

Cotton Variety Observation, Safford Agricultural Center 1986

Lee J. Clark and Eddie W. Carpenter

ABSTRACT

The check variety, Delta Pine 90, produced more than any of the new varieties in this unreplicated strip test. However, three new varieties produced yields within 10 % of the Delta Pine 90 yields; they were BR 110, Northrup King 111 and Germains GC 365.

INTRODUCTION

Genetic material developed in other areas should be evaluated locally before the varieties are taken out to be replicated in on-farm demonstrations. This strip trial is one of those screening evaluations. Delta Pine 90, the most popular short staple cotton variety in the area, was used as the check in this test.

MATERIALS AND METHODS

This varietal observation was performed on the Safford Agricultural Center with a field length of 200 feet and using four 40-inch beds per variety.

CROP HISTORY

SOIL TYPE:	Grabe clay loam
PREVIOUS CROP:	Small grains
TILLAGE:	Ripped, disced twice, bedded
PLANTING:	Date: 21 April 1987 Rate: 25 lbs/ac
HERBICIDE:	2 pints/ac of Prowl preplant, 3.2 pints of Cotton-Pro at layby
FERTILIZER:	100 pounds of Urea and 200 pounds of 16-20-0 per acre, preplant
IRRIGATION:	Pre-irrigation + 6 irrigations (ca. 42 ac inches)
INSECTICIDES:	3 applications of Pydrin
DEFOLIATION:	None
HARVEST:	First pick 22 October Second pick 1 December

The two center rows of each strip were picked with a two row cotton picker to eliminate any border effect from different plant heights of the varieties. Weights were taken by dumping the seed cotton collected after each pass into a basket scale.

RESULTS

Table 1. Plant Height and Yields of Short Staple Cotton Varieties, Safford Agricultural Center, 1987.

Variety	Plant Height (in)	1st Pk Yield	Percent 1st Pk	Sd Cot Yield	% of Check
Delta Pine 90	33.8	3757	83.8	4443.2	100.0
BR 110	31.3	3594	83.1	4322.3	97.3
Northrup King 111	30.5	3512	84.4	4162.2	93.7
Germaines GC 365	36.3	3267	79.4	4113.2	92.6
White Lightning	27.6	3348	85.6	3913.9	88.1
Germaines GC 510	29.3	2695	73.8	3654.2	82.2
Northrup King KC380	30.1	3104	89.4	3472.9	78.2
New Mexico Hybrid	31.4	2368	71.9	3296.4	74.2
Acala 1517-77BR	35.1	2205	66.9	3294.8	74.2
Abundancia	28.0	2614	92.8	2816.2	63.4
Germaines GC 357	35.5	1797	65.6	2741.0	61.7
Hybrid NX-1	31.9	1879	71.3	2633.2	59.3
Dawn	31.8	1634	80.4	2032.1	45.7

Unfortunately, lint turnouts and quality were not available before this publication, but should be available from the authors before the 1988 planting season.

BR 110 seed was produced by Desert Cotton Research and distributed through Arizona Processing, Inc. This variety did well in this strip trial, as well as in the two variety trials in Graham county. It purportedly has a lint quality similar to DP 90, but BR 110 is shorter in stature.

White Lightning, Abundancia and Dawn are produced by Seeds of Tomorrow in Davis, CA. White Lightning and Dawn showed wilt symptoms, and Abundancia showed some genetic irregularity between plants. All three varieties are purported to have quality similar to DP 90. White Lightning is an early maturing variety and was also planted off the experiment station in a field of Stoneville 506 in a double-crop planting for observation. No yields were taken, but White Lightning grew taller than the Stoneville 506 and matured and yielded much the same.