

2014 Evaluation of Soybean Varieties, Jay, Florida

Darcy Telenko, Jennifer Bearden and Barry Brecke

This report includes the summary of the 2014 soybean replicated variety trial at West Florida Research and Education Center, Jay, Florida. It shows the performance of 14 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:

1. Croplan R2C6192
2. Croplan R2C5673
3. Croplan R2C7622
4. Croplan R2C6764
5. Croplan R2C7094
6. Asgrow AG 6931
7. Asgrow AG 7231
8. Asgrow AG 7535
9. Asgrow AG 7733
10. Asgrow AG 7934
11. Bayer HBK RY5421
12. Bayer HBK RY5221
13. Bayer HBK RY7523
14. Bayer Credenz CZ 7070RY

2014 Growing Conditions and Experimental Design:

The soil type was a Dothan sandy loam that was planted to sweet corn in 2013. Fertilizer was applied according to soil test results (350 lb/A 3-7-28 applied 8 June). Soybean varieties were planted on 10 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. Dual Magnum at 1.33 pt/A was applied on 12 June for preemergence weed control and Roundup at 22 oz/A on 1 July and 14 August for postemergence weed control. Approach Prima fungicide was applied at 9 oz/A 14 August for disease management. Lorsban at 1 qt/A was applied 4 August and Belay at 4 oz/A + Intrepid at 6 oz/A

were applied 14 August for insect control. Soybeans were harvested on 16 October with a plot combine, percent moisture determined and plot weights converted to bu/A yield at 13% moisture.

Rainfall in June, August and October was 2.13, 1.58, and 0.15 in. below normal, respectively; rainfall in July, and September was 0.65 and 0.15 in. above normal, respectively. Rainfall during the period totaled 27.07 in., which was 2.89 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 2014 field corn trial.

Month	Total Rainfall (in)	Average minimum air temperature (°F)	Average maximum air temperature (°F)
June	5.27 (2.13 below normal)	66.6	94.4
July	8.70 (0.65 above normal)	62.1	94.9
August	4.94 (1.58 below normal)	66.9	96.0
September	4.11 (0.32 above normal)	57.4	92.5
October	4.05 (0.15 below normal)	42.6	87.9

Summary

Stand count for all varieties ranged from 2.9 to 6.3 plants per foot of row (42,690 to 91,840 plants/A) (Table 2). AG 7535, CZ 7070RY, AG 7231, AG 6931, R2C563 and HBK RY5421 had populations in excess of 80,000 plants/A while HBK RY5221 and RC6764 had densities of less than 60,000 plants/A

Soybean plant height ranged from 32 in. to 41.5 in. on 27 August (Table 3). The cultivars AG 6931, AG 7231, AG 7934 and CZ 7070RY were taller than 40 in. while R2C 6192, HBK RY5421, and R2C 6764 were less than 35 in. tall. Soybean yield ranged from 66.2 to 82.5 bu/A (Table 3). AG 6931, AG 7231, AG 7535, AG 7333 and AG 7934 all yielded 80 bu/A or more while R2C6192 and HBK RY5221 produced less than 70 bu/A. Soybean test weight ranged from 52.2 to 55.2 lb/bu with most cultivars between 53 and 54.5 lb/bu.

Table 2: Soybean variety emergence, Jay, FL 2014.

Cultivar	Plants/ft* (26 June)	Plants/A* (26 June)
Croplan R2C6192	4.4	63,820
Croplan R2C5673	5.7	83,200
Croplan R2C7622	4.3	62,730
Croplan R2C6764	2.9	42,690
Croplan R2C7094	5.1	73,540
Asgrow AG 6931	5.8	84,140
Asgrow AG 7231	6.0	86,680
Asgrow AG 7535	6.3	91,840
Asgrow AG 7733	5.1	73,470
Asgrow AG 7934	5.3	76,300
Bayer HBK RY5421	5.6	80,660
Bayer HBK RY5221	3.8	55,610
Bayer HBK RY7523	4.6	66,070
Bayer Credenz CZ 7070RY	6.1	88,940
<i>LSD</i>	<i>0.75</i>	<i>10,790</i>
<i>CV</i>	<i>10.26</i>	<i>10.26</i>

*Determined from counts of two, 25-ft rows per plot.

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

Table 3: Soybean variety height, test weight and yield, Jay, FL 2014.

Cultivar	Height (in.) (27 August)	Test Weight (lb./bu)	Yield (bu/A) (16 October)
Croplan R2C6192	32.0	53.4	68.1
Croplan R2C5673	36.2	52.2	71.7
Croplan R2C7622	35.6	53.3	75.0
Croplan R2C6764	33.6	55.2	73.9
Croplan R2C7094	37.9	53.3	72.4
Asgrow AG 6931	41.5	53.8	81.7
Asgrow AG 7231	40.5	54.5	82.5
Asgrow AG 7535	38.4	53.8	83.3
Asgrow AG 7733	39.1	52.4	81.2
Asgrow AG 7934	40.5	53.1	80.0
Bayer HBK RY5421	32.6	54.8	72.6
Bayer HBK RY5221	37.4	53.9	66.2
Bayer HBK RY7523	35.1	54.2	73.0
Bayer Credenz CZ 7070RY	40.3	52.6	78.6
<i>LSD</i>	<i>3.2</i>	<i>2.0</i>	<i>5.6</i>
<i>CV</i>	<i>6.1</i>	<i>2.6</i>	<i>5.2</i>

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