



2011 Soybean Variety Performance Tests – Kay County



C.B. Godsey
B. Heister
W. Vaughan

Oklahoma State University
Department of Plant and Soil Sciences

2011 Soybean

Cooperators

Cori Woelk, Kay County Educator
Vap Brothers, Kay County Producers

Information on Soybean Variety Trials

Numerous soybean lines and varieties were evaluated in performance tests during 2011. 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. Tests include both early-season and full-season environments. Early-season tests were planted during April and contained maturity group (MG) III and IV. Full-season tests were planted during June and into the beginning of July and included varieties in MG IV, V, and VI.

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

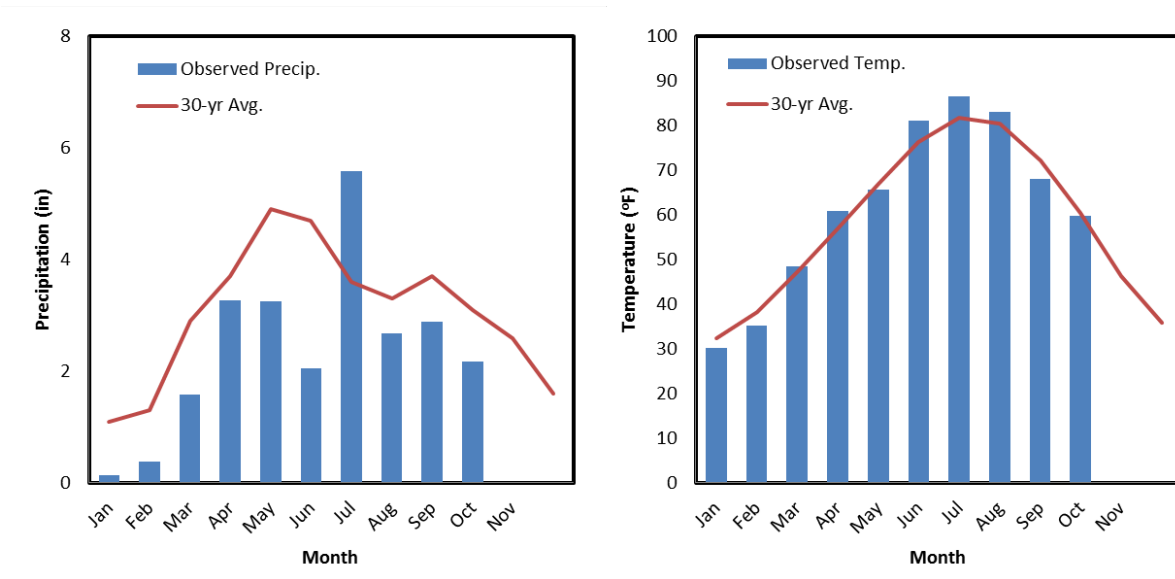
www.oilseeds.okstate.edu/

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 2011 Oklahoma Soybean Variety Trials.

Name/Address	Contact	Entries	Maturity Group	Regions Entered	Type	Soybean Cyst Nematode Resistance	Root Knot Nematode Resistance
Asgrow www.asgrowanddekalb.com		AG 3830	3.8	All	RR2	3	
		AG 4730	4.7	All	RR2,STS		
		AG 4903	4.9	All	RR,STS		
		AG 5632	5.6	All	RR2,STS	3, 14	
		AG 5605	5.6	All	RR	3	
Ohlde Seed Farms, Inc. 1577 4th Rd. Palmer, KS 66962 http://ohldeseed.com/index.html	785-692-4555	O-4595	4.4		RR		
		O-4880	4.8		RR,STS		
		X471	4.7		RR		
		X471A	4.7		RR		
University of Arkansas 115 Plant Science Bldg Fayetteville, AR 72701	479-575-2230	UA4910	4.9		CONV		
		Ozark	5.2		CONV		
		Osage	5.6		CONV		
Progeny Ag Products 1529 Hwy 193 Wynne, AR 72396 http://www.progenyag.com	870-238-2079	Progeny 4910	4.9	All	CONV	3, 6, 14	
		Progeny 5191	5.1	All	CONV	2, 3, 5, 14	I
		Progeny 5770	5.7	All	CONV	3, 6, 9	
		Progeny 4908 RR	4.9	All	RR		
		Progeny 4949 RR	4.9	All	RR		
		Progeny 5218 RR	5.2	All	RR	3	I
		Progeny 5622 RR	5.6	All	RR	2, 3, 6, 9, 14	
		Progeny 5650 RR	5.6	All	RR	3, 14	
		Progeny 4911 RY	4.9	All	RR2		I
		Progeny 5111 RY	5.1	All	RR2		I
		Progeny 5210 RY	5.2	All	RR2	3, 14	I
		Progeny 5321 RY	5.3	All	RR2		I
		Progeny 5655 RY	5.6	All	RR2		I
		Progeny 5610 RY	5.6	All	RR2	3, 14	I
		Progeny 4928 LL	4.9	All	Liberty Link	3	
		Progeny 5160 LL	5.1	All	Liberty Link		
Progeny 5261 LL	5.2	All	Liberty Link				
Progeny 5460 LL	5.4	All	Liberty Link		I		
Terral Seed, Inc. PO Box 826 Lake Providence, LA 71254 http://www.terraseed.com/	318-559-2840	REV 44R22	4.4	NC, NE	RR		
		REV 45R10	4.5	NC, NE	RR	3	A
		REV 47R22	4.7	NC, NE	RR		
		REV 48R10	4.8	NC, NE	RR	3	A
		REV 48R21	4.8	NC, NE	RR		
		REV 48R22	4.8	NC, NE	RR		
		REV 49R22	4.9	NC, NE	RR		
		REV 55R21	5.5	NC, NE	RR,STS		
		REV 56R21	5.6	NC, NE	RR		A
		REV 57R21	5.7	NC, NE	RR		
		REV 496R73	4.6	NC, NE	RR		
		REV 47R53	4.7	NC, NE	RR		
		REV 48R33	4.8	NC, NE	RR		
		REV 49R43	4.9	NC, NE	RR		
		REV 51R53	5.1	NC, NE	RR		
		REV 49R23	4.9	NC, NE	RR		
REV 56R63	5.6	NC, NE	RR				

Kay County



Location Summary:

A full season test was planted near Kildare in 2011. This trial was planted no-till into corn residue from the previous year. Given the weather conditions during the growing season yields were excellent for this location. The average yield was 27.5 bu/ac, when averaged across all varieties. The consistency between the 2010 and 2011 top performing varieties is remarkable (Tables 3 and 4).

Table 2. Information on soil chemical properties and management practices for the Soybean Production Test at Kildare, OK in 2011.

Soil Properties	Result	Cultural Practice	Information
pH	na ¹	Planting Date	6/14/2011
Soil Test P Index	na	Seeding Rate (seeds/foot of row)	8
Soil Test K Index	na	Seeding Depth (in)	1
		Irrigation	none
		Harvest Date	11/4/2011
		Soil Moisture at Planting	good

¹Not available.

Table 3. Full-season soybean production variety trial near Kildare, OK 2011.

Variety	Company	Maturity Group	Height - in -	Shattering ¹ Score	Lodging ¹ Score	Seed/Lb	Yield - bu/acre -	Percent Yield of Trial Average - - % - -
Progeny 5460 LL ³	Progeny Ag Products	5.4	30	0	0	3050	35.3	128%
Osage ²	Univ. of Arkansas	5.6	25	0	0	3050	32.9	120%
REV 48R21	Terral Seed, Inc.	4.8	30	0	0	2800	32.7	119%
Ozark ²	Univ. of Arkansas	5.2	30	0	0	3100	31.7	115%
Progeny 5610 RY	Progeny Ag Products	5.6	28	0	1	2700	31.5	114%
AG 5632	Asgrow	5.6	23	0	0	3300	31.5	114%
REV 56R63	Terral Seed, Inc.	5.6	32	0	0	3300	30.7	112%
Progeny 5650 RR	Progeny Ag Products	5.6	36	0	1	3600	30.1	110%
X471A	Ohlde Seed Farms, Inc	4.7	24	0	0	2850	29.7	108%
REV 47R22	Terral Seed, Inc.	4.7	33	0	0	3100	29.6	108%
AG 4903	Asgrow	4.9	29	0	0	3050	29.5	107%
O-4880	Ohlde Seed Farms, Inc	4.8	25	0	0	3000	29.4	107%
Progeny 4949 RR	Progeny Ag Products	4.9	32	0	1	2700	28.9	105%
REV 49R43	Terral Seed, Inc.	4.9	30	0	0	2750	28.6	104%
Progeny 5191 ²	Progeny Ag Products	5.1	28	0	0	3200	28.5	104%
Progeny 4911 RY	Progeny Ag Products	4.9	30	0	1	3450	28.4	103%
REV 49R22	Terral Seed, Inc.	4.9	30	0	0	2750	28.2	103%
Progeny 5655 RY	Progeny Ag Products	5.6	36	0	1	3300	28.0	102%
Progeny 5261 LL ³	Progeny Ag Products	5.2	25	0	0	3000	28.0	102%
REV 56R21	Terral Seed, Inc.	5.6	28	0	0	2650	27.9	102%
Progeny 4928 LL ³	Progeny Ag Products	4.9	28	0	0	2900	27.6	100%
Progeny 5321 RY	Progeny Ag Products	5.3	32	0	0	3000	27.6	100%
Progeny 5622 RR	Progeny Ag Products	5.6	36	0	1	3250	27.5	100%
REV 47R53	Terral Seed, Inc.	4.7	24	0	0	2800	27.2	99%
REV 49R23	Terral Seed, Inc.	4.9	23	0	0	3500	27.2	99%
Progeny 5770 ²	Progeny Ag Products	5.7	26	0	0	2850	27.2	99%
Progeny 5210 RY	Progeny Ag Products	5.2	28	0	0	2850	27.0	98%
AG 5605	Asgrow	5.6	26	0	0	3000	26.8	97%
REV 57R21	Terral Seed, Inc.	5.7	34	0	1	3200	26.4	96%
Progeny 4908 RR	Progeny Ag Products	4.9	30	0	0	2900	26.4	96%
REV 55R21	Terral Seed, Inc.	5.5	30	0	0	2950	26.3	96%
O-4595	Ohlde Seed Farms, Inc	4.4	32	0	0	2650	26.3	96%
X471	Ohlde Seed Farms, Inc	4.7	28	0	0	2950	26.0	94%
Progeny 5111 RY	Progeny Ag Products	5.1	30	0	0	3000	25.9	94%
UA 4910 ²	Univ. of Arkansas	4.9	28	0	0	3100	25.1	91%
REV 51R53	Terral Seed, Inc.	5.1	30	0	1	2650	25.0	91%
Progeny 5160 LL ³	Progeny Ag Products	5.1	20	0	0	2950	24.9	90%
AG 4730	Asgrow	4.7	22	0	0	3300	24.6	89%
REV 44R22	Terral Seed, Inc.	4.4	22	0	0	3000	24.5	89%

REV 45R10	Terral Seed, Inc.	4.5	29	0	0	3250	23.8	86%
REV 46R73	Terral Seed, Inc.	4.6	30	0	0	2650	23.7	86%
Progeny 5218 RR	Progeny Ag Products	5.2	26	0	1	2900	23.7	86%
Progeny 4910 ²	Progeny Ag Products	4.9	31	0	0	2950	23.3	85%
REV 48R33	Terral Seed, Inc.	4.8	29	0	0	2650	23.2	84%
REV 48R22	Terral Seed, Inc.	4.8	28	0	0	2800	22.7	83%
REV 48R10	Terral Seed, Inc.	4.8	30	0	0	3050	22.1	81%
LSD (P=0.05)							5.3	

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

²Conventional variety

³Liberty Link soybean variety

Table 3. Full-season soybean production variety trail near Kildare, OK 2011.

Variety	Company	Maturity Group	2010 Yield - in -	2010 Percent Yield of Trial Average	2011 Yield	2011 Percent Yield of Trial Average	2-yr Average -bu/acre-	Percent Yield of Trial Average -- % --
REV 48R21	Terral Seed, Inc.	4.8	26	108%	32.7	119%	29	113%
Progeny 4949 RR	Progeny Ag Products	4.9	28	117%	28.9	105%	28	111%
Progeny 4908 RR	Progeny Ag Products	4.9	29	122%	26.4	96%	28	109%
Ozark ²	Univ. of Arkansas	5.2	24	100%	31.7	115%	28	108%
Progeny 5622 RR	Progeny Ag Products	5.6	27	114%	27.5	100%	27	107%
Osage ²	Univ. of Arkansas	5.6	22	92%	32.9	120%	27	106%
REV 56R21	Terral Seed, Inc.	5.6	24	102%	27.9	102%	26	102%
Progeny 5650 RR	Progeny Ag Products	5.6	22	93%	30.1	110%	26	101%
REV 47R22	Terral Seed, Inc.	4.7	22	90%	29.6	108%	26	99%
REV 49R22	Terral Seed, Inc.	4.9	21	87%	28.2	103%	25	95%
REV 57R21	Terral Seed, Inc.	5.7	22	91%	26.4	96%	24	93%
REV 44R22	Terral Seed, Inc.	4.4	21	86%	24.5	89%	23	87%
UA 4910 ²	Univ. of Arkansas	4.9	19	79%	25.1	91%	22	85%
REV 48R10	Terral Seed, Inc.	4.8	21	87%	22.1	81%	21	84%
Progeny 5218 RR	Progeny Ag Products	5.2	18	76%	23.7	86%	21	81%
REV 45R10	Terral Seed, Inc.	4.5	16	68%	23.8	86%	20	77%
REV 48R22	Terral Seed, Inc.	4.8	17	69%	22.7	83%	20	76%
Progeny 5460 LL ³	Progeny Ag Products	5.4			35.3	128%		
Progeny 5610 RY	Progeny Ag Products	5.6			31.5	114%		
AG 5632	Asgrow	5.6			31.5	114%		
REV 56R63	Terral Seed, Inc.	5.6			30.7	112%		
X471A	Ohlde Seed Farms, Inc	4.7			29.7	108%		
AG 4903	Asgrow	4.9			29.5	107%		
O-4880	Ohlde Seed Farms, Inc	4.8			29.4	107%		
REV 49R43	Terral Seed, Inc.	4.9			28.6	104%		
Progeny 5191 ²	Progeny Ag Products	5.1			28.5	104%		
Progeny 4911 RY	Progeny Ag Products	4.9			28.4	103%		
Progeny 5261 LL ³	Progeny Ag Products	5.2	Varieties not tested in 2010		28.0	102%		
Progeny 5655 RY	Progeny Ag Products	5.6			28.0	102%		
Progeny 4928 LL ³	Progeny Ag Products	4.9			27.6	100%		
Progeny 5321 RY	Progeny Ag Products	5.3			27.6	100%		
REV 47R53	Terral Seed, Inc.	4.7			27.2	99%		
REV 49R23	Terral Seed, Inc.	4.9			27.2	99%		
Progeny 5770 ²	Progeny Ag Products	5.7			27.2	99%		
Progeny 5210 RY	Progeny Ag Products	5.2			27.0	98%		
AG 5605	Asgrow	5.6			26.8	97%		
O-4595	Ohlde Seed Farms, Inc	4.4			26.3	96%		
REV 55R21	Terral Seed, Inc.	5.5			26.3	96%		
X471	Ohlde Seed Farms, Inc	4.7			26.0	94%		

Progeny 5111 RY	Progeny Ag Products	5.1	25.9	94%
REV 51R53	Terral Seed, Inc.	5.1	25.0	91%
Progeny 5160 LL ³	Progeny Ag Products	5.1	24.9	90%
AG 4730	Asgrow	4.7	24.6	89%
REV 46R73	Terral Seed, Inc.	4.6	23.7	86%
Progeny 4910 ²	Progeny Ag Products	4.9	23.3	85%
REV 48R33	Terral Seed, Inc.	4.8	23.2	84%
LSD (P=0.05)		7	5	

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

²Conventional variety

³Liberty Link soybean variety