

**BXN 49B AND ST 457: TWO NEW VARIETIES FROM
STONEVILLE PEDIGREED SEED COMPANY**

**Michael Robinson
Stoneville Pedigreed Seed Company
Stoneville, MS**

Abstract

BXN 49B is a new stacked transgene product available from Stoneville Pedigreed Seed Company in 2002. BXN 49B was developed through backcrossing to ST 474, an industry standard. BXN 49B combines the patented BXN[®] gene with Monsanto's Bollgard[®] gene. BXN 49B has a hairy leaf and is an early-mid maturing variety with excellent adaptation across the cotton belt.

ST 457 is a new early-mid maturing variety that combines a high yield potential with improved fiber quality that is adapted across the Cotton Belt. ST 457 was developed by Stoneville's Mid-South and Desert Southwest programs and originated from a cross of ST 468 x LA 887. It is an early-mid maturing variety with a hairy leaf type.

Stoneville Pedigreed Seed Company evaluated BXN 49B and ST 457 in replicated yield trials in 2000 and 2001. BXN 49B and ST 457 were also included in the 2001 university trials under the experimental designation STX0001 and STX 8M007, respectively. Nineteen internal Beltwide trials conducted in 2001 demonstrate that the lint yield of BXN 49B was not statistically different from ST 4691B, BXN 47, or ST 474 (Table 1). Lint yield for ST 457 was not significantly different from ST 474. Fiber property comparisons among these five varieties found no statistical difference for fiber length. BXN 49B has significantly lower fiber strength than ST 474 while ST 457 has significantly higher fiber strength than the other four varieties. The micronaire values for BXN 49B and ST 457 are significantly lower than ST 474 and BXN 47, but are equal to ST 4691B.

Plant mapping data was collected in 2000 and 2001 at six mid-south locations (Table 2). These data detected no significant difference in plant height, height to first fruiting branch, node to first fruiting branch, or total number of nodes between BXN 49B, ST 4691B, BXN 47, and ST 474. ST 457 was significantly shorter in height than the other four varieties and the height of its first fruiting branch was lower than BXN 47, BXN 49B, and ST 474. ST 457 has significantly fewer nodes to the first fruiting branch than ST 4691B, BXN 47, and BXN 49B but is not different from ST 474. No significant differences were detected for total number of nodes between ST 457 and the other four varieties.

Table 1. Agronomic performance of BXN 49B and ST 457 compared to ST 4691B, BXN 47, and ST 474.

Variety	Yield	Length	Strength	Micronaire
ST 4691B	1257	1.11	28.0	4.2
BXN 47	1250	1.11	28.0	4.3
BXN 49B	1215	1.12	27.9	4.1
ST 474	1207	1.10	28.4	4.5
ST 457	1179	1.12	29.4	4.1
LSD	45	0.02	0.3	0.1

Table 2. Phenotypic characteristics of BXN 49B and ST 457 compared to ST 4691B, BXN 47, and ST 474.

Variety	Height	HFFB	NFFB	Nodes
ST 4691B	40.9	9.6	6.5	21.7
BXN 47	40.7	9.8	6.5	21.8
BXN 49B	40.4	9.7	6.8	22.0
ST 474	40.5	9.7	6.4	21.8
ST 457	39.0	8.3	5.9	20.6
LSD	0.9	1.3	0.5	2.8