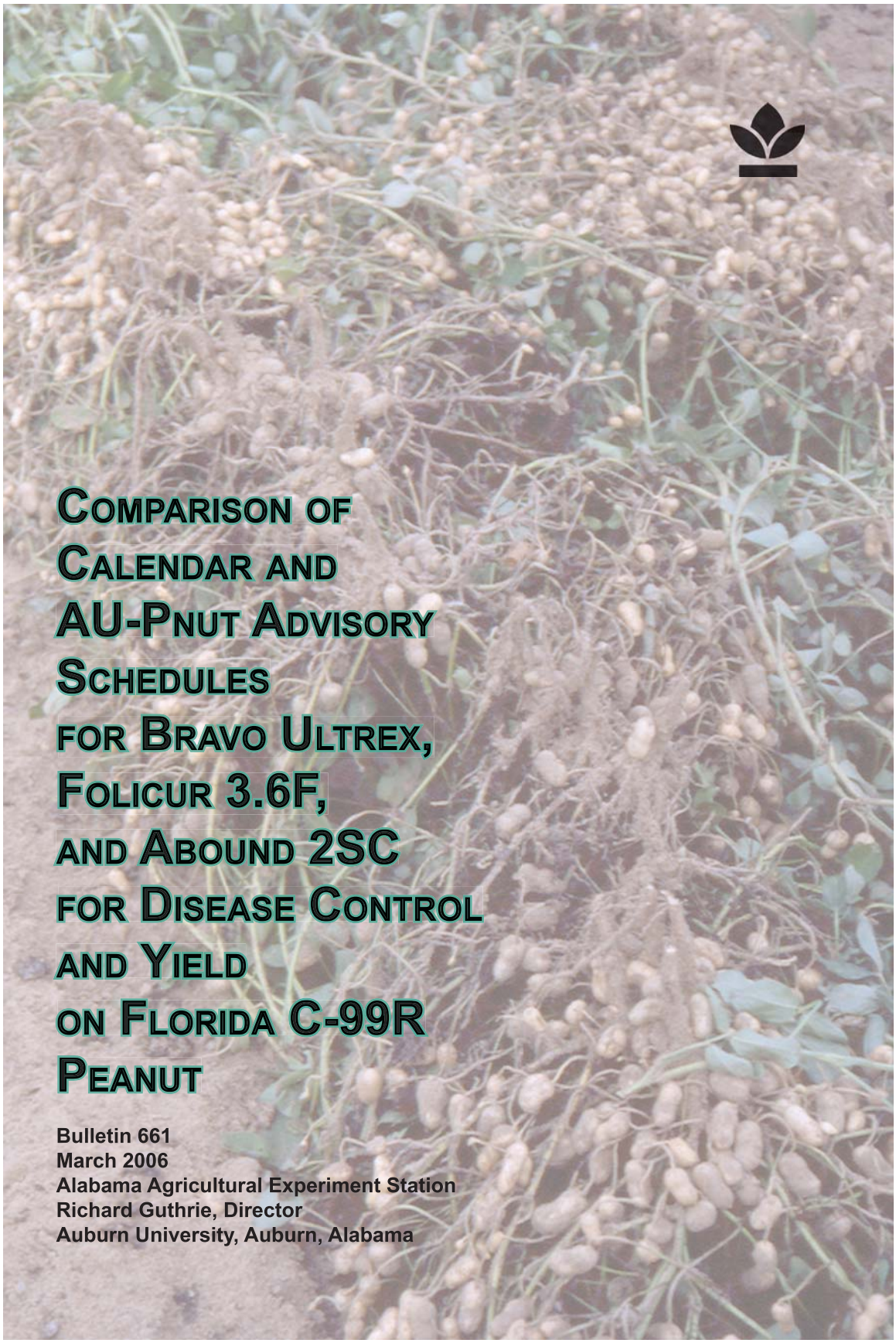

Comparison of Calendar and AU-Pnut Advisory Schedules for Bravo Ultrex, Folicur 3.6F, and Abound 2SC for Disease Control and Yield on Florida C-99R Peanut

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INTRODUCTION

In Alabama, early and late leaf spot (caused by *Cercospora arachidicola* and *Cercosporidium personatum*, respectively) are common diseases that can defoliate peanut and reduce anticipated yield by 50 percent *(13)*. To effectively control both leaf spot diseases, fungicide applications should begin 30 to 40 days after planting and treatment must be reapplied every 10 to 14 days up until approximately 2 weeks before anticipated digging date *(10,14)*. In a 2-week calendar treatment program, a total of six to eight fungicide applications may be made during the growing season.

White mold (caused by *Sclerotium rolfsii*) is the most widespread and damaging soil-borne disease in Alabama peanuts. While average annual losses to white mold are estimated statewide at 5 percent, pod loss in isolated fields that have a history of frequent peanut or vegetable production can easily exceed 30 percent of expected yield. Damaging outbreaks of this disease in Alabama are most often seen in fields cropped every second year to peanut over an extended time period *(3)*. To minimize loss due to white mold, a fungicide program, particularly in fields with a history of damaging disease outbreaks, should include applications of Folicur 3,6F, Abound 2SC, Headline 2.09E, Moncut 70DF, or Artisan 3.6E *(10,14)*.

Numbers of fungicide applications made during a growing season may be reduced by lengthening the interval between applications or adopting the disease advisory program AU-Pnut *(8,9)*. On the partially leaf spot-resistant Southern Runner peanut, lengthening application intervals from 2 to 3 weeks significantly increased ratings for early and late leaf spot but did not effect pod yields *(8)*. Brenneman and Culbreath *(1)* noted not only considerable intensification of early and late leaf spot on Southern Runner but also a significant decline in pod yields in 1 of 3 years when application intervals for Bravo and Folicur 3.6F programs were lengthened from 2 to 3 weeks. Recently, Bowen et al. *(2)* noted similar results on partially leaf spot-resistant

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DP-1 and Florida C-99R peanuts. Yields for the conventional and extended interval Folicur 3.6F and Abound 2SC but not the Bravo calendar programs were very similar although Monfort et al. *(11)* noted heavier leaf spot damage on Florida C-99R, MDR, and the current standard Georgia Green, treated at extended intervals rather than on a conventional 2-week schedule.

In contrast to a calendar fungicide application schedule, the AU-Pnut leaf spot advisory triggers applications on the number of accumulated rain events, which are equal to a minimum of 0.10 inch of rain or irrigation in a 24-hour period, and the 5-day average rainfall forecast. Starting at true ground cracking when seedlings first emerge, rain events are counted. Depending on the 5-day average rainfall forecast, the first fungicide application is made no later than the sixth rain event. Starting 10 days after the first application, additional fungicide treatments are triggered after (a) three rain events, (b) the 5-day average rainfall is forecast to be above 50 percent, or (c) a combination of one or two rain events and the 5-day average rainfall forecast. In a previous study on Florunner peanuts, 1.25 fewer applications per year were made when fungicide applications were scheduled according to AU-Pnut leaf spot advisory *(9).* Brenneman and Culbreath (1) obtained a reduction of two fungicide applications in 2 of 3 years with AU-Pnut compared with the standard 2-week calendar schedule. Bowen et al. *(2)* noted similar reductions in application numbers with AU-Pnut but noted there was an increased risk of inadequate leaf spot control.

Recently released peanut cultivars have much better tolerance or resistance than does the Florunner peanut. Starting with Southern Runner, many late maturing peanut lines have partial resistance to late and sometimes early leaf spot as well as white mold *(6,7).* Runner peanut lines AP-3 and GA01R also have better disease resistance packages then the current industry standard Georgia Green *(5).* Newer fungicides such as Abound 2SC and Headline 2.09E, as well as disease resistant cultivars, may permit application intervals to be extended beyond the recommended 2-week calendar treatment interval. The objective of this study was to compare the effectiveness of several calendar schedules and the AU-Pnut leaf spot advisory with Abound 2SC, Folicur 3.6F, and Bravo Ultrex for the control of leaf spot diseases and white mold on Florida C-99R.

MATERIALS AND METHODS

Production methods. Peanuts were planted on May 14, 2003, May 16, 2004, and May 23, 2005 at a rate of six seed per foot in Dothan fine sandy loam with less than 1 percent organic matter. In 2003, the late maturing, maturity group 5 cultivar DP-1 was planted, while another maturity group 5 cultivar, Florida C-99R, was sown in 2004 and 2005. Both of these peanut lines have some resistance to late leaf spot and southern stem rot *(5,6,7).* In late March, the plot area, which was maintained in a peanut – cotton – peanut rotation, was subsoiled, turned with a moldboard plow, and then prepared for planting with a disk harrow. An early post-emergent application of herbicides (1 quart per acre Sonolan + 0.45 ounce per acre Strongarm) was broadcast and lightly incorporated. Temik 15G at 6.7 pounds per acre was applied in-furrow at

plant to control thrips. Post-emergent grass control was obtained with a broadcast application of 8 ounces per acre Select + 1 quart per acre of a crop oil concentrate. Escape weeds were pulled by hand or killed by cultivating the row middles with flat sweeps. Due to frequent summer rains in 2003, the test area was not irrigated. In 2004, 1 acre inch of water was applied on July 30 and August 17. In the following year, plots received 0.6 and 0.75 acre inches of water on August 1 and September 13, respectively.

Fungicide programs. A randomized complete block design with four replications per treatment interval was used. Plots consisted of four 30-foot rows spaced 3 feet apart and were irrigated as needed. Fungicide programs with 2-, 3-, and 4-week intervals between applications (calendar schedules) and according to the standard 6/3 AU-Pnut advisory were evaluated. The 2-week calendar schedule is considered the industry standard and serves as a positive control.

In 2003, applications were made on June 16, June 30, July 14, July 28, August 11, August 25, and September 8 on the 2-week schedule; June 16, July 7, July 28, August 18, and September 8 on the 3-week schedule; and on June 16, July 14, August 14, and September 8 for the 4-week schedule. Fungicide applications were triggered by the AU-Pnut leaf spot advisory on June 16, June 30, July 14, August 4, August 14, and August 28. For 2004, application dates were June 16, June 30, July 14, July 26, August 11, August 25, and September 8 for the 2-week schedule; June 16, July 7, August 11, August 18, and September 8 for the 3-week schedule; and June 16, July 14, August 18, and September 8 for the 4-week schedule. Application dates for the AU-Pnut leaf spot advisory program in 2004 were June 25, July 8, July 26, August 11, September 3, and September 14. Calendar fungicide program applications in 2005 were made on June 16, July 5, July 27, August 10, August 22, and September 8 for the 2-week schedule; June 16, July 5, July 27, August 22, and September 8 for the 3-week schedule; and June 16, July 14, August 10, and September 8 for the 4-week schedule. In 2005, the AU-Pnut leaf spot advisory triggered fungicide applications on June 16, July 5, July 22, August 22, and September 8.

In all three years, the 2-, 3-, and 4-week calendar schedules for Folicur 3.6F included four, three, and two applications of this fungicide, respectively, while three of the six applications in the AU-Pnut advisory schedule were Folicur 3.6F. For all of the Abound 2SC programs, two applications of this fungicide were made approximately 60 and 90 days after planting and the number of Bravo Ultrex applications varied. All fungicide applications were made with a tractor-mounted boom sprayer with three TX-8 nozzles per row that delivered approximately 15 gallons per acre of spray volume.

Disease assessment. Early and late leaf spot were rated together using the 1 to 10 Florida peanut leaf spot scoring system where 1 = no disease, 2 = very few leaf spots on leaves in lower canopy, 3 = few lesions on leaves in lower and upper canopy, 4 = some leaf spots on leaves in lower and upper canopy with light defoliation ($\leq$10 percent), 5 = leaf spots noticeable in upper canopy and some defoliation ($\leq$25 percent), 6 = leaf spots numerous with significant defoliation ($\leq$50 percent), 7 = leaf spots numerous with heavy defoliation ($\leq$75 percent), 8 = numerous leaf spots on leaves with severe defoliation ($\leq$90 percent), 9 = few remaining leaves covered with leaf spots with severe defoliation (<95 percent), and 10 = plants defoliated or dead (4). Leaf spot ratings were recorded approximately every two weeks on July 31 to September 25, 2003;

July 13 to October 7, 2004; and July 5 to October 12, 2005. Incidence of white mold was described as the number of hits, or disease loci counts, where one hit (locus) is defined as less than or equal to 1 foot of consecutively damaged plants per row (12). White mold was rated immediately after digging on October 13, 2003; October 14, 2004; and October 20, 2005. Plots were combined 2 or 3 days later and then dried. Yields are reported at 10 percent moisture.

RESULTS

In 2003, monthly rainfall totals were well above the historical average for June and July, average for May and August, but below average for September and October. In 2004, May, June, July, September, and October had average to above average rainfall, while August was unusually dry. For 2005, monthly rainfall totals were average to above average for June, July, and August but below average for May, September, and October.

2003. For the Bravo Ultrex, Folicur 3.6F, and Abound 2SC programs, the level of leaf spotting and premature defoliation increased as application intervals were lengthened from 2 to 3 weeks and the number of fungicide applications reduced from seven to five (Table 1). Leaf spot ratings for the 3- and 4-week Bravo Ultrex and Folicur 3.6F programs did not greatly differ. Surprisingly, better leaf spot control was obtained with the 4-week than the 3-week Abound 2SC and Folicur 3.6F calendar programs. With one fewer application, the AU-Pnut Bravo Ultrex, Abound 2SC, and Folicur 3.6F programs gave noticeably less control of leaf spot diseases than the 2-week calendar programs for these fungicides. The 2-week Folicur 3.6F and Abound 2SC programs proved more effective than the Bravo Ultrex applied on the same treatment schedule in controlling leaf spot diseases.

While the overall incidence of white mold was low in 2003, some differences in hit counts between fungicide programs were seen (Table 1). For Bravo Ultrex and Folicur 3.6F, white mold incidence was similar across all calendar and advisory treatment schedules. Except for the 2-week schedule, white mold hit counts for the Bravo Utrex and Folicur 3.6F programs did not greatly differ. For Abound 2SC programs, peanut treated at 2- and 4-week intervals had less white mold damage compared to the 3-week schedule and the AU-Pnut advisory.

Treatment interval for Bravo Ultrex, Folicur 3.6F, and Abound 2SC programs did not greatly influence peanut yields in 2003 (Table 1). Despite differences in leaf spot ratings and one to three fewer fungicide applications, treatment interval did not affect the yield response to the Bravo Ultrex and Folicur 3.6F programs. In fact, yields for the 2-, 3-, and 4-week calendar schedules for these two fungicide program were very similar. With Abound 2SC, reductions in either leaf spot and/or white mold damage accounted for the sizable yield gains seen with the 2- and 4-week treatment schedules.

2004. Application interval had a considerable impact on the control of early leaf spot with Bravo Ultrex, Folicur 3.6F, and Abound 2SC programs (Table 2). Leaf spot ratings for the programs of each of the above fungicides noticeably increased from the 2- to 3- through 4-week treatment intervals. The 2-week and AU-Pnut adviso-

TABLE 1. INFLUENCE OF APPLICATION SCHEDULE ON THE CONTROL OF LEAF SPOT, WHITE MOLD, AND THE YIELD OF FLORIDA C-99R PEANUT WITH BRAVO ULTREX, FOLICUR 3.6F, AND ABOUND 2SC PROGRAMS IN 2003

Fungicide regime and rate/ac	——Application—— Schedule	Date, DAP[1]	Leaf spot rating[2]	White mold[3]	Yield lb/ac
Bravo Ultrex 1.4 lb	2-wk	33, 47, 61, 75, 89, 103, 116	3.8	7.5	3703
Bravo Ultrex 1.4 lb	3-wk	33, 54, 75, 96, 116	5.5	5.8	3666
Bravo Ultrex 1.4 lb	4-wk	33, 61, 89, 116	5.0	4.5	3709
Bravo Ultrex 1.4 lb	AU-Pnut[4]	33, 47, 61, 92, 103, 117	4.8	5.8	3588
Bravo Ultrex 1.4 lb Folicur 3.6F	2-wk	33, 47, 116 61, 75, 89, 103	3.0	4.3	3745
Bravo Ultrex 1.4 lb Folicur 3.6F	3-wk	33, 116 54, 75, 96	5.0	5.8	3703
Bravo Ultrex 1.4 lb Folicur 3.6F	4-wk	33, 116 61, 89	4.3	5.3	3908
Bravo Ultrex 1.4 lb Folicur 3.6F	AU-Pnut	33, 47, 117 61, 92, 103	4.5	5.0	3676
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	2-wk	33, 47, 75, 103, 116 61, 89	3.0	3.5	4559
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	3-wk	33, 75, 116 54, 96	5.3	6.5	3754
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	4-wk	33, 116 61, 89	4.0	2.8	4538
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	AU-Pnut	33, 47, 103, 117 61, 92	4.0	5.8	4078

[1] DAP = days after planting when fungicide applications are made.
[2] Rating for early and late leaf spot is based on a scale of 1 to 10, with 10 = plants defoliated or dead.
[3] White mold incidence is expressed as the number of disease hits or loci per 60 feet of row.
[4] AU-Pnut disease advisory rules specify that the first application be made immediately after six or more rain events (≥0.10 in), and additional applications immediately after three rain events.

ry schedules for Bravo Ultrex, Folicur 3.6F, and Abound 2SC proved equally effective in controlling early leaf spot. With one exception, symptoms noted for the 2-week and AU-Pnut advisory Bravo Ultrex, Folicur 3.6F, and Abound 2SC programs were limited to light spotting in the peanut canopy with 10 percent or less premature defoliation. Defoliation levels in excess of 25 percent were recorded for the 4-week Bravo Ultrex and Folicur 3.6F programs.

The 2-week Folicur 3.6F program gave better white mold control than the 3- and 4-week programs, which included one and two fewer applications of this fungicide, respectively (Table 2). Abound 2SC was equally effective in controlling white

TABLE 2. INFLUENCE OF APPLICATION SCHEDULE ON THE CONTROL OF LEAF SPOT, WHITE MOLD, AND THE YIELD OF FLORIDA C-99R PEANUT WITH BRAVO ULTREX, FOLICUR 3.6F, AND ABOUND 2SC PROGRAMS IN 2004

Fungicide regime and rate/ac	——Application—— Schedule	Date, DAP[1]	Leaf spot rating[2]	White mold[3]	Yield lb/ac
Bravo Ultrex 1.4 lb	2-wk	22, 36, 50, 62, 78, 86, 108	3.9	7.5	3660
Bravo Ultrex 1.4 lb	3-wk	22, 43, 78, 86, 108	4.5	10.3	3434
Bravo Ultrex 1.4 lb	4-wk	22, 50, 86, 108	5.3	7.8	3455
Bravo Ultrex 1.4 lb	AU-Pnut[4]	29, 44, 62, 78, 98, 114	3.6	9.3	3358
Bravo Ultrex 1.4 lb Folicur 3.6F	2-wk	22, 36, 108 50, 62, 78, 86	4.3	4.0	4161
Bravo Ultrex 1.4 lb Folicur 3.6F	3-wk	22, 43 78, 86, 108	4.9	8.0	3738
Bravo Ultrex 1.4 lb Folicur 3.6F	4-wk	22, 108 50, 86	5.3	7.0	3757
Bravo Ultrex 1.4 lb 4283 Folicur 3.6F	AU-Pnut	29, 44, 114 62, 78, 98		4.0	5.5
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	2-wk	22, 36, 62, 86, 108 50, 78	3.6	3.3	4538
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	3-wk	22, 43, 108 62, 86	4.0	4.3	4398
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	4-wk	22, 108 50, 86	4.8	5.0	4120
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	AU-Pnut	29, 44, 78, 114 62, 98	3.5	3.8	4398

[1] DAP = days after planting when fungicide applications are made.
[2] Rating for early and late leaf spot is based on a scale of 1 to 10, with 10 = plants defoliated or dead.
[3] White mold incidence is expressed as the number of disease hits or loci per 60 feet of row.
[4] AU-Pnut disease advisory rules specify that the first application be made immediately after six

mold at all of the calendar and advisory schedules. White mold hit counts for the Bravo Ultrex calendar and advisory schedules were similar.

Generally, the combination of reduced intensity of leaf spot diseases and white mold resulted in higher yields (Table 2). Yields for all Abound 2SC treatments were similar regardless of application schedule. Despite significant differences in leaf spot ratings, application schedule did not greatly impact yield response with the Bravo Ultrex programs. Yields for the AU-Pnut advisory and 14-day schedule with Folicur 3.6F were higher than those for the 3- and 4-week programs.

2005. Application interval had a significant impact on the level of leaf spot control obtained with Folicur 3.6F but not with Bravo Ultrex or Abound 2SC programs (Table 3). The 14-day Folicur 3.6F program provided better leaf spot control compared to the 21- and 28-day schedules. Disease ratings for the Folicur 3.6F 14-day and AU-Pnut advisory were similar. When applied on a 14-day schedule, the Folicur 3.6F program was as equally effective against leaf spot as the 14-day Abound program and more effective than the 14-day Bravo Ultrex program.

Overall white mold pressure in 2005 was low. Hit counts for all of the Bravo Ultrex, Folicur 3.6F, and Abound 2SC programs did not greatly differ (Table 3).

TABLE 3. INFLUENCE OF APPLICATION SCHEDULE ON THE CONTROL OF LEAF SPOT, WHITE MOLD, AND THE YIELD OF FLORIDA C-99R PEANUT WITH BRAVO ULTREX, FOLICUR 3.6F, AND ABOUND 2SC PROGRAMS IN 2005

Fungicide regime and rate/ac	——Application—— Schedule	Date, DAP[1]	Leaf spot rating[2]	White mold[3]	Yield lb/ac
Bravo Ultrex 1.4 lb	2-wk	24, 42, 61, 75, 87, 98	4.8	2.8	3570
Bravo Ultrex 1.4 lb	3-wk	24, 42, 61, 87, 98	4.8	3.5	3170
Bravo Ultrex 1.4 lb	4-wk	24, 51, 75, 98	4.1	4.3	3049
Bravo Ultrex 1.4 lb	AU-Pnut[4]	24, 42, 56, 87, 98	4.3	3.5	3606
Bravo Ultrex 1.4 lb Folicur 3.6F	2-wk	24, 42 61, 75, 87, 98	3.6	3.5	3799
Bravo Ultrex 1.4 lb Folicur 3.6F	3-wk	24, ?? 42, 61, 87, 98	4.9	4.0	4090
Bravo Ultrex 1.4 lb Folicur 3.6F	4-wk	24 51, 75, 98	4.8	3.8	3582
Bravo Ultrex 1.4 lb Folicur 3.6F	AU-Pnut	24 42, 56, 87, 98	4.0	3.9	3763
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	2-wk	24, 42, 75, 98 61, 87	4.1	3.8	3920
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	3-wk	24, 42, 98 61, 87	3.9	3.3	3691
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	4-wk	24, 98 51, 75	4.6	4.0	3364
Bravo Ultrex 1.4 lb Abound 2SC 1.2 pt	AU-Pnut	24, 42, 98 56, 87	4.1	3.0	4005

[1] DAP = days after planting when fungicide applications are made.
[2] Rating for early and late leaf spot is based on a scale of 1 to 10, with 10 = plants defoliated or dead.
[3] White mold incidence is expressed as the number of disease hits or loci per 60 feet of row.
[4] AU-Pnut disease advisory rules specify that the first application be made immediately after six or more rain events (≥0.10 in), and additional applications immediately after three rain events.

For all fungicide programs in 2005, yields often declined as application intervals lengthened from 2 to 4 weeks. For the Bravo Ultrex, yields were higher for the 2-week than for the 3- or 4-week calendar programs, which had similar yields (Table 3). A gradual yield decline with the Abound 2SC programs was seen when treatment intervals increased from 2 to 4 weeks. For Folicur 3.6F, yield was higher for the 3-week calendar program and lowest for the 4-week calendar program. Yield response for the AU-Pnut advisory and 2-week calendar schedule for Bravo Ultrex, Folicur 3.6F, and Abound 2SC also was similar.

DISCUSSION

On the disease resistant Florida C-99R peanut, the 2-week calendar and AU-Pnut advisory schedules for Bravo Ultrex, Folicur 3.6F, and Abound 2SC were often equally effective in controlling early leaf spot and for maintaining peanut yields. Although the level of leaf spot control was similar in 2 of 3 years, the AU-Pnut advisory triggered one less application of Bravo Ultrex or Folicur 3.6F compared with the 2-week calendar schedules for the Bravo Ultrex, Folicur 3.6F, and Abound 2SC programs. Previous studies have shown that scheduling fungicide applications using AU-Pnut on a partially disease resistant peanut cultivar reduced total application numbers without a decline in leaf spot control or pod yields *(1,2,8).* In addition, results confirm the observations of Brenneman and Cultreath *(1)* and Bowen et al. *(2)* that Folicur 3.6F and Abound 2SC, respectively, can give effective leaf spot control when applied according to the AU-Pnut advisory.

Extending application intervals is a second strategy for reducing fungicide application numbers. Previously, increased leaf spot damage has been observed when application intervals were lengthened beyond the recommended 2-week intervals *(1,11).* Brenneman and Culbreath *(1)* noted, however, that severe leaf spot outbreaks, which resulted from extending application intervals from 2 to 3 weeks, did not always result in lower pod yields on the partially leaf spot resistant Southern Runner peanut. In a recent comparison of Abound calendar schedules on leaf spot-resistant peanut cultivars, lengthening application intervals from 2 to 4 weeks had a substantial impact on leaf spot control and pod yields in only 1 of 3 years *(2).* In this study, poorer leaf spot control was seen in 2 of 3 years between the 2- and 3-week schedules for the Bravo Ultrex and Folicur 3.6F compared with 1 year for the Abound 2SC programs. Noticeable yield declines at extended application intervals were seen in only 1 of 3 years for Bravo Ultrex, Folicur 3.6F, and Abound 2SC. As previously noted by Bowen et al. *(2),* 3- or 4-week application schedules, which saved two or three fungicide applications, respectively, compared with the recommended 2-week calendar schedule, appreciably lowered yield of partially resistant Florida C-99R peanut in only 1 of 3 years. The frequency of sizable yield losses associated with extended treatment intervals probably will be greatly increased on a leaf spot-susceptible cultivar like Carver or Georgia Green, particularly in an area with frequent afternoon showers.

Incidence of white mold was not greatly influenced by fungicide program

or application interval. White mold hit counts for the recommended 2-week calendar schedules for Bravo Ultrex differed from those recorded for the Abound 2SC and Folicur 3.6F programs in only 1 of 3 years. Typically, white mold damage levels are much lower on peanut treated on a 2-week calendar schedule with recommended rates of Abound 2SC and Folicur 3.6F than with Bravo Ultrex alone *(7)*. In 2 of the 3 years of this study, incidence of white mold was similar regardless of treatment schedule for the Abound 2SC, Bravo Ultrex, and Folicur 3.6F programs. Bowen et al. *(2)* also did not see a consistent effect of calendar treatment schedules on the control of white mold with Abound 2SC. For all fungicide programs in all 3 years, the level of white mold control obtained with the 2-week and AU-Pnut advisory programs was very similar.

In summary, the two or three applications of Bravo Ultrex or Folicur 3.6F that were eliminated by adopting a 3- or 4-week calendar fungicide treatment schedule came at the risk of a sizable yield loss in only 1 of 3 years. Given the history of frequent peanut production on the test sites, greatly increased disease-related damage, which should translate into lower yields, was expected when application intervals were lengthened beyond the recommended 2 weeks. Apparently, partially resistant peanut cultivars like Florida C-99R have the capacity to produce acceptable yields in an irrigated production system with two to three fewer fungicide applications per growing season. However, elimination of several fungicide applications may not always be the best method of maximizing peanut profits. With the increased leaf spot pressure from extending application intervals comes the higher risk of a late summer or early fall weather event(s) such as one or more tropical storms that delay digging until the peanuts have suffered greater than 50 percent premature defoliation. In such a scenario, catastrophic yield losses due to severe late leaf spot and possibly rust pressure have occurred in Alabama. Extending fungicide application intervals on a disease resistant peanut cultivar may be more of an option in areas outside of the traditional peanut production areas in the Wiregrass region or Baldwin and Mobile counties as well as on peanuts grown as a bio-diesel fuel.

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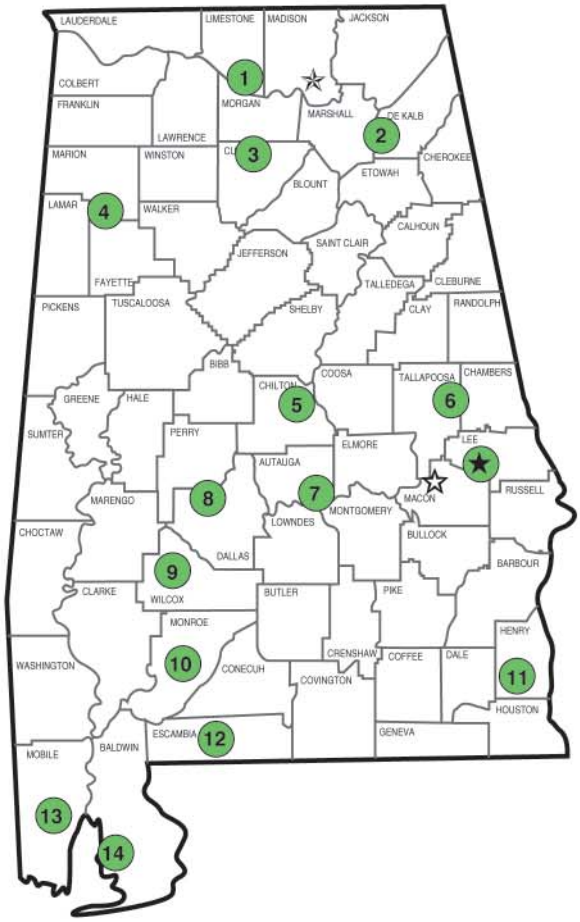
With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical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



Research Unit Identification

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

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