



2012 Soybean Variety Performance Tests – Fort Cobb



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2012 Soybean

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Information on Soybean Variety Trials

Numerous soybean lines and varieties were evaluated in performance tests during 2012. Commercially available varieties, both public and private, and advanced experimental lines were included within the tests. Tests were designed to provide information to assist producers in identifying superior varieties and make crop management decisions. Full-season test were planted at the end of May into June and included varieties in MG IV and V. Tests were separated into conventional, Liberty Link, and Roundup Ready.

Public varieties included in tests are considered to be competitive for the region, and are represented by established varieties, new releases, and advanced experimental lines. Varieties of private seed company origin are submitted based on decisions by the respective company.

Methods

All test plots were planted using four 30-inch rows that were 25 feet long. Plots were seeded at a rate of eight seeds per row foot (139,392 seeds per acre). At planting, *Bradyrhizobium japonicum* in a liquid formulation was applied with the seed. Tests were conducted using randomized complete block design with four replications. Irrigation was used only at the Fort Cobb location. Two rows the entire length of the plot was harvested with a small plot combine to determine grain yield.

Interpreting Data

Performance of soybean varieties is affected by many factors, including year, location, soil type, and time of planting. Details of establishment and management of each test are listed in footnotes below the tables.

Small differences in yield are usually of little importance. The reason being that two varieties at a single location can differ because of "chance" factors which may include soil fertility, soil type, depth of top soil, etc. To decide if a yield difference is "real", use the least significant differences (LSD) at the bottom of all 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 that the yield difference is real, with only a 5% probability that the difference is due to chance alone. For example, if variety X is 5 bushels/acre higher in yield than variety Y, then this difference is statistically significant if the LSD is 5 or less. If the LSD is 5 or greater, then we are less confident that variety X really is higher yielding than variety Y under the conditions of the test.

Results reported here should be representative of what might occur throughout the state but would be most applicable under environmental and management conditions similar to those of the tests. The relative yields of all soybean varieties are affected by crop management and by environmental factors including soil type, summer conditions, soil moisture conditions, diseases, and insects.

Additional information on the Web

A copy of this publication as well as additional variety information and more information on soybean management can be found at

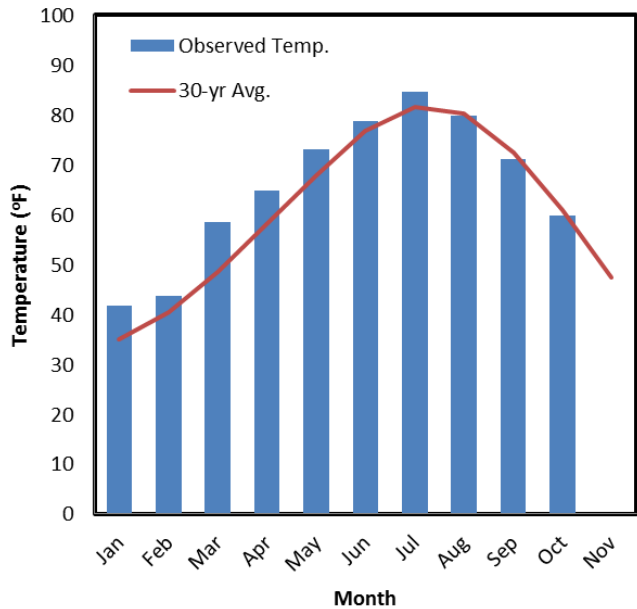
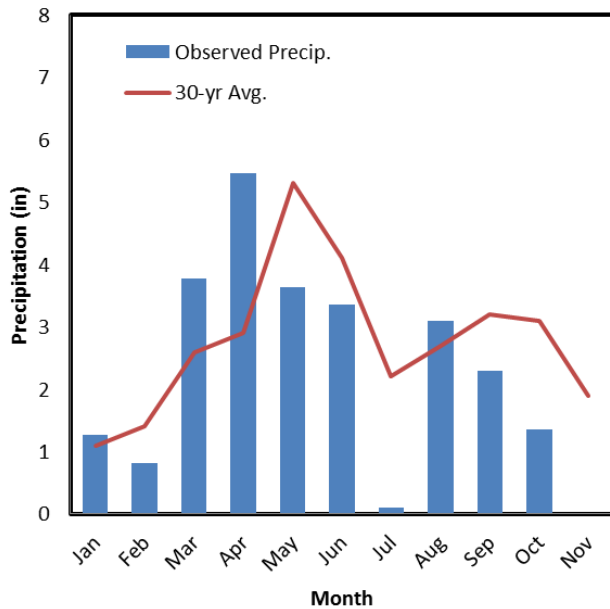
www.oilseeds.okstate.edu/

An individual is encouraged to review 2 to 3 years of variety test results before making a variety selection. Because soybean varieties change often multiple years of data are not compared in this publication but previous years data can be found at the previously mentioned website.

Table 1. Sources of seed for the 2012 Oklahoma Soybean Variety Trials.

Name/Address	Contact	Entries	Maturity Group	Regions Entered	Type	Growth Habit	Soybean Cyst Nematode Resistance	Root Knot Nematode Resistance
Asgrow www.asgrowanddekalb.com		AG4730	4.7	All	RR2,STS	IND		
		AG4732	4.7	All	RR	IND		
		AG4831	4.8	All	RR	IND		
		AG4832	4.8	All	RR	IND		
		AG4933	4.9	All	RR	IND		
		AG5332	5.3	All	RR	DET		
University of Arkansas 115 Plant Science Bldg Fayetteville, AR 72701	479-575-2230	R05-4114	4.9	All	CONV	DET		
		OZARK	5.2	All	CONV	DET		
		OSAGE	5.6	All	CONV	DET		
		UA 5612	5.6	All	CONV	DET		
		R04-1268RR	5.4	All	RR	DET		
Progeny Ag Products 1529 Hwy 193 Wynne, AR 72396 http://www.progenyag.com	870-238-2079	Progeny 4819LL	4.8	All	Liberty Link	IND		
		Progeny 4928LL	4.9	All	Liberty Link	IND	3	
		Progeny 5160LL	5.1	All	Liberty Link	DET		
		Progeny 5460LL	5.4	All	Liberty Link	DET		I
		Progeny 4211RY	4.2	All	RR	IND	3, 14	
		Progeny 4510RY	4.5	All	RR,STS	IND		
		Progeny 4611RY	4.6	All	RR	IND	3, 14	I
		Progeny 4710RY	4.7	All	RR,STS	IND		
		Progeny 4747RY	4.7	All	RR	IND	3, 14	
		Progeny 4814RY	4.8	All	RR	IND		I
		Progeny 4850RY	4.8	All	RR,STS	IND	3, 14	
		Progeny 4900RY	4.9	All	RR	IND	3, 14	
		Progeny 4920RY	4.9	All	RR	IND	3, 14	
		Progeny 5111RY	5.1	All	RR	DET	3	I
		Progeny 5210RY	5.2	All	RR	DET	3, 14	I
		Progeny 5388RY	5.3	All	RR	DET	3	
		Progeny 5412RY	5.4	All	RR	DET	3, 14	
		Progeny 5610RY	5.6	All	RR	DET	3, 14	I
		Progeny 5655RY	5.6	All	RR	DET	3	
		Progeny 5711RY	5.7	All	RR	DET		I
Syngenta Seeds www2.syngenta.com/	254-424-8570	S46-T3	4.6	All	RR	IND	3, 14	
		S48-P4	4.8	All	RR, STS	IND	3, 14	
		S51-H9	5.1	All	RR	DET	3, 14	

Fort Cobb



Location Summary:

A full season test was planted near Fort Cobb in 2012. This trial was planted following peanut from the previous year. This location was fully irrigated all season. Given the weather conditions during the growing season yields were excellent for this location. The average yield was 45 bu/ac, when averaged across all varieties and all three trials (conv., LL, and RR). The above normal heat in July most likely decreased yield potential.

Table 2. Information on soil chemical properties and management practices for the Soybean Production Test at Fort Cobb, OK in 2012.

Soil Properties	Result	Cultural Practice	Information
pH	7.3	Planting Date	5/17/2012
Soil Test P Index	28	Seeding Rate (seeds/foot of row)	8
Soil Test K Index	240	Seeding Depth (in)	1
*P and K fertilizer was applied		Harvest Dates	10/24/2012
Previous Crop	Peanut	Irrigation	as needed

Table 3. Conventional soybean production variety trial Fort Cobb, OK 2012.

Variety	Company	Maturity Group	Height	Shattering ¹ Score	Lodging ¹ Score	Seed/Lb	Yield	Percent Yield of Trial Average
			- in -				- bu/acre -	-- % --
OSAGE	Univ. of Arkansas	5.6	13	0	0	3000	42.3	114%
UA 5612	Univ. of Arkansas	5.6	13	0	0	2900	41.9	113%
R05-4114	Univ. of Arkansas	4.9	12	0	0	2800	35.8	96%
OZARK	Univ. of Arkansas	5.2	12	0	0	2700	28.6	77%
LSD (P=0.05)							3.0	

¹0 = no shattering or lodging, 5 = very severe shattering or lodging.

Table 4. Liberty Link soybean production variety trial Fort Cobb, OK 2012.

Variety	Company	Maturity Group	Height	Shattering ¹ Score	Lodging ¹ Score	Seed/Lb	Yield	Percent Yield of Trial Average
			- in -				- bu/acre -	-- % --
Progeny 4928LL	Progeny Ag Products	4.9	27	0	0	2600	45.2	110%
Progeny 5160LL	Progeny Ag Products	5.1	14	0	0	2700	41.2	101%
Progeny 5460LL	Progeny Ag Products	5.4	28	0	0	2900	41.1	100%
Progeny 4819LL	Progeny Ag Products	4.8	22	0	0	2700	36.4	89%
LSD (P=0.05)							4.9	

¹0 = no shattering or lodging, 5 = very severe shattering or lodging.

Table 5. Roundup Ready soybean production variety trial near Fort Cobb, OK 2012.

Variety	Company	Maturity Group	Height - in -	Shattering ¹ Score	Lodging ¹ Score	Seed/Lb	Yield - bu/acre -	Percent Yield of Trial Average - - % - -
AG5332	Asgrow	5.3	na	0	0	3100	64.0	137%
Progeny 5412RY	Progeny Ag Products	5.4		0	0	2900	60.0	129%
Progeny 4920RY	Progeny Ag Products	4.9		0	0	2500	57.9	124%
Progeny 4510RY	Progeny Ag Products	4.5		0	0	2700	55.9	120%
AG4831	Asgrow	4.8		0	0	2700	50.9	109%
Progeny 5210RY	Progeny Ag Products	5.2		0	0	2600	50.3	108%
Progeny 5610RY	Progeny Ag Products	5.6		0	0	2400	50.3	108%
Progeny 4611RY	Progeny Ag Products	4.6		0	0	2600	50.2	108%
Progeny 5711RY	Progeny Ag Products	5.7		0	0	2900	48.7	105%
Progeny 5111RY	Progeny Ag Products	5.1		0	0	2500	48.4	104%
R04-1268RR	Univ. of Arkansas	5.4		0	0	2900	48.4	104%
Progeny 4211RY	Progeny Ag Products	4.2		0	0	2800	48.3	104%
S46-T3	Syngenta Seeds	4.6		0	0	2500	48.2	103%
AG4933	Asgrow	4.9		0	0	2600	47.7	102%
AG4732	Asgrow	4.7		0	0	3300	47.4	102%
Progeny 4747RY	Progeny Ag Products	4.7		0	0	2600	47.0	101%
Progeny 4850RY	Progeny Ag Products	4.8		0	0	2900	46.5	100%
Progeny 5655RY	Progeny Ag Products	5.6		0	0	3000	46.3	99%
AG4730	Asgrow	4.7		0	0	2700	45.9	98%
Progeny 4900RY	Progeny Ag Products	4.9		0	0	2400	45.8	98%
Progeny 4710RY	Progeny Ag Products	4.7		0	0	2600	45.4	97%
Progeny 4814RY	Progeny Ag Products	4.8		0	0	2800	45.3	97%
HBK RY5521	Bayer Crop Science	5.5		0	0	2800	45.1	97%
HBK RY5421	Bayer Crop Science	5.4		0	0	2800	44.2	95%
HBK RY5221	Bayer Crop Science	5.2		0	0	2700	44.1	95%
HBK RY4721	Bayer Crop Science	4.7		0	0	2600	43.5	93%
S51-H9	Syngenta Seeds	5.1		0	0	2900	41.9	90%
Progeny 5388RY	Progeny Ag Products	5.3		0	0	2900	40.6	87%
HBK R4924	Bayer Crop Science	4.9		0	0	2600	40.2	86%
AG4832	Asgrow	4.8		0	0	2600	37.2	80%
S48-P4	Syngenta Seeds	4.8		0	0	3000	34.5	74%
HBK RY4620	Bayer Crop Science	4.6		0	0	2700	34.4	74%
HBK RY5425	Bayer Crop Science	5.4		0	0	2700	32.9	71%
							6.5	

¹0 = no shattering or lodging, 5 = very severe shattering or lodging.