

United States Department of Agriculture, University of Arkansas, and County Governments Cooperating

Cotton Comments

Cotton Yield, Quality, and Gross Returns: 2006 Arkansas Cotton Variety Test

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Gross revenue in cotton production is a function of lint yield and lint price. Lint price will be approximated by CCC loan rate. For cotton, CCC loan rate is government loan price adjusted for fiber quality. Gross revenue is then the product of CCC loan rate and per acre lint yield.

The results of this publication are for one year only and were based on data from the 2006 Arkansas cotton variety test (Bourland et al., 2007). These data include yield by variety for each of five different tests, three sites (2 irrigated and 1 non-irrigated) in northern Arkansas (Tables 1, 2, and 3) and two sites (irrigated) in southern Arkansas (Tables 4 and 5). Table 6 is a summary of variety tests across the state. The summary table does not make a distinction of test sites or irrigated—non-irrigated management regime. The data include respective micronaire, staple length, uniformity, and fiber strength for each variety. Using the 2006 CCC loan value table (Anonymous, 2006), a loan value was calculated for each of the varieties in each test. A color grade of 41 and a leaf grade of 4 were assumed for all varieties. Micronaire, staple length, uniformity, and fiber strength measurements of each variety were used to determine premium and discount values for each variety for each test. It was further assumed that all price data were taken from the Greenwood, MS station. The CCC

loan values were then ranked to determine which variety yielded the greatest price per pound adjusted for fiber quality characteristics. Using these calculated loan values, gross revenue for an acre of each variety for each test was computed. These gross revenues were then ranked to determine the variety that yielded the greatest revenue inclusive of fiber quality premiums and discounts for that variety.

Calculated CCC loan values and gross revenues for all varieties are displayed in Tables 1—6. In two cases, Tables 2 and 3, the non-irrigated Tunica silty clay soil trial at Keiser and irrigated Dundee silt loam soil test at Judd Hill, ranking varieties by gross revenue is the same as ranking by lint yield. In Table 1, the irrigated trial at Keiser on a Tunica silty clay soil, the top two thirds of varieties are shuffled due to variety advantages and disadvantages in various fiber qualities. Only an 80 pound difference in lint yield separates the top five performers. In Table 4, the irrigated trial at Marianna on a Calloway silt loam, the top yielding variety ST 5599 BR with 1674 pounds of lint is placed second in gross revenue as ST 5242 BR (the top gross revenue contender) has 4.25¢ per pound better loan value due to better fiber quality (5599 suffered a high micronaire discount) generating more revenue than the 34 pound increase in lint yield. Table 5, the irrigated Desha silt loam trial at Rohwer, the highest yielding variety DP 515 BG/RR with

1600 pounds of lint but a discount for high micronaire value became second place in gross revenue behind DP 454 BG/RR the variety providing highest gross revenue at \$835.05 per acre. Interestingly, Arkot 9304b pulled up in ranking from 11th in overall yield to 6th in gross revenue because it had a good well rounded fiber package that did not suffer any fiber discounts due to lower quality. Similarly in Table 6, state summary, the second highest yielding variety ST 5599 BR is placed 6th behind ST 5242 BR (6th highest yielder) where a 45 pound yield advantage is

outranked by better fiber premiums.

Equality across varieties on color grade and leaf grade was assumed. This may bias the study with respect to hairy leaf cultivars. Production costs will vary across different genetic traits. Production budgets for cotton in various regions of the state, tillage strategies, and genetic traits utilized may be obtained from the following site <http://www.arkagriculture.org/crops/cotton/budgets/default.htm>.

References

Anonymous, 2006 CCC Loan Values at Greenwood, MS and equivalent Locations, Courtesy of Staplcotn.

Bourland, F.M., B. S. Brown, J. M. Hornbeck, and K. Kaufman. 2007, Arkansas Cotton Variety Test 2006. Arkansas Agricultural Experiment Station Research Series 547.

Table 1. 2006 Arkansas Cotton Variety Test Results - Irrigated Tunica Silty Clay Soil at Keiser, AR.

Variety	Lint Yield ^a lbs. (<i>r</i>)	Micronaire ^b	Length ^{bc} in.	Uniformity ^{bc} %	Strength ^b g/tex	CCC Loan Value ^a ¢/lb (<i>r</i>)	Gross Revenue ^a \$/acre (<i>r</i>)
PHY 370 WR	1164 (<i>1</i>)	4.70 (0.00)	1.13 (2.05)	84.60 (0.45)	31.80 (0.45)	55.30 (<i>8</i>)	643.69 (<i>1</i>)
DP 432 RR	1139 (<i>3</i>)	4.80 (0.00)	1.14 (2.05)	85.10 (0.45)	32.50 (0.50)	55.35 (<i>5</i>)	630.44 (<i>2</i>)
PHY 310 R	1119 (<i>4</i>)	4.70 (0.00)	1.12 (1.40)	84.80 (0.45)	31.80 (0.45)	54.65 (<i>20</i>)	611.53 (<i>3</i>)
ST 5599 BR	1149 (<i>2</i>)	5.00 (-2.75)	1.14 (2.05)	84.50 (0.45)	31.50 (0.45)	52.55 (<i>24</i>)	603.80 (<i>4</i>)
DP 393	1084 (<i>5</i>)	4.90 (0.00)	1.19 (2.05)	85.80 (0.55)	35.60 (0.50)	55.45 (<i>2</i>)	601.08 (<i>5</i>)
DP 455 BG/RR	1079 (<i>6</i>)	4.10 (0.20)	1.20 (2.05)	84.20 (0.35)	32.10 (0.45)	55.40 (<i>4</i>)	597.77 (<i>6</i>)
DP 445 BG/RR	1076 (<i>7</i>)	4.50 (0.00)	1.17 (2.05)	84.60 (0.45)	33.20 (0.50)	55.35 (<i>5</i>)	595.57 (<i>7</i>)
DP 454 BG/RR	1063 (<i>8</i>)	4.20 (0.20)	1.11 (1.40)	82.90 (0.25)	29.70 (0.25)	54.45 (<i>22</i>)	578.80 (<i>8</i>)
ST 4575 BR	1037 (<i>10</i>)	4.70 (0.00)	1.13 (2.05)	84.10 (0.35)	33.50 (0.50)	55.25 (<i>12</i>)	572.94 (<i>9</i>)
Arkot 9304b	1036 (<i>11</i>)	4.70 (0.00)	1.13 (2.05)	84.40 (0.35)	32.60 (0.50)	55.25 (<i>12</i>)	572.39 (<i>10</i>)
DP 444 BG/RR	1033 (<i>12</i>)	4.10 (0.20)	1.14 (2.05)	84.40 (0.35)	29.60 (0.25)	55.20 (<i>15</i>)	570.22 (<i>11</i>)
DP 515 BG/RR	1032 (<i>13</i>)	4.50 (0.00)	1.15 (2.05)	83.60 (0.35)	28.80 (0.00)	54.75 (<i>19</i>)	565.02 (<i>12</i>)
ST 5242 BR	1011 (<i>14</i>)	4.70 (0.00)	1.12 (1.40)	83.90 (0.35)	30.50 (0.45)	54.55 (<i>21</i>)	551.50 (<i>13</i>)
PHY 480 WR	1039 (<i>9</i>)	5.00 (-2.75)	1.16 (2.05)	85.20 (0.45)	32.60 (0.50)	52.60 (<i>23</i>)	546.51 (<i>14</i>)
PHY 470 WR	983 (<i>15</i>)	4.80 (0.00)	1.13 (2.05)	83.50 (0.35)	31.40 (0.45)	55.20 (<i>15</i>)	542.62 (<i>15</i>)
Arkot 9409	944 (<i>17</i>)	4.30 (0.00)	1.13 (2.05)	83.70 (0.35)	34.30 (0.50)	55.25 (<i>12</i>)	521.56 (<i>16</i>)
FM 960 BR	944 (<i>18</i>)	4.70 (0.00)	1.16 (2.05)	84.20 (0.35)	32.30 (0.45)	55.20 (<i>15</i>)	521.09 (<i>17</i>)
DP 434 RR	940 (<i>19</i>)	4.50 (0.00)	1.16 (2.05)	84.60 (0.45)	29.80 (0.25)	55.10 (<i>18</i>)	517.94 (<i>18</i>)
Arkot 9308	980 (<i>16</i>)	5.30 (-3.60)	1.18 (2.05)	86.00 (0.55)	35.10 (0.50)	51.85 (<i>26</i>)	508.13 (<i>19</i>)
DX 25105N	924 (<i>20</i>)	5.00 (-2.75)	1.16 (2.05)	83.90 (0.35)	32.10 (0.45)	52.45 (<i>25</i>)	484.64 (<i>20</i>)
FM 955 B2LL	834 (<i>21</i>)	4.80 (0.00)	1.20 (2.05)	84.70 (0.45)	32.20 (0.45)	55.30 (<i>8</i>)	461.20 (<i>21</i>)
FM 966 LL	827 (<i>22</i>)	4.80 (0.00)	1.15 (2.05)	85.00 (0.45)	33.20 (0.50)	55.35 (<i>5</i>)	457.74 (<i>22</i>)
FM 958 LL	771 (<i>23</i>)	4.60 (0.00)	1.21 (2.05)	85.10 (0.45)	31.30 (0.45)	55.30 (<i>8</i>)	426.36 (<i>23</i>)
FM 960 B2R	731 (<i>24</i>)	4.80 (0.00)	1.17 (2.05)	84.70 (0.45)	32.30 (0.45)	55.30 (<i>8</i>)	404.24 (<i>24</i>)
FM 965 B2LL	720 (<i>25</i>)	4.20 (0.20)	1.20 (2.05)	84.50 (0.45)	32.40 (0.45)	55.50 (<i>1</i>)	399.60 (<i>25</i>)
Arkot 9304a	657 (<i>26</i>)	4.90 (0.00)	1.17 (2.05)	85.70 (0.55)	34.20 (0.50)	55.45 (<i>2</i>)	364.31 (<i>26</i>)

^a The numbers in parenthesis and italics represent that variety's rank in that characteristic.

^b The numbers in parenthesis represent premium (positive number), no change (0.00), or discount (negative number) given the value of that fiber trait for that variety.

^c Measurements of fiber length and length uniformity may be exaggerated since samples were processed on a small laboratory gin with no lint cleaning. Although values are exaggerated, comparisons among varieties for these parameters are generally valid, but may be biased against hairy leaf varieties since smooth leaf varieties tend to require less lint cleaning than hairy leaf varieties.

Table 2. 2006 Arkansas Cotton Variety Test Results - Non-irrigated Tunica Silty Clay at Keiser, AR.

Variety	Lint Yield ^a lbs. (<i>r</i>)	Micronaire ^b	Length ^{bc} in.	Uniformity ^{bc} %	Strength ^b g/tex	CCC Loan Value ^a ¢/lb (<i>r</i>)	Gross Revenue ^a \$/acre (<i>r</i>)
ST 5599 BR	1261 (<i>1</i>)	4.90 (0.00)	1.16 (2.05)	85.30 (0.45)	31.90 (0.45)	55.30 (<i>10</i>)	697.33 (<i>1</i>)
ST 5242 BR	1156 (<i>2</i>)	4.70 (0.00)	1.14 (2.05)	84.40 (0.35)	29.80 (0.25)	55.00 (<i>21</i>)	635.80 (<i>2</i>)
DP 454 BG/RR	1150 (<i>3</i>)	4.40 (0.00)	1.16 (2.05)	84.30 (0.35)	30.80 (0.45)	55.20 (<i>17</i>)	634.80 (<i>3</i>)
DP 515 BG/RR	1146 (<i>4</i>)	4.90 (0.00)	1.20 (2.05)	85.10 (0.45)	30.80 (0.45)	55.30 (<i>10</i>)	633.74 (<i>4</i>)
ST 4575 BR	1136 (<i>5</i>)	4.20 (0.20)	1.16 (2.05)	84.30 (0.35)	32.80 (0.50)	55.45 (<i>1</i>)	629.91 (<i>5</i>)
DP 455 BG/RR	1122 (<i>6</i>)	4.00 (0.20)	1.19 (2.05)	84.20 (0.35)	32.60 (0.50)	55.45 (<i>1</i>)	622.15 (<i>6</i>)
PHY 370 WR	1121 (<i>7</i>)	4.60 (0.00)	1.12 (1.40)	84.90 (0.45)	31.80 (0.45)	54.65 (<i>22</i>)	612.63 (<i>7</i>)
PHY 470 WR	1094 (<i>8</i>)	4.70 (0.00)	1.15 (2.05)	84.50 (0.45)	30.90 (0.45)	55.30 (<i>10</i>)	604.98 (<i>8</i>)
DP 432 RR	1073 (<i>10</i>)	4.80 (0.00)	1.15 (2.05)	84.60 (0.45)	33.00 (0.50)	55.35 (<i>5</i>)	593.91 (<i>9</i>)
DP 444 BG/RR	1060 (<i>11</i>)	4.30 (0.00)	1.17 (2.05)	84.90 (0.45)	31.10 (0.45)	55.30 (<i>10</i>)	586.18 (<i>10</i>)
PHY 480 WR	1056 (<i>12</i>)	4.60 (0.00)	1.21 (2.05)	85.70 (0.55)	33.80 (0.50)	55.45 (<i>3</i>)	585.55 (<i>11</i>)
DP 393	1028 (<i>13</i>)	4.60 (0.00)	1.17 (2.05)	84.30 (0.35)	32.70 (0.50)	55.25 (<i>15</i>)	567.97 (<i>12</i>)
PHY 310 R	1076 (<i>9</i>)	5.10 (-2.75)	1.13 (2.05)	83.90 (0.35)	31.80 (0.45)	52.45 (<i>24</i>)	564.36 (<i>13</i>)
FM 960 B2R	978 (<i>14</i>)	4.50 (0.00)	1.18 (2.05)	84.50 (0.45)	32.70 (0.50)	55.35 (<i>5</i>)	541.32 (<i>14</i>)
FM 958 LL	952 (<i>17</i>)	4.60 (0.00)	1.22 (2.05)	84.60 (0.45)	31.20 (0.45)	55.30 (<i>10</i>)	526.46 (<i>15</i>)
DX 25105N	944 (<i>18</i>)	4.70 (0.00)	1.17 (2.05)	84.40 (0.35)	30.80 (0.45)	55.20 (<i>17</i>)	521.09 (<i>16</i>)
DP 434 RR	918 (<i>19</i>)	4.40 (0.00)	1.20 (2.05)	85.50 (0.55)	30.40 (0.25)	55.20 (<i>19</i>)	506.74 (<i>17</i>)
Arkot 9409	952 (<i>16</i>)	5.10 (-2.75)	1.14 (2.05)	85.20 (0.45)	32.00 (0.45)	52.55 (<i>23</i>)	500.28 (<i>18</i>)
Arkot 9304b	958 (<i>15</i>)	5.00 (-2.75)	1.12 (1.40)	84.60 (0.45)	32.80 (0.50)	51.95 (<i>25</i>)	497.68 (<i>19</i>)
FM 960 BR	897 (<i>20</i>)	4.90 (0.00)	1.14 (2.05)	83.40 (0.25)	34.40 (0.50)	55.15 (<i>20</i>)	494.70 (<i>20</i>)
FM 966 LL	869 (<i>21</i>)	4.50 (0.00)	1.15 (2.05)	85.00 (0.45)	34.20 (0.50)	55.35 (<i>5</i>)	480.99 (<i>21</i>)
DP 445 BG/RR	839 (<i>22</i>)	4.60 (0.00)	1.18 (2.05)	85.30 (0.45)	34.50 (0.50)	55.35 (<i>5</i>)	464.39 (<i>22</i>)
Arkot 9304a	816 (<i>23</i>)	4.70 (0.00)	1.18 (2.05)	84.10 (0.35)	33.10 (0.50)	55.25 (<i>15</i>)	450.84 (<i>23</i>)
FM 955 B2LL	750 (<i>25</i>)	4.90 (0.00)	1.24 (2.05)	86.00 (0.55)	31.40 (0.45)	55.40 (<i>4</i>)	415.50 (<i>24</i>)
Arkot 9308	765 (<i>24</i>)	5.30 (-3.60)	1.19 (2.05)	86.00 (0.55)	35.20 (0.50)	51.85 (<i>26</i>)	396.65 (<i>25</i>)
FM 965 B2LL	650 (<i>26</i>)	4.60 (0.00)	1.20 (2.05)	85.30 (0.45)	34.40 (0.50)	55.35 (<i>5</i>)	359.78 (<i>26</i>)

^a The numbers in parenthesis and italics represent that variety's rank in that characteristic.

^b The numbers in parenthesis represent premium (positive number), no change (0.00), or discount (negative number) given the value of that fiber trait for that variety.

^c Measurements of fiber length and length uniformity may be exaggerated since samples were processed on a small laboratory gin with no lint cleaning. Although values are exaggerated, comparisons among varieties for these parameters are generally valid, but may be biased against hairy leaf varieties since smooth leaf varieties tend to require less lint cleaning than hairy leaf varieties.

Table 3. 2006 Arkansas Cotton Variety Test Results - Irrigated Dundee Silt Loam at Judd Hill, AR.

Variety	Lint Yield ^a lbs. (<i>r</i>)	Micronaire ^b	Length ^{bc} in.	Uniformity ^{bc} %	Strength ^b g/tex	CCC Loan Value ^a ¢/lb (<i>r</i>)	Gross Revenue ^a \$/acre (<i>r</i>)
DP 444 BG/RR	1409 (<i>1</i>)	4.10 (0.20)	1.16 (2.05)	84.30 (0.35)	30.50 (0.45)	55.40 (<i>11</i>)	780.59 (<i>1</i>)
PHY 370 WR	1380 (<i>2</i>)	3.70 (0.20)	1.13 (2.05)	84.00 (0.35)	31.60 (0.45)	55.40 (<i>11</i>)	764.52 (<i>2</i>)
DP 434 RR	1313 (<i>3</i>)	3.80 (0.20)	1.24 (2.05)	85.30 (0.45)	29.40 (0.00)	55.05 (<i>25</i>)	722.81 (<i>3</i>)
DP 454 BG/RR	1290 (<i>4</i>)	3.90 (0.20)	1.14 (2.05)	84.70 (0.45)	30.80 (0.45)	55.50 (<i>2</i>)	715.95 (<i>4</i>)
DP 445 BG/RR	1230 (<i>5</i>)	4.30 (0.00)	1.20 (2.05)	85.80 (0.55)	34.80 (0.50)	55.45 (<i>9</i>)	682.04 (<i>5</i>)
ST 4575 BR	1223 (<i>6</i>)	4.40 (0.00)	1.15 (2.05)	85.00 (0.45)	34.50 (0.50)	55.35 (<i>16</i>)	676.93 (<i>6</i>)
PHY 480 WR	1205 (<i>7</i>)	4.30 (0.00)	1.18 (2.05)	85.10 (0.45)	33.50 (0.50)	55.35 (<i>16</i>)	666.97 (<i>7</i>)
DX 25105N	1185 (<i>8</i>)	4.30 (0.00)	1.18 (2.05)	84.50 (0.45)	31.20 (0.45)	55.30 (<i>19</i>)	655.31 (<i>8</i>)
PHY 470 WR	1144 (<i>10</i>)	4.00 (0.20)	1.14 (2.05)	84.30 (0.35)	30.60 (0.45)	55.40 (<i>11</i>)	633.78 (<i>9</i>)
ST 5242 BR	1148 (<i>9</i>)	4.50 (0.00)	1.14 (2.05)	84.70 (0.45)	28.50 (0.00)	54.85 (<i>26</i>)	629.68 (<i>10</i>)
PHY 310 R	1136 (<i>12</i>)	4.10 (0.20)	1.13 (2.05)	84.30 (0.35)	32.30 (0.45)	55.40 (<i>11</i>)	629.34 (<i>11</i>)
DP 393	1137 (<i>11</i>)	4.40 (0.00)	1.18 (2.05)	84.80 (0.45)	32.00 (0.45)	55.30 (<i>19</i>)	628.76 (<i>12</i>)
DP 515 BG/RR	1133 (<i>13</i>)	4.40 (0.00)	1.18 (2.05)	84.10 (0.35)	30.60 (0.45)	55.20 (<i>22</i>)	625.42 (<i>13</i>)
ST 5599 BR	1117 (<i>14</i>)	4.20 (0.20)	1.15 (2.05)	83.70 (0.35)	31.00 (0.45)	55.40 (<i>11</i>)	618.82 (<i>14</i>)
FM 960 BR	1102 (<i>15</i>)	3.90 (0.20)	1.18 (2.05)	83.80 (0.35)	33.00 (0.50)	55.45 (<i>7</i>)	611.06 (<i>15</i>)
DP 432 RR	1099 (<i>16</i>)	3.60 (0.00)	1.18 (2.05)	84.40 (0.35)	32.00 (0.45)	55.20 (<i>22</i>)	606.65 (<i>16</i>)
DP 455 BG/RR	1088 (<i>17</i>)	3.80 (0.20)	1.19 (2.05)	82.90 (0.25)	30.90 (0.45)	55.30 (<i>19</i>)	601.66 (<i>17</i>)
FM 960 B2R	1075 (<i>18</i>)	4.40 (0.00)	1.15 (2.05)	83.60 (0.35)	31.90 (0.45)	55.20 (<i>22</i>)	593.40 (<i>18</i>)
FM 966 LL	1057 (<i>19</i>)	4.20 (0.20)	1.18 (2.05)	84.20 (0.35)	33.10 (0.50)	55.45 (<i>7</i>)	586.11 (<i>19</i>)
FM 958 LL	1034 (<i>20</i>)	4.20 (0.20)	1.23 (2.05)	84.70 (0.45)	32.30 (0.45)	55.50 (<i>2</i>)	573.87 (<i>20</i>)
Arkot 9304b	978 (<i>21</i>)	4.20 (0.20)	1.16 (2.05)	85.40 (0.45)	31.60 (0.45)	55.50 (<i>2</i>)	542.79 (<i>21</i>)
Arkot 9304a	973 (<i>22</i>)	4.30 (0.00)	1.16 (2.05)	84.50 (0.45)	33.60 (0.50)	55.35 (<i>16</i>)	538.56 (<i>22</i>)
FM 965 B2LL	957 (<i>23</i>)	3.90 (0.20)	1.22 (2.05)	85.30 (0.45)	33.30 (0.50)	55.55 (<i>1</i>)	531.61 (<i>23</i>)
Arkot 9308	951 (<i>24</i>)	4.80 (0.00)	1.21 (2.05)	85.50 (0.55)	34.30 (0.50)	55.45 (<i>9</i>)	527.33 (<i>24</i>)
FM 955 B2LL	937 (<i>25</i>)	3.90 (0.20)	1.24 (2.05)	85.20 (0.45)	31.20 (0.45)	55.50 (<i>2</i>)	520.04 (<i>25</i>)
Arkot 9409	902 (<i>26</i>)	4.10 (0.20)	1.20 (2.05)	85.00 (0.45)	31.80 (0.45)	55.50 (<i>2</i>)	500.61 (<i>26</i>)

^a The numbers in parenthesis and italics represent that variety's rank in that characteristic.

^b The numbers in parenthesis represent premium (positive number), no change (0.00), or discount (negative number) given the value of that fiber trait for that variety.

^c Measurements of fiber length and length uniformity may be exaggerated since samples were processed on a small laboratory gin with no lint cleaning. Although values are exaggerated, comparisons among varieties for these parameters are generally valid, but may be biased against hairy leaf varieties since smooth leaf varieties tend to require less lint cleaning than hairy leaf varieties.

Table 4. 2006 Arkansas Cotton Variety Test Results - Irrigated Calloway Silt Loam at Marianna, AR.

Variety	Lint Yield ^a lbs. (<i>r</i>)	Micronaire ^b	Length ^{bc} in.	Uniformity ^{bc} %	Strength ^b g/tex	CCC Loan Value ^a ¢/lb (<i>r</i>)	Gross Revenue ^a \$/acre (<i>r</i>)
ST 5242 BR	1640 (2)	4.80 (0.00)	1.13 (2.05)	84.40 (0.35)	29.70 (0.25)	55.00 (5)	902.00 (1)
ST 5599 BR	1674 (1)	5.30 (-3.60)	1.12 (1.40)	84.00 (0.35)	30.40 (0.25)	50.75 (25)	849.56 (2)
PHY 310 R	1609 (4)	5.00 (-2.75)	1.14 (2.05)	83.60 (0.35)	32.70 (0.50)	52.50 (13)	844.73 (3)
Arkot 9304b	1546 (8)	4.70 (0.00)	1.11 (1.40)	83.20 (0.25)	30.50 (0.45)	54.45 (6)	841.80 (4)
DX 25105N	1603 (5)	5.00 (-2.75)	1.13 (2.05)	83.70 (0.35)	30.70 (0.45)	52.45 (15)	840.77 (5)
ST 4575 BR	1615 (3)	5.40 (-3.60)	1.11 (1.40)	83.40 (0.25)	33.60 (0.50)	50.90 (24)	822.04 (6)
Arkot 9409	1577 (6)	5.00 (-2.75)	1.11 (1.40)	83.70 (0.35)	31.00 (0.45)	51.80 (19)	816.89 (7)
DP 515 BG/RR	1503 (9)	5.10 (-2.75)	1.14 (2.05)	83.90 (0.35)	31.30 (0.45)	52.45 (15)	788.32 (8)
DP 454 BG/RR	1568 (7)	5.00 (-2.75)	1.08 (0.00)	82.70 (0.25)	27.60 (0.00)	49.85 (26)	781.65 (9)
DP 434 RR	1489 (10)	5.20 (-2.75)	1.16 (2.05)	84.50 (0.45)	29.70 (0.25)	52.35 (18)	779.49 (10)
Arkot 9304a	1396 (15)	4.90 (0.00)	1.14 (2.05)	83.80 (0.35)	32.50 (0.50)	55.25 (2)	771.29 (11)
FM 960 BR	1393 (16)	4.90 (0.00)	1.17 (2.05)	84.60 (0.45)	34.30 (0.50)	55.35 (1)	771.03 (12)
DP 455 BG/RR	1357 (19)	4.50 (0.00)	1.17 (2.05)	83.70 (0.35)	31.50 (0.45)	55.20 (4)	749.06 (13)
DP 444 BG/RR	1419 (12)	4.70 (0.00)	1.09 (0.00)	83.20 (0.25)	28.50 (0.00)	52.60 (7)	746.39 (14)
PHY 370 WR	1453 (11)	5.60 (-3.60)	1.12 (1.40)	83.70 (0.35)	32.80 (0.50)	51.00 (23)	741.03 (15)
PHY 470 WR	1408 (13)	5.00 (-2.75)	1.13 (2.05)	84.60 (0.45)	32.30 (0.45)	52.55 (10)	739.90 (16)
PHY 480 WR	1403 (14)	5.20 (-2.75)	1.16 (2.05)	85.30 (0.45)	32.10 (0.45)	52.55 (10)	737.28 (17)
DP 445 BG/RR	1360 (18)	5.10 (-2.75)	1.15 (2.05)	83.80 (0.35)	34.30 (0.50)	52.50 (13)	714.00 (18)
DP 393	1367 (17)	5.30 (-3.60)	1.17 (2.05)	84.90 (0.45)	33.80 (0.50)	51.75 (20)	707.42 (19)
DP 432 RR	1355 (20)	5.50 (-3.60)	1.14 (2.05)	84.50 (0.45)	31.80 (0.45)	51.70 (22)	700.54 (20)
FM 960 B2R	1243 (24)	4.90 (0.00)	1.17 (2.05)	84.10 (0.35)	33.00 (0.50)	55.25 (2)	686.76 (21)
FM 966 LL	1293 (22)	5.10 (-2.75)	1.14 (2.05)	84.50 (0.45)	32.60 (0.50)	52.60 (7)	680.12 (22)
FM 958 LL	1296 (21)	5.10 (-2.75)	1.20 (2.05)	84.40 (0.35)	31.30 (0.45)	52.45 (15)	679.75 (23)
FM 965 B2LL	1241 (25)	5.20 (-2.75)	1.17 (2.05)	84.60 (0.45)	33.00 (0.50)	52.60 (7)	652.77 (24)
Arkot 9308	1250 (23)	5.70 (-3.60)	1.15 (2.05)	84.70 (0.45)	35.80 (0.50)	51.75 (20)	646.88 (25)
FM 955 B2LL	1158 (26)	5.20 (-2.75)	1.21 (2.05)	85.20 (0.45)	31.90 (0.45)	52.55 (10)	608.53 (26)

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^b The numbers in parenthesis represent premium (positive number), no change (0.00), or discount (negative number) given the value of that fiber trait for that variety.

^c Measurements of fiber length and length uniformity may be exaggerated since samples were processed on a small laboratory gin with no lint cleaning. Although values are exaggerated, comparisons among varieties for these parameters are generally valid, but may be biased against hairy leaf varieties since smooth leaf varieties tend to require less lint cleaning than hairy leaf varieties.

Table 5. 2006 Arkansas Cotton Variety Test Results - Irrigated Desha Silt Loam at Rohwer, AR.

Variety	Lint Yield ^a lbs. (<i>r</i>)	Micronaire ^b	Length ^{bc} in.	Uniformity ^{bc} %	Strength ^b g/tex	CCC Loan Value ^a ¢/lb (<i>r</i>)	Gross Revenue ^a \$/acre (<i>r</i>)
DP 454 BG/RR	1528 (2)	4.70 (0.00)	1.13 (2.05)	82.60 (0.25)	28.80 (0.00)	54.65 (4)	835.05 (1)
DP 515 BG/RR	1600 (1)	5.20 (-2.75)	1.15 (2.05)	83.30 (0.25)	27.90 (0.00)	51.90 (17)	830.40 (2)
PHY 310 R	1423 (3)	5.10 (-2.75)	1.08 (0.00)	83.20 (0.25)	29.50 (0.25)	50.10 (25)	712.92 (3)
DX 25105N	1299 (4)	5.20 (-2.75)	1.13 (2.05)	82.70 (0.25)	29.00 (0.00)	51.90 (17)	674.18 (4)
ST 5242 BR	1263 (5)	5.20 (-2.75)	1.13 (2.05)	84.00 (0.35)	28.60 (0.00)	52.00 (16)	656.76 (5)
Arkot 9304b	1202 (11)	4.80 (0.00)	1.11 (1.40)	83.30 (0.25)	30.10 (0.25)	54.25 (7)	652.09 (6)
FM 960 BR	1248 (6)	5.20 (-2.75)	1.11 (1.40)	83.00 (0.25)	29.80 (0.25)	51.50 (23)	642.72 (7)
PHY 370 WR	1232 (8)	5.10 (-2.75)	1.11 (1.40)	83.20 (0.25)	32.10 (0.45)	51.70 (21)	636.94 (8)
FM 966 LL	1225 (9)	5.20 (-2.75)	1.11 (1.40)	83.50 (0.35)	31.30 (0.45)	51.80 (19)	634.55 (9)
ST 5599 BR	1245 (7)	5.50 (-3.60)	1.10 (1.40)	83.00 (0.25)	28.70 (0.00)	50.40 (24)	627.48 (10)
PHY 480 WR	1211 (10)	5.30 (-3.60)	1.13 (2.05)	83.90 (0.35)	32.00 (0.45)	51.60 (22)	624.88 (11)
DP 434 RR	1131 (14)	4.60 (0.00)	1.17 (2.05)	83.70 (0.35)	28.80 (0.00)	54.75 (3)	619.22 (12)
FM 960 B2R	1164 (12)	5.10 (-2.75)	1.15 (2.05)	83.80 (0.35)	31.10 (0.45)	52.45 (12)	610.52 (13)
DP 455 BG/RR	1110 (15)	4.40 (0.00)	1.11 (1.40)	81.90 (0.00)	28.70 (0.00)	53.75 (10)	596.63 (14)
DP 393	1133 (13)	5.10 (-2.75)	1.14 (2.05)	83.50 (0.35)	32.40 (0.45)	52.45 (12)	594.26 (15)
DP 445 BG/RR	1059 (17)	4.90 (0.00)	1.15 (2.05)	84.10 (0.35)	32.60 (0.50)	55.25 (1)	585.10 (16)
ST 4575 BR	1069 (16)	4.90 (0.00)	1.12 (1.40)	83.70 (0.35)	32.30 (0.45)	54.55 (5)	583.14 (17)
Arkot 9409	1054 (19)	4.80 (0.00)	1.10 (1.40)	83.40 (0.25)	29.90 (0.25)	54.25 (7)	571.80 (18)
DP 444 BG/RR	1051 (20)	4.20 (0.20)	1.12 (1.40)	83.40 (0.25)	26.30 (0.00)	54.20 (9)	569.64 (19)
FM 965 B2LL	1024 (21)	4.80 (0.00)	1.18 (2.05)	84.20 (0.35)	32.30 (0.45)	55.20 (2)	565.25 (20)
FM 958 LL	1054 (18)	5.00 (-2.75)	1.19 (2.05)	84.50 (0.45)	28.60 (0.00)	52.10 (14)	549.13 (21)
Arkot 9304a	955 (25)	4.80 (0.00)	1.12 (1.40)	84.00 (0.35)	31.00 (0.45)	54.55 (5)	520.95 (22)
PHY 470 WR	980 (23)	5.10 (-2.75)	1.10 (1.40)	83.50 (0.35)	30.80 (0.45)	51.80 (19)	507.64 (23)
FM 955 B2LL	970 (24)	5.20 (-2.75)	1.21 (2.05)	84.70 (0.45)	29.30 (0.00)	52.10 (14)	505.37 (24)
DP 432 RR	1014 (22)	5.10 (-2.75)	1.09 (0.00)	82.40 (0.00)	29.40 (0.00)	49.60 (26)	502.94 (25)
Arkot 9308	895 (26)	5.10 (-2.75)	1.17 (2.05)	85.00 (0.45)	31.80 (0.45)	52.55 (11)	470.32 (26)

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^c Measurements of fiber length and length uniformity may be exaggerated since samples were processed on a small laboratory gin with no lint cleaning. Although values are exaggerated, comparisons among varieties for these parameters are generally valid, but may be biased against hairy leaf varieties since smooth leaf varieties tend to require less lint cleaning than hairy leaf varieties.

Table 6. 2006 Arkansas Cotton Variety Test Results - Means Across Six Arkansas Test Sites.

Variety	Lint Yield ^a lbs. (<i>r</i>)	Micronaire ^b	Length ^{bc} in.	Uniformity ^{bc} %	Strength ^b g/tex	CCC Loan Value ^a ¢/lb (<i>r</i>)	Gross Revenue ^a \$/acre (<i>r</i>)
DP 454 BG/RR	1320 (<i>1</i>)	4.40 (0.00)	1.12 (1.40)	83.40 (0.25)	29.50 (0.25)	54.25 (<i>24</i>)	716.10 (<i>1</i>)
DP 515 BG/RR	1283 (<i>3</i>)	4.80 (0.00)	1.16 (2.05)	84.00 (0.35)	29.90 (0.25)	55.00 (<i>18</i>)	705.65 (<i>2</i>)
PHY 370 WR	1276 (<i>4</i>)	4.70 (0.00)	1.12 (1.40)	84.10 (0.35)	32.00 (0.45)	54.55 (<i>21</i>)	696.06 (<i>3</i>)
PHY 310 R	1273 (<i>5</i>)	4.80 (0.00)	1.12 (1.40)	83.90 (0.35)	31.60 (0.45)	54.55 (<i>21</i>)	694.42 (<i>4</i>)
ST 5242 BR	1244 (<i>6</i>)	4.80 (0.00)	1.13 (2.05)	84.30 (0.35)	29.40 (0.00)	54.75 (<i>19</i>)	681.09 (<i>5</i>)
ST 5599 BR	1289 (<i>2</i>)	5.00 (-2.75)	1.13 (2.05)	84.10 (0.35)	30.70 (0.45)	52.45 (<i>26</i>)	676.08 (<i>6</i>)
ST 4575 BR	1220 (<i>7</i>)	4.70 (0.00)	1.13 (2.05)	84.10 (0.35)	33.30 (0.50)	55.25 (<i>8</i>)	674.05 (<i>7</i>)
DX 25105N	1220 (<i>8</i>)	4.80 (0.00)	1.15 (2.05)	83.80 (0.35)	30.70 (0.45)	55.20 (<i>12</i>)	673.44 (<i>8</i>)
PHY 480 WR	1182 (<i>10</i>)	4.80 (0.00)	1.17 (2.05)	85.00 (0.45)	32.80 (0.50)	55.35 (<i>1</i>)	654.24 (<i>9</i>)
DP 444 BG/RR	1194 (<i>9</i>)	4.30 (0.00)	1.14 (2.05)	84.00 (0.35)	29.20 (0.00)	54.75 (<i>19</i>)	653.72 (<i>10</i>)
DP 434 RR	1158 (<i>11</i>)	4.50 (0.00)	1.19 (2.05)	84.70 (0.45)	29.60 (0.25)	55.10 (<i>17</i>)	638.06 (<i>11</i>)
DP 393	1150 (<i>13</i>)	4.80 (0.00)	1.17 (2.05)	84.60 (0.45)	33.30 (0.50)	55.35 (<i>1</i>)	636.53 (<i>12</i>)
DP 455 BG/RR	1151 (<i>12</i>)	4.10 (0.20)	1.17 (2.05)	83.40 (0.25)	31.10 (0.45)	55.30 (<i>5</i>)	636.50 (<i>13</i>)
DP 432 RR	1136 (<i>15</i>)	4.70 (0.00)	1.14 (2.05)	84.20 (0.35)	31.70 (0.45)	55.20 (<i>12</i>)	627.07 (<i>14</i>)
Arkot 9304b	1144 (<i>14</i>)	4.70 (0.00)	1.12 (1.40)	84.20 (0.35)	31.50 (0.45)	54.55 (<i>21</i>)	624.05 (<i>15</i>)
PHY 470 WR	1122 (<i>16</i>)	4.70 (0.00)	1.13 (2.05)	84.10 (0.35)	31.20 (0.45)	55.20 (<i>12</i>)	619.34 (<i>16</i>)
FM 960 BR	1117 (<i>17</i>)	4.70 (0.00)	1.15 (2.05)	83.80 (0.35)	32.70 (0.50)	55.25 (<i>8</i>)	617.14 (<i>17</i>)
DP 445 BG/RR	1113 (<i>18</i>)	4.70 (0.00)	1.17 (2.05)	84.70 (0.45)	33.90 (0.50)	55.35 (<i>1</i>)	616.05 (<i>18</i>)
Arkot 9409	1086 (<i>19</i>)	4.60 (0.00)	1.14 (2.05)	84.20 (0.35)	31.80 (0.45)	55.20 (<i>12</i>)	599.47 (<i>19</i>)
FM 966 LL	1054 (<i>20</i>)	4.70 (0.00)	1.14 (2.05)	84.40 (0.35)	32.90 (0.50)	55.25 (<i>8</i>)	582.34 (<i>20</i>)
FM 960 B2R	1038 (<i>21</i>)	4.70 (0.00)	1.16 (2.05)	84.10 (0.35)	32.20 (0.45)	55.20 (<i>12</i>)	572.98 (<i>21</i>)
FM 958 LL	1034 (<i>22</i>)	4.70 (0.00)	1.21 (2.05)	84.60 (0.45)	30.90 (0.45)	55.30 (<i>5</i>)	571.80 (<i>22</i>)
Arkot 9304a	960 (<i>24</i>)	4.70 (0.00)	1.15 (2.05)	84.40 (0.35)	32.80 (0.50)	55.25 (<i>8</i>)	530.40 (<i>23</i>)
FM 955 B2LL	930 (<i>25</i>)	4.80 (0.00)	1.22 (2.05)	85.10 (0.45)	31.20 (0.45)	55.30 (<i>5</i>)	514.29 (<i>24</i>)
Arkot 9308	968 (<i>23</i>)	5.20 (-2.75)	1.18 (2.05)	85.40 (0.45)	34.40 (0.50)	52.60 (<i>25</i>)	509.17 (<i>25</i>)
FM 965 B2LL	919 (<i>26</i>)	4.50 (0.00)	1.19 (2.05)	84.80 (0.45)	33.10 (0.50)	55.35 (<i>1</i>)	508.67 (<i>26</i>)

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^c Measurements of fiber length and length uniformity may be exaggerated since samples were processed on a small laboratory gin with no lint cleaning. Although values are exaggerated, comparisons among varieties for these parameters are generally valid, but may be biased against hairy leaf varieties since smooth leaf varieties tend to require less lint cleaning than hairy leaf varieties.