

2015 Evaluation of Soybean Varieties, Jay, Florida

Jennifer Bearden and Barry Brecke

This report includes the summary of the 2015 soybean replicated variety trial at West Florida Research and Education Center, Jay, Florida. It shows the performance of 21 soybean varieties. This data represents only one year, results should be considered over several locations and years before conclusions are valid.

Varieties that were evaluated:

Brand	Variety
Asgrow	Asgrow 6536
Asgrow	Asgrow 6834
Asgrow	Asgrow 6931
Asgrow	Asgrow 7231
Asgrow	Asgrow 7535
Asgrow	Asgrow 7934
Bayer	CZ 4959 RY
Bayer	CZ 6060 RY
Bayer	CZ 7070 RY
Bayer	HBK RY5221
Bayer	HBK RY7523
Pioneer	P54T94R
Pioneer	P56T12SR
Pioneer	P67T25R2
Pioneer	P76T54R2
Southern States	SS 6810
Southern States	SS 6315
Southern States	SS 7215
Croplan	R2C 6764
Croplan	R2C 7094
Croplan	R2C 7622

2015 Growing Conditions and Experimental Design:

The soil type was a Dothan sandy loam that was planted to peanut in 2014. Fertilizer was applied according to soil test results (320 lb/A 3-7-28 applied 1 June). Soybean varieties were planted on 4 June under conventional tillage. Plots were 4 rows wide by 25 feet long with 36-in. row spacing. Standard practices for soybean production were followed throughout the season. Stealth herbicide at 1 qt/A was applied on 4 June for preemergence weed control and Roundup at 26 oz/A on 17 July for postemergence weed control. Quadris fungicide was applied at 12 oz/A on 27 July for disease management. Diamond insecticide was applied at 6 oz/A on 13 August and Diamond at 6 oz/A plus Belay insecticide at 4 oz/A was applied on 18 September for insect control. Soybeans were harvested on 16 November with a plot combine, percent moisture determined and plot weights converted to bu/A yield at 13% moisture.

Rainfall in June was 3.1 in. below normal, July 1.11 in. above normal, August and September 2.16 and 2.02 in. below normal and in October and November was 3.11 and 0.99 in. above normal. Rainfall during the period totaled 34.13 in., which was 2.07 in. below normal. Weather data was obtained from Florida Automated Weather Network (FAWN) station located on Jay research farm and normal represents the mean for the past 54 years of records (Table 1).

Table 1. Weather conditions during 2015 soybean trial.

Month	Total Rainfall (in)	Average minimum air temperature (°F)	Average maximum air temperature (°F)
June	4.30 (3.10 below normal)	67.2	98.0
July	9.16 (1.11 above normal)	66.5	98.2
August	4.36 (2.16 below normal)	62.1	96.4
September	4.22 (2.02 below normal)	53.0	97.1
October	6.90 (3.11 above normal)	44.5	93.3
November	5.19 (0.99 above normal)	31.7	86.0

Summary

Stand count for all varieties ranged from 2.9 to 5.8 plants per foot of row (42,653 to 83,490 plants/A) (Table 2). Asgrow 6931, 7535, Pioneer P67T25R2, Southern States SS 6315 and SS 7215 and Croplan R2C 6764 and R2C 7094 had populations in excess of 70,000 plants/A while Asgrow 6834, 7934 and Southern States SS 6810 had populations less than 60,000 plants/A.

Soybean plant height ranged from 19.7 in. to 39.7 in. on 30 October (Table 3). Asgrow 7934, CZ 4959 RY, HBK RY5221, P76T54R2 and R2C 7094 were taller than 36 in. while CZ 6060 RY, P54T94R and P56T12SR were less than 28 in. tall. Soybean yield ranged from 40.1 to 61.0 bu/A (Table 3). Asgrow 7231, 7535, 7934, CZ 7070 RY, HBK RY7523, P67T25R2 and P76T54R2 all yielded 56 bu/A or more while CZ 4959 RY, HBK RY5221, P54T94R, SS 6315 and R2C 6764 produced less than 50 bu/A. Soybean test weight ranged from 42.7 to 54.7 lb/bu with most cultivars between 53 and 54.7 lb/bu.

Table 2: Soybean variety emergence, Jay, FL 2015.

Variety	Plants/ft* 6/25/15	Plants/A* 6/25/15
Asgrow 6536	4.7 c-f	68,668 c-f
Asgrow 6834	2.9 i	42,653 i
Asgrow 6931	5.0 bcd	71,995 bcd
Asgrow 7231	4.7 c-f	68,668 c-f
Asgrow 7535	5.0 bcd	72,298 bcd
Asgrow 7934	3.8 gh	54,753 gh
CZ 4959 RY	4.2 fgh	60,803 fgh
CZ 6060 RY	4.6 c-f	66,550 c-f
CZ 7070 RY	4.3 e-h	62,315 e-h
HBK RY5221	4.4 d-g	63,525 d-g
HBK RY7523	4.7 c-f	68,063 c-f
P54T94R	4.3 e-h	62,315 e-h
P56T12SR	4.8 c-f	69,575 c-f
P67T25R2	5.5 ab	79,558 ab
P76T54R2	4.5 c-f	65,945 c-f
SS 6810	3.7 h	53,845 h
SS 6315	4.9 b-e	71,088 b-e
SS 7215	5.8 a	83,490 a
R2C 6764	4.9 bcd	71,693 bcd
R2C 7094	5.1 bc	74,113 bc
R2C 7622	4.4 def	64,433 def
<i>LSD</i>	<i>0.6</i>	<i>9,189</i>
<i>CV</i>	<i>9.8</i>	<i>9.8</i>

*Determined from counts of two, 6-ft rows sections per plot. Planted 6 seed/ft, 87,100 seed/A.

LSD = Fisher's Protected LSD (P=0.05)

Table 3: Soybean variety height, test weight and yield, Jay, FL 2015.

Cultivar	Height (in.) 10/30/15	% Lodging 10/30/15	Test Weight (lb./bu)	Yield (bu/A) 11/16/15
Asgrow 6536	31.6 c-g	0 b	53.2 abc	55.2 a-d
Asgrow 6834	30.8 d-h	0 b	52.1 bc	52.2b-e
Asgrow 6931	35.3 a-e	7 ab	52.4 bc	55.2 a-d
Asgrow 7231	33.1 b-f	7 ab	53.6 abc	59.1 ab
Asgrow 7535	32.8 c-f	5 ab	53.4 abc	61.0 a
Asgrow 7934	37.5 abc	9 ab	53.9 abc	57.2 a-d
CZ 4959 RY	36.2 a-d	6 ab	46.4 f	42.4 f
CZ 6060 RY	25.5 h	0 b	48.6 e	55.8 a-d
CZ 7070 RY	29.4 e-h	2 ab	55.2 a	57.8 abc
HBK RY5221	39.2 ab	12 a	42.7 g	40.1 f
HBK RY7523	28.7 fgh	1 b	52.9 abc	57.3 a-d
P54T94R	19.7 i	0 b	47.5 ef	48.9 de
P56T12SR	26.5 gh	3 ab	47.4 ef	50.6 b-e
P67T25R2	35.0 a-f	2 b	51.7 c	57.1 a-d
P76T54R2	36.6 a-d	4 ab	54.7 ab	58.6 abc
SS 6810	33.5 b-f	6 ab	52.8 abc	54.1 a-d
SS 6315	32.3 c-g	5 ab	47.6 ef	45.2 ef
SS 7215	33.3 b-f	4 ab	50.1 d	51.5 b-e
R2C 6764	28.9 e-h	1 b	53.8 abc	49.9 cde
R2C 7094	39.7 a	8 ab	52.2 bc	55.7 a-d
R2C 7622	34.8 e-f	4 ab	52.6 bc	54.7 a-d
<i>LSD</i>	<i>3.81</i>	<i>5.3</i>	<i>1.52</i>	<i>5.0</i>
<i>CV</i>	<i>8.33</i>	<i>3.8</i>	<i>1.0</i>	<i>3.5</i>

LSD = Fisher's Protected LSD (P=0.05)