

## 2024 Evaluation of Soybean Varieties, Northwest Florida

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This report includes the summary of the 2024 soybean large plot demonstration trials at West Florida Research and Education Center, Jay, Florida and on-farm in Baker, FL. It shows the performance of 9 soybean varieties in this Demonstration Trial (Table 1). This data represents only one year, results should be considered over several locations and years before conclusions are valid.

**Table 1. Soybean Entries that were evaluated: (Brand/Variety/Maturity)**

	<b>Brand</b>	<b>Variety</b>	<b>Maturity Index</b>
1	Asgrow	AG71XF2	7.1
2	Asgrow	AG72XF0	7.2
3	Asgrow	AG66XF2	6.6
4	Asgrow	AG69XF5	6.9
5	Asgrow	AG69XF0	6.9
6	Pioneer	P56A71E	5.6
7	Pioneer	P68A41BE	6.8
8	Aarmor	68F35	6.8
9	Aarmor	71F12	7.1

### 2024 Growing Conditions and Experimental Design:

For the demonstration on the research center, the soil type was a Red Bay sandy loam and the study area was planted to peanut in 2023. Soybean varieties were planted on 12 June under strip tillage at 7 seed per foot. Plots were 4 rows wide by 350 feet long with 36-in. row spacing. Standard practices for soybean production were followed throughout the season. Glyphosate herbicide (32 oz/A) was applied preplant on 7 June. S-metolachlor (1.3pt/A) was applied at planting. Three quarters of an inch of irrigation was applied 14 June. Cyfluthrin (2.8oz/A) and novaluron (6oz/A) were applied on 26 July. On 9 August, tebuconazole (6oz/A) plus zeta-cypermethrin (4oz/A) were applied. On 28 August, stink bugs were over threshold and the soybeans were treated with cyfluthrin (3oz/A). On 25 September, the soybeans were treated with Chlorantraniliprole/Lambda-cyhalothrin (10oz/A) plus cyfluthrin (4oz/A) once after finding

stink bugs above threshold. One variety (P56A71E) reached peak maturity ahead of the other varieties and was harvested on 22 October. Soybeans were harvested on 3 December with a plot combine, percent moisture determined and plot weights converted to bu/A yield. Fertilization was not applied due to soil sample results showing it was not necessary.

For the demonstration on-farm, the soil type was Troup sand and the previous crop was peanuts in 2023. Soybeans were planted under strip tillage on 14 June and harvested on 3 December with a combine and weighed using a seed tender with scales. The soybean varieties were fertilized and sprayed along with the farmer’s other soybeans in the field.

Rainfall was well below normal for the growing season. The historic average rainfall for June through November is 38.96 inches, however in 2024, rainfall received was 28.03 inches. 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 2).

**Table 2. Weather conditions during 2024 soybean trial.**

Month	Actual Rainfall/Monthly Average	Average minimum air temperature (°F)	Average maximum air temperature (°F)
June 12-30	2.68 in/7.35 in	72.9	92.1
July	7.17 in/7.71 in	71.6	96.9
August	4.35 in/7.18 in	66.7	98.2
September	6.9 in/6.11 in	63.6	97.6
October	0.68 in/4.09 in	38.5	89.9
November	6.25 in/5.52 in	32.8	85.2
December 1-3	0 in/4.51 in	31.7	60.1
<b>Total</b>	<b>28.03 in</b>		

## Summary

In the demonstration on the research center, 4 varieties yielded over 60 bu/A (Table 3). The top yielding variety was the Pioneer P56A71E at 78.13 bu/A. This variety was harvested early when it was mature rather than waiting until all varieties were mature. It should be noted that this demonstration site has irrigation and deer fencing.

In the on-farm demonstration, yields were lower due to no irrigation and deer pressure. Three varieties tied for highest yield in this demonstration (Table 4). Note that P56A71E may have yielded higher if the varieties were harvested when each reached maturity.

**Table 3. Soybean Variety moisture and yield, Jay, FL 2024.**

Company	Variety	Moisture (%)	Yield (bu/A)	2023 Yield (lb/A)
Asgrow	AG71XF2	14	59.55	27.9
Asgrow	AG72XF0	13.2	59.55	
Asgrow	AG66XF2	13.8	57.42	
Asgrow	AG69XF5	13	<b>66.05</b>	
Asgrow	AG69XF0	12.9	<b>63.47</b>	24.6

Pioneer	P56A71E*	10	<b>78.13</b>	
Pioneer	P68A41BE	12.7	58.32	
Armor	68F35	12.5	46.65	
Armor	71F12	13.1	<b>67.67</b>	26.5

\*Variety was harvested on 22 October. All other varieties were harvested 3 December.

**Table 4. Soybean Variety yield On-Farm, Baker, FL 2024**

Company	Variety	Yield (bu/A)
Asgrow	AG71XF2	33
Asgrow	AG72XF0	33
Asgrow	AG66XF2	<b>37</b>
Asgrow	AG69XF5	<b>37</b>
Asgrow	AG69XF0	<b>37</b>
Pioneer	P56A71E*	28
Pioneer	P68A41BE	28
Armor	68F35	24
Armor	71F12	27.5