

**ST 4646B2R: A NEW EARLY-MID SEASON  
BG2™ + RR™ VARIETY FROM STONEVILLE**

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**Abstract**

ST 4646B2R is a new Bollgard II® plus Roundup Ready® variety available from Stoneville for 2004. ST 4646B2R was derived from a backcross breeding process. ST 4646B2R has a hairy leaf and is an early-mid maturing variety that is well adapted across the cotton belt.

Emergent Genetics evaluated ST 4646B2R in replicated trials in 2002 and 2003 and ST 4646B2R was entered into university trials in 2003 under the experimental designation STX4646B2R. Eight internal Beltwide trials conducted in 2002 demonstrate that ST 4646B2R was not significantly different from ST 4892BR or PM 1218 BGRR for lint yield, fiber strength, or micronaire (Table 1). ST 4646B2R did have a significantly shorter fiber when compared to ST 4892BR but was equal to PM 1218 BGRR. In 2003, ST 4646B2R was evaluated in sixteen internal Beltwide locations (Table 2). ST 4646B2R was not significantly different in lint yield in the Southeast or Texas High Plains when compared to ST 4892BR or ST 4563B2. ST 4646B2R had a significantly longer and finer fiber when compared to ST 4892BR and was equal for fiber strength. ST 4646B2R was statistically equal to ST 4563B2 for fiber length and micronaire. ST 4646B2R had a stronger fiber than ST 4563B2.

Table 1. Agronomic performance of ST 4646B2R compared to ST 4892BR and PM 1218 BG/RR in 2002.

| Variety              | Yield  | Length | Strength | Micronaire |
|----------------------|--------|--------|----------|------------|
|                      | lbs./A | UHM    | g/tex    |            |
| ST 4892BR            | 1470   | 1.10   | 29.2     | 4.8        |
| ST 4646B2R           | 1393   | 1.12   | 29.5     | 4.6        |
| PM 1218 BG/RR        | 1338   | 1.09   | 28.4     | 4.7        |
| LSD <sub>(.05)</sub> | 116    | 0.01   | 1.1      | 0.2        |

Table 2. Agronomic performance of ST 4646B2R compared to ST 4892BR and ST 4563B2 in 2003.

| Variety              | SE <sup>1</sup> | MS <sup>1</sup> | THP <sup>1</sup> | AZ <sup>1</sup> | OV   | Length <sup>2</sup> | Strength <sup>2</sup> | Micronaire <sup>2</sup> |
|----------------------|-----------------|-----------------|------------------|-----------------|------|---------------------|-----------------------|-------------------------|
|                      | (6)             | (5)             | (2)              | (3)             | (16) |                     |                       |                         |
|                      | lbs./A          |                 |                  |                 |      | UHM                 | g/tex                 |                         |
| ST 4892BR            | 1187            | 1677            | 1614             | 1697            | 1544 | 1.10                | 27.3                  | 4.7                     |
| ST 4563B2            | 1154            | 1703            | 1554             | 1705            | 1526 | 1.13                | 26.3                  | 4.5                     |
| ST 4646B2R           | 1157            | 1417            | 1473             | 1529            | 1394 | 1.13                | 27.7                  | 4.5                     |
| LSD <sub>(.05)</sub> | 78              | 93              | 142              | 115             | 53   | 0.01                | 0.4                   | 0.1                     |

1, Number in parenthesis indicates number of locations within region

2, Results from 2003 combined location analysis.