

2014-15 WHEAT VARIETY EVALUATION, WFREC, JAY, FLORIDA

Jennifer Bearden and Barry J. Brecke

This report is a summary of the 2014-15 wheat variety trial at the University of Florida/IFAS West Florida Research and Education Center, Jay, Florida. It shows the performance of 17 wheat varieties. This data represents only one year and results should be considered over several locations and years before conclusions are valid.

Entries (Brand/Variety) that were evaluated:

1. Dyna-Gro Baldwin
2. Dyna-Gro WX 15151
3. Pioneer 26R41
4. Pioneer 26R53
5. Pioneer 26R94
6. Southern States SS 8415
7. Southern States SS 8641
8. AGSouth Genetics AGS 2026
9. AGSouth Genetics AGS 2035
10. AGSouth Genetics AGS 2040
11. UniSouth Genetics USG 3120
12. UniSouth Genetics USG 3201
13. UniSouth Genetics USG 3404
14. Progeny Ag Product 53188
15. Progeny Ag Product 111303W
16. Syngenta Coker 9553
17. VPI Jamestown

2014-15 Growing Conditions and Experimental Design

The soil type in the test area was a Red Bay sandy loam that was planted to soybean in 2014. Wheat was planted with a plot drill equipped with cone seeders on 9 Dec 2014 under conventional tillage. Entries were replicated four times. Plots were six rows spaced 7 inches apart by 25 feet long.

Standard practices for wheat production were followed throughout the season. The herbicide 2,4-D was applied at 0.3 lb a.i./A on 24 January to control winter broadleaf weeds. A top dressing of 90 lb/A N was made on 11 February.

Wheat stand was determined on 17 March by counting plants in two - 24" row sections in each plot. During April 50% heading dates were recorded. Wheat height was measured 5 May. Quilt XP (14 oz/A) fungicide was applied for disease control on 24 February and 9 April. Even with the fungicide application there was sufficient disease incidence for visual evaluation of leaf diseases septoria leaf spot and leaf rust on 5 May.

Lodging was visually evaluated 29 May as percent of plants lodged. Wheat was harvested on 29 May with a small plot combine. Wheat test weight and yield at 13.5% moisture were determined. The Least Significant Difference (LSD) at 5 percent level is included

in the tables to assist in comparing variety results. If the difference between two varieties for a parameter exceeds the LSD, the varieties can be considered different for that parameter.

Bolding in the yield table indicates entries with yields statistically equal to the highest yielding entry.

Weather Summary

Rainfall was normal in January, slightly below normal for February and March, much above normal for April and 2 in. below normal in May (Table 1). Rainfall during the entire wheat growing season (December through June) totaled 30.2 in., which was near 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 55 years of records.

Table 1. Weather conditions during 2014-15 in Jay, FL.

Month	Total rainfall (in.)	Average air temperature (°F)	Minimum air temperature (°F)	Maximum air temperature (°F)
December	5.8 (0.7 above normal)	54.4	32.4	80.1
January	4.4 (1.0 below normal)	48.6	16.5	75.4
February	3.5 (1.6 below amount)	47.2	23.4	75.1
March	1.3 (5.2 below normal)	63.6	27.1	84.9
April	12.6 (7.8 above normal)	69.8	45.7	88.0
May	2.7 (1.9 below normal)	74.5	49.6	90.7

Data Summary

Stand counts ranged from 30 to 40 plants/ft² (1,300,000 to 1,700,000 plants/A) which is within the recommended population range (Table 2). The varieties with the earliest heading dates (early April) were Baldwin, AGS 2040, USG 3120 and Jamestown. The varieties that headed the latest (mid-April) were USG 3404, USG 3201, Progeny 111303W, Pioneer 26R41 and Pioneer 26R94.

Disease ratings on 5 May showed a wide variation in disease incidence among varieties. The varieties with 5% or less Septoria Leaf Spot were Pioneer 26R41, 26R53, USG 3201, USG 3404 and Progeny 111303W while Dyna-Gro WX 15151, Pioneer 26R94, SS 8415 and AGS 2035 had more than 25% Septoria infected leaf area. Most of the varieties tested had low levels of leaf rust; however, Progeny 53188 and 111303W had 20% and 50% leaf rust coverage.

Wheat height on 5 May ranged from 29 inches for Pioneer 26R53 and Progeny 111303W to 38 inches for Baldwin. Most varieties were 30 to 36 inches tall.

The varieties yielding more than 70 bu/A were Baldwin (78 bu/A), AGS 2035 (78 bu/A), Dyna-Gro WX 15151 (74 bu/A) Pioneer 26R41 (72 bu/A) and Pioneer 26R94 (71 bu/A). Those yielding between 65 and 69 bu/A included SS 8415, AGS 2026, AGS 2040 and USG 3120.

Table 2. Stand count, 50% heading date and disease ratings for 2014-15 wheat entries, WFREC, Jay, FL.

Brand/Variety	Stand Count (Plants/sq.ft.)	50% Heading Date	Septoria Leaf Spot (% Leaf Area)	Leaf Rust (% Leaf Area)
	03/17/15		05/05/15	05/05/15
Dyna-Gro Baldwin	38	04/01/15	16	0
Dyna-Gro WX 15151	36	04/02/15	26	0
Pioneer 26R41	38	04/15/15	5	1
Pioneer 26R53	31	04/13/15	4	3
Pioneer 26R94	32	04/04/15	29	3
Southern States SS 8415	39	04/06/15	24	8
Southern States SS 8641	34	04/06/15	13	3
AGSouth Genetics AGS 2026	32	04/05/15	18	0
AGSouth Genetics AGS 2035	31	04/03/15	26	0
AGSouth Genetics AGS 2040	31	04/01/15	19	3
UniSouth Genetics USG 3120	31	04/01/15	21	0
UniSouth Genetics USG 3201	35	04/14/15	5	11
UniSouth Genetics USG 3404	30	04/17/15	5	6
Progeny Ag Product 53188	30	04/06/15	13	20
Progeny Ag Product 111303W	34	04/17/15	4	50
Syngenta Coker 9553	31	04/06/15	18	4
VPI Jamestown	40	04/02/15	20	1
LSD (0.05)	7	2	9	11

Table 3. Wheat height, percent lodging, test weight and yield for 2014-15 wheat entries, WFREC, Jay, FL.

Variety	Wheat Height (inches)	% Lodging	Test Weight (lb/bu)	Yield (bu/A)
	05/05/15	05/29/15	05/29/15	05/29/15
Dyna-Gro Baldwin	38	4	58	78
Dyna-Gro WX 15151	33	8	55	74
Pioneer 26R41	31	4	56	72
Pioneer 26R53	29	5	51	53
Pioneer 26R94	36	13	60	71
Southern States SS 8415	35	18	57	69
Southern States SS 8641	34	10	50	49
AGSouth Genetics AGS 2026	32	10	60	68
AGSouth Genetics AGS 2035	36	4	60	78
AGSouth Genetics AGS 2040	32	10	58	68
UniSouth Genetics USG 3120	36	7	53	66
UniSouth Genetics USG 3201	30	8	56	47
UniSouth Genetics USG 3404	30	23	48	43
Progeny Ag Product 53188	35	16	53	50
Progeny Ag Product 111303W	29	45	45	26
Syngenta Coker 9553	33	16	58	54
VPI Jamestown	30	7	59	62
LSD (0.05)	2	9	6	7

Bolded entries have yields equal to the highest yielding entries based on LSD.