

'Florida-07', a Medium Maturity, Large Seeded, High Oleic Peanut Variety with Resistance to Tomato Spotted Wilt¹

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'Florida-07' peanut variety was developed by the University of Florida, Institute of Food and Agricultural Sciences, North Florida Research and Education Center near Marianna, Florida. The variety was released in 2006 because of its outstanding pod-yield potential, competitive grades, high oleic oil chemistry and resistance to tomato spotted wilt virus (TSWV).

Over several years of testing in Florida, the pod yield of 'Florida-07' has been excellent, and the grade (TSMK-Total Sound Mature Kernels) has been competitive with other varieties (Table 1). In addition, 'Florida-07' has very good resistance to tomato spotted wilt virus with a rating of 2.1, compared to a rating of 4.2 for 'Georgia Green' (using a rating scale of 1 - 10 with 1 = no disease). 'Florida-07' has also performed well in Alabama and Georgia.

In the 2006 Alabama peanut variety tests at Headland, pod yield of 'Florida-07' ranked first in both irrigated and non-irrigated tests: <http://www.aes.auburn.edu/comm/pubs/agronomy/ay282.pdf>. Similarly, in 2007 pod yield of 'Florida-07' ranked second in the irrigated test and first in the non-irrigated test: <http://www.aes.auburn.edu/comm/pubs/agronomy/ay291.pdf>. In both tests, the TSMK of 'Florida-07' was competitive with other varieties although it did not have the highest grade. In the Georgia peanut variety tests, pod yield of 'Florida-07' ranked no less than

fifth in three irrigated tests and two non-irrigated tests: <http://www.swvt.uga.edu/2006/pct06/RR709-contents.pdf>. Similarly, in 2007 pod yield of 'Florida-07' was ranked not less than fourth in five out of six tests: <http://www.swvt.uga.edu/2007/pct07/RR714-Peanut.pdf>. In all tests, the TSMK of 'Florida-07' was competitive with other varieties, but was not among the highest group.

The seed size of 'Florida-07' is larger than that of 'Georgia Green' and 'C-99R'. In three years of testing at two locations in Florida, 'Florida-07' had an average of 591 sound mature kernels (SMK, those riding a 16/64 inch screen) per pound. These results compared to 655 per pound for 'C-99R' and 858 per pound for 'Georgia Green'. The results indicate more pounds of seed of 'Florida-07' will be required to plant the same seeding density as 'Georgia Green' or 'C-99R'. However, the SMK group contains jumbo runner seed, medium seed and number one seed. It is not likely that jumbo runners will be used for seed, which should increase the seed count per pound and reduce the pounds of seed per acre required for planting.

'Florida-07' has a typical runner growth habit with a semi-prominent central stem and dark green foliage. Under irrigated conditions in Florida, 'Florida-07' reaches optimum maturity about 140 days after planting. Because the

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variety has large seed, gypsum is recommended, especially when producing seed of 'Florida-07'.

Production of seed of 'Florida-07' is governed by PVP (Plant Variety Protection), such that seed of this variety can be produced and sold only as a class of certified seed and only by companies licensed by the Florida Foundation Seed Producers, Inc. In addition to PVP, 'Florida-07' is protected by three U.S. utility patents because it is high oleic. These patents do not have a farmer exemption for saving seed, as provided under PVP. As a result, farmers are prohibited from saving seed from their own farm to plant the following season.

Table 1. Performance of runner market-type peanut varieties at two or three Florida locations over the past 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
Andru II**	ME	3993	3982	3464	3553	75.0	75.7	73.7	73.3	5.1	3.9	4.0	3.7
Virugard	ME	3139	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-3Carver Green	MMM										2.73,24.3		
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**AT3081R	MM		37993653	36003401		77.975.5	75.874.9	75.673.2		3.44.6	3.14.0	3.44.1	
AP-4	M	4359	4387			77.0	44.8			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-99RGeorgia-02C**York**	LLL				44003911-				76.279.2-		2.62.42.0		2.62.7-
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)