR was noted among the fungicide regimes. The least SSR damage was seen in the plots treated with Folicur 3.6F. When compared with the Bravo Ultrex standard,

the broadcast and narrow band/drop nozzle treatments of Moncut 50W suffered significantly less SSR-damage. However, neither of the above Moncut 50W treatments was as effective in controlling SSR as Folicur 3.6F.

Yields were significantly higher in the plots treated with Bravo Ultrex/Moncut 50W and Bravo Ultrex/Folicur 3.6F than for those receiving Bravo Ultrex alone. Of the Moncut 50W treatments, only the banded program yielded significantly less than the recommended Bravo Ultrex/Folicur 3.6F program.

EFFECT OF PLACEMENT ON THE EFFICACY OF MONCUT 50W FOR THE CONTROL OF LEAF SPOT AND SOUTHERN STEM ROT AND ON THE YIELD OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000

Treatment	Rate Per Acre	Spray Timing ¹	Placement	Leaf Spot ²	Southern Stem Rot ³	Yield lbs/ac
Bravo Ultrex	1.4 lb	1-6	Broadcast	2.3 A ⁴	12.5 A	3614 C
Bravo Ultrex	1.4 lb	1,2	Broadcast	2.0 A	3.0 C	4413 A
Folicur 3.5F	7.2 fl oz	3, 4, 5, 6	Broadcast			
Bravo Ultrex	1.4 lb	1-6	Broadcast	2.7 A	9.7 AB	4001 B
Moncut 50W	2.0 lb	3	Band			
Bravo Ultrex	1.4 lb	1-6	Broadcast	2.7 A	6.7 B	4283 AB
Moncut 50W	2.0 lb	3	Narrow Band/ Drop Nozzles			
Bravo Ultrex	1.4 lb	1-6	Broadcast	2.2 A	7.2 B	4461 A
Moncut 50W	2.0 lb	3	Broadcast			
LSD (0.05)				0.7	3.4	371

¹Spray timing was as follows: 1= June 27, 2= July 11, 3= July 25, 4= August 8, 5= August 22, 6= September 5.

²Early and late leaf spot was assessed on October 12, based on 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= lesion numerous with heavy defoliation, 8= very numerous lesions on few remaining leaves with very heavy defoliation, 9= very few remaining leaves covered with lesions, 10= plants dead).

³Southern stem rot was assessed as the number of disease loci per 60 ft of row.

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

Efficacy of Tank Mix Combinations of BAS 500 Against Foliar and Soil-borne Diseases of Peanut

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

Target diseases include early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 19, 2007

Experimental Design: Randomized complete block design with six replications. Plot size was six 30-foot (9.1 m) rows spaced 3 feet (0.9 m) 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: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre incorporated (April 18).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 22).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds in-furrow.

Nematicides: Temik 15G 7 pounds banded over center of seed furrow.

Irrigation Applied: Approximately 0.75 inch of water was applied on May 13, May 19, and 1 inch on June 7, June 15, June 28, July 22, August 12, August 18, and August 29.

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 two-week intervals beginning June 19 and continuing through September 11.

Disease Assessment: Early and late leaf spot were visually rated on September 18 and 26 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on October 3 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 5 and 13. Yields were reported at 10.4% moisture.

Summary: With one exception, the BAS 500 programs gave the same level of leaf spot control as the Bravo 720 6F, Abound 2SC, and Folicur 3.6F standards. Typically, damage on peanuts treated with BAS 500, Abound 2SC, Folicur 3.6F, and Bravo 720 6F was limited to spotting of the lower and middle canopy. Surprisingly, leaf spot levels were significantly lower on the peanuts treated with Bravo 720 alone than with Bravo 720 + Moncut 50W.

Few differences in SSR control were noted among the treatments evaluated. When compared with Bravo 720 at 138 DAP, significant reductions in SSR damage were obtained with programs that included four applications of BAS 500 at the 0.95 pint per acre rate, two applications of both BAS 500 at the 0.58 pint per acre rate and Folicur 3.6F at the 0.45 pint per acre rate, and Abound 2SC at the 1.15 pints per acre rate. At 148 DAP, SSR hit counts were significantly higher in the Bravo 720-treated plots than in those treated with BAS 500, Folicur 3.6F, Abound 2SC, Moncut 50W, and combinations of two of the above fungicides. At both rating dates, *Rhizoctonia* limb rot damage levels were low.

At the first digging date, programs that included four applications of BAS 500 at 0.76 and 0.95 pint per acre as well as two applications of both BAS 500 at 0.58 pint per acre and Folicur 3.6F at 0.45 pint per acre significantly increased yields above those reported for Bravo 720 alone. Significant yield gains were also obtained at the first digging date with the Bravo 720/Folicur 3.6F and Bravo 720/Moncut 50W programs. By the second digging date, the yield in the Bravo 720-treated plots was significantly below those recorded in the plots treated with BAS 500, Folicur 3.6F, Moncut 50WP, and Abound 2SC.

EFFECT OF TANK MIX COMBINATIONS OF BAS 500 ON FOLIAR AND SOIL-BORNE DISEASES OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000

Treatment	Rate Per Acre		Early and Late Leafspot ² 131 DAP	Southern —Stem Rot ³ —		Rhizoctonia —Limb Rot ⁴ —		—Pod Yield— lbs/ac	
	Formulated Product	Spray Timing ¹		138 DAP	148 DAP	138 DAP	148 DAP	1st dig ⁵	2nd dig ⁶
Bravo 720			2.2 C ⁷	9.3 A	9.3 A	1.3 A	1.8 A	2723 C	2759 B
Bravo 720 BAS 500	1.5 pt 0.76 pt	1,6,7 2,3,4,5	2.3 BC	5.3 B	6.5 B	1.3 A	1.5 AB	4235 A	3848 A
Bravo 720 BAS 500	1.5 pt 0.95 pt	1,6,7 2,3,4,5	2.2 C	7.8 AB	5.0 B	1.5 A	1.5 AB	3884 AB	3787 A
Bravo 720 BAS 500 Folicur 3.6F	1.5 pt 0.58 pt 0.45 pt	1,6,7 2,4 3,5	2.5 A-C	6.5 AB	6.0 B	1.5 A	1.3 AB	3775 AB	4009 A
Bravo 720 BAS 500 Folicur 3.6F	1.5 pt 0.76 pt 0.45 pt	1,6,7 2,4 3,5	2.5 A-C	5.0 B	5.2 B	1.2 A	1.4 AB	3543 A-C	3882 A
Bravo 720 BAS 500 Folicur 3.6F	1.5 pt 0.76 pt 0.45 pt	1,6,7 2,3 4,5	2.3 BC	7.3 AB	6.0 B	1.5 A	1.3 AB	3453 A-C	3590 A
Bravo 720 BAS 500 Moncut 50WP	1.5 pt 0.76 pt 1.2 lb	1,6,7 2,4 3,5	2.8 AB	5.8 AB	4.6 B	1.2 A	1.0 B	3214 BC	3678 A
Bravo 720 Folicur 3.6F	1.5 pt 0.45 pt	1,6,7 2,3,4,5	2.5 A-C	6.0 AB	6.2 B	1.4 A	1.2 AB	3998 AB	3882 A
Bravo 720 Abound 2.08 SC	1.5 pt 1.15 pt	1,2,4,6,7 3,5	2.7 A-C	5.0 B	6.5 B	1.0 A	1.5 AB	3497 A-C	3497 A
Bravo 720 Moncut 50 WP	1.5 pt 1.2 lb	1,2,4,6,7 3,5	3.0 A	6.5 AB	6.7 B	1.3 A	1.3 AB	3678 AB	3824 A
LSD (0.05)			0.5	3.9	2.2	0.7	0.7	910	641

¹Spray timing was as follows: 1=June 19, 2=June 30, 3=July 17, 4=July 31, 5=August 14, 6=August 28, 7=September 11.

²Early and late leaf spot was assessed on September 18 and September 26, based on 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=lesion numerous with heavy defoliation, 8=very numerous lesions on few remaining leaves with very heavy defoliation, 9=very few remaining leaves covered with lesions, 10=plants dead).

³Southern stem rot was assessed on October 3 (1st dig) and October 10 (2nd dig) as the number of disease loci per 60 ft of row.

⁴Rhizoctonia limb rot was assessed at inversion using a 1-5 rating scale (1=0-10% level of damage of a given row length, 2=11-25%, 3=26-50%, 4=51-75%, 5= completely dead plants).

⁵First dig October 3, harvested October 5. ⁶Second dig October 10, harvested October 13.

⁷Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Effectiveness of Terraclor Against Soil-borne Diseases and of Echo 720 and Eminent 125SL Against Soil-borne and Foliar Diseases of Peanut

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

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 12, 2000

Experimental Design: Randomized complete block design with six replications. Plot size was six 35-foot (10.7 m) rows spaced 3 feet (0.9 m) 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: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre (April 19).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 20).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds per acre in furrow.

Nematicides: Temik 15G 7 pounds per acre banded over the center of the seed furrow.

Irrigation Applied: Approximately 1 inch of water was applied on May 8, June 9, June 22, July 7, July 19, July 27, August 10, and August 22.

Application of Treatments: Fungicide applications were made at two-week intervals beginning June 13 and continuing through September 8, and 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.

Disease Assessment: Early and late leaf spot were visually rated on September 11 and 22 using the Florida leaf spot scoring system. Counts of southern stem rot loci were made on September 28 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 2. Yields were reported at 10.19% moisture.

Summary: In-furrow applications of the three formulations of Terraclor failed to increase the stand count 14 and 28 DAP compared with Echo 720 alone. Despite supplemental watering, the season-long drought suppressed the onset and spread of early and late leaf spot. Generally, leaf spot damage was limited to spotting of the leaves and light defoliation. Echo 720 alone gave similar control of early and late leaf spot as programs that included applications of Eminent 125 SL, Folicur 3.6F, and Abound 2SC.

In addition, the level of SSR damage in the Echo 720-treated peanuts did not differ significantly from those treated with Eminent 125SL, Folicur 3.6F, Abound 2SC, or Moncut 50W. Plots treated with Folicur 3.6F, Abound 2SC, and Moncut 50W suffered less damage than those treated with Eminent 125SL. The in-furrow applications of the three formulations of Terraclor had no impact on the occurrence of southern stem rot.

Yield in the Abound 2SC-treated plots was significantly higher than those noted with Echo 720. Plots treated with Folicur 3.6F, Moncut 50W, and Eminent 125SL did not yield higher than those treated season-long with Echo 720. In-furrow applications of Terraclor 15G, Terraclor 2E, and Terraclor 4F failed to increase peanut yield.

EFFECTIVENESS OF TERRACLOR AGAINST SOIL-BORNE DISEASES AND OF ECHO 720 AND EMINENT 125 SL AGAINST SOIL-BORNE AND FOLIAR DISEASES OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000

Treatment	Rate Per Acre		—Stand Count—		Early and Late	Southern	Limb Rot ⁴	Pod Yield lbs/ac
	Formulated Product	Spray Timing ¹	14DAP	28DAP	Leafspot ² 133 DAP	Stem Rot ³ 140DAP		
Echo 720	1.5 pt	1-7	85.2 A ⁵	100.8 A	3.7 A-C	8.2 A-D	1.7 A	4480 BC
Echo 720	1.5 pt	1,6,7	—	—	3.3 BC	7.3 B-D	1.5 A	4411 BC
Eminent 125 SL	26 fl oz	2,3,4,5	—	—	—	—	—	—
Echo 720	1.5 pt	1,6,7	—	—	3.0 C	8.7 A-C	1.5 A	4411 BC
IS 125 DME	26 fl oz	2,3,4,5	—	—	—	—	—	—
Echo 720	1.0 pt	1,6,7	—	—	3.0 C	10.5 A	1.3 A	4431 BC
Echo 720 + Eminent 125 SL	1.0 pt + 13 fl oz	2,3,4,5	—	—	—	—	—	—
Echo 720	1.5 pt	1,2,7	—	—	3.2 C	5.7 CD	1.3 A	4784 AB
Folicur 3.6F	0.45 pt	3,4,5,6	—	—	—	—	—	—
Echo 720	1.5 pt	1,3,5,6,7	—	—	3.3 BC	5.5 CD	1.3 A	5116 A
Abound 2 SC	1.6 pt	2,4	—	—	—	—	—	—
Echo 720	1.5 pt	1,2,4,6,7	—	—	4.0 AB	5.3 D	1.3 A	4445 BC
Moncut 50 WP	1.2 lb	3,5	—	—	—	—	—	—
Terraclor 15G	10 lb	in furrow	84.0 A	101.5 A	3.3 BC	9.0 AB	1.7 A	4300 C
Echo 720	1.5 pt	1-7	—	—	—	—	—	—
Terraclor 2E	96 fl oz	in furrow	91.3 A	103.8 A	3.5 A-C	6.7 B-D	1.7 A	4418 BC
Echo 720	1.5 pt	1-7	—	—	—	—	—	—
Terraclor 4F	48 fl oz	in furrow	81.8 A	100.2 A	4.2 A	8.2 A-D	1.5 A	4487 BC
Echo 720	1.5 pt	1-7	—	—	—	—	—	—
LSD (0.05)			10.3	13.2	0.8	3.0	0.6	462.5

¹Spray timing was as follows: 1=June 13, 2=June 29, 3=July 11, 4=July 25, 5=August 8, 6=August 23, and 7=September 8.

²Early and late leaf spot was assessed on September 22, based on 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=lesion numerous with heavy defoliation, 8=very numerous lesions on few remaining leaves with very heavy defoliation, 9=very few remaining leaves covered with lesions, 10=plants dead).

³Southern stem rot was assessed on September 28 as the number of disease loci per 70 ft row.

⁴Rhizoctonia limb rot was assessed using a 1-5 rating scale (1=0-10% level of damage of a given row length, 2=11-25%, 3=26-50%, 4=51-75%, 5=completely dead plants).

⁵Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Control of Foliar and Soil-borne Diseases of Peanut with Fungicide Treatment Regimes that Include Stratego

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

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 19, 2000

Experimental Design: Randomized complete block design with six replications. Plots consisted of six 30-foot (9.1 m) rows spaced 3 feet (0.9 m) 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: Pre-plant: Incorporated Sonalan 1 quart + Dual 1.5 pints per acre (April 18). Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 22).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds per acre in furrow.

Nematicides: Temik 15G 7 pounds per acre banded over the center of the seed furrow.

Irrigation Applied: Approximately 0.75 inch of water was applied on May 13, and May 19, and 1 inch on June 7, June 15, June 28, July 22, August 12, August 18, and August 29.

Application of Treatments: Fungicide applications were made at two-week intervals starting on June 19 and ending on September 11. Treatments 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.

Disease Assessment: Early and late leaf spot were visually rated on September 18 and 26 using the Florida leaf spot scoring system. Counts of southern stem rot loci were made on October 3 and 10 (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 5 and 13. Yields were reported at 10.39% moisture.

Summary: Unusually dry weather patterns in June, July, and August greatly limited the development of early and late leaf spot. Consequently, few significant differences in the leaf spot ratings were seen among the treatments. Damage in all plots, including those sprayed season-long with the Bravo 720, was limited to light spotting in the lower and mid-canopy. Little if any premature leaf shed was seen. At the first digging date (138 DAP), programs that included applications of Moncut 50W or Abound 2SC significantly reduced the severity of southern stem rot when compared to the Bravo 720 or the Bravo 720 + Benlate programs. Stem rot damage in the plots treated with the Tilt + Bravo tank mixture or Bravo 720/Folicur 3.6F was similar to the levels seen in those treated season-long with Bravo 720 alone. Abound 2SC applied twice at 1.15 pints per acre gave better southern stem rot control than did four applications of 0.45 pt/A of Folicur 3.6F. On the second digging date, Abound 2SC-treated plots generally suffered the least southern stem rot damage. Stratego 2.08EC, when used in combination without Abound 2SC or Moncut 50W had no impact on the severity of southern stem rot. Rhizoctonia limb rot damage was negligible and the fungicide programs had limited impact on disease severity. Generally, the yields for individual programs at both digging dates were similar.

Significant yield gains were noted with the programs that included applications of Moncut 50W, Abound 2SC, and Folicur 3.6F. Surprisingly, yields recorded for the program that included two applications of the 14 fluid ounce rate of Stratego were often similar to those obtained with the previously mentioned fungicides. At both digging dates, the highest yields were noted in the plots receiving two applications of Abound 2SC at 1.15 pints per acre while the lowest were obtained with Bravo 720 alone or the Bravo + Benlate/Bravo 720 program.

EFFECT OF FUNGICIDE TREATMENT REGIMES ON FOLIAR AND SOIL-BORNE DISEASES OF PEANUT, WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000

Treatment	Rate Per Acre		Early and Late Leafspot ² 131 DAP	Southern Stem Rot ³		Rhizoctonia Limb Rot ⁴ 145 DAP	Pod Yield lbs/ac	
	Formulated Product	Spray Timing ¹		138 DAP	145 DAP		1st dig ⁵	2nd dig ⁶
Bravo 720	1.5 pt	1-7	2.5 AB ⁷	12.4 A	10.0 AB	2.0 A	3582 C	3804 E
Tilt 3.6EC + Bravo 720	2 fl oz + 1.5 pt	1-7	2.5 AB	9.8 A-C	9.4 A-C	1.6 AB	3746 BC	3891 DE
Bravo 720 Folicur 3.6F	1.5 pt 0.45 pt	1,2,7 3,4,5,6	2.5 AB	9.0 A-C	9.0 A-D	1.7 AB	4327 AB	4340 B-D
Stratego 2.08 EC Tilt + Moncut 50W Bravo 720	5 fl oz 4 fl oz + 1.2 lb 1.5 pt	1,3,5 2,4 6,7	2.5 AB	8.5 B-D	8.5 A-E	1.5 A-C	4247 AB	4453 A-C
Stratego 2.0 EC Tilt + Moncut 50W Bravo 720	5 fl oz 4 fl oz + 1.2 lb 1.5 pt	1,2,4 3,5 6,7	3.0 AB	8.5 B-D	7.5 B-E	1.3 BC	4066 A-C	4404 A-C
Stratego 2.08 EC Abound 2.08 SC Tilt + Bravo 720	7 fl oz 0.77 pt 2 fl oz + 1.0 pt	1 2,4 3,5,6,7	2.5 AB	7.3 CD	6.0 DE	1.0 C	4566 A	4622 A-C
Stratego 2.08 EC Tilt + Moncut 50W Bravo 720	7 fl oz 4 fl oz + 1.2 lb 1.5 pt	1,3,5 2,4 6,7	2.5 AB	8.0 CD	7.8 A-E	2.0 A	4029 A-C	4203 C-E
Tilt + Bravo 720 Stratego 2.08 EC Bravo 720	2 fl oz + 1.0 pt 14 fl oz 1.5 pt	1,3 2,4 5,6,7	2.7 AB	8.4 B-D	10.6 A	2.0 A	4221 AB	4327 B-D
Tilt + Bravo 720 Abound 2.08 SC Bravo 720	2 fl oz + 1.0 pt 0.77 pt 1.5 pt	1,3,5 2,4 6,7	2.8 A	4.8 D	5.5 E	1.3 BC	4489 A	4671 AB
Bravo 720 Abound 2.08 SC	1.5 pt 1.15 pt	1,2,4,6,7 3,5	2.2 B	4.8 D	6.4 C-E	1.2 BC	4521 A	4821 A
Bravo 720 + Benlate 50WP Bravo 720	0.75 pt + 4.0 oz 1.5 pt	1,2 3,4,5,6,7	2.5 AB	12.2 AB	10.8 A	1.7 AB	3799 BC	3840 E
LSD (0.05)			0.6	3.8	3.1	0.5	583	454

¹Spray timing was as follows: 1=June 19, 2=June 30, 3=July 17, 4=July 31, 5=August 14, 6=August 28, 7=September 11.

²Early and late leaf spot was assessed on September 26, based on 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=lesion numerous with heavy defoliation, 8=very numerous lesions on few remaining leaves with very heavy defoliation, 9=very few remaining leaves covered with lesions, 10=plants dead).

³Southern stem rot was assessed on October 3 (1st dig) and October 10 (2nd dig) as the number of disease loci per 60 ft of row.

⁴Rhizoctonia limb rot was assessed at inversion using a 1-5 rating scale (1=0-10% level of damage of a given row length, 2=11-25%, 3=26-50%, 4=51-75%, 5=completely dead plants). ⁵First dig October 3, harvested October 5. ⁶Second dig October 10, harvested October 13. ⁷Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Impact of In-furrow Applications of Abound 2SC on the Incidence of Leaf Spot and Southern Stem Rot in Peanut

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

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 19, 2000

Experimental Design: Randomized complete block design with six replications. Plots consisted of four 35-foot (10.7 m) rows spaced 3 feet (0.9) 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: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre (April 19).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 20).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds per acre in furrow.

Nematicides: Temik 15G 7 pounds per acre banded over the center of the seed furrow.

Irrigation Applied: Approximately 1 inch of water was applied on May 8, June 9, June 22, July 7, July 19, July 27, August 10, and August 22.

Application of Treatments: In-furrow applications were made at planting on May 12 at 5 gallons per acre using a tractor-mounted CO₂ sprayer with 8001 nozzles. Foliar fungicide applications were made at two-week intervals beginning June 12 and continuing through September 5 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 September 11 and 22 using the Florida leaf spot scoring system. Counts of southern stem rot loci were made on September 11, September 22, and September 28 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 3. Yields were reported at 10.17% moisture.

Summary: At both rating dates, the leaf spot ratings for nearly all of the fungicide regimes were not significantly different. At the last rating, southern stem rot damage was significantly lower in the plots treated at mid-season with Abound 2SC, Fluazinam, Moncut 50W, and/or Folicur 3.6F than in those treated with Bravo Ultrex alone. With one exception, yields were also significantly higher with mid-season applications of Abound 2SC, Fluazinam, Moncut 50W, or Folicur 3.6F. Yield gains obtained with the latter fungicides were similar. When applied in-furrow at planting, Abound 2SC appeared to have little if any impact on disease incidence or peanut yield.

**EFFECT OF IN-FURROW APPLICATIONS OF ABOUND 2SC ON THE INCIDENT OF PEANUT DISEASES,
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Stand Count—		Early and Late —Leaf Spot ² —		Southern Stem Rot ³			Limb Rot ⁴	Pod Yield lbs/ac
			14 DAP	28 DAP	116 DAP	133 DAP	116 DAP	133 DAP	140 DAP		
Untreated Control			86.3 B ⁵	97.3 A	6.2 A	7.7 A	1.8 A	3.5 A	12.3 A	2.2 A	4072 C
Bravo Ultrex	1.4 lb	1-7	—	—	2.7B	3.5BC	2.2 A	3.7 A	10.0 A	1.8 AB	4037 C
Abound 2SC	0.38 fl oz/1000 row ft	in-furrow	94.3 B	104.7 A	2.3 B	3.5 BC	0.7 A	2.8 A	3.5 D	1.2 C	4445 A-C
Bravo Ultrex	1.4 lb	1,2,4,6,7									
Abound 2SC	1.15 pt	3,5									
Abound 2SC	0.58 fl oz/1000 row ft	in-furrow	89.3 B	105.0 A	2.3 B	3.2 C	0.8 A	2.0 A	6.0 B-D	1.3 BC	4957 A
Bravo Ultrex	1.4 lb	1,2,4,6,7									
Abound 2SC	1.15 pt	3,5									
Bravo Ultrex	1.4 lb	1,2,4,6,7	—	—	2.5 B	3.5 BC	1.2 A	3.0 A	5.3 B-D	1.2 C	4743 AB
Abound 2SC	1.15 pt	3,5									
Abound 2SC	0.38 fl oz/1000 row ft	in-furrow	108.3 A	113.8 A	2.5 B	3.3 BC	1.5 A	3.2 A	6.8 B	1.3 C	4943 A
Bravo Ultrex	1.4 lb	1,2,4,6									
Abound 2 SC	0.8 pt	3,5,7									
Bravo Ultrex	1.4 lb	1,2,7	—	—	2.3 B	3.3 BC	1.8 A	3.3 A	6.5 BC	1.2 C	4743 AB
Abound 2SC	0.8 pt	3,5									
Bravo Ultrex + Fluazinam	1.4 lb + 0.71 pt	4,6									
Bravo Ultrex	1.4 lb	1,2,7	—	—	2.7 B	4.0 B	1.8 A	3.0 A	5.2 B-D	1.3 BC	4777 A
Abound 2SC	0.8 pt	3,5									
Folicur 3.6F	0.45 pt	4,6									
Bravo Ultrex	1.4 lb	1,2,3	—	—	3.0 B	3.3 BC	0.5 A	2.2 A	5.7 B-D	1.3 BC	4729 AB
Folicur 3.6F	0.45 pt	4,5,6,7									
Bravo Ultrex	1.4 lb	1,2,4,6,7	—	—	3.0 B	3.7 BC	0.5 A	2.0 A	3.8 CD	1.2 C	4867 A
Moncut 50WP	1.2 lb	3,5									
LSD (0.05)			11.1	16.8	0.8	0.7	2.0	2.1	2.9	0.5	675

¹Spray timing was as follows: 1=June 12, 2=June 26, 3=July 10, 4=July 24, 5=August 7, 6=August 21, 7=September 5.

²Early and late leaf spot was assessed on September 11 and 22, 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=lesion numerous with heavy defoliation, 8=very numerous lesions on few remaining leaves with very heavy defoliation, 9=very few remaining leaves covered with lesions, 10=plants dead).

³Southern stem rot was assessed on September 11, 22, and 28 (inversion) as the number of disease loci per 70 ft of row. ⁴Rhizoctonia limb rot was assessed at inversion using a 1-5 rating scale (1=0-10% level of damage of a given row length, 2=11-25%, 3=26-50%, 4=51-75%, 5=completely dead plants). ⁵Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Comparison of Abound 2SC Spray Programs to Recommended Fungicides for Control of Foliar and Soil-borne Diseases of Peanut

Objective: To assess the efficacy of fungicides applied in-furrow and under a 14-day spray schedule for the control of foliar and soilborne diseases in peanut.

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), southern stem rot (*Sclerotium rolfsii*), and Rhizoctonia limb rot (*Rhizoctonia solani*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 12, 2000

Experimental Design: Randomized complete block design with six replications. Plot size was eight 35-foot (10.7 m) rows spaced 3 feet (0.9 m) 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: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre (April 19).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 20).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds per acre in furrow.

Nematicides: Temik 15G 7 pounds per acre banded over the center of the seed furrow.

Irrigation Applied: Approximately 1 inch of water was applied on May 8, June 9, June 22, July 7, July 19, July 27, August 10, and August 22.

Application of Treatments: In-furrow applications were made at planting on May 12 at 5 gallons per acre using a tractor-mounted CO₂ sprayer with 8001 nozzles. Foliar fungicides 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 and applications were made at two-week intervals beginning June 12 and continuing through September 5.

Disease Assessment: Early and late leaf spot were visually rated on September 11 and 22 using the Florida leaf spot scoring system. Counts of southern stem rot loci were made on September 28 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 3, and yields were reported at 10.17% moisture.

Summary: All of the treatments controlled both early and late leaf spot significantly better than the non-treated control, but none of the treatments were better than the full season Bravo treatment. Destructive sampling of the plots showed the number of hits increased in the non-treated control during the season. All of the treatments gave significantly better control of southern stem rot compared to the non-treated control. Increased yield results were observed in all of the in-furrow Abound treatments giving significantly better results than both the untreated control and the Bravo full season treatment. The yields observed with the Bravo/Abound treatment were better than those observed with other standard spray programs.

**EFFECT OF FUNGICIDE PROGRAMS FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Stand Count—		Early and Late —Leaf Spot ² —		Southern —Stem Rot ³ —		Limb Rot ⁴	Pod Yield lbs/ac
			14 DAP	28 DAP	116 DAP	133 DAP	90 DAP	140 DAP		
Untreated Control	—	—	88.8 AB ⁵	96.2 AB	6.2 A	7.5 A	15.0 A	17.0 A	2.5 A	3567E
Bravo Ultrex	1.4 lb	1-7	85.3 AB	92.8 AB	2.2 C	3.5 BC	5.3 B	10.3 BC	1.8 B	3733 DE
Abound 2SC	0.38 fl oz/1000 row ft	in-furrow	90.2 AB	95.5 AB	2.2 C	3.2 C	4.5 B	6.3 DE	1.2 C	4756 AB
Bravo Ultrex	1.4 lb	1,2,4,6,7								
Abound 2SC	1.15 pt	3,5								
Abound 2SC	0.38 fl oz/1000 row ft	in-furrow	92.0 AB	99.6 AB	2.3 BC	3.3 BC	5.5 B	8.7 BCD	1.5 BC	4722 AB
Bravo Ultrex	1.4 lb	1,2,3,4,6								
Abound 2SC	1.15 pt	5,7								
Bravo Ultrex	1.4 lb	1,2,4,6,7	86.3 AB	93.2 AB	2.0 C	3.0 C	2.8 B	6.7 DE	1.5 BC	4922 A
Abound 2SC	1.15 pt	3,5								
Abound 2SC	0.38 fl oz/1000 row ft	in-furrow	93.8 A	104.7 A	2.3 BC	3.2 C	4.8 B	6.2 DE	1.2 C	4777 A
Bravo Ultrex	1.4 lb	1,2,4,6								
Abound 2 SC	0.8 pt	3,5,7								
Bravo Ultrex	1.4 lb	1,2,7	88.5 AB	97.7 AB	2.3 BC	3.8 B	4.5 B	5.0 E	1.2 C	4459 A-C
Abound 2 SC	0.8 pt	3,5								
Bravo Ultrex+Fluazinam	1.4 lb+0.71 pt	4,6								
Bravo Ultrex	1.4 lb	1,2,3,8	81.0 B	91.6 AB	2.8 B	3.5 BC	3.0 B	8.8 B-D	1.3 BC	4183 B-D
Folicur 3.6F	0.45 pt	4,5,6,7								
Bravo Ultrex	1.4 lb	1,2,4,6,7	85.0 AB	88.7 B	2.8 B	3.8 B	4.5 B	7.7 C-E	1.5 BC	4107 C-E
Moncut 50WP	1.2 lb	3,5								
Bravo Ultrex	1.4 lb	1-7	85.8 AB	93.8 AB	2.3 BC	3.2 C	7.5 B	12.2 B	1.7 BC	3816 DE
LSD (0.05)			11.7	13.0	0.7	0.5	6.8	3.6	0.6	574

¹Spray timing was as follows: 1 = June 12, 2 = June 26, 3 = July 10, 4 = July 24, 5 = August 7, 6 = August 21, 7 = September 5.

²Early and late leaf spot was assessed on September 11 and September 22, 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 = lesion numerous with heavy defoliation, 8 = very numerous lesions on few remaining leaves with very heavy defoliation, 9 = very few remaining leaves covered with lesions, 10 = plants dead).

³Southern stem rot was assessed on August 11, and September 28 (inversion) as the number of disease loci per 70 feet row.

⁴Rhizoctonia limb rot was assessed at inversion using a 1-5 rating scale (1=0-10% level of damage of a given row length, 2=11-25%, 3=26-50%, 4=51-75%, 5=completely dead plants).

⁵Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Comparison of Moncut 50W and Moncut 70WDG with Abound 2SC and Folicur 3.6F for Control of Foliar and Soil-borne Diseases of Peanut

Objective: To assess efficacy of fungicides as foliar spray for the management of leaf spot and soil-borne diseases in peanut.

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 12, 2000

Experimental Design: Randomized complete block design with six replications. Plot consisted of six 35-foot (10.7 m) rows spaced 3 feet (0.9 m) 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: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre (April 19).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 20).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds per acre in furrow.

Nematicides: Temik 15G 7 pounds per acre banded over the center of the seed furrow.

Irrigation Applied: Approximately 1 inch of water was applied on May 8, June 9, June 22, July 7, July 19, July 27, August 10, and August 22.

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 two-week intervals beginning June 12 and continuing through September 5.

Disease Assessment: Early and late leaf spot were visually rated on September 10 and 21 using the Florida leaf spot scoring system. Counts of southern stem rot loci were made on September 29 and October 5 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 3 and 9. Yields were reported at 10.18% moisture.

Summary: At 133 DAP, leaf spot ratings for all of the fungicide programs evaluated did not significantly differ. Due to the extended drought, Bravo Ultrex alone proved as effective in controlling early and late leaf spot as those programs that included applications of Abound 2SC and Folicur 3.6F. As indicated by leaf spot ratings of 3.0 to 3.3, damage was limited to light spotting in the lower and mid-canopy. No appreciable defoliation was seen.

Although significant differences in the level of southern stem rot damage were noted among the fungicide programs at both digging dates, less variability was noted at the second digging date among the fungicide programs. When compared with the Bravo Ultrex standard, significant reductions in the level of southern stem rot were obtained with two applications of Abound 2SC and the Moncut 50W/Folicur 3.6F-combination program. With the notable exception of two applications of Moncut 70WDG at 1.5 pounds per acre, Moncut 50W and Moncut 70WDG programs proved to have little activity against southern stem rot. Also, the standard Folicur 3.6F program, which consists of four applications of the 0.45 pint per acre rate, failed to reduce southern stem rot severity in peanut below levels seen in the Bravo Ultrex-treated plots. Although some differences in *Rhizoctonia* limb rot damage were noted at both rating dates, damage levels were uniformly low (data not shown).

In this irrigated trial, pod yields for all the fungicide programs were well over the two-ton level. However, significant differences in yield were seen among these programs. The effect of southern stem rot control was reflected in the high yields seen in the peanuts treated twice with Abound 2SC at 1.15-pints per acre. On the other hand, yields of the Folicur 3.6F-treated peanuts did not differ significantly from those of the Bravo Ultrex standard. Yield response to the Moncut 50W and Moncut 70WDG-treated peanuts varied widely. Two applications of Moncut 70WDG at 1.5 pounds per acre and the Moncut 50W/Folicur 3.6F combination program were as effective in boosting pod yields as Abound 2SC. The yields obtained with the remaining Moncut 50W and Moncut 70WDG program, which did not differ significantly from those of the Bravo Ultrex standard, were directly related to their lack of efficacy against southern stem rot.

**EFFECT OF FUNGICIDES ON FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	Leaf Spot ²		Southern Stem Rot ³		Pod Yield (lbs/ac)	
			133 DAP	141 DAP	147 DAP	1st dig ⁴	2nd dig ⁵	
Bravo Ultrex	1.4 lb	1-7	3.3 AB ⁶	9.2 AB	11.0 AB	459 B-D	4127 BC	
Bravo Ultrex	1.4 lb	1,2,4,6,7	3.2 AB	5.7 B	5.2 D	5462 A	5392 A	
Abound 2.08 SC	1.15 pt	3,5						
Bravo Ultrex	1.4 lb	1,2,7	3.2 AB	5.5 B	8.2 A-D	4528 B-D	4383 BC	
Folicur 3.6F	0.45 pt	3,4,5,6						
Bravo Ultrex	1.4 lb	1,2,4,6,7	3.2 AB	9.8 AB	8.5 A-D	4729 A-D	4418 BC	
Moncut 50W + Bravo Ultrex	1.5 lb + 1.4 lb	3,5						
Bravo Ultrex	1.4 lb	1,2,7	3.3 AB	10.0 AB	8.5 A-D	4259 CD	4397 BC	
Moncut 50W + Bravo Ultrex	0.75 lb + 1.4 lb	3,4,5,6						
Bravo Ultrex	1.4 lb	1,2,7	3.2 AB	7.3 AB	6.0 CD	4950 A-C	4611 A-C	
Moncut 50 W + Bravo Ultrex	0.75 lb + 1.4 lb	4,6						
Folicur 3.6F	0.45 pt	3,5						
Bravo Ultrex	1.4 lb	1,2,4,6,7	3.3 AB	5.5 B	7.2 B-D	4494 B-D	4708 AB	
Moncut 50W + Bravo Ultrex	1.5 lb + 1.4 lb	3						
Abound 2.08 SC	1.15 pt	5						
Bravo Ultrex	1.4 lb	1,2,4,6,7	3.3 AB	5.5 B	4.8 D	5005 AB	4819 AB	
Moncut 70WDG + Bravo Ultrex	1.5 lb + 1.4 lb	3,5						
Bravo Ultrex	1.4 lb	1,2,7	3.0 B	10.0 AB	8.0 A-D	4680 B-D	4266 BC	
Moncut 70WDG + Bravo Ultrex	0.75 lb + 1.4 lb	3,4,5,6						
Bravo Ultrex	1.4 lb	1,2,4,5,6,7	3.2 AB	11.5 A	10.8 AB	4024 D	3761 C	
Moncut 70WDG + Bravo Ultrex	4.0 lb + 1.4 lb	3						
Bravo Ultrex	1.4 lb	1,2,4,5,6,7	3.2 AB	10.2 AB	11.3 A	4618 B-D	4307 BC	
Moncut 70WDG + Bravo Ultrex	4.0 lb + 1.4 lb	3						
Bravo Ultrex	1.4 lb	1,2,4,5,6,7	3.0 B	8.5 AB	9.7 A-C	4625 B-D	4093 BC	
Moncut 70WDG + Bravo Ultrex	8.0 lb + 1.4 lb	3						
Bravo Ultrex + Tilt	0.9 lb + 2.0 fl oz	1,2,4,6,7	3.5 A	8.7 AB	7.6 A-D	4425 B-D	4065 BC	
Montero	3,5							
LSD (0.05)			0.5	5.3	4.1	734	857	

¹Spray timing was as follows: 1=June 12, 2=June 26, 3=July 10, 4=July 24, 5=August 7, 6=August 23, 7=September 5.

²Early and late leaf spot was assessed on September 21, based on 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=lesion numerous with heavy defoliation, 8=very numerous lesions on few remaining leaves with very heavy defoliation, 9=very few remaining leaves covered with lesions, 10=plants dead). ³Southern stem rot was assessed on September 29 (1st dig) and October 5 (2nd dig) as the number of disease loci per 70 ft of row. ⁴First dig September 29, harvested October 3. ⁵Second dig October 5, harvested October 9.

⁶Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

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

Objective: To assess the efficacy of new and experimental fungicides for control of foliar and soil-borne diseases of peanut.

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

Location: Wiregrass Research and Extension Center, Headland, AL

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

Cultivar: Georgia Green

Planting:

Date: May 12, 2000

Experimental Design: Randomized complete block design with six replications. Plots consisted of six 35-foot (10.7 m) rows spaced 3 feet (0.9 m) 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: Pre-plant: Sonalan 1 quart + Dual 1.5 pints per acre (April 19).

Gramoxone Max 5.5 ounces + 2,4 DB 1.5 pint + Basagran 0.5 pint per acre (June 20).

Fungicides: See table.

Insecticides: Temik 15G 7 pounds per acre in furrow.

Nematicides: Temik 15G 7 pounds per acre banded over the center of the seed furrow.

Irrigation Applied: Approximately 1 inch of water was applied on May 8, June 9, June 22, July 7, July 19, July 27, August 10, and August 22.

Application of Treatments: Foliar 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 two-week intervals beginning June 12 and continuing through September 5.

Disease Assessment: Early and late leaf spot were visually rated on September 12 and 21 using the Florida leaf spot scoring system. Counts of southern stem rot loci were made on September 29 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plots were harvested on October 3 and 9. Yields were reported at 10.19% moisture.

Summary: When tank-mixed with Bravo 720, Messenger and Biozyme failed to enhance seedling emergence or the control of leaf spot diseases, southern stem rot, or Rhizoctonia limb rot as compared with the season-long Equus 720 or Bravo 720 standard. Surprisingly, no appreciable differences in southern stem rot levels were noted between the Bravo 720 standard and the other fungicide programs, including those that included three applications of the 0.45 pints per acre rate of Folicur 3.6F. At the first digging date the Equus 720/Kocide 2000+Folicur 3.6F program increased yields above those recorded for Equus alone. By the second digging date, highest yields were obtained with the Bravo 720/Folicur 3.6F program. Messenger and Biozyme had no noticeable impact on peanut yield.

**EFFECT OF NEW AND EXPERIMENTAL FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Stand Count—		Leaf Spot ² 133 DAP	Southern Stem Rot ³		Limb Rot ⁴		Pod Yield lbs/ac	
			14 DAP	28 DAP		141 DAP	147 DAP	141 DAP	147 DAP	1st dig ⁵	2nd dig ⁶
Equus 720	1.5 pt	1-7	78.5 A ⁷	85.3 A	3.0 C	10.7 AB	10.0 AB	1.5 B-D	1.8 A	3650 B	3534 BC
Equus 82.5 DF	1.4 lb	1-7	—	—	3.2 BC	10.0 AB	8.0 AB	1.3 CD	1.2 AB	3754 AB	3775 A-C
Equus 720 + Kocide 4.5 LF	1.0 pt + 1.0 pt	1-7	—	—	3.5 AB	10.2 AB	10.5 AB	1.7 A-D	1.7 AB	3844 AB	3547 BC
Equus 82.5 DF + Kocide 2000	1.0 lb + 1.0 lb	1-7	—	—	3.5 AB	10.8 AB	8.8 AB	1.7 A-D	1.0 B	4113 AB	3601 BC
Equus 720 + Kocide 4.5 LF	1.0 pt + 1.0 pt	1,2,6,7	—	—	3.5 AB	10.8 AB	7.7 B	2.2 AB	1.5 AB	4148 A	3851 A-C
Folicur 3.6F	0.45 pt	3,4,5	—	—	3.5 AB	10.8 AB	7.7 B	2.2 AB	1.5 AB	4148 A	3851 A-C
Equus 82.5 DF + Kocide 2000	1.0 lb + 1.0 lb	1,2,6,7	—	—	3.7 A	9.3 AB	8.5 B	2.2 AB	1.5 AB	4044 AB	3961 AB
Folicur 3.6F	0.45 pt	3,4,5	—	—	3.7 A	9.3 AB	8.5 B	2.2 AB	1.5 AB	4044 AB	3961 AB
Bravo 720	1.5 pt	1-7	—	—	3.2 BC	11.0 AB	9.0 AB	2.2 AB	1.3 AB	3982 AB	3726 A-C
Bravo 720 Folicur 3.6F	1.5 pt 0.45 pt	1,2,6,7 3,4,5	—	—	3.7 A	9.3 AB	8.8 AB	1.7 A-D	1.5 AB	4107 AB	4148 A
Bravo 720 Bravo 720 + Biozyme	1.5 pt 1.5 pt + 8 fl oz	1,3,5,7 2,4,6	—	—	3.5 AB	12.2 A	11.0 AB	2.3 A	1.8 A	3685 AB	3766 A-C
Bravo 720 Bravo 720 + Biozyme	1.5 pt 1.5 pt + 12 fl oz	1,3,5,7 2,4,6	—	—	3.0 C	7.2 B	11.0 AB	1.2 D	1.8 A	3975 AB	3785 A-C
Biozyme Bravo 720 + Biozyme	12 fl oz 1.5 pt + 12 fl oz	1 st bloom 1,2,3	—	—	3.5 AB	12.8 A	13.0 A	2.2 AB	1.8 A	3657 B	3346 C
Bravo 720	1.5 pt	4,5,6,7	—	—	3.5 AB	12.8 A	13.0 A	2.2 AB	1.8 A	3657 B	3346 C
Messenger Bravo 720	2.23 oz 1.5 pt	7,14 DAE 1-7	76.7 A	89.2 A	3.2 BC	9.5 AB	9.2 AB	1.8 A-D	1.6 AB	4003 AB	3327 C

continued

**CONTINUED, EFFECT OF NEW AND EXPERIMENTAL FUNGICIDES FOR CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,
WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Stand Count—		Leaf Spot ² 133 DAP	Southern Stem Rot ³		Limb Rot ⁴		Pod Yield lbs/ac	
			14 DAP	28 DAP		141 DAP	147 DAP	141 DAP	147 DAP	1st dig ⁵	2nd dig ⁶
Messenger	2.23 oz	emerge, 7, 14 DAE	77.3 A ⁷	92.7 A	3.0 C	10.0 AB	8.2 B	1.7 A-D	1.4 AB	3927 AB	3858 A-C
Messenger + Bravo 720	2.23 oz + 1.5 pt	1-7									
Messenger	2.23 oz	pre-bloom	73.8 A	87.3 A	3.0 C	12.5 A	10.3 AB	2.0 A-C	1.7 AB	4031 AB	3630 A-C
Messenger + Bravo 720	2.23 oz + 1.5 pt	1-7									
LSD (0.05)			7.3	19.8	0.5	3.8	4.1	0.8	0.7	487	533

¹Spray timing was as follows: 1=June 12, 2= June 26, 3=July 10, 4=July 24, 5=August 7, 6=August 21, 7=September 5.

²Early leaf spot was rated on September 21, based on the the Florida leaf 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 very heavy defoliation, 9=very few remaining leaves covered with lesions, 10=plant dead).

³Southern stem rot was assessed on September 29 (1st dig) and October 5 (2nd dig) as the number of disease loci per 70 ft of row.

⁴Rhizoctonia limb rot was assessed at inversion using a 1-5 rating scale (1=0-10% level of damage of a given row length, 2=11-25%, 3=26-50%, 4=51-75%, 5=completely dead plants).

⁵First dig September 29, harvested October 3. ⁶Second dig October 5, harvested October 9.

⁷Mean separation within columns was according to Fisher's protected least significant difference (LSD) test.

Efficacy of Fungicides as Foliar Spray for the Management of Leaf Spot and Soil-borne Diseases of Peanut

Objective: To assess the efficacy of fungicides applied under a 14-, 21-, or 28-day spray schedule for the control of foliar and soil-borne diseases in peanut.

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

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

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

Cultivar: Georgia Green

Planting:

Date: April 28, 2000

Experimental Design: Randomized complete block design with six replications. Plot size was four 30-foot (9.1 m) rows spaced 38 inches (0.97 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Five to six seed per foot of row.

Crop History: Field with history of peanut production.

Cultural Practices:

Herbicides: Pre-plant: Prowl 2 pints + Dual Magnum 1.5 pints per acre (April 28).

Poast Plus 1.5 pints + Prime Oil 2 pints per acre (June 7).

Classic 0.5 ounces per acre + Activate 1 pint per 50 gallons of water (July 5).

Poast Plus 1.5 pints + Prime Oil 2 pints per acre (July 27).

Fungicides: See table.

Insecticides: Temik 5-6 pounds per acre in-furrow (April 28).

Lorsban 15G 13 pounds per acre banded over row (June 13).

Nematicides: None.

Irrigation Applied: None.

Application of Treatments: Fungicides were applied as a full canopy spray at a calibrated volume of 20 gallons per acre using a four-row tractor-mounted boom sprayer with TX8 nozzles. Spray schedule intervals were as follows:

14-day intervals: June 2, June 14, June 28, July 12, July 25, August 9, and August 23

21-day intervals: June 2, June 21, July 12, August 2, and August 23

28-day intervals: June 2, June 28, July 25, August 23

Disease Assessment: Early and late leaf spot were visually rated on August 29 and September 13 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on August 29 and September 14 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plant were dug September 14 and plots were harvested on September 18.

Summary: Overall, early and late leaf spot were suppressed by the unusually dry summer-long weather patterns. Surprisingly, leaf spot ratings for the plots treated with the 0.4 pints per acre rate of BAS 500 at two-week intervals were higher than those recorded for the unsprayed control and most of the other fungicide treatments. The least southern stem rot damage was noted in the plots treated with 0.58 pint per acre of BAS 500F at 28-day intervals. Yields in the unsprayed control were similar to those obtained with the fungicide treatments. The best yields were seen in the plots treated with the combination of three applications of BAS 500F and two applications of Folicur 3.6F.

**EFFECT OF FUNGICIDES ON LEAF SPOT AND SOIL-BORNE DISEASES OF PEANUT,
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Leaf Spot ² —		Southern Stem Rot ³		Pod Yield (lbs/ac)
			125 DAP	146 DAP	125 DAP	125 DAP	
Untreated Control	—	—	2.3 B ⁴	3.0 BC	3.5 A	7.2 A	3397 AB
Bravo 720	1.5 pt	1,6,7	2.0 B	3.0 BC	5.2 A	6.8 AB	3586 AB
BAS 500	0.4 pt	2,3,4,5					
Bravo 720	1.5 pt	1,6,7	2.2 B	2.8 C	4.8 A	5.3 A-C	3636 AB
BAS 500	0.58 pt	2,3,4,5					
Bravo 720	1.5 pt	1,7	2.0 B	3.2 BC	4.8 A	5.0 A-C	3787 A
BAS 500	0.4 pt	2,4,6					
Folicur 3.6F	0.45 pt	3,5					
Bravo 720	1.5 pt	1,3,5,7	3.2 A	4.0 A	4.7 A	5.2 A-C	3361 B
BAS 500	0.4 pt	2,4,6					
Bravo 720	1.5 pt	1	2.0 B	3.2 BC	4.5 A	6.2 AB	3619 AB
BAS 500	0.4 pt	2-5 ⁵					
Bravo 720	1.5 pt	1	2.2 B	2.8 C	4.5 A	5.2 A-C	3529 AB
BAS 500	0.58 pt	2-5 ⁵					
Bravo 720	1.5 pt	1	2.0 B	2.7 C	4.0 A	3.5 C	3493 AB
BAS 500	0.4 pt	2-4 ⁵					
Bravo 720	1.5 pt	1	2.0 B	2.8 C	3.2 A	4.5 BC	3558 AB
BAS 500	0.58 pt	2-4 ⁵					
Barvo 720	1.5 pt	1,6,7	2.3 B	3.2 BC	3.2 A	6.5 AB	3258 B
Folicur 3.6 F	0.45 pt	2,3,4,5					
Bravo 720	1.5 pt	1-7	2.8 A	3.5 AB	3.8 A	5.0 A-C	3412 AB
LSD (0.05)			0.4	5.5	2.2	2.4	417

¹Spray timing was as follows:

14-day intervals: 1=June 2, 2=June 14, 3=June 28, 4=July 12, 5=July 25, 6=August 9, 7=August 23

21-day intervals: 1=June 2, 2=June 21, 3=July 12, 4=August 2, 5=August 23

28-day intervals: 1=June 2; 2=June 28, 3=July 25, 4=August 23.

²Early and late leaf spot was assessed on August 29 and September 13, 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, 10=plants dead).

³Southern stem rot was assessed on August 29 and September 14 (inversion) as the number of disease loci per 60 ft of row.

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

⁵ At 28-day intervals.

Efficacy of New Fungicides for the Control of Foliar and Soil-borne Diseases of Peanut

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

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

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

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

Cultivar: Georgia Green

Planting:

Date: April 26, 2000

Experimental Design: Randomized complete block design with six replications. Plot size was four 30-foot (9.1 m) rows spaced 38 inches (0.97 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Five to six seeds per foot of row.

Crop History: Field with history of peanut production.

Cultural Practices:

Herbicides: Pre-plant: Prowl 2 pints + Dual Magnum 1.5 pints per acre (April 26).

Gramoxone 6 ounces + Basagran 8 ounces per acre (May 16).

Poast Plus 1.5 pints + Prime Oil 2 pints per acre (June 7).

Classic 0.5 ounces per acre + Active 1 pint per 50 gallons of water (July 5)

Fungicides: See table.

Insecticides: Temik 5-6 pounds per acre in-furrow (April 26).

Lorsban 15G 13 per acre banded over row (June 12).

Nematicides: None.

Irrigation Applied: None.

Application of Treatments: Fungicides were applied as a full canopy spray at a calibrated volume of 20 gallons per acre using a four-row tractor-mounted boom sprayer with TX8 nozzles. Applications were made at two-week intervals: June 14, June 28, July 12, July 25, August 9, and August 23.

Disease Assessment: Early and late leaf spot were visually rated on August 29 and September 13 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on August 29 and September 14 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plants were dug September 14 and plots were harvested on September 18. Yields were reported at 9% moisture.

Summary: Weather patterns were unusually dry through much of the summer. Consequently, the level of early and late leaf spot pressure noted in trials at this location was unusually low. Even on the unsprayed control, damage was limited to light spotting of the leaves in the lower and mid-canopy. At both rating dates, premature leaf shed, which is typically associated with severe outbreaks of early and late leaf spot, was negligible. The biofungicide Serenade alone controlled early and late leaf spot as effectively as the standard full-season Bravo 720 program. At the second rating date, leaf spot levels in the plots treated with Serenade at a rate of 4.0 pounds per acre were lower than those recorded for several of the Equus + Kocide 2000 or Kocide LF programs.

At the first digging date, the least stem rot damage was seen in the plots treated season-long with Serenade at the 2 pounds per acre rate. By the second digging date, little differences in disease control were noted among the fungicide programs, including those that included three applications of Folicur 3.6F.

Although the lowest yields were noted in the control plots and those treated season-long with Serenade at the rate of 4 pounds per acre, relatively few significant differences in yield were seen among the fungicide programs. Yield in the plots treated with the 2 pounds per acre rate of Serenade were similar to those obtained full season with Bravo 720 and Equus 720. The yields of the plots treated with Equus 720 + Kocide LT or Equus DF + Kocide 2000 alone or in combination with Folicur 3.6F did not significantly differ.

**EFFECT OF NEW FUNGICIDES FOR THE CONTROL OF FOLIAR AND SOIL-BORNE DISEASES OF PEANUT,
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Leaf Spot ² —		Southern Stem Rot ³		Pod Yield lbs/ac
			125 DAP	146 DAP	125 DAP	125 DAP	
Untreated Control	—	—	3.2 A ⁴	3.0 A-C	7.3 AB	11.0 AB	2709D
Bravo 720 (standard control)	1.5 pt	1-6	2.5 B	2.5 C	6.0 A-C	10.2 AB	2942 A-D
Serenade	2 lb	1-6	2.5 B	2.8 A-C	4.2 C	9.8 AB	3038 A-C
Serenade	4 lb	1-6	2.3 B	2.5 C	5.3 A-C	10.8 AB	2627D
Serenade + Kocide DF	2 lb + 2 lb	1-6	2.7 AB	3.2 AB	4.8 BC	10.5 AB	3063 A-C
Equus 720	1.5 pt	1-6	2.8 AB	2.8 A-C	7.5 AB	10.7 AB	2814 B-D
Equus 82.5 DF	1.36 lb	1-6	2.7 AB	2.7 BC	8.0 AB	11.5 A	2808 B-D
Equus 720 + Kocide 4.5 LF	1.0 pt + 1.0 pt	1-6	2.7 AB	3.3 A	5.0 BC	9.5 AB	3051 A-C
Equus 82.5 DF + Kocide 2000	1.0 lb + 1.0 lb	1-6	2.8 AB	3.3 A	5.8 A-C	8.2 B	2936 A-D
Equus 720 + Kocide 4.5 LF Folicur 3.6 F	1.0 pt + 1.0 pt 0.45 pt	1,2,6 3,4,5	2.5 A	3.3 A	6.8 A-C	11.0 AB	3166 AB
Equus 82.5 DF + Kocide 2000 Folicur 3.6 F	1.0 lb + 1.0 lb 0.45 pt	1,2,6 3,4,5	2.7 AB	3.2 AB	4.8 BC	9.2 AB	3280 A
LSD (0.05)			0.6	0.5	2.9	3.2	367

¹Spray timing was as follows: 1=June 14, 2= June 28, 3=July 12, 4=July 25, 5=August 9, 6=August 23.

²Early and late leaf spot was assessed on August 29 and September 13, based on 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, 10=plants dead).

³Southern stem rot was assessed on August 29 and September 14 (dig) as the number of disease loci per 60 ft of row.

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

Efficacy of Abound 2SC as a Foliar Spray for the Management of Leaf Spot and Soil-borne Diseases of Peanut

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

Target diseases included early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), and southern stem rot (*Sclerotium rolfsii*).

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

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

Cultivar: Georgia Green

Planting:

Date: April 27, 2000

Experimental Design: Randomized complete block design with six replications. Plot size was four 30-foot (9.1 m) rows spaced 38 inches (0.97 m) apart.

Land Preparation: Moldboard plow and disk harrow.

Seeding Rate: Five to six seed per foot of row.

Crop History: Field with history of peanut production.

Cultural Practices:

Herbicides: Pre-plant: Prowl 2 pints + Dual Magnum 1.5 pints per acre (April 27).

Gramoxone 6 ounces + Basagran 8 ounces per acre (May 16).

Poast Plus 1.5 pints + Prime Oil 2 pints per acre (June 7).

Classic 0.5 ounces per acre + Active 1 pint per 50 gallons of water (July 5).

Fungicides: See table.

Insecticides: Temik 5-6 pounds per acre in-furrow (April 27).

Lorsban 15G 13 per acre banded over row (June 12).

Nematicides: None.

Irrigation Applied: None.

Application of Treatments: Fungicides were applied as a full canopy spray at a calibrated volume of 20 gallons per acre using a four-row tractor-mounted boom sprayer with TX8 nozzles. Applications were made at two-week intervals: June 2, June 14, June 28, July 12, July 25, August 9, and August 24.

Disease Assessment: Early and late leaf spot were visually rated on August 29 and September 13 using the Florida leaf spot scoring system. Counts of southern stem rot (SSR) loci were made on August 29 and September 14 immediately after plot inversion (one locus was defined as ≤ 1 ft of consecutive symptoms and signs of the disease).

Harvest: Plants were dug September 14 and plots were harvested on September 18.

Summary: Due to unusually dry weather patterns throughout much of the summer, early and late leaf spot damage in all of the fungicide treated plots were quite low. No significant differences in leaf spot or southern stem rot damage ratings were noted among the fungicide treatments. Yields in the untreated control and the fungicide-treated plots were similar.

**EFFECT OF FUNGICIDES ON LEAF SPOT AND SOIL-BORNE DISEASES OF PEANUT,
GULF COAST RESEARCH AND EXTENSION CENTER, FAIRHOPE, AL, 2000**

Treatment	Rate Per Acre Formulated Product	Spray Timing ¹	—Leaf Spot ² —		Southern Stem Rot ³		Pod Yield lbs/ac
			125 DAP	146 DAP	125 DAP	125 DAP	
Untreated Control	—	—	2.5 A ⁴	3.3 A	3.2 A	8.0 A	2803 A
Bravo Ultrex (standard control)	1.4 lb	1-7	2.2 AB	2.7B	3.0 A	5.2C	2587 A
Abound 2.08 SC	0.38 floz/1000 ft	in-furrow	2.2 AB	2.5B	2.7 A	5.5 BC	2644 A
Bravo Ultrex	1.4 lb	1,2,4,6,7					
Abound 2.08 SC	1.15 pt	3,5					
Abound 2.08 SC	0.58 floz/1000 ft	in-furrow	2.2 AB	2.7B	2.0 A	6.5 ABC	2648 A
Bravo Ultrex	1.4 lb	1,2,4,6,7					
Abound 2.08 SC	1.15 pt	3,5					
Bravo Ultrex	1.4 lb	1,2,4,6,7	2.0B	2.3 B	3.8 A	6.0 BC	2722 A
Abound 2.08 SC	1.15 pt	3,5					
Abound 2.08 SC	0.38 floz/1000 ft	in-furrow	2.0B	2.5B	2.3 A	6.2 BC	2936 A
Bravo Ultrex	1.4 lb	1,2,4,6					
Abound 2.08 SC	0.8 pt	3,5,7					
Bravo Ultrex	1.4 lb	1,2,7	2.2 AB	2.8 AB	2.0 A	7.0 AB	2659 A
Abound 2.08 SC	0.8 pt	3,5					
Bravo Ultrex + Fluazinam	1.4 lb + 0.71 pt	4,6					
Bravo Ultrex	1.4 lb	1,2,7	2.2 AB	2.7B	2.3 A	6.2 BC	2663 A
Abound 2.08 SC	0.8 pt	3,5					
Folicur 3.6F	0.45 pt	4,6					
Bravo Ultrex	1.4 lb	1,2,3	2.3 AB	2.7B	3.0 A	6.7 ABC	2722 A
Folicur 3.6F	0.45 pt	4,5,6,7					
Bravo Ultrex	1.4 lb	1,2,4,6,7	2.2 AB	2.8 AB	2.8 A	6.3 ABC	2772 A
Moncut 50WP	1.2 lb	3,5					
LSD (0.05)			0.4	0.5	1.9	1.7	555

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