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2025 Evaluation of Cotton Varieties at the Jay Research Facility

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This report summarizes the 2025 cotton large plot demonstration trial at West Florida Research and Education Center, Jay, Florida. It shows the yields of 17 varieties in the nonreplicated demonstration trial. This data represents only one year, and results should be considered over several locations and years before conclusions are valid.

2025 Growing Conditions and Demonstration Design

On May 15, 2025, cotton varieties were planted under conventional tillage at 2 seed/ft with a hill drop planter. Thimet insecticide (5 lb/ac) was applied in-furrow during planting. The demonstration plots were planted over an area of Red Bay sandy loam and Orangeburg sandy loam soils that was planted in corn during 2024. Prior to planting, any vegetation present was killed by conventional tillage. Prowl H2O (32 oz/A) was applied on May 2, 2025. Glyphosate (32 oz/A) was applied on June 24, 2025. All plots were fertilized with nitrogen at a rate of 100 lb/A using urea as a source and potash at rate of 80 lb/A using Murate of potash in 2 split applications based on recommendations from Waters Lab. The first split of urea and potash (60% of total) were applied approximately two weeks after planting (June 1st). The second split of urea and potash (remaining 40%) were applied at the time of squaring (July 14th). On July 15, 2025, Pix (10 oz/A) was applied. On July 16, 2025, irrigation was applied to all plots (1.0 in). On July 21, 2025, RoundUp Power Max (32 oz/A) and Staple (2.5 oz/A) were applied. Insects were controlled with applications of Bifenthrin (8 oz/A) on August 22, 2025, and Bidrin (8 oz/A) on August 26, 2025. On September 4, 2025, Pix (24 oz/A) was applied. On September 10, 2025, irrigation was applied (0.75 in). The crop was defoliated on October 23, 2025, with Folex (24 oz/A) + Boll Buster (48 oz/A) + Take Down (4 oz/A). All plots were harvested on November 3, 2025. The nonreplicated plots were 4 rows spaced 36 in. apart (12 ft wide) by 350 ft long. Yield data was collected from 4 rows of each demonstration plot.

Rainfall in Jay, Florida, for June and July 2025 was almost three times the long-term average (Table 1). This excessive rainfall hindered field operations during these months and likely negatively influenced yield of some varieties. The total rainfall for the growing period was 39.8 in, which was above the average.

Table 1. Weather conditions during the 2025 cotton demonstration.

Month	Total Rainfall (in)	Minimum temperature (°F)	Maximum temperature (°F)
May (15-31)	3.56	61	93
June	14.29	63	94
July	12.47	71	95
August	4.36	63	96
September	2.14	59	95
October	2.98	39	92
November (1-3)	0	40	71
Total	**39.8**		

2025 Demonstration Summary

Cotton lint yields in the demonstration plots ranged from 726 lbs/A to 1245 lbs/A with DP2127 B3XF, PHY415 W3FE, PHY475 W3FE, and NG4507 B3TXF being the top yielding varieties (Table 2). Yield of AM9831 B3XF was likely negatively influenced by water standing in this plot for extended period due to the excessive rainfall. Table 2 assumes a ginning turnout of 40%.

Table 2. 2025 cotton demonstration plot yields at the Jay Research Facility.

Company	Variety	Seed Cotton (lb/ac)	Lint Yield (lb/ac)	Bales/ac
Deltapine	DP 2038 B3XF	2,6445	1,058	2.20
Deltapine	**DP 2127 B3XF**	**3,111**	**1,245**	**2.59**
Deltapine	DP 2317 B3TXF	2,800	1,120	2.33
Deltapine	DP 2328 B3TXF	2,800	1,120	2.33
Deltapine	DP 2333 B3XF	2,852	1,141	2.38
Deltapine	DP 2414 B3TXF	3,060	1,224	2.55
Deltapine	DP 2522 B3TXF	3,060	1,224	2.55
Deltapine	DP 2537 B3TXF	2,697	1,079	2.25
PhytoGen	PHY 411 W3FE	2,956	1,182	2.46
PhytoGen	**PHY 415 W3FE**	**3,111**	**1,245**	**2.59**
PhytoGen	**PHY 475 W3FE**	**3,111**	**1,245**	**2.59**
PhytoGen	PHY 400 W3FE	2,126	851	1.77
PhytoGen	PHY 443 W3FE	2,800	1,120	2.33
NexGen	NG 5430 B3XF	2,230	892	1.86
NexGen	**NG 4507 B3TXF**	**3,111**	**1,245**	**2.59**
Armor	AM 9831 B3XF	1,815	726	1.51
Armor	AM 9371 B3XF	2,334	933	1.94

*Assumes a ginning turnout of 40% and a bale weight of 480 lbs.