



2011 Beckham County Peanut Variety Trial Summary



Location: Erick, OK

Date Planted: 5/9/2011

Date Dug and Harvested: 10/24/2011 and 10/26/2011

All variety tests were conducted under an extensive pest management program. The objective was to prevent as much outside influence from pest pressures (weed, disease, and insect) on yield and grade as possible. All test plots were planted using two 36-inch rows that were 20 feet long. Plots were seeded at a rate of five seeds per row foot (139,392 seeds/A). At planting, liquid inoculant formulation was applied with the seed. Tests were conducted using randomized, complete block design with five replications. The entire plot was dug and then thrashed three to four days later. Peanuts were placed in a drier until moisture reached 10%. Total sound mature kernels (TSMK) was determined on a 200 g sample from each plot.

Interpreting data

Details of establishment and management of each test are listed in footnotes below the tables. Least significant differences, or LSD, are listed at the bottom of all but the Performance Summary tables. Differences between varieties are significant only if they are equal to or greater than the LSD value. If a given variety out yields another variety by as much or more than the LSD value, then we are 95% sure the yield difference is real, with only a 5% probability the difference is due to chance alone. For example, if variety X is 500 lbs/A higher in yield than variety Y, then this difference is statistically significant if the LSD is 500 or less. If the LSD is 500 or greater, then we are less confident that variety X really is higher yielding than variety Y under the conditions of the test.

The coefficient of variation, or CV value, listed at the bottom of each table is used as a measure of the precision of the experiment. Lower CV values will generally relate to lower experimental error in the trial. Uncontrollable or immeasurable variations in soil fertility, soil drainage, and other environmental factors contribute to greater experimental error and higher CV values.

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The trial was planted on May 9 into a strip-till seedbed. No significant foliar diseases were observed during the growing season. The only yield limiting disease that was observed in the plots was pod rot. Pod rot was severe in the Virginia varieties.

Average yield for the runner test was 5238 lbs/A with an average grade of 71% (Table 1). Red River Runner, GA-09B, and Florida 107 had a higher yield when compared to the other varieties. Red River Runner and GA-09B also had a higher grade when compared to the other varieties.

In 2011, average yield and grade for the Spanish test were 3857 lbs/A and 67% TSMK, respectively. In the Spanish test, AT98-99-14 was the top yielding variety.

Average yield and grade in the Virginia test was 5030 lbs/A and 69% TSMK, respectively. Yields and grades were lower than normal due to pod rot problems.

Table 1. Peanut yields, pod rot observations, and grades from Beckham County variety tests in 2011.

Variety	Pod Rot (% of plot)	Yield (lb/A)	Percent of Trial Average	Grade (% TSMK) ²	Revenue (\$/A)
Runner¹					
Red River Runner	0	5615	107%	73.6	1025
GA-09B	0	5554	106%	74.1	1013
Florida 107	0	5543	106%	70.2	962
ACI149	0	5209	99%	70.6	913
ARSOK-R29-3	0	5173	99%	68.8	881
ARSOK-R36-1	0	5140	98%	68.6	876
Flavorrunner 458	0	5129	98%	68.5	873
Tamrun OL 07	0	5049	96%	69.2	868
ARSOK-R34-1	0	4730	90%	71.5	833
	CV	5.5		2.4	
	LSD 0.05	375		2.2	
Spanish¹					
AT 98-99-14	0	4563	118%	67.9	754
Olin	0	3920	102%	67.2	644
140-10L	0	3772	98%	65.6	604
Tamspan 90	0	3496	91%	67.4	576
Tamnut 06	0	3532	92%	64.8	559
	CV	12.0		2.0	
	LSD 0.05	633		1.8	
Virginia¹					
GA-08V	8	5253	104%	69.8	968
Jupiter	9	4930	98%	71.8	930
N0807	3	4988	99%	70.7	928
Champs	7	5024	100%	68.9	910
AT-07V	8	5351	106%	61.6	865
N08081	2	4632	92%	69.6	851
	CV	33	8.5	4.5	
	LSD 0.05	3	568	4.1	

¹ Market type.

² % TSMK = Percent total sound mature kernels.

Table 2. Peanut yields and grades from Beckham County variety tests in 2009-2011 and 2-3 year averages.

Variety or line	Yield (lb/A)	Grade (% TSMK)	Yield (lb/A)	Grade (% TSMK)	Yield (lb/A)	Grade (% TSMK)	Yield (lb/A)	Grade (% TSMK)	Yield (lb/A)	Grade (% TSMK)
	----- 2009 -----		----- 2010 -----		----- 2011 -----		----- 2 yr Avg. -----		----- 3 yr Avg. -----	
Runner¹										
Red River Runner	4461	78.2	5223	73.7	5615	73.6	5419	73.6	5100	75.2
GA-09B	-- ³	--	5359	70.4	5554	74.1	5456	72.3	--	--
Florida 107	--	--	--	--	5543	70.2	--	--	--	--
ACI 149	--	--	--	--	5209	70.6	--	--	--	--
ARSOK-R29-3	--	--	5081	71.3	5173	68.8	5127	70.1	--	--
ARSOK-R36-1	--	--	na	na	5140	68.6	--	--	--	--
Flavorunner 458	4352	76.3	4866	75.0	5129	68.5	4997	71.8	4782	73.3
Tamrun OL 07	4229	74.0	5064	71.2	5049	69.2	5056	70.2	4781	71.5
ARSOK-R34-1	--	--	--	--	4730	71.5	--	--	--	--
LSD 0.05	ns	1.5	ns	ns	375	2.2				
Spanish¹										
Tamnut 06	3939	70.6	5374	67.1	3532	64.8	4453	66.0	4282	67.5
AT 98-99-14	4320	73.4	4411	69.2	4563	67.9	4487	68.6	4431	70.2
Tamspan 90	3576	72.2	5271	67.5	3496	67.4	--	--	--	--
140-10L	--	--	--	--	3772	65.6	3772	65.6	3772	65.6
OLin	3530	72.1	4206	67.3	3920	67.2	4063	67.3	3885	68.9
LSD 0.05	502	1.4	706	4.3	633	1.8				
Virginia¹										
AT-07V	--	--	--	--	5351	61.6	--	--	--	--
N08081	--	--	4256	69.2	4632	69.6	4444	69.4	4444	69.4
Jupiter	4034	70.8	3528	65.3	4930	71.8	4229	68.6	4164	69.3
Champs	--	--	4030	68.6	5024	68.9	4527	68.8	--	--
GA-08V	--	--	3800	65.7	5253	69.8	4527	67.7	--	--
LSD 0.05	ns	ns	ns	3	568	4				

¹ Market type.

² % TSMK = Percent total sound mature kernels.

³ Data was not available because variety was not included in the trial.