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Comparison of a Calendar Program and AU-Pnut Leaf Spot Advisory to Schedule Fungicide Applications on Peanut in a Dryland Production System

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Introduction

Early and late leaf spot, as well as white mold, are significant threats to Alabama's peanut crop. Failure to make timely fungicide applications to control these diseases may reduce expected yields by 20% or more. In poorly rotated fields, disease-related yield losses may exceed 50% of anticipated pod yield. Fungicides will give good to excellent control of the above diseases and prevent sizable yield loss. Timely applications are required to insure effective disease control with all registered fungicides.

The timing of fungicide applications directed at controlling leaf spot diseases and white mold can be improved using the AU-Pnut leaf spot advisory. This online disease advisory adjusts the scheduling of fungicide applications so that they coincide with conditions that favor disease development, as well as delay applications when pathogenic fungi are not active. Often, a reduction of 1 to 3 fungicide applications, as compared to the standard calendar schedule, for a savings in product costs of $9 to $27 per acre may be realized by implementation of the AU-Pnut leaf spot advisory with no reduction in pod yield or crop quality. To monitor rainfall off site in individual fields, Doppler radar rainfall estimates have been integrated into the AU-Pnut advisory (www.awis.com). The combination of peanut cultivars with partial resistance to leaf spot diseases and the AU-Pnut advisory offers growers an additional safety factor to further reduce the risk of catastrophic disease outbreaks associated with late-season tropical storms.

The object of this study was to compare the performance of recommended fungicide programs advisory on three peanut cultivars when applied according to the standard 14-day calendar and the AU-Pnut leaf spot.

Materials and Methods

On 22 May 2002, peanut (*Arachis hypogaea*) cv. 'Virugard' (maturity group 3), 'Georgia Green' (maturity group 4), and 'Florida C-99R' (maturity group 5) were planted at a rate of 6 seed/ft of row using in a field at the Wiregrass Research and Extension Center, Headland, AL. The cropping history of the test area over the previous three years was peanut-cotton-cotton. The soil type was a Dothan fine sandy loam [fine, loamy, siliceous, thermic Plinthis Palendut].

The plot area was prepared for planting with a moldboard plow and disk harrow. Optimal soil fertility and pH were maintained according the results of a soil fertility assay conducted by the Soil Testing Laboratory at Auburn University. Broadleaf and grass weeds were control by lightly incorporating a pre-emergence application of a tank mixture of 1.5 pt/A of Sonalan HFP and 1.0 pt/A of Dual Magnum. At 5-days after seedling emergence [ground cracking], one application of Gramoxone Maxx at 5.5 fl oz/A plus 1.0 pt/A of Butoxone 200 and 0.5 pt/A of Basagran 4EC was made. At planting, Temik 15G at 6.7 lb/A was applied in-furrow to control thrips. For the rest of the production season, escape weeds were pulled by hand. The plots were not irrigated. Rainfall totals for June, July, August, and September were below the historical average for the study location.

A split plot design with peanut lines as whole plots and fungicide treatments as subplots was used. Whole plots were randomized in four complete blocks. Subplots, which consisted of four 30-ft rows spaced 3 ft apart, were randomized within each whole plot. Broadcast applications of all fungicides were made with a tractor-mounted four-row boom sprayer with three TX-8 hollow cone nozzles per row that were calibrated to deliver 15 gallons of spray volume per acre. Fungicides were applied either on the recommended 14-day calendar schedule or according to the rules of the AU-Pnut leaf spot advisory. In 2002, application dates for the 14-day calendar program were 26 June [35 DAP (days after planting)], 9 July [47 DAP], 23 July [61 DAP], 8 Aug [77 DAP], 23 Aug [93 DAP], 5 September [106 DAP], and 20 September 121 DAP]. Fungicide treatments were applied to the AU-Pnut plots on 18 June [27 DAP], 9 July [47 DAP], 23 July [61 DAP], 23 August [93 DAP], and 20 September [121 DAP]. Application rates for both the calendar and AU-Pnut programs were 1.4 lb/A for Bravo Ultrex, 1.16 pt/A for Abound 2SC, 0.45 pt/A for Folicur 3.6F, and 6.4 fl oz/A for Headline 2.09E.

In the Abound 2SC, Folicur 3.6F, and Headline 2.09EC calendar programs, Bravo Ultrex was the first and second treatment applied and the one or two treatments made at the end of the above programs. Starting at 62DAP, three or four consecutive applications of Headline 2.09EC or Folicur 3.6E were made, respectively. The first application of Abound 2SC was followed by an application of Bravo Ultrex at 78 DAP and then Abound 2SC at 93 DAP. A total of seven fungicide applications were made to the Abound 2SC, Folicur 3.6F, and Headline 2.09E calendar program plots. A seven-application calendar program of Bravo Ultrex was also included.

The five fungicide applications scheduled using the AU-Pnut leaf spot advisory were made on 18 June [27 DAP], 9 July [47 DAP], 23 July [61 DAP], 23 August [93 DAP], and 20 September [121 DAP]. Two initial applications of Bravo Ultrex at 28 and 48 DAP were followed by two applications [62 and 93DAP] of Abound 2SC, or three applications [62, 93, 121 DAP] of Headline 2.09E or Folicur 3.6F. A final application of Bravo Ultrex in the Abound 2SC program was made at 121 DAP. A Bravo Ultrex AU-Pnut program was also included.

Early leaf spot was rated on 11 July, 25 July, 8 August, 22 August, 5 September, and 19 September using the 1-10 Florida leaf spot scoring system. The hull scrape method of estimating pod maturity was used to determine the optimum digging date. Incidence of white mold was determined immediately after the peanuts were dug by counting the number of 'hits' in the windrow, where one 'hit' was defined as the number of consecutive symptomatic plant(s) in 1 ft. of row. Virugard, Georgia Green, and Florida C-99R plots were dug with a two-row inverter on 23 September [121 DAP], 4 October [133 DAP], and 18 October [147 DAP], respectively.

Means for each fungicide treatment were compared with Fisher's Least Significant Difference (LSD) test at the $P \leq 0.05$ level. Due to significant differences ($P \leq 0.05$) in early leaf spot severity between peanut cultivars, the final leaf spot ratings or Area Under the Disease Progress Curve

(AUDPC) data for each cultivar were not pooled. Since the cultivar x treatment interaction was not significant, the data for white mold incidence and yield was averaged across the three peanut cultivars.

Results and Discussion

In 2002, rainfall totals were below the historical average for June, July, August, and September but above that figure for October. Due to reduced rainfall through much of the growing season, the total number of fungicide applications were reduced from seven for the 14-day calendar program to five for the plots treated according to the AU-Pnut leaf spot advisory (Table 1). In three of the four AU-Pnut programs, the treatments deleted in July and August were those of Bravo Ultrex. In the Folicur AU-Pnut program, an application each of Folicur 3.6F and Bravo Ultrex were saved.

On the late-maturing Florida C-99R peanut, leaf spot ratings on both the calendar and AU-Pnut treatment schedules in the plots treated with Bravo Ultrex alone or in the recommended Abound 2SC, Folicur 3.6F, and Headline 2.09E were similar. On Virugard and Georgia Green, early leaf spot ratings were significantly higher where Bravo Ultrex alone or Folicur 3.6F was applied according to AU-Pnut than on a 14-day calendar schedule (Table 1). Abound 2SC provided significantly better control of early leaf spot when applied on a calendar schedule rather than the AU-Pnut advisory on Georgia Green but not on Virugard. In contrast, the Headline 2.09E program gave better leaf spot control when applied on a calendar schedule on Virugard but not on Georgia Green.

All of the calendar programs gave similar control of early leaf spot on Virugard, Georgia Green, and Florida C-99R (Table 1). However, significant differences in early leaf spot ratings were noted among the AU-Pnut programs on Virugard and Georgia Green but not on Florida C-99R. When applied according to the AU-Pnut advisory, the Abound 2SC and Headline 2.09 EC programs controlled early leaf spot better than the Bravo Ultrex and Folicur 3.6F programs. In addition, the level of leaf spot control provided by the Abound 2SC and Headline 2.09E AU-Pnut programs did not significantly differ on Virugard and Georgia Green.

Table 1. Incidence of early leaf spot on selected peanut cultivars as influenced by application schedule in 2002.

	Application			Early Leaf Spot Rating[x]		
Fungicide Regime	Rate/A	Schedule[y]	Number	Virugard	Georgia Green	Florida C-99R
Bravo Ultrex	1.4 lb	Calendar	7	3.0 [z]	3.3	3.0
Bravo Ultrex	1.4 lb	AU-Pnut	5	4.0	5.0	3.3
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	7	2.8	3.0	3.0
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut	5	3.3	4.0	3.0
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	7	3.3	3.5	3.0
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut	5	4.5	5.3	3.3
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	7	2.8	3.3	3.0
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut	5	3.5	3.8	3.3
LSD (P=0.05)						0.6

[x]Early leaf spot severity was assessed on 19 September on all peanut cultivars using the Florida leaf spot scoring system.
[y]Fungicide applications were made on a calendar schedule 34, 47, 61, 77, 93, 106, and 121 DAP, while those scheduled using the AU-Pnut leaf spot advisory were made 27, 47, 61, 93, and 121 DAP.
[z]Mean separation for leaf spot severity was according to Fisher's protected least significant test ($P \leq 0.05$).

The AUC is a season long assessment of early leaf spot development in the plots of each fungicide program. Overall fungicide programs, the calendar spray schedules had significantly lower AUC than the AU-Pnut schedules (data not shown). When applied according to the calendar and AU-Pnut advisory, the level of season-long disease control maintained by Abound 2SC and Headline 2.09E was statistically similar on all three peanut cultivars (Table 2). Bravo Ultrex applied on at 14-day intervals gave better control of leaf spot on Georgia Green but not on Virugard or Florida C-99R than did the same fungicide applied according to the AU-Pnut advisory. The Folicur 3.6F AU-Pnut program was less effective than the same fungicide applied on a calendar schedule in controlling this disease on all three peanut cultivars. Regardless of the treatment schedule, the Abound 2SC and Headline 2.09E programs provided better leaf spot control than did the Folicur 3.6F and Bravo Ultrex programs.

As previously noted, the Bravo Ultrex, Abound 2SC, Folicur 3.6F, and Headline 2.09E calendar programs gave a similar levels of season-long early leaf spot control on each of the three peanut cultivars (Table 2). Significant differences in the effectiveness of the AU-Pnut programs for each of the fungicides evaluated were noted. Among the AU-Pnut schedules, the AUDPC for the Folicur 3.6F program was significantly higher than that for Abound 2SC and Headline 2.09E but not for the Bravo Ultrex program on the Virugard and Georgia Green peanuts. On Florida C-99R, the AUDPC for each of the four fungicides applied on an AU-Pnut schedule were similar. A non-significant cultivar x calendar interaction ($P \leq 0.4765$) shows that the efficacy of the calendar and AU-Pnut schedules for each fungicide program were equally effective in controlling early leaf spot on all three peanut cultivars.

Table 2. Impact of fungicide scheduling and peanut cultivar on cumulative early leaf spot rating on three peanut cultivars[y].

	Application			Early Leaf Spot (AUC)		
Fungicide Regime	Rate/A	Schedule	Number	Virugard	Georgia Green	Florida C-99R
Bravo Ultrex	1.4 lb	Calendar	7	178.5[z]	157.5	154.0
Bravo Ultrex	1.4 lb	AU-Pnut	5	189.0	201.3	175.0
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	7	157.5	173.3	140.0
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut	5	161.0	183.8	159.3
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	7	161.0	178.5	152.3
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut	5	206.5	217.0	176.8
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	7	154.0	164.5	154.0
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut	5	169.5	183.8	166.3
LSD (P=0.05)						23.2

[y]Leaf spot damage was assessed using the Florida leaf spot scoring system on 11 July, 25 July, 8 August, 22 August, 5 September, and 19 September, 2002.
[z]Mean separation for leaf spot severity was according to Fisher's protected least significant test ($P \leq 0.05$).

Due to the cotton-cotton-peanut rotation in the test area, white mold pressure averaged across all peanut cultivars was low (Table 3). Incidence of white mold in the plots treated with Bravo Ultrex on a calendar and AU-Pnut schedule did not statistically differ. Similar results were obtained with Folicur 3.6F, Abound 2SC, and Headline 2.09E programs. Among the calendar programs, white mold incidence was significantly lower for the Folicur 3.6F program compared with the Headline 2.09E program. The level of white mold control provided by all fungicides applied according to the AU-Pnut advisory was similar. When averaged across treatment schedule and peanut cultivars, the Abound 2SC and Folicur 3.6F programs gave significantly better control of white mold compared with the Headline 2.09E and Bravo Ultrex programs.

Average yield in the Bravo Ultrex and Abound 2SC AU-Pnut plots was similar to those recorded with the same fungicides applied on the standard 14-day calendar schedule (Table 3). When compared to the 14-day calendar program, significant yield gains were obtained with Folicur 3.6F and Headline 2.09E AU-Pnut programs. Yield of the Abound 2SC, Bravo Ultrex, Folicur 3.6F, and Headline 2.09E calendar programs did not significantly differ. In contrast, the peanuts treated with Folicur 3.6F according to the AU-Pnut disease advisory yielded significantly higher than the remaining AU-Pnut programs.

Table 3. Effect of scheduling regime on the efficacy of recommended fungicides for the control of southern stem rot and on peanut yield.

Fungicide Regime	Application			White Mold no. hits/60 ft row	Average Yield lb/A
	Rate/A	Schedule	Number		
Bravo Ultrex	1.4 lb	Calendar	7	3.3[z]	4025
Bravo Ultrex	1.4 lb	AU-Pnut	5	3.3	3749
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	7	3.7	4112
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut	5	3.2	4102
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	7	3.1	3985
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut	5	3.2	4427
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	7	4.3	3769
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut	5	4.2	4152
LSD (P=0.05)				1.2	296

[z]Mean separation for leaf spot severity was according to Fisher's protected least significant test (P≤0.05).

To assess the performance of each fungicide program, data for early leaf spot, white mold incidence, and yield were averaged over all peanut cultivars and treatment schedules (Table 4). Season-long, the Bravo Ultrex and Folicur 3.6F programs were not as effective as the Abound 2SC and Headline 2.09E programs in controlling early leaf spot. Development of this disease on the peanuts treated with Bravo Ultrex alone and the Folicur 3.6F program were similar. Folicur 3.6F and Abound 2SC programs gave better control of white mold than the standard Bravo Ultrex and Headline 2.09E programs, which had similar numbers of disease hits. Yield response to the Folicur 3.6F program was similar to that obtained with the Abound 2SC and Headline 2.09E programs but significantly higher when compared to Bravo Ultrex alone. No significant differences in yield were noted between the Bravo Ultrex, Abound 2SC, and Headline 2.09E programs.

Table 4. Average level of disease control and yield response across peanut cultivar and treatment schedule to fungicide programs.

Fungicide Program	Application Rate/A	Early Leaf Spot AUC	Incidence of White Mold no. hits/60 ft row	Average Yield lb/A
Bravo Ultrex	1.4 lb	182.0	4.7	3894
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	175.9	2.3	4198
Bravo Ultrex Abound 2SC	1.4 lb 1.16 pt	162.5	2.6	4065
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	165.4	4.4	4003
LSD (P≤0.05)		9.7	0.8	208

Peanut cultivars significant differed in their reaction to early leaf spot and southern stem rot. The lowest early leaf spot ratings were found on the late maturing Florida C-99R. Virugard suffered significant less leaf spotting and premature leaf shed than did the current industry standard Georgia Green (Table 5). The incidence of SSR was significantly lower for Virugard compared with either Florida C-99R or Georgia Green, which had similar SSR levels. Despite significant differences in early leaf spot ratings and SSR incidence among the three peanut cultivars, yields were similar.

Table 5. Yield response and disease ratings of three peanut cultivars.

Peanut Cultivar	Maturity Group	Early Leaf Spot AUC	White Mold no. hits/ 60 ft row	Yield lb/A
Virugard	3	172.2 b	2.5 b	4048.2 a
Georgia Green	4	182.4 a	4.3 a	3965.8 a
Florida C-99R	5	159.7 c	3.7 a	4106.4 a
LSD (P<0.05)	---	8.4	0.7	180

While saving two fungicide applications, the performance of the Abound 2SC, Bravo Ultrex, Folicur 3.6F, and Headline 2.09E AU-Pnut programs closely paralleled that of the same fungicides applied on a 14-day calendar schedule. For the Abound 2SC and Headline 2.09E AU-Pnut programs, the levels of early leaf spot and southern stem rot were very similar to those obtained with the standard 14-day application schedule with these same fungicides. When applied according to AU-Pnut, Bravo Ultrex and Folicur 3.6F were less effective than the recommended calendar schedule for each fungicide program in controlling early leaf spot but not southern stem rot. Over the entire growing season, early leaf spot was responsible for less damage in the Abound 2SC and Headline 2.09E-treated peanuts than for those treated with Folicur 3.6F or Bravo Ultrex season-long. For the Folicur 3.6F and Headline 2.09E programs, yield was higher for the AU-Pnut plots compared to those treated on the 14-day calendar schedule. Yield in both of the Abound 2SC and Bravo Ultrex-treated plots was similar.

In summary, the AU-Pnut programs reduced the number of fungicide applications needed for disease control, while maintaining peanut yields. While some differences in leaf spot control were noted, the AU-Pnut fungicide programs performed very well across all peanut cultivars, particularly in the area of yield response. Further studies are needed to assess the efficacy of AU-Pnut programs against southern stem rot and yield response in both dryland and irrigated production systems.

With respect to overall activity against diseases, Abound 2SC proved to have a slight edge in performance over the other fungicide programs. The Abound 2SC and Headline 2.09E programs controlled early leaf spot better than Bravo Ultrex or Folicur 3.6F programs. The least white mold damage was noted in the plots treated with either Abound 2SC or Folicur 3.6F. Unlike the results of some recent Alabama studies, Headline 2.09E demonstrated little activity against white mold. The Folicur 3.6F programs increased yield higher than those recorded for Bravo Ultrex alone but Abound 2SC and Headline 2.09E programs did not.

Of the three peanut cultivars, Georgia Green was most susceptible to early leaf spot and white mold. Florida C-99R, which had the lowest leaf spot rating here, reportedly is partially resistant to late leaf spot. Results of this study suggest that this peanut cultivar is also partially resistant to early leaf spot and would make a good choice where the risk of damaging leaf spot outbreaks is likely to occur. The early maturing (Group 3) Virugard, which had a lower season-long early leaf

spot rating than the later maturing (Group 4) Georgia Green, does not have a higher level of resistance to this disease than the latter peanut cultivar. Virugard actually avoids early leaf spot damage by being dug approximately two weeks before Georgia Green. Although significant differences in early leaf spot severity and white mold incidence were noted, yield potential for Virugard, Georgia Green, and Florida C-99R in well rotated, dryland production system was similar.

Fungicide Regime	Application			Early Leaf Spot Rating[x]		
	Rate/A	Schedule[y]	Number	Virugard	Georgia Green	Florida C-99R
Bravo Ultrex	1.4 lb	Calendar	7	3.0 fg[z]	3.3 efg	3.0 fg
Bravo Ultrex	1.4 lb	AU-Pnut	5	4.0 cd	5.0 ab	3.3 efg
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	7	2.8 g	3.0 fg	3.0 fg
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut	5	3.3 efg	4.0 cd	3.0 fg
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	7	3.3 efg	3.5 def	3.0 fg
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut	5	4.5 bc	5.3 a	3.3 efg
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	7	2.8 g	3.3 efg	3.0 fg
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut	5	3.5 def	3.8 de	3.3 efg
LSD (P=0.05)						0.6

[x]Early leaf spot severity was assessed on 19 September on all peanut cultivars using the Florida leaf spot scoring system.
[y]Fungicide applications were made on a calendar schedule 34, 47, 61, 77, 93, 106, and 121 DAP, while those scheduled using the AU-Pnut leaf spot advisory were made 27, 47, 61, 93, and 121 DAP.
[z]Mean separation for leaf spot severity was according to Fisher's protected least significant test (P≤0.05).

Table 2. Impact of fungicide scheduling and peanut cultivar on cumulative early leaf spot rating on three peanut cultivars[y].

Fungicide Regime	Application			Early Leaf Spot (AUDPC)		
	Rate/A	Schedule	Number	Virugard	Georgia Green	Florida C-99R
Bravo Ultrex	1.4 lb	Calendar	7	178.5 cdef[z]	157.5 fghi	154.0 ghi
Bravo Ultrex	1.4 lb	AU-Pnut	5	189.0 bcd	201.3 abc	175.0 defgh
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	7	157.5 fghi	173.3 defgh	140.0 i
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut	5	161.0 efghi	183.8 bcde	159.3 fghi
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	7	161.0 efghi	178.5 cdef	152.3 hi
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut	5	206.5 ab	217.0 a	176.8 defg
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	7	154.0 ghi	164.5 efgh	154.0 ghi
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut	5	169.5 defgh	183.8 bcde	166.3 defgh
LSD (P=0.05)						23.2

[y]Leaf spot damage was assessed using the Florida leaf spot scoring system on.
[z]Mean separation for leaf spot severity was according to Fisher's protected least significant test (P≤0.05.

Fungicide Regime	Application			Southern Stem Rot loci/plot		
	Rate/A	Schedule	Timing	Virugard	Georgia Green	Florida C-99R
Bravo Ultrex	1.4 lb	Calendar	1-7	3.3 defghi	4.8 bcd	4.3 bcdef
Bravo Ultrex	1.4 lb	AU-Pnut		3.5 defgh	8.3 a	4.3 bcdef
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	1,2,4,6,7 3,5	1.5 ij	3.8 cdefgh	2.3 ghij
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut		1.3 j	2.5 fghij	4.5 bcde
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	1,2,7 3,4,5,6	1.3 j	2.0 hij	2.3 ghij
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut		2.5 fghij	2.0 hij	3.8 cdefgh
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	1,2,6,7 3,4,5	4.3 bcdef	5.5 bc	4.3 bcdef
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut		2.8 efghij	5.8 b	4.0 bcdefgh
LSD (P=0.05)						1.9

Fungicide Regime	Application			Yield lb/A		
	Rate/A	Schedule	Timing	Virugard	Georgia Green	Florida C-99R
Bravo Ultrex	1.4 lb	Calendar	1-7	4296 abc	3939 bcd	3854 bcd
Bravo Ultrex	1.4 lb	AU-Pnut		4217 abcd	3285 e	3775 de
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	Calendar	1,2,4,6,7 3,5	3721 de	4634 a	4368 ab
Bravo Ultrex Abound 2SC	1.4 lb 1.15 pt	AU-Pnut		3836 cd	4060 bcd	4041 bcd
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	Calendar	1,2,7 3,4,5,6	4332 abc	4120 abcd	4634 a
Bravo Ultrex Folicur 3.6F	1.4 lb 0.45 pt	AU-Pnut		3818 cd	3975 bcd	4314 abc
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	Calendar	1,2,6,7 3,4,5	4041 bcd	4162 abcd	4047 bcd
Bravo Ultrex Headline 2.09E	1.4 lb 6.4 fl oz	AU-Pnut		4126 abcd	3824 cd	3818 cd
LSD (P=0.05)						520