

# Peanut Variety Performance in Florida, 2004 - 2007<sup>1</sup>

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Variety choice is a critical management decision in producing a peanut crop. Several good peanut varieties are available to choose from, so it is essential to know the attributes of each variety and how various varieties might fit into a farm plan.

Growers planting more than 100 acres of peanuts should plant at least two varieties. Planting more than one variety can help to spread risk of losses from diseases and weather. For example, if a field has a history of white mold, use varieties that have a better resistance to that disease compared to other varieties.

To evaluate variety resistance to diseases, use the Peanut Diseases Risk Index (<http://www.caes.uga.edu/commodities/fieldcrops/peanuts/2008peanutupdate/seuspnutdis.html>) or the University of Florida Plant Protection Pointers ([http://edis.ifas.ufl.edu/TOPIC\\_SERIES\\_PPP](http://edis.ifas.ufl.edu/TOPIC_SERIES_PPP)). Your county agent can also help you find these resources. A summary table from the Peanut Disease Risk Index is included in this article (Table 5).

If you are trying a new variety for the first time, plant a relatively small test plot (20-50 acres) to make sure you see the differences first-hand. When choosing which varieties to plant, first consider pod yields and grades, but also consider disease resistance, maturity, seed supply, and anticipated planting dates.

The potentially devastating effects of tomato spotted wilt virus (TSWV) in the southeastern United States make variety choice very important. Severity of TSWV varies from year to year, and scientists are unable to predict disease levels for a coming crop season. Because TSWV is unpredictable, planting a peanut variety with good resistance to TSWV can significantly reduce the risk of losses from TSWV.

Among the tests grown in Florida, TSWV is usually most severe in Marianna, so variety performance in that location will give a good indication of the TSWV resistance of a given variety. Results often are very different between Marianna, Gainesville, and Jay, depending on TSWV pressure, other disease pressure within those areas, and environmental conditions, such as soil type and rainfall. Variety resistance to TSWV is summarized in Table 5, which is from the 2008 Peanut Disease Risk Index.

This report provides data from University of Florida trials conducted in Florida at IFAS research centers located in Gainesville (Citra), Marianna, and Jay from 2004-2007. Tests in Marianna and Gainesville were grown with irrigation. The tests at Jay were not irrigated. All tests were managed for optimum production, including the use of pesticides to control various pests. In-furrow insecticides (Temik or Thimet) were used in Gainesville and Jay, but not in Marianna.

1. This document is SS AGR 311, one of a series of the Agronomy, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date August 2008. Reviewed April 2011. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
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## Peanut Varieties in the Southeastern United States

Historically, peanut acreage in the southeastern United States has been dominated by one variety during a given time period. For about 20 years, from the early 1970s and continuing through the early 1990s, 'Florunner' was the dominant peanut variety grown in this region. In the mid 1990s, TSWV began to cause severe losses in Florunner and in other varieties used at the time that did not have TSWV resistance. Since the late 1990s, 'Georgia Green' has been the dominant cultivar planted in this region. The main reasons for the popularity of Georgia Green were its moderate resistance to TSWV, good grades and good pod yield. When Georgia Green was released in 1996, Georgia Green was the only medium-maturity runner variety with resistance to TSWV.

As the TSWV epidemic of the 1990s demonstrated, it is dangerous for the peanut industry to rely so heavily on one cultivar at a time. Like Florunner before it, Georgia Green in 2005 occupied about 75 percent of the certified seed acreage in Alabama, Florida and Georgia (Figure 1). In the 10 or more preceding years, Georgia Green occupied at least that amount in these states. In 2006, however, other varieties began to displace Georgia Green in certified seed acreage in this region (Figure 2 and Figure 3).

On an industry-wide scale, it seems preferable that no one variety occupy more than 50 percent of the certified seed acreage. Diversity in peanut varieties planted can reduce the risk of losses from disease and provide a buffer against differential environmental impacts on a given variety. Considering that the seed increase ratio of peanuts is low, having several varieties in seed production at significant levels allows a much quicker shift to different varieties if needed.

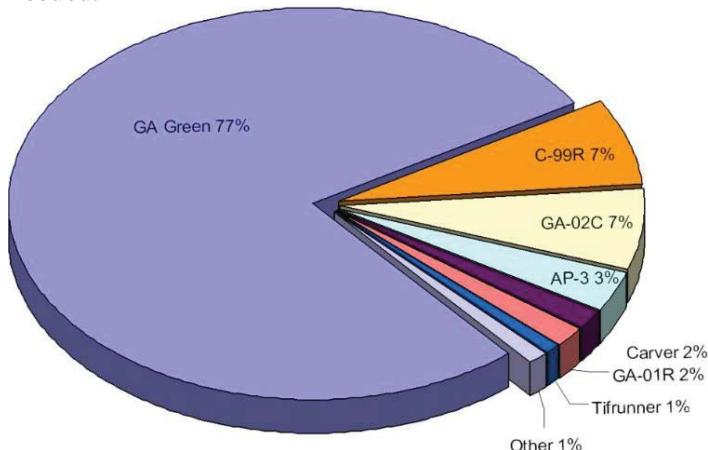


Figure 1. Certified seed acreage in Alabama, Florida, and Georgia in 2005.

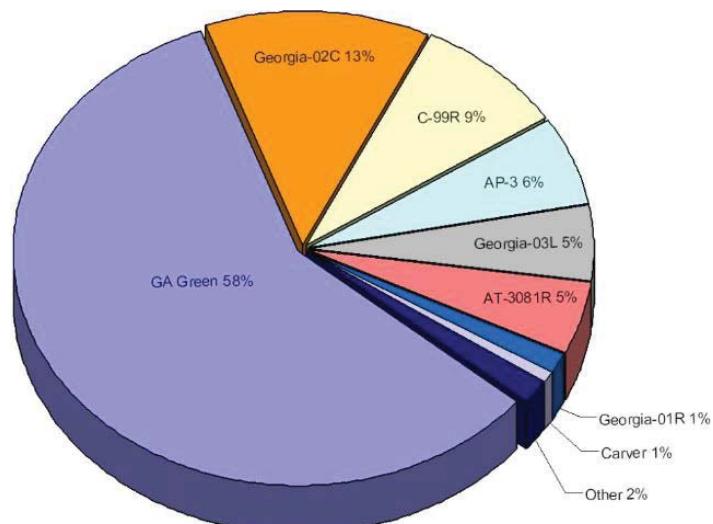


Figure 2. Certified seed acreage in Alabama, Florida, and Georgia in 2006.

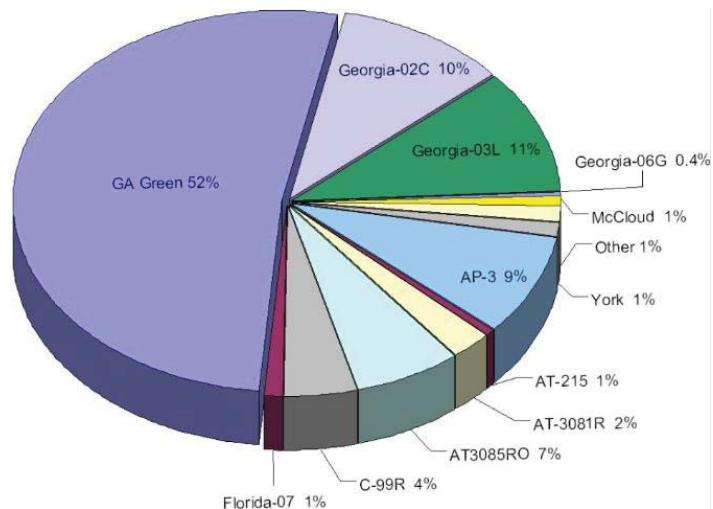


Figure 3. Certified seed acreage in Alabama, Florida, and Georgia in 2007.

## Recently Released Varieties

Several new runner varieties were released in 2006 and 2007. The University of Florida released 'Florida-07', 'McCloud', 'York' and 'AP-4'. Florida-07 is a medium-maturing to medium-late maturing, large-seeded runner with excellent resistance to TSWV, good resistance to white mold, and some tolerance to leaf spots. Florida-07 has high oleic oil chemistry and has demonstrated excellent yield potential and good grades.

McCloud is a medium-maturity, large-seeded runner with high oleic oil chemistry. McCloud has better TSWV resistance than Georgia Green and is similar to Georgia Green in its resistance to other diseases. McCloud has demonstrated good yield potential and excellent grades.

York is a late-maturing runner with typical runner seed size, similar to Georgia Green. York has an excellent disease-resistance package with a high level of resistance to TSWV, white mold and leaf spots. York has high oleic oil chemistry and has demonstrated excellent yield potential and good grades. Seed of Florida-07, York and McCloud should be readily available for the 2009 season.

AP-4 is a large-seeded runner with good resistance to TSWV and moderate resistance to white mold. AP-4 is better than Georgia Green in both of these important measures. AP-4 has also demonstrated excellent pod yield and very good grades. AP-4 has normal oleic oil chemistry. Seed of AP-4 should be available for the 2010 season.

The new virginia variety, 'Florida Fancy', was released by the University of Florida in 2007. Florida Fancy has high oleic oil chemistry and standard virginia pod and seed size. Florida Fancy has demonstrated very good yield potential and has among the best resistance to TSWV available in a virginia variety. Seed of Florida Fancy should be available for the 2010 season.

The University of Georgia has two new runner varieties, 'Georgia-06G', which was released in 2006, and 'Georgia Greener', which was released in 2007. Both Georgia-06G and Georgia Greener have normal oleic oil chemistry,

excellent grades, and competitive pod yield. Georgia-06G is a large-seeded runner with good TSWV resistance.

Georgia Greener has normal runner size seed and very good resistance to TSWV. Seed of these varieties should be generally available for the 2010 season.

The USDA released a new runner variety in 2007, 'Tifguard', a medium-maturing, large-seeded runner. Tifguard is the first variety to combine resistance to TSWV and a high level of resistance to root knot nematode. That combination of disease resistance will allow growers in the southeastern United States to take advantage of the same root knot nematode resistance as in 'NemaTam', a peanut variety developed in Texas. Seed of Tifguard should be generally available for the 2010 season.

## 2007 Results

Pod yields, TSMK (total sound mature kernels) percentage, maturity and TSWV ratings for tests at three locations in Florida in 2007 are reported in Table 1. Each entry was harvested (dug) at their apparent optimum maturity stage (i.e., E = 125-130 days after planting, DAP; M = 133-139 DAP; L = 145-155 DAP). Ratings for TSWV were on a 1-10 scale, where 1 = no disease, and 10 = all plants with severe damage or dying.

Spotted wilt was worse in 2007 compared to 2006, and yields were generally lower in 2007, especially in Marianna (Table 1). Only two early-maturing varieties are available, 'Virugard' and 'Andru II'. Andru II was the higher yielding in 2007. Among the medium-maturity varieties, Florida-07, Georgia Greener and AP-4 had statistically greater yield that year than Georgia Green.

Notably, Florida-07 had statistically higher yield in 2007 than all other medium maturity varieties tested except Georgia Greener and AP-4. The yield of 'Georgia-03L' was much lower in 2007 than in previous years, especially in Marianna and Gainesville.

Our results over the past four years have shown that some years Georgia-03L is afflicted by a disease that we

	Market Type	Maturity*	Pod Yield (lbs./A)				TSWV (1-10)				TSMK (%)		
			MR****	GV	JY	Avg	MR	GV	JY	Avg	MR	GV	Avg
Andru II**	R	ME	2975	4675	4142	3931	6.7	1.0	7.7	5.1	74.2	75.8	75.0
Virugard	R	E	2610	4333	2636	3193	8.7	1.7	8.0	6.1	77.6	79.3	78.4
Florida-07**	R	M	4456	5295	3924	4558	3.7	1.0	1.7	2.1	74.2	78.5	76.4
Georgia Greener	R	M	4214	4921	3988	4374	5.0	1.7	2.0	2.9	79.4	80.8	80.1
AP-4	R	M	4111	4985	3982	4359	5.0	2.0	2.3	3.1	77.8	76.2	77.0
Georgia-06G	R	M	2946	5247	3672	3955	5.3	1.3	3.3	3.3	79.3	80.7	80.0
AT3085A**	R	M	2810	5124	3272	3735	5.0	2.0	6.7	4.6	75.0	76.1	75.6
AP-3	R	M	3472	4153	3185	3603	4.0	2.3	3.7	3.3	73.7	76.7	75.2
Georgia Green	R	M	2204	4909	3491	3561	7.3	1.3	4.0	4.2	76.9	78.7	77.8
Carver	R	M	2449	4408	3435	3430	5.7	2.0	4.7	4.1	76.7	76.1	76.4
McCloud**	R	M	2497	4598	3114	3403	5.7	1.3	3.3	3.4	77.0	78.7	77.9
Georgia-03L	R	M	2530	3688	3907	3375	6.3	3.0	2.3	3.9	78.1	77.1	77.6
AT3081R	R	M	2452	4951	2604	3336	6.0	1.0	6.7	4.6	74.7	76.4	75.5
C-99R	R	L	3049	5205	--	3999	5.3	1.0	--	3.4	77.8	79.4	78.6
Georgia-01R	R	L	3486	4879	3314	3893	4.0	1.0	2.0	2.3	79.0	79.8	79.4
York**	R	L	3669	4508	3350	3842	4.3	1.0	1.3	2.2	74.0	75.6	74.8
Georgia-02C**	R	L	3656	4676	3023	3785	4.7	1.0	2.7	2.8	80.4	80.8	80.6
Gregory	V	ME	3130	5143	4093	4122	6.7	1.0	7.3	5.0	71.8	72.6	72.2
VAC92R	V	E	2965	4279	2776	3340	7.3	2.3	6.7	5.4	72.6	73.0	72.8
Brantley	V	E	1901	5250	2633	3261	7.7	1.0	4.7	4.4	71.7	76.7	74.2
VC2	V	E	2281	4414	2650	3115	7.0	1.7	5.3	4.7	74.5	75.0	74.8
NC12C	V	E	1839	4124	2776	2913	7.0	1.7	8.0	5.6	73.1	74.9	74.0
CHAMPS	V	E	1378	4204	2554	2712	9.0	1.3	7.0	5.8	69.0	74.4	71.7
NCV11	V	E	1339	4779	1985	2701	8.3	1.0	6.3	5.2	71.5	73.1	72.3
Georgia-05E	V	M	4472	4253	4401	4375	3.0	1.0	1.0	1.7	80.5	81.3	80.9
Florida Fancy**	V	M	3356	4892	3252	3833	5.3	1.0	4.3	3.6	71.4	74.1	72.8

\*E = early; M = medium; L = late.

\*\*High oleic oil chemistry

\*\*\*Tomato Spotted Wilt Virus ratings (1-10, 1 = no disease)

\*\*\*\*Locations: MR=Marianna, FL; JY=Jay, FL; GV=Gainesville, FL.

Planting dates: MR=5/9; JY=5/8; GV=4/17.

Figure 6. Performance of peanut varieties in three locations in Florida in 2007 (Varieties are sorted by market type, maturity and then yield in descending order.)

confirmed in one field in 2007 as Diplodia Collar Rot. Yield was similar among the late-maturing varieties. Among the virginia varieties, 'Gregory', 'Florida Fancy' and 'Georgia-05E' had the highest pod yield in 2007.

## Multi-year results

Averaging over two or more years and locations is a powerful method of determining how a variety will perform over a wide array of environments. The performance of runner market-type peanut varieties in Florida over the past four years (2004-2007) is shown in Table 2.

Name	Maturity*	YIELD (lbs./acre)				TSMK (%)				TSWV (1-10)***			
		2007	2-YR†	3-YR††	4-YR†††	2007	2-YR	3-YR	4-YR	2007	2-YR	3-YR	4-YR
Andru II**	ME	3931	3982	3464	3553	75.0	75.7	73.7	73.3	5.1	3.9	4.0	3.7
Virugard	ME	3193	3834	3265	3284	78.4	77.5	75.6	75.9	6.1	4.5	4.4	4.2
Georgia-03L	M	3375	3941	3936	4098	77.6	77.8	76.7	76.3	3.9	3.5	3.5	3.4
AP-3	M	3603	3993	3721	3971	75.2	74.3	73.4	73.4	3.3	2.7	2.7	2.6
Carver	M	3430	3886	3364	3579	76.4	77.0	75.1	75.2	4.1	3.2	3.7	3.5
Georgia Green	M	3561	3652	3231	3457	77.8	77.4	76.2	76.4	4.2	4.3	4.3	4.1
Florida-07**	M	4558	4909	4656		76.4	77.4	76.4		2.1	2.0	2.3	
AT3085A**	M	3735	4190	3885		75.6	75.9	74.9		4.6	3.6	3.4	
McCloud**	M	3403	3799	3600		77.9	75.8	75.6		3.4	3.1	3.4	
AT3081R	M	3336	3653	3401		75.5	74.9	73.2		4.6	4.0	4.1	
AP-4	M	4359	4387			77.0	77.8			3.1	2.8		
Georgia Greener	M	4374				80.1				2.9			
Georgia-06G	M	3955				80.0				3.3			
Georgia-01R	L	3893	4438	4281	4432	79.4	79.5	78.7	78.9	2.3	2.1	2.4	2.3
C-99R	L	4167	4307	4232	4400	78.6	76.4	76.1	76.2	3.2	2.6	2.7	2.6
Georgia-02C**	L	3785	4161	3804	3911	80.6	81.0	79.3	79.2	2.8	2.4	2.8	2.7
York**	L	3842	4182	4172		74.8	74.9	74.4		2.2	2.0	2.0	
C.V.		18	16	17	16	1.6	2.6	2.8	2.6	34.2	32.1	31.2	31.5
LSD		514	346	360	329	1.5	1.6	1.4	1.1	1.0	0.6	0.6	0.5

\*E = early, M = medium, L = late; \*\*High oleic oil chemistry. †2 YR= average of 2005 and 2006, ††3 YR= average of 2005, 2006 and 2007; ††† 4 YR= average of 2004, 2005, 2006 and 2007. \*\*\*Tomato Spotted Wilt Virus ratings (1-10, 1 = no disease);

Figure 7. Performance of runner market-type peanut varieties in two or three Florida locations over four years, 2004-2007. (Entries are sorted by maturity and the four-year average yield in descending order.)

Name	Maturity*	YIELD lbs./acre				TSMK %				TSWV*** 1-10			
		2007	2-YR†	3-YR††	4-YR†††	2007	2-YR	3-YR	4-YR	2007	2-YR	3-YR	4-YR
Gregory	ME	4122	4123	3561	3656	72.2	71.6	71.0	71.1	5.0	3.6	3.8	3.7
VC2**	E	3115	3712	3365	3515	74.8	74.8	73.8	73.6	4.7	3.6	3.7	3.7
VAC92R	E	3340	3502	3194	3454	72.8	70.9	70.3	71.4	5.4	4.7	4.7	4.5
NCV11	E	2701	3324	3084	3259	72.3	73.2	71.7	72.0	5.2	4.4	4.5	4.4
NC12C	E	2913	3257	2892	3034	74.0	74.2	73.3	73.9	5.6	4.5	5.1	4.8
CHAMPS	E	3261				74.2				4.4			
Brandley	E	2712				71.7				5.8			
Georgia-05E	M	4375	4222			80.9	79.5			1.7	2.2		
Florida Fancy**	M	3833	4064			72.7	72.0			3.6	3.1		
C.V.		18	16	17	16	1.6	2.6	2.8	2.6	34.2	32.1	31.2	31.5
LSD		514	346	360	329	1.5	1.6	1.4	1.1	1.0	0.6	0.6	0.5

\*E = early, M = medium, L = late

\*\*High oleic oil chemistry.

†2 YR= average of 2006 and 2007

††3 YR= average of 2005, 2006 and 2007

††† 4 YR= average of 2004, 2005, 2006 and 2007.

\*\*\*Tomato Spotted Wilt Virus ratings (1-10, 1 = no disease);

Figure 8. Performance of virginia market-type peanut varieties in two or three Florida locations over four years, 2004-2007. (Entries are sorted by maturity and the four-year average yield in descending order.)

Among the medium-maturity cultivars tested during 2003 - 2007, 'AP-3' and Georgia-03L demonstrated the highest pod yields and a good TSMK percentage. AP-3 had the best resistance to TSWV.

In three years of testing (2005 – 2007), Florida-07 has had excellent pod yields, very good TSMK and a high level of resistance to TSWV resistance. Statistically, no other variety in any maturity category yielded as high as Florida-07 during 2005-2007.

Among the late-maturing varieties tested from 2004-2007, 'Georgia-01R' and 'C-99R' had higher yields than 'Georgia-

'02C'. Over the three-year period from 2004-2006, Georgia-01R, C-99R, and York had similar yield, followed by Georgia-02C. High TSMK percentage for both Georgia-01R and Georgia-02C, averaged over 2004 – 2007, was around 79 percent; high TSMK is a strength of those varieties. Acreage of Georgia-01R has been limited because of poor seed quality, a problem shared by several late-maturing varieties.

The performance of virginia market-type varieties in Florida over the four-year period 2004-2007 is shown in Table 3.

Most of these varieties are more susceptible to TSWV than the popular runner

varieties. If these TSWV-susceptible varieties contract the disease, yield losses could be substantial. Two new virginia varieties -- Georgia-05E and Florida Fancy -- appear to have better TSWV resistance than the others. Georgia-05E and Florida Fancy also have very competitive pod yield.

## Location Results

The pod yield of peanut cultivars grown in three locations in Florida is shown in [Table 4](#). In general, the highest-yielding entries in one location also did well in the other locations. Yields are generally lower in Jay because the

Using [Table 5](#), find a variety with the right disease package for your situation. If white mold is a problem in some of your fields, AP-3, C-99R, or Georgia-02C would be good choices. Similarly, in terms of late-maturing varieties, C-99R, Georgia 01R, and Tifrunner have good leafspot resistance and could allow a reduction in the frequency

of fungicide sprays needed for leafspot compared to other, susceptible varieties.

The new variety, Tifguard, has resistance to root knot nematode and so would be a good choice in fields with a history of that pest. AP-3 has also demonstrated tolerance to root knot nematode.

Name	Market-type	Marianna (MR)					Pod Yield (lbs./acre)					Gainesville (GV)					
		2004	2005	2006	2007	Average	2004	2005	2006	2007	Average	2004	2005	2006	2007	Average	
Andru II <sup>**</sup>	ME	R	4569	2239	4369	2975	3538	1529	1765	3311	4142	2687	5356	3285	4420	4675	4434
Virugard	ME	R	3863	2052	4856	2610	3345	1462	1236	3949	2636	2319	4695	3094	4630	4333	3284
Georgia-03L	M	R	5576	3198	4860	2530	4041	2936	2943	3985	3907	3443	5243	5637	4675	3688	4811
AP-3	M	R	5953	3417	5595	3472	4609	2455	2639	3333	3185	2903	5760	3475	4221	4153	4402
Carver	M	R	4863	1997	5544	2449	3713	2097	1471	3088	3435	2523	5711	3491	4392	4408	4501
Georgia Green	M	R	4904	1736	4107	2204	3238	1888	2100	2578	3491	2514	5614	3333	4540	4989	4619
Florida-07 <sup>**</sup>	M	R	4311	5915	4456	4894	4894	3204	4424	3924	3851	3851	4940	5440	5295	5225	4657
AT3085RO <sup>**</sup>	M	R	3298	5660	2810	3923	3923	2510	3340	3272	3041	3041	4020	4934	5124	4693	3885
McCloud <sup>**</sup>	M	R	2878	5027	2497	3467	3467	2533	3372	3114	3006	3006	4188	4188	4598	4325	3599
AT3081R	M	R	2807	4901	2452	3387	3387	2388	2817	2604	2603	2603	3501	4191	4951	4214	3401
AP-4	M	R	5308	4111	4710	3175	3982	3579	3988	3988	3988	3988	4762	4985	4874	4387	
Georgia Greener	M	R			4214	4214		3672	3672				5247	5247			3955
Georgia-06G	M	R			2946	2946							4921	4921			4374
Georgia-01R	L	R	5766	3636	4937	3484	4456	3275	3162	4566	3314	3579	5615	5105	5446	4879	5261
C99-R	L	R	5679	4046	4747	3049	4380	3507	3875	3633	--	3672	5356	4401	4918	5285	4965
Georgia-02C <sup>**</sup>	L	R	5105	2581	4882	3656	4056	2520	3078	3491	3023	3028	5066	3607	5240	4676	4647
York <sup>**</sup>	L	R	4598	5037	3669	4435	3795	3930	3350	3692	3692	3692	4062	4598	4508	4389	4172
Gregory	ME	V	4214	2055	4869	3130	3567	1959	1568	3627	4093	2812	5647	3688	3878	5143	4589
VC2 <sup>**</sup>	E	V	4459	2285	4643	2281	3417	1930	1869	3449	2650	2474	5502	3859	4834	4414	4652
VAC92R	E	V	4904	2249	4320	2965	3610	1558	1707	2578	2776	2155	6244	3775	4095	4279	3454
CHAMPS	E	V			1901	1901							5250	5250			3261
NCV11	E	V	3769	2114	4824	1339	3012	1817	1717	2794	1985	2078	5760	3985	4226	4779	4688
NC12C	E	V	3721	1739	3788	1839	2772	1752	1497	2552	2776	2144	4904	3252	4459	4124	4185
Brantley	E	V			1378	1378							4204	4204			2712
Georgia-05E	M	V			5085	4472	4779		3020	4401	3711		4098	4253	4176		4222
Florida Fancy <sup>**</sup>	M	V			4533	3356	3945		3078	3252	3165		5272	4892	5082		4064

\*E = early, M = medium, L = late; \*\*High oleic oil chemistry

Figure 9. Pod yield of peanut varieties in three Florida locations over four years, 2004-2007.

(Entries are sorted by market type, maturity and the overall average yield in descending order.)

peanuts are not irrigated. Pod yields in Gainesville are generally higher because TSWV is very mild in this area. In Marianna, yields can be severely limited by TSWV. For that reason, varieties that are most resistant to TSWV usually have the highest yield in that area. In Marianna, TSWV pressure was much lower in 2006 compared to 2005.

## Which varieties have the best resistance to TSWV and other diseases?

Disease resistance is a very important factor in choosing a variety. The reaction of most peanut varieties to some diseases present in Florida is detailed in [Table 5](#). To optimize the disease-resistance benefits of these varieties, choose varieties based on their disease resistance.

Variety <sup>1</sup>	Spotted Wilt Points		Leaf Spot Points		Soil-borne Disease Points	
	White Mold	Limb Rot	White Mold	Limb Rot	White Mold	Limb Rot
NC-V11	35	30	30	25		
Georgia Green	30	20	25	15		
Virugard	30	20	25	Unknown		
Gregory	30	30	25	25		
Andru II <sup>2</sup>	25	30	25	25		
AT 3081R	25	30	30	Unknown		
Florida Fancy <sup>3</sup>	25	Unknown	Unknown	Unknown		
McCloud	20	25	20	Unknown		
C-99R <sup>4</sup>	20	15	15	25		
Carver <sup>5</sup>	20	30	25	25		
AT 3085 RO	20	30	30	Unknown		
Georgia-06G <sup>6</sup>	20	Unknown	Unknown	Unknown		
Georgia-05E	15	20	25	Unknown		
Georgia-03L <sup>5</sup>	15	15	10	20		
Georgia-02C <sup>2,3,5</sup>	15	20	10	20		
Georgia-01R <sup>3</sup>	10	10	15	15		
York	10	10	10	Unknown		
Florida-07	10	20	15	Unknown		
AP-3 <sup>4</sup>	10	25	10	25		
Tifguard <sup>3,6</sup>	10	15	Unknown	Unknown		

<sup>1</sup>Data for these new varieties is limited, and risk ratings will undergo changes as needed in the future.

<sup>2</sup>Adequate research data is not available for all varieties with regards to all diseases. Additional varieties will be included as data to support the assignment of an index value become available.

<sup>3</sup>High oleic variety.

<sup>4</sup>Varieties 'Carver', 'GA-02C', 'GA-01R' and 'Tifguard' have an increased resistance to *Cylindrocladium* black rot (CBR) compared to other varieties commonly planted in Georgia.

<sup>5</sup>Varieties 'AP3' and 'C-99R' are less resistant to CBR and are not recommended for fields where this disease is a problem.

<sup>6</sup>The malady referred to as "funky" or "irregular" leaf spot tends to be more severe in 'GA-02C' and 'GA-03L' than in other varieties. Although this condition can look like early leaf spot (*Cercospora arachidicola*), the cause of "funky" leaf spot is unknown. Disease losses are not typically associated with funky leaf spot.

<sup>7</sup>The new variety, 'Tifguard', has excellent resistance to the peanut root-knot nematode.

Figure 10. Disease resistance of major peanut varieties in the southeastern United States.

(Adapted from the University of Georgia Disease Risk Index- 2008. Fewer points mean better resistance.)

## On-Farm Tests

During the past three years -- 2005, 2006, and 2007, scientists conducted farm-scale variety tests in Columbia County, Fla., using a limited number of varieties. These tests consisted of one to two acre replicated plots within a peanut field managed under conditions normal for the farmers who cooperated in the tests. Management included a full-season fungicide program. The typical rotation on this farm is two to three years of peanut followed by four to five years of bahiagrass. Soil-born disease pressure is usually low, but leaf spots can be heavy. These tests were helpful to verify results from research trials under low disease pressure.

Over the three years of the test of the medium-maturity varieties, AP-3 and Georgia Green had similar yield, and in 2005 the three varieties planted that year had similar yield

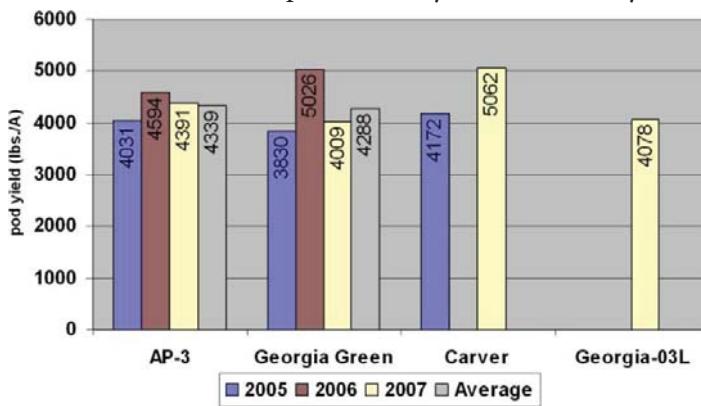


Figure 4. Performance of three medium-maturity varieties in 1-2 acre replicated plots in Columbia County, Fla., in 2005, 2006, and 2007. The fields were not irrigated, and 2005 was the first year of peanut following four to five years of bahiagrass. The 2006 and 2007 tests were planted in the same field following four to five years of bahiagrass.

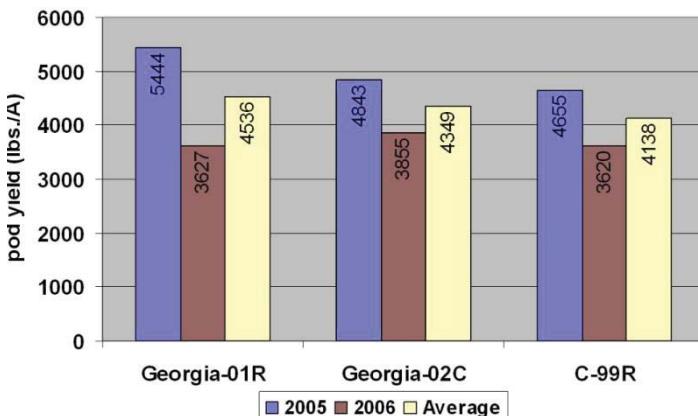


Figure 5. Performance of three late-maturity varieties in 1-2 acre replicated plots in Columbia, County, Fla., in 2005 and 2006. The fields were not irrigated, and in 2005 the plots were the first peanut crop planted after four to five years of bahiagrass. The 2006 peanut test followed in the same field as the 2005 test.

(Figure 4). Yields of two tons per acre are well above the state average of 2,500 - 2,800 pounds even though in some cases the tests were planted the season after a previous peanut crop. The results show that the yield potential of these varieties is similar under near-ideal conditions with little or no TSWV. The value of the long-term bahiagrass rotation with peanuts is especially striking. Similar results were obtained with late-maturing varieties on the same farm (Figure 5).

## Summary

Variety choice is a critical management decision for peanut production. Many varieties with good to excellent resistance to TSWV are suitable for production in the southeastern United States. Additionally, several of these TSWV-resistant varieties also have resistance to other diseases. Growing these varieties can reduce risk and production cost. The varieties C-99R, York, and Georgia 01R all have considerable resistance to leafspot. Use of these varieties, in combination with good crop rotation, might allow for reduced use of fungicide sprays and, therefore, lower production costs.

Some of the cultivars – Florida-07, Georgia-03L, C-99R, and AP-3 -- have good resistance to soil-borne diseases, such as white mold (*S. rolfsii*). Additionally, Georgia 01R, Georgia 02C, and ‘Carver’ have resistance to *Cylindrocladium* black rot (CBR).

When choosing a variety and making arrangements for seeds of the varieties that best fit your needs, evaluate your production and marketing situation. Seed of Florida-07, York, Georgia-06G and McCloud should be readily available for the 2009 season. Seed of AP-4, Georgia Greener, Tifguard, and Florida Fancy should be available for the 2010 season.