



2011 Soybean Variety Performance Tests - Stillwater



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2011 Soybean

Cooperators

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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 test 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

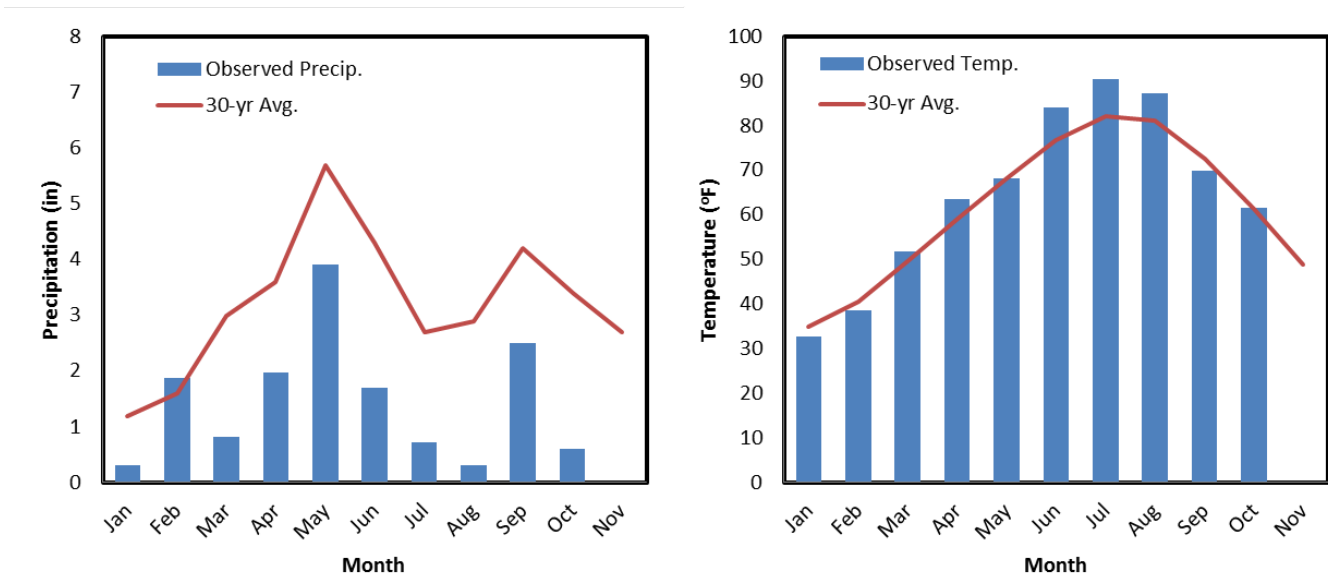
www.oilseeds.okstate.edu/

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 NE 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	
Syngenta Seeds www2.syngenta.com/	254-424-8570	S46-A1 Brand	4.6	All	RR2	3, 14	
		S47-R3 Brand	4.7	All	RR	3, 14	
		S49-A5 Brand	4.9	All	RR	3	

Stillwater



Location Summary:

An early-season was planted at Stillwater in 2011. The test was planted into a conventional tilled seedbed. Yields were exceptional even though rainfall was below average and temperatures were above average for the majority of the growing season. This was most likely due to plants utilizing sub-surface moisture. The plot area was in an area where the water table is relatively high.

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

Soil Properties	Result	Cultural Practice	Information
pH	5.7	Planting Date	5/4/2011
Soil Test P Index	56	Seeding Rate (seeds/foot of row)	8
Soil Test K Index	551	Seeding Depth (in)	1.5
		Irrigation	none
		Harvest Date	10/6/2011
		Soil Moisture at Planting	good

Table 2. Early-season glyphosate resistant soybean production variety trial Stillwater, OK 2011.

Variety	Company	Maturity Group	Height - in -	Shattering ¹ Score	Lodging ¹ Score	Seed/Lb	Yield -bu/acre-	Percent Yield of Trial Average -- % --
AG 3830	Asgrow	3.8	32	0	2	3000	72.0	114%
AG 4903	Asgrow	4.9	36	0	2	3200	68.0	108%
S47-R3 Brand	Syngenta	4.7	41	0	2	3350	63.5	101%
S49-A5 Brand	Syngenta	4.9	39	0	1	3050	62.7	100%
S46-A1 Brand	Syngenta	4.6	29	1	2	3000	61.2	97%
AG 4730	Asgrow	4.7	35	1	3	2900	53.1	84%
LSD (P=0.05)							6.7	

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