

# 2020

# COT TON

**VARIETIES FOR LOUISIANA**

**Variety Trials and On-Farm Demonstrations**

# Table of Contents

<b>Introduction; Choosing Varieties; Fiber Properties; Using the Data</b> .....	3
<b>Selecting Varieties; Transgenic Traits</b> .....	4
<b>Seeding Rate and Stand</b> .....	5
<b>Fertility Management</b> .....	6
<b>Table 1.</b> Participating seed companies and varieties entered .....	10
<b>Table 2.</b> Cultural practices for the cotton official variety trials.....	10
<b>Table 3.</b> Two-year lint yield performance for the cotton varieties across seven locations .....	11
<b>Table 4.</b> One-year lint yield performance for the cotton varieties across seven locations .....	12
<b>Table 5.</b> Lint yield performance, fiber characteristics, loan value and dollar return per acre, Dean Lee Research Station OVT, nonirrigated Latanier clay .....	13
<b>Table 6.</b> Lint yield performance, fiber characteristics, loan value and dollar return per acre, Dean Lee Research Station OVT, nonirrigated Coushatta silt loam.....	14
<b>Table 7.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Macon Ridge Research Station OVT, irrigated Gigger silt loam .....	15
<b>Table 8.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Northeast Research Station OVT, irrigated Sharkey clay .....	16
<b>Table 9.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Northeast Research Station OVT, non-irrigated Commerce silt loam.....	17
<b>Table 10.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Red River Research Station OVT, irrigated Moreland clay .....	18
<b>Table 11.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Red River Research Station OVT, irrigated Caplis very fine sandy loam.....	19
<b>Table 12.</b> Summary of lint yield performance for the on-farm core block demonstrations across locations.....	20
<b>Table 13.</b> Summary of percent turn-out for the on-farm core block demonstrations across locations .....	20
<b>Table 14.</b> Summary of micronaire values for the on-farm core block demonstrations across locations .....	20
<b>Table 15.</b> Summary of fiber length values for the on-farm core block demonstrations across locations.....	21
<b>Table 16.</b> Summary of fiber strength values for the on-farm core block demonstrations across locations.....	21
<b>Table 17.</b> Summary of fiber uniformity values for the on-farm core block demonstrations across locations.....	21
<b>Table 18.</b> Summary of loan values for the on-farm core block demonstrations across locations .....	22
<b>Table 19.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre of on-farm core block demonstration, Avoyelles Parish .....	22
<b>Table 20.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre of on-farm core block demonstration, Franklin Parish .....	23
<b>Table 21.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre of on-farm core block demonstration, Morehouse Parish.....	23
<b>Table 22.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Ouachita Parish.....	24
<b>Table 23.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre of on-farm core block demonstration, Pointe Coupee Parish.....	24
<b>Table 24.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Rapides Parish 1-on-farm core block demonstration.....	25
<b>Table 25.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Rapides Parish 2-on-farm core block demonstration.....	25
<b>Table 26.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Rapides Parish 3-on-farm core block demonstration.....	26
<b>Table 27.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, Tensas Parish on-farm core block demonstration .....	26
<b>Table 28.</b> Lint yield performance, fiber characteristics, loan values and dollar return per acre, West Carroll Parish on-farm core block demonstration.....	27

## Introduction

Scientists with the LSU AgCenter annually evaluate cotton varieties at four locations that represent Louisiana's cotton-producing regions.

These AgCenter locations are the Red River Research Station at Bossier City, Dean Lee Research Station at Alexandria, Macon Ridge Research Station at Winnsboro and Northeast Research Station at St. Joseph.

Cotton varieties are managed using practices that follow LSU AgCenter recommendations and demonstrate commercial operations as closely as possible. All entries in the trials are replicated four times, and results are compiled for average performance after one or two years of testing.

## Choosing Varieties

Variety selection is one of the most important decisions a cotton producer will make for the entire growing season. The variety and its associated traits set the stage for harvest at the time of planting. All other input decisions affect the performance of the variety selected.

Variety selection has become increasingly important since the introduction of transgenic cottons and the accompanying increases in seed costs and associated technology fees. Moreover, variety selection is the one decision a producer makes that is not influenced by environmental factors. Therefore, choosing a high-yielding variety with acceptable fiber quality that is adapted to local growing conditions should be considered carefully because of the tremendous importance the decision plays for the entire season.

Choosing a cotton variety can be difficult, and the availability of different transgenic traits often complicates the process. The more informed the decision, the better. Therefore, this publication strives to provide growers as much information as possible concerning cotton variety performance over a range of soil textures and conditions. The information reported concerning measured performance of cotton varieties in Louisiana should be useful as a primary source of information for choosing varieties.

Producers should be mindful that these LSU AgCenter official variety trials never can identify the best single variety for soils and conditions. As such, producers should plant multiple varieties that are selected from the top performers in the variety trials closest to their production region. This strategy will help mitigate risks from adverse environmental conditions.

Individual varieties always differ in performance from one year to the next. In most years, however, those among the top 10% of the highest-yielding varieties generally remain there for several seasons. The best variety for a particular farm likely resides among the top yielders in the official variety trials, but no one can be certain which of those top-yielding varieties will be the highest yielder for the upcoming year. This actually is a good thing because it gives producers the option to select from as many as five to 10 varieties with different traits, knowing that one of those may be the best for next year's crop.

The majority of a grower's acreage should be devoted to proven varieties. Newer varieties should be evaluated on limited acreage until further testing is completed.

## Fiber Properties

Fiber quality has become a more important consideration in marketing cotton and choosing varieties. Because the domestic textile industry has become very limited, most U.S. cotton is exported to foreign mills that generally demand cotton with the most consistent and highest fiber quality properties.

The quality of Louisiana cotton has been a concern in recent years, particularly with regard to high micronaire. While premiums are small, discounts for high micronaire and other factors can be significant. Variety selection plays the largest role in fiber properties and is increasingly important for U.S. cotton to maintain and increase its presence in the world market.

Fiber parameters in the LSU AgCenter's official variety trials were determined with the same high-volume instrumentation classing system used by the U.S. Department of Agriculture's classing offices. Physical properties, including staple length (reported as the upper half mean length), fiber strength, uniformity index and micronaire were evaluated and are reported for each variety. Seed cotton samples were ginned with small plot research gins that do not have lint cleaners. This method will produce higher lint percentages than would normally be received from a commercial gin. A 41-4 color and leaf grade was used on all fiber samples to determine loan values.

## Using the Data

Yield should be the primary factor when selecting a variety, followed by fiber quality and maturity. Top-yielding varieties should be considered first.

Top-yielding varieties often have no statistical differences between them in a given trial. The least significant difference reported below each table is the smallest difference in yield that can be considered a "true" difference.

The most important factor is not the absolute number reported for a cotton variety's yield or fiber quality. The most important question to consider is, "How did a variety yield in relation to other varieties in the same trial?" Another important number to look for is the average yield from the variety trials. Considering a variety's performance compared to the average for the entire trial will help identify varieties that are above average for a given location.

Cotton varieties should be chosen by considering their performances across several locations and multiple years of testing. Superior performance in one year often can indicate a good variety, but superior performance over multiple years indicates consistency and reliability. Varieties currently are introduced at a rapid pace and have shorter life spans than in the past, so information about some of the newest varieties often is not available for multiple years. For those new

varieties that do not have multiyear performance records, it is best to consider performance averaged across several locations during a variety's first year of testing.

Grower experience with a variety is important for several reasons. Cotton varieties have different growth habits and can be locally adapted to a small area. Experience with a variety should be considered, but newer varieties that perform well in the official variety trials also should be considered.

## Selecting Varieties

The LSU AgCenter identifies the top tier of high-yielding varieties at each location using a statistical test called the "least significant difference." A probability level of 5% is used, which means the test correctly identifies variety performance for that location with 95% certainty.

The group of varieties that is statistically the highest yielding is shown in each table in bold print. To identify promising varieties that are new to the market and have only one year of testing in the LSU AgCenter official variety trials, a multilocation analysis should be performed. Producers should review the data tables for variety performance at the closest location that most represents their individual farms, and they also should review statewide multilocation yield averages for consistency of performance over a range of environments.

## Transgenic Traits

**Roundup Ready:** Transgenic traits are available for glyphosate tolerance, usually indicated by Roundup Ready Flex (sometimes shown simply as "RF" or "F"). The Flex varieties have been available commercially since 2006 and completely replaced the older Roundup Ready ("R" or "RR") varieties. Roundup Ready Flex varieties exhibit increased tolerance, particularly in the fruiting stage, to glyphosate applications.

Roundup Ready Flex labeling allows over-the-top applications of glyphosate to Flex varieties into the bloom stage and does not restrict contact with the stem for applications. Read and follow the label closely for specific restrictions and be sure to consult the label for the specific glyphosate formulations permitted for use on Roundup Ready Flex varieties.

Weed control is a major factor in producing high-yielding, high-quality cotton. Because of the increased flexibility of applying glyphosate over the top to Roundup Ready Flex varieties, some growers may opt to wait until weeds emerge and gain some size before making applications. This is not recommended, however, particularly for early season weed control. Early weed competition can severely reduce yield.

Glyphosate is very effective on a wide range of species, particularly when they are small. Applications should be timed to weed size and not to other factors. Even more, reliance on one mode of action for weed control is not recommended and has led to herbicide-resistant weeds.

Because of concerns with glyphosate-resistant weeds, the use of other herbicides in addition to glyphosate is strongly encouraged. Growers should note that glyphosate-resistant Palmer amaranth was identified in Louisiana in 2009 and resistant johnsongrass in 2010. Consult the LSU AgCenter 2017 Louisiana Suggested Chemical Weed Management Guide for more information.

**Liberty Link:** Varieties with the designation "LL" in their brand names are transgenic varieties tolerant to over-the-top applications of Liberty (glufosinate). These varieties can be managed in a Liberty Link weed control program, which is covered in more detail in the LSU AgCenter 2020 Louisiana Suggested Chemical Weed Management Guide publication.

Liberty Link cotton is tolerant to Liberty herbicide but will be injured by applications or drift from glyphosate. On farms or in areas where Liberty Link cotton is grown near Roundup Ready Flex cotton, care should be taken to avoid confusion of the herbicide systems and to reduce the potential for mistaken applications or drift.

**Glytol Liberty Link:** Varieties with the designation "GL" in their brand names are transgenic varieties tolerant to over-the-top applications of both glyphosate and glufosinate. These varieties offer potential to alternate from one class of chemistry to another, particularly where producers are concerned about herbicide resistant weed populations. In any case, weeds still should be controlled early, when weeds are small and actively growing. Producers are cautioned to avoid late, low-dose applications of these nonselective herbicides when existing weeds are large and well developed.

**XTendFlex:** In 2015, Delta Pine varieties with the designation "XF" became available, and they are transgenic cotton lines that are tolerant to over-the-top applications of dicamba, glyphosate and glufosinate. This was the first cotton technology with tolerance to three herbicides. These varieties offer the potential of alternating from one class of chemistry to another, particularly where producers are concerned about herbicide-resistant weed populations. In any case, weeds still should be controlled early, when weeds are small and actively growing. Producers are cautioned to avoid late, low-dose applications of these nonselective herbicides when these weeds are large and well-developed.

**Enlist:** In 2016, Phytogen varieties with the designation "FE" became available, and they are transgenic cotton lines tolerant to over-the-top applications of 2,4-D, glyphosate and glufosinate. This is the second cotton technology that now offers tolerance to three herbicides. Weeds still should be controlled early, when they are small and actively growing. In any case, weeds still should be controlled early, when weeds are small and actively growing. Producers are cautioned to avoid late, low-dose applications of these nonselective herbicides when these weeds are large and well-developed.

**Bollgard 2:** Varieties with the designation “B2” or “BG2” in their brand names are cotton lines tolerant to the Louisiana caterpillar pest known as the tobacco budworm. After the successful introduction of Bollgard 2 technology into the market, the U.S. Environmental Protection Agency in 2010 required that all Bollgard-only technology be prohibited from future planting due to its single-gene-site activity.

Varieties that include Bollgard 2 technology should not need any supplemental insecticide sprays for control of tobacco budworms. They also are tolerant to the bollworm, soybean looper, fall armyworm and beet armyworm. For those and other caterpillar pests, note that supplemental chemical control strategies will be necessary to provide satisfactory management with high and persistent populations. In addition, the insecticidal traits in Bollgard 2 varieties have no activity against noncaterpillar pests such as thrips, aphids, plant bugs, stink bugs and spider mites. Those pests must be managed with conventional integrated pest management practices.

**Bollgard 3:** In 2017, varieties with the designation “B3” in their brand names became available. Bollgard 3 offers three Bt proteins for greater technology durability and improved resistance management. The addition of the third protein reinforces the Bt proteins found in Bollgard II. Having three proteins will increase the longevity of the technology, with each having a different mode of action or kill the larvae in a different way. Decreased likelihood of supplemental applications to control worm pests as a result of enhanced three-gene activity.

**Widestrike:** PhytoGen varieties with designation “W” or “W3” in their brand names are cotton lines tolerant to the Louisiana caterpillar pests known as tobacco budworms and fall armyworms. These varieties should not need any supplemental insecticidal sprays for controlling those pests. The characteristics and insect management recommendations previously mentioned for Bollgard 2 traits remain the same for the Widestrike trait in PhytoGen varieties.

**Twinlink:** In 2014, Stoneville varieties with the designation “T” in their brand names became available and are tolerant to the tobacco budworm. Also, they provide reduced bollworm damage through superior bollworm protection comparable to Bollgard II and significant reduction in damage caused by armyworms when compared to non-Bt cotton. Under high and persistent populations of bollworms and armyworms, supplemental chemical control strategies will be necessary for satisfactory management practices.

**Twinlink Plus:** In 2016, Stoneville varieties with the designation “TP” in their brand names became available. Twinlink plus offers three Bt proteins for greater technology durability and improved resistance management. Decreased likelihood of supplemental applications to control worm pests as a result of enhanced three-gene activity.

**Root-knot nematode:** Since 2015, several companies have been marketing cotton varieties with tolerance to the root-knot nematode. This is not a transgenic

technology. Planting these varieties on sandier soils with known root-knot nematode populations is a new option, especially with the loss of Temik.

## Seeding Rate and Stand

Two to three plants per foot of row is the ideal final plant population in 30- to 40-inch rows. To achieve this “stand,” seeding rates should be slightly higher based on the actual stated germination.

Seed sizes vary, and the number of cotton seeds per pound ranges from a low of 3,700 up to a high of 5,800. Therefore, seeding rates have to be based on seed numbers per acre and not pounds of seed per acre.

To ensure the best seedling emergence, planting should be scheduled during the most favorable conditions possible based on existing and forecast temperatures and soil moisture levels.

Being aware of the cool germination test results, however, is more important than determining what actually is the good or bad cool germination rate. For example, a seed lot with 85% cool germination is more vigorous than one with a 65% cool germination test result. If the 65% cool germination lot is planted in warm and otherwise good conditions, however, overall germination is likely to be as high as the 85% lot. Under adverse conditions, the 85% cool germination lot is likely to germinate at a much higher rate than the 65% cool germination lot. A somewhat arbitrary division of the cool germination test results is shown in the following table.

Cool Germination %	Vigor
>80	Excellent
65-80	Good
50-65	Acceptable – plant under good conditions
<50	Poor – most seed companies will not sell this seed

Most planting date studies indicate the ideal planting window is Louisiana for cotton is between April 15 and May 15. Earlier planting is possible without causing significant yield loss, but there is the risk of cold damage or reduced ability of the plants to recover from thrips pressure. Two LSU AgCenter planting date studies have demonstrated that planting after June 1 can reduce yield potential significantly.

Most cotton seed sold will have at least an 80% germination reported on the bag. This is the result of the warm germination test. Field conditions are typically more adverse than laboratory tests. The cool germination test can approximate adverse field conditions and is a measure of seed vigor. Results from the cool germination test are not reported on the bag but can be obtained from the seed company. Growers are encouraged to request this information.

Remember, a cotton seed is a living organism that is used as a delivery mechanism for genetic traits, transgenic technology and even pesticide seed treatments. Care should be taken to preserve and plant high quality seed to ensure adequate plant stands.

## Fertility Management

A good cotton fertilization program begins with regular soil testing. Soil test results are the most accurate and economical way to determine the fertilizer and lime needs of cotton. Fall or early winter is the best time to collect soil samples, and September to November is the best period if you are sampling for nematodes at the same time. This schedule allows plenty of time to get the soil test report back and to plan your fertilization and liming program before the busy planting season.

### Soil Acidity and Liming

Increased growth and yield increases have repeatedly occurred when fields are properly limed. When the soil pH drops below 5.5, aluminum and manganese dissolve from soil clays and can severely decrease root elongation, as well as reduce plant growth. Under these growing conditions, roots will become stunted and will not reach as much water and nutrients. Look for “J-shaped” taproots; and collect separate subsoil samples to confirm this situation. Acidity also interferes with the availability and uptake of phosphorus, potassium, calcium and magnesium.

The optimum pH for cotton ranges from 5.8 to 6.5 for mineral soils. The amount of lime required for optimum cotton production varies with soil texture, pH, organic matter content, soil minerals and animal waste application history. The recommended amount of lime should be applied several months before planting to allow time for it to dissolve and react with the acidic components of the soil. However, lime applied just

before planting is much more effective than no lime applied at all. If possible, mix lime thoroughly with the soil to speed the reaction.

### Nitrogen

Once the cotton stand has been established, nitrogen applications will be made for the upcoming season. Recommended nitrogen rates are 60 to 90 pounds per acre for course-textured soils and 90 to 120 pounds per acre for high clay soils. The lower recommended rates should be used on fields that are following soybeans, corn, legume cover crops or fields with a history of excessive stalk growth.

Caution should be used to not apply more nitrogen than what is going to be required by the cotton plant because excessively high nitrogen rates can produce very tall and rank cotton. This increased vegetative growth will hinder reproductive growth and, ultimately, yield. Furthermore, to limit this excessive growth, producers will have to rely heavily on mepiquat chloride applications to control plant height, creating the potential for making the cotton plant harder to defoliate at the end of season. Excessive nitrogen, especially in combination with high amounts of late season rainfall, can delay maturity, reduce harvesting and ginning percentages, and promote boll shedding and boll rot.

Also, best management practices would suggest making split applications of nitrogen especially on sandy soils with a high leaching potential or soils with a high saturation potential because of denitrification losses. For split nitrogen applications, one-third to one-half should be applied at planting with the remainder being applied by early bloom at the latest.

### Nitrogen Rates for Cotton in Louisiana.

Soil Type	Dryland	Irrigated
Clay	90-120	100-120
Clay Loam	90-120	100-120
Fine Sandy Loam	60-90	60-90
Loamy Sand	60-90	60-90
Silt Clay	90-120	100-120
Silt Clay Loam	90-120	100-120
Silt Loam	60-90	60-90
Very Fine Sandy Loam	60-90	60-90

## Phosphorus

Phosphorus deficiencies are rare and usually associated with low pH. Plants appear darker green than normal, growth rate is slow and plants may appear

stunted. Treatments to correct phosphorus deficiency seldom prove effective, so placement in the root zone before planting is essential.

### Phosphorus ( $P_2O_5$ lbs/acre) recommendations in cotton for clay, silty clay, silty clay loam and clay loam.

	V. Low 10 and < ppm	Low 11-20 ppm	Medium 21-35 ppm	High 36-60 ppm	V. High >60 ppm
Alluvial-irrigated	90	70	50	0	0
Alluvial-nonirrigated	80	60	40	0	0
Upland-irrigated	90	70	50	0	0
Upland-nonirrigated	80	60	40	0	0

### Phosphorus ( $P_2O_5$ lbs/acre) recommendations in cotton for silt loam, loam, very fine sandy loam, fine sandy loam, sandy loam and loamy sand.

	V. Low 10 and < ppm	Low 11-20 ppm	Medium 21-35 ppm	High 36-60 ppm	V. High >60 ppm
Alluvial-irrigated	100	80	60	0	0
Alluvial-nonirrigated	80	60	40	0	0
Upland-irrigated	100	80	60	0	0
Upland-nonirrigated	80	60	40	0	0

## Potassium

The symptoms of potassium deficiency can be very pronounced and first appear on the older leaves as a yellowish-white mottling. The mottling changes to a light yellowish-green, and yellow spots appear between veins. The centers of these spots die, and numerous brown specks appear at the leaf top, around the margin and between the veins. The tip and the margin of the leaf break down first and curl downward. As this physiological breakdown progresses, the whole leaf becomes reddish-brown, dies, and is shed prematurely. (NC State Extension Cotton Handbook, 2017)

However, in recent years potassium deficiency symptoms have appeared in the upper part of the plant. In some cases, soil potassium levels appear to be high, but the plants are unable to obtain adequate potassium. At the present time, these symptoms have been associated with four factors.

1. The use of very high-yielding, determinate-type cultivars that set a heavy fruit load over a very short period of time.
2. Soils that "fix" potassium in nonavailable forms.
3. Mild to moderate drought stress following heavy fruit set.
4. Fields that have soil compaction issues.

**Potassium (K<sub>2</sub>O lbs/acre) recommendations in cotton for clay and silty clay soils.**

	V. Low 141 and < ppm	Low 211 ppm	Medium 317 ppm	High 334 ppm	V. High >334 ppm
Alluvial-irrigated	100	80	60	0	0
Alluvial-nonirrigated	80	60	40	0	0
Upland-irrigated	100	80	60	0	0
Upland-nonirrigated	80	60	40	0	0

**Potassium (K<sub>2</sub>O lbs/acre) recommendations in cotton for silty clay loam and clay loam soils.**

	V. Low 123 and < ppm	Low 176 ppm	Medium 264 ppm	High 282 ppm	V. High >282 ppm
Alluvial-irrigated	100	80	60	0	0
Alluvial-nonirrigated	80	60	40	0	0
Upland-irrigated	100	80	60	0	0
Upland-nonirrigated	80	60	40	0	0

**Potassium (K<sub>2</sub>O lbs/acre) recommendations in cotton for silt loam soil.**

	V. Low 70 and < ppm	Low 106 ppm	Medium 141 ppm	High 158 ppm	V. High >158 ppm
Alluvial-irrigated	120	90	60	0	0
Alluvial-nonirrigated	100	80	40	0	0
Upland-irrigated	120	90	60	0	0
Upland-nonirrigated	100	80	40	0	0

**Potassium (K<sub>2</sub>O lbs/acre) recommendations in cotton for loam, very fine sandy loam, fine sandy loam and loamy sand soils.**

	V. Low 53 and < ppm	Low 88 ppm	Medium 123 ppm	High 141 ppm	V. High >141 ppm
Alluvial-irrigated	120	90	60	0	0
Alluvial-nonirrigated	100	80	40	0	0
Upland-irrigated	120	90	60	0	0
Upland-nonirrigated	100	80	40	0	0



## Sulfur

A two-bale cotton crop will take up 20 to 30 pounds of sulfur. Some sulfur is supplied by the decomposition of crop residues and organic matter, and some is supplied by rainfall. In recent years, sulfur deficiencies have become more common in row crops with the decline in industrial emissions of sulfur dioxide and the increased use of higher analysis materials and bulk blends containing less incidental sulfur.

Sulfur and nitrogen reactions in the plant are interrelated, and deficiency symptoms for the two nutrients are sometimes confused. Deficiency symptoms of both nutrients appear as general leaf yellowing. However, nitrogen is mobile within the plant, and its deficiency symptoms first appear on the lower leaves. Sulfur is relatively mobile, and deficiency symptoms first appear on new leaves. In cotton, persistent yellowing of new leaves and reddening of the petioles are typical sulfur deficiency symptoms. In severe cases, the whole plant may become yellow, which means that both sulfur and nitrogen may be deficient. (NC State Extension Cotton Handbook, 2017)

As a general rule, applications of 10 pounds of sulfur per acre are suggested when soil test levels are less than 12 ppm.

## Calcium and Magnesium

A two-bale crop will take up 60 pounds of calcium and 23 pounds of magnesium, with 4 pounds of calcium and 7 pounds of magnesium actually removed in seed and lint. Calcium deficiencies are seldom seen because acidity (low pH) and aluminum toxicity usually limit growth first. Magnesium deficiencies are most likely to occur on highly leached, sandy, low-organic matter soils. High rates of potassium being applied can result in magnesium deficiencies. In cotton, magnesium deficiency appears first on the lower leaves as an intense yellowing between the major veins. In severe cases, and sometimes in cool soils, a purplish-red color develops around the leaf margins and between veins, while the veins maintain their dark green color. Leaves shed prematurely. Late in the season, this color may be confused with the orange and red colors caused by normal aging of leaves. If magnesium is deficient, but it is not desirable to raise soil pH by adding dolomitic lime, then a source such as magnesium sulfate or sulfate of potash magnesium can be applied at a rate to supply 20 to 30 pounds of magnesium per acre. (NC State Extension Cotton Handbook, 2017)

## Micronutrients

Boron, copper, chlorine, iron, manganese, molybdenum and zinc are necessary for plant growth, although the quantities needed are small. Specifically,

zinc and boron should be of most concern to cotton growers in Louisiana.

Zinc deficiency symptoms include leaves that appear leathery and upturned. As with other micronutrients, zinc deficiency signs usually appear in the upper canopy because the nutrient is not readily translocated from the older to younger leaves. Next to phosphorus, zinc is the nutrient most likely to be deficient on high pH soils. Other symptoms may include short internodes (rosetting), small, stunted leaves with interveinal chlorosis, and a bronzed appearance. If soil test results show that zinc is lower than 1 ppm, apply 10 pounds of actual zinc in a soluble form, such as zinc sulfate or zinc chelate per acre. If zinc levels are between 1 to 2.25 ppm, apply 5 pounds of zinc per acre.

Boron is needed throughout the life of a cotton plant, but adequate supplies are especially important during flowering and boll development. Dry weather can trigger a temporary deficiency as organic matter decomposition slows. Also, dry weather slows root growth and limits boron uptake. Therefore, cotton grown on well-drained, sandy, low-organic matter soils is more prone to boron deficiencies, especially in years of high rainfall or drought. Deficiencies can sometimes be induced by a soil pH greater than 6.5 or a heavy lime application in the recent past. The most pronounced boron deficiency symptoms include:

1. Abnormal shedding of squares and young bolls.
2. Ruptures at the base of squares or blooms.
3. Dark-green rings on leaf petioles accompanied by discoloration of the pith under the rings.
4. Death of the terminal bud and shortened internodes near the top of the plant, resulting in a dwarfed and many-branched plant.
5. Mature bolls that are small, deformed and do not fluff normally.

In many cases, the first real indication of a problem may be excessive growth. A close look at the plant will usually reveal abnormal fruit shed as the reason for the problem. If plants are not carefully monitored, the problem may not be noticed until harvest reveals an unexpectedly poor response to nitrogen and potassium applications.

The actual uptake requirement of boron by a two-bale cotton crop is about 0.2 of a pound per acre. Boron can be applied to the soil or foliage. The suggested rate of soil application is 1 pound of actual boron per acre broadcast before or during seedbed preparation, or 0.2 to 0.4 of a pound of actual boron per acre if a borated fertilizer is banded. For foliar applications, a good general recommendation is to use 0.5 of a pound per acre of actual boron applied at early bloom.

**Table 1. Participating seed companies and varieties entered, 2019.**

Americot (11)	CropLan (2)	Deltapine (7)	Dyna-Gro (9)	Fiber Max (1)	Phytogen (12)	Seed Source Genetics (2)	Stoneville (3)
AMX19A005B3XF	CP9608B3XF	DP1835B3XF	DG3427B3XF	FM2398GLTP	PHY400W3FE	UA222	ST4550GLTP
NG3729B2XF	CP9830B3XF	DP1518B2XF	DG3317B3XF		PX5C45W3FE	UA114	ST5600B2XF
AMX1828B3XF		DP1646B2XF	DG3615B3XF		PX5C05W3FE		ST5471GLTP
AMX19A006B3XF		DP1845B3XF	DG3520B3XF		PX3D43W3FE		
NG5711B3XF		DP1851B3XF	DGX18503-BB3XF		PHY340W3FE		
NG4936B3XF		DP1555B2RF	DG3526B2XF		PX3D32W3FE		
NG3522B2XF		DP1916B3XF	DG3605B2XF		PHY580W3FE		
NG3994B3XF			DG3402B3XF		PX5E28W3FE		
NG3930B3XF			H959B3XF		PHY350W3FE		
AMX1816B3XF					PHY480W3FE		
AMX1818B3XF					PHY500W3FE		
					PX5E34W3FE		

**Table 2. Cultural practices for the cotton official variety trials managed at the LSU AgCenter research stations, 2019.**

	Alexandria	Alexandria	St. Joseph	St. Joseph	Winnsboro	Bossier City	
Event	silt loam	clay	silt loam	clay	silt loam	v. fine sandy loam	clay
Planting date	5/29	5/29	5/30	4/23	4/29	5/16	5/17
Emergence	6/3	6/3	6/4	5/3	5/4	5/21	5/23
Row spacing	38	38	40	40	40	40	40
Seeding rate	45,870	45,870	45,850	45,850	45,850	45,850	45,850
Previous crop	cotton	soybeans	corn	corn	soybeans	corn	corn
Irrigation	no	no	no	yes	yes	yes	yes
No. irrigation events				2	3	4	2
N, P, K (lbs)	80-60-60	90-0-0	80-52-52	80-52-52	100-50-50	60-0-0	90-0-0
Defoliation dates	10/20, 11/1	10/20, 11/1	10/10, 10/17	9/16, 10/4	9/25, 10/1	10/25	10/1
Harvest date	11/4	11/5	10/23	10/9	10/9	11/4	10/14
Plot sizes (harvested)	2 rows by 50 feet	2 rows by 50 feet	2 rows by 45 feet	2 rows by 45 feet	2 rows by 45 feet	2 rows by 50 feet	
GPS location	31.10866N, 92.24315W	31.10655N, 92.23362W	31.949478N, 91.227928W	31.938481N, 91.23995W	32.141842N, 91.700928W	32.24925N, 93.38540W	32.25115N, 93.38304W

**Table 3. Two-year lint yield performance of cotton varieties planted across locations, 2018-2019.**

Variety	Alexandria (2018)		Winnsboro (2018)		St. Joseph (2018)		Bossier City (2018)		2018 Average	Alexandria (2019)		Winnsboro (2019)		St. Joseph (2019)		Bossier City (2019)		2019 Average	Average Across Locations
	Clay	Silt loam	Silt loam	Silt loam	Clay	Silt loam	Clay	Sandy loam		Clay	Silt Loam	Silt loam	Silt loam	Clay	Silt loam	Clay	Sandy loam		
PHY400W3FE	2,406	2,444	1,496	1,370	1,452	1,370	780	998	1,564	1,105	783	1,672	1,100	1,388	1,549	1,518	1,302	1,433	
CP9608B3XF	2,104	2,340	1,639	1,218	1,334	1,218	930	1,060	1,518	1,044	780	1,866	897	1,240	1,422	1,528	1,254	1,386	
DP1646B2XF	2,303	2,205	1,363	1,172	1,442	1,172	901	888	1,468	1,028	1,039	1,580	892	1,168	1,329	1,453	1,213	1,340	
PHY340W3FE	2,217	2,393	1,318	1,130	1,472	1,130	980	712	1,460	1,114	947	1,489	916	1,209	1,244	1,586	1,215	1,338	
NG3729B2XF	2,086	2,110	1,548	1,308	1,376	1,308	1,097	842	1,481	980	841	1,600	811	1,154	1,229	1,549	1,166	1,323	
DG3427B3XF	2,015	2,065	1,575	1,182	1,506	1,182	990	904	1,462	1,060	961	1,884	1,041	1,198	1,152	996	1,184	1,323	
DG3317B3XF	2,238	2,110	1,425	1,109	1,170	1,109	1,255	865	1,453	1,231	850	1,348	711	1,027	1,576	1,515	1,180	1,316	
DP1518B2XF	2,113	1,961	1,432	1,183	1,311	1,183	1,139	599	1,391	1,132	895	1,426	1,017	1,293	1,450	1,361	1,225	1,308	
DP1851B3XF	2,215	1,999	1,364	1,129	1,329	1,129	998	1,042	1,439	1,082	727	1,737	939	1,162	1,347	1,202	1,171	1,305	
DP1555B2RF	2,206	2,035	1,602	1,317	1,258	1,317	959	800	1,454	991	833	1,760	919	1,228	1,190	1,143	1,152	1,303	
PHY500W3FE	2,148	2,159	1,437	1,209	1,385	1,209	1,167	777	1,469	1,054	713	1,614	1,054	1,131	1,058	1,330	1,136	1,302	
DP1845B3XF	2,116	2,287	1,343	1,091	1,364	1,091	608	897	1,387	1,084	932	1,677	949	1,089	1,182	1,441	1,194	1,290	
DP1835B3XF	1,584	1,950	1,345	1,190	1,150	1,190	1,045	996	1,323	1,039	860	1,810	932	993	1,446	1,572	1,236	1,279	
PHY480W3FE	2,074	1,974	1,661	1,091	1,260	1,091	949	885	1,414	999	757	1,692	996	1,077	1,251	1,216	1,141	1,277	
DG3605B2XF	2,293	2,314	1,245	1,102	1,306	1,102	872	967	1,443	823	938	1,651	869	1,312	1,066	1,085	1,106	1,274	
ST4550GLTP	1,270	2,131	1,413	1,322	1,254	1,322	1,176	824	1,341	1,166	799	1,558	821	1,129	1,384	1,500	1,194	1,268	
NG5711B3XF	2,249	1,827	1,362	1,004	1,176	1,004	993	967	1,368	1,115	858	1,558	910	868	1,225	1,221	1,108	1,238	
DG3520B3XF	1,849	1,551	1,547	1,123	1,243	1,123	1,098	793	1,315	1,004	849	1,621	985	1,172	1,171	1,294	1,157	1,236	
ST5471GLTP	1,930	1,859	1,449	1,163	1,143	1,163	985	1,122	1,379	1,142	679	1,579	910	1,115	1,016	1,202	1,092	1,235	
DG3615B3XF	1,932	1,587	1,480	1,249	1,227	1,249	622	987	1,298	1,232	954	1,565	958	1,021	1,273	1,154	1,165	1,231	
DG3526B2XF	1,703	1,812	1,519	1,134	1,204	1,134	827	1,020	1,317	821	931	1,540	825	1,108	1,272	1,272	1,110	1,213	
NG4936B3XF	1,258	1,810	1,395	1,113	984	1,113	911	875	1,192	1,159	801	1,529	773	1,053	1,196	1,234	1,107	1,150	
DG3402B3XF	1,173	1,951	1,473	1,189	1,260	1,189	630	667	1,192	859	939	1,424	966	1,200	1,113	1,091	1,084	1,138	
UA222	1,598	1,555	1,144	1,047	1,089	1,047	914	616	1,137	609	793	1,446	839	1,126	1,181	1,235	1,033	1,085	
UA114	1,188	1,188	1,114	1,130	1,112	1,130	678	766	1,025	587	664	1,452	730	1,250	859	1,153	956	991	
Overall mean	1,930	1,985	1,428	1,171	1,272	1,171	940	875	1,372	1,018	845	1,603	910	1,148	1,247	1,314	1,155	1,263	

**Table 4. One-year performance of cotton varieties planted at seven locations, 2019.**

Variety	Alexandria		Winnsboro	St. Joseph		Bossier City		Average across locations
	Clay Lint yield (pounds/acre)	Silt loam Lint yield (pounds/acre)	Silt loam Lint yield (pounds/acre)	Clay Lint yield (pounds/acre)	Silt loam Lint yield (pounds/acre)	Clay Lint yield (pounds/acre)	Sandy loam Lint yield (pounds/acre)	
PHY400W3FE	1,105	783	1,672	1,100	1,388	1,549	1,518	1,302
PX5C45W3FE	1,094	827	1,957	1,123	1,099	1,408	1,523	1,290
CP9608B3XF	1,044	780	1,866	897	1,240	1,422	1,528	1,254
PX5C05W3FE	1,060	806	1,828	993	1,207	1,530	1,298	1,246
DP1835B3XF	1,039	860	1,810	932	993	1,446	1,572	1,236
DP1518B2XF	1,132	895	1,426	1,017	1,293	1,450	1,361	1,225
PX3D43W3FE	1,039	1,010	1,486	915	1,450	1,234	1,398	1,219
PHY340W3FE	1,114	947	1,489	916	1,209	1,244	1,586	1,215
DP1646B2XF	1,028	1,039	1,580	892	1,168	1,329	1,453	1,213
AMX19A005B3XF	979	1,096	1,468	879	1,214	1,230	1,567	1,205
H959B3XF	1,337	944	1,576	922	1,020	1,385	1,178	1,195
ST4550GLTP	1,166	799	1,558	821	1,129	1,384	1,500	1,194
DP1845B3XF	1,084	932	1,677	949	1,089	1,182	1,441	1,194
PX3D32W3FE	1,052	880	1,286	958	1,476	1,194	1,473	1,189
DG3427B3XF	1,060	961	1,884	1,041	1,198	1,152	996	1,184
DG3317B3XF	1,231	850	1,348	711	1,027	1,576	1,515	1,180
PHY580W3FE	1,107	769	1,837	1,021	883	1,312	1,322	1,179
PX5E28W3FE	1,087	1,040	1,527	877	1,275	1,196	1,226	1,175
DP1851B3XF	1,082	727	1,737	939	1,162	1,347	1,202	1,171
PHY350W3FE	999	742	1,523	985	1,069	1,444	1,406	1,167
NG3729B2XF	980	841	1,600	811	1,154	1,229	1,549	1,166
DG3615B3XF	1,232	954	1,565	958	1,021	1,273	1,154	1,165
DG3520B3XF	1,004	849	1,621	985	1,172	1,171	1,294	1,157
ST5600B2XF	847	815	1,621	868	1,165	1,280	1,480	1,154
DP1555B2RF	991	833	1,760	919	1,228	1,190	1,143	1,152
AMX1828B3XF	939	769	1,555	814	1,270	1,383	1,321	1,150
PHY480W3FE	999	757	1,692	996	1,077	1,251	1,216	1,141
PHY500W3FE	1,054	713	1,614	1,054	1,131	1,058	1,330	1,136
PX5E34W3FE	878	936	1,704	831	1,272	1,068	1,256	1,135
DGX18503-BB3XF	1,177	987	1,587	861	917	1,237	1,018	1,112
AMX19A006B3XF	756	639	1,634	929	1,009	1,475	1,338	1,111
DG3526B2XF	821	931	1,540	825	1,108	1,272	1,272	1,110
NG5711B3XF	1,115	858	1,558	910	868	1,225	1,221	1,108
NG4936B3XF	1,159	801	1,529	773	1,053	1,196	1,234	1,107
DG3605B2XF	823	938	1,651	869	1,312	1,066	1,085	1,106
ST5471GLTP	1,142	679	1,579	910	1,115	1,016	1,202	1,092
DG3402B3XF	859	939	1,424	966	1,200	1,113	1,091	1,084
NG3522B2XF	973	788	1,407	826	1,134	1,165	1,183	1,068
NG3994B3XF	770	867	1,434	655	1,149	1,097	1,437	1,058
DP1916B3XF	971	864	1,394	832	1,067	1,130	1,127	1,055
CP9830B3XF	956	749	1,576	781	979	1,163	1,168	1,053
UA222	609	793	1,446	839	1,126	1,181	1,235	1,033
NG3930B3XF	817	631	1,534	751	1,037	1,249	1,190	1,030
FM2398GLTP	971	774	1,544	831	1,089	893	976	1,011
AMX1816B3XF	858	633	1,252	668	1,004	1,227	1,087	961
UA114	587	664	1,452	730	1,250	859	1,153	956
AMX1818B3XF	915	634	1,429	666	827	1,121	1,039	947
Overall mean	1,001	837	1,579	888	1,134	1,247	1,295	
LSD (0.05)	178.66	172.07	206.09	92.91	155.79	233.35	217.96	
C.V. (%)	17.07	17.57	11.15	8.93	11.73	15.98	14.37	

Numbers shaded within a column are not significantly different from the numerically greatest value.

**Table 5. Lint yield performance, fiber characteristics, loan values and dollar return per acre of cotton varieties grown on a nonirrigated Latanier clay at the Dean Lee Research Station, Alexandria, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
H959B3XF	1,337	40.2	4.7	1.27	34.8	85.1	54.38	\$726.91
DG3615B3XF	1,232	42.9	4.8	1.24	34.0	85.2	53.50	\$668.23
DG3317B3XF	1,231	44.1	4.8	1.18	32.4	84.6	54.26	\$658.87
DGX18503-BB3XF	1,177	42.8	4.6	1.25	34.7	84.6	54.38	\$640.30
ST4550GLTP	1,166	44.6	4.6	1.21	34.9	85.5	54.42	\$634.78
NG4936B3XF	1,159	40.0	4.5	1.27	31.2	85.8	54.30	\$629.24
ST5471GLTP	1,142	41.0	4.7	1.22	34.0	84.2	54.34	\$620.88
DP1518B2XF	1,132	41.4	4.5	1.22	31.7	85.0	54.31	\$614.77
NG5711B3XF	1,115	42.0	4.5	1.26	33.0	85.2	54.34	\$605.57
PHY340W3FE	1,114	43.8	4.8	1.25	33.0	86.2	53.49	\$603.08
PHY580W3FE	1,107	43.8	4.6	1.21	35.1	85.7	54.46	\$602.11
PHY400W3FE	1,105	42.5	4.6	1.25	35.8	86.1	54.50	\$596.01
PX5C45W3FE	1,094	44.0	4.7	1.20	34.8	84.9	54.37	\$594.61
PX5E28W3FE	1,087	38.9	4.1	1.24	35.1	85.7	54.50	\$592.37
DP1845B3XF	1,084	42.2	4.4	1.33	34.4	85.5	54.46	\$590.45
DP1851B3XF	1,082	41.9	4.6	1.25	36.4	86.3	54.48	\$589.72
PX5C05W3FE	1,060	44.2	4.8	1.18	35.0	85.8	53.94	\$573.66
DG3427B3XF	1,060	44.1	4.9	1.18	34.5	83.8	54.09	\$573.64
PHY500W3FE	1,054	43.3	4.6	1.22	36.3	84.8	54.40	\$572.68
PX3D32W3FE	1,052	41.5	4.6	1.25	34.4	86.0	54.44	\$572.63
CP9608B3XF	1,044	44.9	4.6	1.22	30.7	84.6	54.15	\$565.32
PX3D43W3FE	1,039	41.8	4.8	1.20	35.7	85.0	53.92	\$565.02
DP1835B3XF	1,039	44.7	4.7	1.25	32.3	85.5	54.38	\$561.06
DP1646B2XF	1,028	42.0	4.5	1.29	31.1	85.0	54.26	\$557.32
DG3520B3XF	1,004	38.9	4.0	1.33	35.2	86.9	54.59	\$547.98
PHY480W3FE	999	42.5	4.6	1.24	33.3	85.6	53.98	\$543.14
PHY350W3FE	999	40.7	4.6	1.22	34.0	85.5	54.40	\$539.34
DP1555B2RF	991	44.2	4.6	1.22	35.6	84.7	54.38	\$538.76
NG3729B2XF	980	41.0	5.1	1.23	33.1	85.8	52.14	\$529.44
AMX19A005B3XF	979	42.6	4.6	1.20	30.6	84.3	54.12	\$522.18
NG3522B2XF	973	40.5	4.8	1.17	30.7	84.6	53.64	\$518.86
DP1916B3XF	971	43.8	4.9	1.25	36.1	85.8	53.06	\$514.71
FM2398GLTP	971	43.1	5.2	1.24	33.3	86.4	52.27	\$511.08
CP9830B3XF	956	44.8	4.4	1.30	31.4	84.9	54.27	\$509.21
AMX1828B3XF	939	41.4	4.8	1.26	33.6	86.1	53.52	\$504.49
AMX1818B3XF	915	41.3	4.4	1.25	34.6	85.2	54.41	\$497.71
PX5E34W3FE	878	39.3	4.1	1.25	35.2	85.3	54.49	\$478.35
DG3402B3XF	859	40.8	4.7	1.26	33.8	86.5	54.46	\$467.89
AMX1816B3XF	858	38.1	4.2	1.23	32.3	84.3	54.32	\$466.28
ST5600B2XF	847	42.3	5.1	1.22	35.8	85.4	52.00	\$447.69
DG3605B2XF	823	41.8	4.4	1.30	32.9	85.7	54.39	\$443.84
DG3526B2XF	821	44.2	4.8	1.17	32.1	85.5	53.80	\$442.43
NG3930B3XF	817	41.3	4.5	1.22	31.8	85.7	54.34	\$442.20
NG3994B3XF	770	42.7	5.0	1.23	33.6	85.4	53.02	\$411.11
AMX19A006B3XF	756	40.0	4.5	1.29	38.3	85.4	54.41	\$408.13
UA222	609	38.2	4.9	1.26	34.3	86.2	53.09	\$323.56
UA114	587	37.9	5.0	1.22	35.5	86.5	53.58	\$315.81
Overall mean	1,001	42.0	4.637	1.2386	33.877	85.396	54.016	\$541.14
LSD (0.05)	178.66	1.078	0.156	0.0275	1.12	1.06	0.6872	96.9667
C.V. (%)	17.07	2.45	3.23	2.12	3.16	1.19	1.22	17.14

**Table 6. Lint yield performance, fiber characteristics, loan values, and dollar return per acre of cotton varieties grown on a nonirrigated Coushatta silt loam at the Dean Lee Research Station, Alexandria, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
AMX19A005B3XF	1,096	42.5	4.7	1.17	29.7	83.7	53.80	\$589.91
PX5E28W3FE	1,040	39.4	4.3	1.22	34.3	84.4	54.39	\$565.85
DP1646B2XF	1,039	41.4	4.6	1.27	31.8	84.5	54.25	\$563.30
PX3D43W3FE	1,010	41.8	4.7	1.19	35.9	85.7	53.83	\$543.22
DGX18503-BB3XF	987	40.5	4.8	1.27	34.3	85.4	53.84	\$531.86
DG3427B3XF	961	42.4	4.8	1.22	33.2	83.5	53.68	\$515.37
DG3615B3XF	954	41.0	4.9	1.27	34.6	84.2	53.16	\$506.91
PHY340W3FE	947	41.9	4.8	1.22	32.7	84.3	53.66	\$508.62
H959B3XF	944	39.2	4.8	1.29	34.7	84.7	53.76	\$508.27
DG3402B3XF	939	39.0	4.8	1.25	33.3	85.3	53.26	\$500.66
DG3605B2XF	938	40.8	4.4	1.29	32.5	83.9	54.28	\$509.15
PX5E34W3FE	936	39.4	4.3	1.20	35.2	84.4	54.35	\$508.58
DP1845B3XF	932	41.4	4.3	1.29	34.5	84.2	54.36	\$506.59
DG3526B2XF	931	42.6	4.7	1.16	31.4	84.4	53.56	\$499.60
DP1518B2XF	895	40.3	4.6	1.21	31.4	84.4	54.19	\$484.80
PX3D32W3FE	880	39.9	4.6	1.27	35.0	86.0	53.26	\$469.73
NG3994B3XF	867	41.5	4.9	1.24	32.5	84.2	53.10	\$463.26
DP1916B3XF	864	41.8	4.9	1.22	35.8	84.3	53.79	\$463.86
DP1835B3XF	860	42.1	4.7	1.23	32.6	85.4	54.36	\$467.70
NG5711B3XF	858	40.0	4.6	1.25	33.5	84.0	54.31	\$465.77
DG3317B3XF	850	42.3	4.9	1.18	33.7	84.7	53.19	\$453.18
DG3520B3XF	849	38.3	4.0	1.30	34.3	86.3	54.59	\$463.43
NG3729B2XF	841	41.0	5.1	1.24	32.7	85.9	52.30	\$442.10
DP1555B2RF	833	42.7	4.8	1.21	33.8	84.3	53.70	\$448.94
PX5C45W3FE	827	42.5	4.8	1.20	35.0	85.1	53.74	\$445.01
ST5600B2XF	815	42.1	5.0	1.19	33.5	84.7	53.09	\$435.20
PX5C05W3FE	806	43.1	5.0	1.17	34.9	85.1	52.18	\$420.56
NG4936B3XF	801	38.5	4.6	1.25	31.5	85.2	54.30	\$435.08
ST4550GLTP	799	43.2	4.7	1.21	34.8	85.1	54.40	\$434.42
UA222	793	37.7	4.7	1.25	34.0	85.1	54.36	\$431.01
NG3522B2XF	788	40.1	4.8	1.16	29.9	84.2	53.86	\$424.70
PHY400W3FE	783	43.4	4.8	1.25	34.8	84.8	53.25	\$417.81
CP9608B3XF	780	42.6	4.7	1.20	30.7	83.2	54.09	\$421.47
FM2398GLTP	774	41.5	5.3	1.24	33.3	86.6	50.99	\$394.09
PHY580W3FE	769	42.6	4.7	1.23	34.9	84.9	53.85	\$413.88
AMX1828B3XF	769	39.5	4.8	1.22	33.1	84.5	54.33	\$417.44
PHY480W3FE	757	40.0	4.7	1.23	34.7	86.2	54.45	\$411.87
CP9830B3XF	749	42.8	4.4	1.28	30.4	83.1	53.99	\$404.83
PHY350W3FE	742	39.9	4.7	1.22	33.7	85.4	54.40	\$403.37
DP1851B3XF	727	40.5	4.5	1.25	35.7	85.6	54.40	\$395.35
PHY500W3FE	713	41.2	4.6	1.21	36.5	85.3	54.41	\$387.79
ST5471GLTP	679	38.9	4.9	1.22	35.1	84.6	53.78	\$366.10
UA114	664	36.9	5.0	1.23	34.5	86.1	53.29	\$354.64
AMX19A006B3XF	639	36.7	4.6	1.29	38.4	85.2	54.39	\$347.43
AMX1818B3XF	634	39.1	4.5	1.24	34.5	84.3	54.30	\$343.95
AMX1816B3XF	633	36.7	4.4	1.23	33.4	84.5	54.31	\$343.80
NG3930B3XF	631	39.3	4.5	1.20	32.1	85.3	54.34	\$342.68
Overall mean	837	40.7	4.686	1.2304	33.682	84.809	53.8178	\$450.49
LSD (0.05)	172.07	0.965	0.15	0.0274	1.088	1.028	0.9523	94.288817
C.V. (%)	17.57	2.27	3.05	2.13	3.09	1.16	1.51	17.87

**Table 7. Lint yield performance, fiber characteristics, loan values, and dollar return per acre of cotton varieties grown on an irrigated Gigger silt loam at the Macon Ridge Research Station, Winnsboro, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
PX5C45W3FE	1,957	42.7	4.1	1.12	31.6	84.1	53.82	\$1,053.04
DG3427B3XF	1,884	42.9	4.6	1.15	27.9	81.9	53.25	\$1,003.11
CP9608B3XF	1,866	43.2	4.4	1.18	26.6	83.7	53.80	\$1,003.65
PHY580W3FE	1,837	41.5	4.1	1.16	32.3	83.4	54.15	\$994.60
PX5C05W3FE	1,828	42.7	4.3	1.15	30.9	84.6	53.98	\$986.96
DP1835B3XF	1,810	41.9	4.6	1.17	29.4	83.4	53.87	\$975.14
DP1555B2RF	1,760	39.5	4.3	1.19	30.9	83.1	54.08	\$952.04
DP1851B3XF	1,737	39.8	4.4	1.17	33.5	83.9	54.28	\$942.78
PX5E34W3FE	1,704	40.4	3.8	1.19	31.4	83.2	54.18	\$923.45
PHY480W3FE	1,692	39.7	3.9	1.21	32.3	85.8	54.40	\$920.34
DP1845B3XF	1,677	40.1	3.9	1.26	32.3	84.4	54.37	\$911.90
PHY400W3FE	1,672	40.9	4.2	1.20	31.0	83.7	54.18	\$906.10
DG3605B2XF	1,651	39.7	4.0	1.27	29.1	83.1	53.97	\$891.14
AMX19A006B3XF	1,634	35.7	4.3	1.27	33.9	84.5	54.43	\$889.46
DG3520B3XF	1,621	36.4	3.7	1.24	31.2	84.6	54.22	\$878.96
ST5600B2XF	1,621	39.2	4.9	1.18	30.4	84.5	52.80	\$855.90
PHY500W3FE	1,614	41.4	4.2	1.16	31.5	82.9	54.10	\$873.40
NG3729B2XF	1,600	38.8	4.4	1.22	29.0	84.6	53.97	\$863.26
DGX18503-BB3XF	1,587	37.6	4.5	1.19	30.8	83.1	54.02	\$857.47
DP1646B2XF	1,580	41.0	4.2	1.22	29.1	84.0	53.93	\$851.98
ST5471GLTP	1,579	37.9	4.2	1.19	31.0	82.8	54.13	\$854.81
H959B3XF	1,576	37.3	4.0	1.20	30.3	83.0	54.03	\$851.82
CP9830B3XF	1,576	42.7	4.1	1.27	28.7	83.9	53.95	\$850.01
DG3615B3XF	1,565	36.2	4.1	1.20	32.1	84.7	54.28	\$849.53
NG5711B3XF	1,558	37.1	4.1	1.21	30.6	84.8	54.22	\$844.90
ST4550GLTP	1,558	39.7	4.3	1.16	32.7	83.5	54.30	\$846.01
AMX1828B3XF	1,555	37.6	4.7	1.23	30.9	85.4	53.43	\$830.72
FM2398GLTP	1,544	41.0	4.9	1.20	28.9	84.7	53.18	\$821.38
DG3526B2XF	1,540	40.8	4.6	1.12	28.7	83.9	52.82	\$813.29
NG3930B3XF	1,534	39.4	4.4	1.17	27.5	83.2	53.82	\$825.40
NG4936B3XF	1,529	36.8	4.4	1.22	28.2	84.7	53.90	\$824.37
PX5E28W3FE	1,527	37.1	3.5	1.20	31.3	83.5	54.15	\$826.93
PHY350W3FE	1,523	38.0	3.8	1.17	30.3	82.5	54.05	\$823.17
PHY340W3FE	1,489	41.3	4.1	1.16	29.6	83.9	53.92	\$802.69
PX3D43W3FE	1,486	40.2	4.0	1.18	33.6	84.6	54.42	\$808.42
AMX19A005B3XF	1,468	39.8	4.3	1.18	28.1	83.5	53.85	\$790.38
UA114	1,452	35.3	4.2	1.21	31.2	84.9	54.33	\$788.65
UA222	1,446	37.4	4.0	1.22	30.1	85.0	54.15	\$783.23
NG3994B3XF	1,434	41.2	4.4	1.14	28.5	82.0	53.60	\$768.45
AMX1818B3XF	1,429	37.6	4.3	1.19	31.1	84.1	54.15	\$773.73
DP1518B2XF	1,426	39.0	4.2	1.14	27.3	82.8	53.67	\$765.32
DG3402B3XF	1,424	38.8	3.8	1.20	31.0	83.1	54.15	\$771.15
NG3522B2XF	1,407	37.6	4.2	1.15	26.4	83.5	53.12	\$747.55
DP1916B3XF	1,394	40.9	4.3	1.16	29.6	82.5	53.93	\$751.78
DG3317B3XF	1,348	40.6	4.6	1.17	30.0	83.3	53.93	\$726.96
PX3D32W3FE	1,286	37.3	3.5	1.23	30.3	82.8	52.20	\$671.22
AMX1816B3XF	1,252	33.8	3.6	1.21	28.2	84.1	52.67	\$659.64
Overall mean	1,579	39.3	4.202	1.1914	30.237	83.77	53.8755	\$851.20
LSD (0.05)	206.09	1.516	0.331	0.0372	1.5	1.335	NS	138.5115
C.V. (%)	11.15	3.29	5.81	2.3	3.66	1.17	1.42	11.99

**Table 8. Lint yield performance, fiber characteristics, loan values, and dollar return per acre of cotton varieties grown on an irrigated Sharkey clay at the Northeast Research Station, St. Joseph, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
PX5C45W3FE	1,123	43.4	5.0	1.13	29.0	84.7	52.12	\$585.18
PHY400W3FE	1,100	39.9	4.5	1.18	29.5	83.2	53.87	\$592.70
PHY500W3FE	1,054	42.2	4.5	1.16	30.7	84.4	54.03	\$569.49
DG3427B3XF	1,041	44.7	5.0	1.12	25.9	82.0	50.67	\$527.20
PHY580W3FE	1,021	41.3	4.9	1.14	29.4	83.9	52.97	\$540.94
DP1518B2XF	1,017	38.6	4.5	1.16	26.3	84.1	53.72	\$546.48
PHY480W3FE	996	39.2	4.7	1.12	29.2	84.1	53.63	\$533.97
PX5C05W3FE	993	43.1	5.1	1.08	28.8	83.3	49.85	\$495.00
PHY350W3FE	985	38.2	4.5	1.14	27.9	83.5	53.58	\$528.00
DG3520B3XF	985	36.2	3.9	1.23	30.0	85.2	54.18	\$533.83
DG3402B3XF	966	38.2	4.6	1.16	29.5	83.5	53.85	\$520.05
PX3D32W3FE	958	37.7	4.4	1.20	30.2	83.6	54.10	\$518.52
DG3615B3XF	958	40.6	4.9	1.15	28.4	82.6	52.88	\$506.40
DP1845B3XF	949	39.0	4.3	1.23	31.5	83.8	54.25	\$514.75
DP1851B3XF	939	38.4	4.6	1.15	30.8	84.5	54.05	\$507.40
DP1835B3XF	932	40.8	4.7	1.19	27.8	83.6	53.82	\$501.73
AMX19A006B3XF	929	36.5	4.6	1.23	32.0	84.0	54.23	\$503.60
H959B3XF	922	36.3	5.0	1.17	28.0	83.7	52.53	\$484.29
DP1555B2RF	919	41.3	4.9	1.16	30.2	83.8	53.25	\$489.59
PHY340W3FE	916	40.3	4.7	1.17	28.0	85.2	53.80	\$492.61
PX3D43W3FE	915	38.8	4.5	1.13	31.3	84.0	53.97	\$494.04
NG5711B3XF	910	37.3	4.7	1.20	29.5	82.7	53.88	\$490.42
ST5471GLTP	910	36.3	4.6	1.14	29.7	82.6	53.63	\$488.13
CP9608B3XF	897	40.8	4.6	1.14	25.1	82.3	52.20	\$468.46
DP1646B2XF	892	40.1	4.5	1.20	27.8	82.9	53.77	\$479.84
AMX19A005B3XF	879	39.2	4.5	1.13	26.5	82.7	53.55	\$470.65
PX5E28W3FE	877	35.9	4.3	1.17	30.5	83.1	53.97	\$473.21
DG3605B2XF	869	39.2	4.6	1.24	28.2	83.2	53.80	\$467.29
ST5600B2XF	868	40.0	5.2	1.16	29.4	83.0	51.38	\$445.77
DGX18503-BB3XF	861	39.7	4.7	1.16	29.3	83.5	53.77	\$463.08
UA222	839	35.5	4.7	1.19	29.5	84.9	53.95	\$452.66
DP1916B3XF	832	39.7	4.7	1.16	30.0	83.9	53.92	\$448.64
PX5E34W3FE	831	35.8	4.3	1.19	31.1	83.5	54.15	\$449.93
FM2398GLTP	831	38.7	5.0	1.18	27.9	85.1	52.37	\$434.92
NG3522B2XF	826	35.1	4.6	1.12	24.8	81.7	51.62	\$426.55
DG3526B2XF	825	39.1	4.9	1.12	27.3	83.2	52.73	\$435.23
ST4550GLTP	821	40.4	4.5	1.16	32.5	84.8	54.22	\$445.19
AMX1828B3XF	814	37.9	4.6	1.19	28.4	83.8	53.83	\$438.20
NG3729B2XF	811	37.1	4.9	1.14	28.0	83.8	52.58	\$426.66
CP9830B3XF	781	40.6	4.5	1.23	27.7	83.5	53.82	\$420.16
NG4936B3XF	773	34.9	4.4	1.19	27.0	84.2	53.88	\$416.68
NG3930B3XF	751	36.1	4.6	1.18	26.9	84.0	53.80	\$404.12
UA114	730	34.4	4.8	1.18	30.7	85.2	53.37	\$389.55
DG3317B3XF	711	38.3	4.9	1.15	30.2	84.1	52.42	\$372.68
AMX1816B3XF	668	32.2	4.0	1.15	26.8	82.9	52.92	\$353.73
AMX1818B3XF	666	34.4	4.5	1.19	31.8	84.7	54.25	\$361.37
NG3994B3XF	655	39.4	4.8	1.16	28.3	83.0	53.67	\$351.28
Overall mean	888	38.6	4.637	1.1665	28.918	83.677	53.3358	\$473.62
LSD (0.05)	92.91	0.871	0.208	0.0306	1.307	1.102	1.4085	62.23
C.V. (%)	8.93	1.93	3.3	1.93	3.33	1.12	1.95	9.84



**Table 9. Lint yield performance, fiber characteristics, loan values, and dollar return per acre of cotton varieties grown on a nonirrigated Commerce silt loam at the Northeast Research Station, St. Joseph, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
PX3D32W3FE	1,476	38.8	4.4	1.25	33.3	85.7	54.40	\$802.84
PX3D43W3FE	1,450	38.3	4.6	1.19	36.5	85.5	54.40	\$788.96
PHY400W3FE	1,388	41.3	4.6	1.20	34.4	84.8	54.37	\$754.61
DG3605B2XF	1,312	40.0	4.4	1.26	32.8	84.9	54.30	\$712.58
DP1518B2XF	1,293	39.0	4.4	1.19	29.5	85.1	53.94	\$697.20
PX5E28W3FE	1,275	37.0	4.2	1.22	34.3	85.7	54.53	\$695.30
PX5E34W3FE	1,272	37.8	4.4	1.21	34.5	85.4	54.50	\$692.97
AMX1828B3XF	1,270	40.3	4.7	1.22	32.7	86.1	54.42	\$691.26
UA114	1,250	37.8	5.0	1.24	33.4	86.7	52.93	\$661.40
CP9608B3XF	1,240	44.0	4.7	1.18	29.6	84.7	54.03	\$669.90
DP1555B2RF	1,228	43.0	4.9	1.21	32.1	84.8	53.52	\$657.08
AMX19A005B3XF	1,214	39.3	4.8	1.19	28.9	84.4	53.93	\$654.64
PHY340W3FE	1,209	41.0	4.7	1.21	32.0	85.0	54.28	\$656.17
PX5C05W3FE	1,207	41.8	4.8	1.21	33.6	85.6	54.35	\$656.17
DG3402B3XF	1,200	37.8	4.8	1.23	32.3	86.0	54.38	\$652.32
DG3427B3XF	1,198	43.3	5.1	1.17	30.0	82.8	51.55	\$617.47
DG3520B3XF	1,172	38.0	4.1	1.24	33.3	85.6	54.48	\$638.27
DP1646B2XF	1,168	40.3	4.8	1.26	30.8	84.1	54.07	\$631.50
ST5600B2XF	1,165	41.0	5.0	1.23	34.0	85.2	52.92	\$616.64
DP1851B3XF	1,162	40.3	4.9	1.20	34.9	85.6	54.45	\$632.60
NG3729B2XF	1,154	39.8	5.0	1.24	31.5	85.7	52.05	\$600.55
NG3994B3XF	1,149	41.3	5.3	1.20	30.0	83.4	50.67	\$582.32
NG3522B2XF	1,134	38.8	4.9	1.14	27.7	83.3	52.90	\$599.89
PHY500W3FE	1,131	42.8	4.5	1.18	33.6	83.3	54.27	\$613.65
ST4550GLTP	1,129	42.3	4.9	1.21	33.2	85.1	53.58	\$604.84
UA222	1,126	36.8	4.8	1.25	31.9	85.0	53.50	\$602.14
ST5471GLTP	1,115	36.3	4.8	1.18	34.6	83.6	53.43	\$595.67
DG3526B2XF	1,108	41.8	4.9	1.14	30.6	85.1	53.98	\$598.29
PX5C45W3FE	1,099	39.0	4.9	1.23	34.3	86.4	54.49	\$598.59
FM2398GLTP	1,089	41.8	5.4	1.22	32.0	85.8	50.57	\$550.83
DP1845B3XF	1,089	40.8	4.4	1.30	33.6	85.9	54.48	\$593.48
PHY480W3FE	1,077	38.8	4.6	1.21	32.5	86.5	54.43	\$586.13
PHY350W3FE	1,069	35.3	4.9	1.19	33.3	85.0	53.62	\$573.06
DP1916B3XF	1,067	41.3	4.8	1.22	33.0	84.7	53.55	\$571.38
NG4936B3XF	1,053	38.0	4.7	1.26	29.8	85.8	54.12	\$570.01
NG3930B3XF	1,037	37.0	4.9	1.22	30.4	85.8	53.40	\$553.65
DG3317B3XF	1,027	41.8	4.9	1.23	32.6	85.2	53.58	\$550.19
DG3615B3XF	1,021	38.0	4.9	1.22	32.7	84.7	52.80	\$539.09
H959B3XF	1,020	36.3	4.7	1.27	33.9	86.0	54.43	\$555.11
AMX19A006B3XF	1,009	35.8	4.6	1.27	35.7	85.6	54.45	\$549.40
AMX1816B3XF	1,004	34.3	4.2	1.23	30.5	85.0	54.17	\$543.57
DP1835B3XF	993	40.3	5.0	1.23	32.0	85.5	52.72	\$523.37
CP9830B3XF	979	43.3	4.6	1.26	30.9	84.7	54.20	\$530.78
DGX18503-BB3XF	917	39.8	4.8	1.25	33.7	84.8	54.35	\$498.12
PHY580W3FE	883	40.8	4.8	1.23	34.2	85.7	53.67	\$473.61
NG5711B3XF	868	39.0	4.8	1.25	32.3	85.4	53.58	\$465.10
AMX1818B3XF	827	37.0	4.6	1.23	34.8	85.6	54.43	\$450.05
Overall mean	1,134	39.5	4.742	1.2202	32.513	85.145	53.7198	\$595.20
LSD (0.05)	155.79	1.550	0.237	0.0349	1.527	1.257	1.0757	107.7277
C.V. (%)	11.73	3.36	3.68	2.11	3.46	1.09	1.48	12.63

**Table 10. Lint yield performance, fiber characteristics, loan values and dollar return per acre of cotton varieties grown on an irrigated Moreland clay at the Red River Research Station, Bossier City, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
DG3317B3XF	1,576	40.2	4.6	1.21	34.4	86.1	53.88	\$847.44
PHY400W3FE	1,549	39.8	4.7	1.23	36.9	85.6	53.86	\$835.08
PX5C05W3FE	1,530	40.7	4.6	1.24	37.4	87.3	54.50	\$833.91
AMX19A006B3XF	1,475	38.5	4.5	1.22	37.4	84.5	54.34	\$801.90
DP1518B2XF	1,450	39.9	4.5	1.22	35.5	85.8	54.48	\$789.71
DP1835B3XF	1,446	40.7	4.5	1.25	35.9	85.2	53.86	\$778.60
PHY350W3FE	1,444	38.3	4.4	1.21	35.8	85.7	54.50	\$786.88
CP9608B3XF	1,422	40.5	4.4	1.21	32.5	84.3	54.30	\$772.28
PX5C45W3FE	1,408	41.1	4.7	1.21	36.6	86.4	54.41	\$766.27
H959B3XF	1,385	39.8	4.6	1.22	35.8	86.5	54.41	\$753.76
ST4550GLTP	1,384	40.4	4.5	1.21	37.3	86.6	54.49	\$754.33
AMX1828B3XF	1,383	40.7	4.7	1.21	36.7	85.6	53.86	\$745.96
DP1851B3XF	1,347	39.5	4.4	1.19	37.9	85.3	54.18	\$729.94
DP1646B2XF	1,329	39.7	4.6	1.25	35.1	85.8	54.39	\$722.81
PHY580W3FE	1,312	37.9	4.4	1.25	37.9	87.0	54.53	\$715.21
ST5600B2XF	1,280	39.5	4.9	1.21	35.0	85.5	53.84	\$689.52
DG3615B3XF	1,273	40.4	4.6	1.21	36.6	85.2	54.40	\$692.52
DG3526B2XF	1,272	40.1	4.5	1.19	33.1	85.2	54.40	\$692.02
PHY480W3FE	1,251	38.3	4.4	1.23	36.4	85.7	54.49	\$681.49
NG3930B3XF	1,249	39.1	4.4	1.21	32.7	85.2	54.41	\$679.58
PHY340W3FE	1,244	41.0	4.7	1.22	35.7	85.6	54.34	\$676.23
DGX18503-BB3XF	1,237	38.8	4.5	1.27	35.0	85.7	54.44	\$673.44
PX3D43W3FE	1,234	41.3	4.4	1.23	36.3	85.8	54.49	\$672.37
AMX19A005B3XF	1,230	38.6	4.2	1.23	32.8	86.4	54.43	\$669.57
NG3729B2XF	1,229	37.6	4.4	1.26	35.0	86.8	54.51	\$669.97
AMX1816B3XF	1,227	38.0	4.6	1.24	34.4	86.0	53.50	\$656.56
NG5711B3XF	1,225	36.1	4.1	1.25	34.8	84.8	54.45	\$666.79
NG4936B3XF	1,196	38.8	4.6	1.26	35.9	85.9	53.91	\$643.93
PX5E28W3FE	1,196	36.9	3.9	1.26	37.8	86.2	54.56	\$652.48
PX3D32W3FE	1,194	37.5	4.4	1.22	35.9	85.6	54.38	\$649.04
DP1555B2RF	1,190	39.9	4.4	1.27	35.2	86.5	54.46	\$647.90
DP1845B3XF	1,182	40.2	4.5	1.25	35.3	86.6	54.51	\$644.49
UA222	1,181	36.8	4.5	1.26	36.0	86.5	54.49	\$643.56
DG3520B3XF	1,171	37.0	4.0	1.27	37.1	86.5	54.56	\$638.86
NG3522B2XF	1,165	38.5	4.5	1.20	32.0	84.1	54.15	\$630.97
CP9830B3XF	1,163	40.4	4.4	1.27	35.2	86.4	54.48	\$633.73
DG3427B3XF	1,152	37.9	4.6	1.23	37.7	85.3	54.40	\$626.74
DP1916B3XF	1,130	41.8	4.6	1.23	36.3	85.4	54.44	\$615.12
AMX1818B3XF	1,121	38.8	4.5	1.27	36.2	86.3	53.91	\$605.04
DG3402B3XF	1,113	38.5	4.7	1.24	36.0	86.1	54.48	\$606.11
NG3994B3XF	1,097	38.3	4.6	1.27	37.5	87.2	53.95	\$590.22
PX5E34W3FE	1,068	38.2	4.2	1.21	36.8	85.5	53.90	\$574.81
DG3605B2XF	1,066	38.6	4.5	1.24	34.5	85.2	54.41	\$580.20
PHY500W3FE	1,058	39.0	4.1	1.23	37.4	85.5	54.54	\$577.22
ST5471GLTP	1,016	36.9	4.8	1.22	36.1	85.7	53.88	\$549.84
FM2398GLTP	893	37.7	4.4	1.23	35.5	85.6	54.46	\$486.39
UA114	859	36.4	4.7	1.25	36.8	85.8	54.44	\$467.56
Overall mean	1,247	39.0	4.473	1.23	35.776	85.802	54.2971	\$676.99
LSD (0.05)	233.35	2.314	0.338	NS	2.192	1.185	NS	127.0169
C.V. (%)	15.98	5.06	6.45	3.76	5.23	1.18	1.13	16.02

**Table 11. Lint yield performance, fiber characteristics, loan values and dollar return per acre of cotton varieties grown on an irrigated Caplis very fine sandy loam at the Red River Research Station, Bossier City, Louisiana, 2019.**

Variety	Lint Yield (lbs/acre)	Lint (%)	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢)	Dollar Return (Acre)
PHY340W3FE	1,586	43.0	4.1	1.22	32.8	84.7	54.39	\$862.40
DP1835B3XF	1,572	42.7	4.4	1.22	32.4	85.5	54.39	\$854.75
AMX19A005B3XF	1,567	40.4	4.2	1.23	31.4	85.9	54.31	\$851.48
NG3729B2XF	1,549	38.4	4.5	1.23	31.9	86.1	54.35	\$842.01
CP9608B3XF	1,528	41.2	4.1	1.22	31.3	85.0	54.34	\$830.46
PX5C45W3FE	1,523	42.4	4.3	1.17	33.8	84.9	54.35	\$828.05
PHY400W3FE	1,518	41.1	4.4	1.24	34.4	85.6	54.44	\$826.42
DG3317B3XF	1,515	41.4	4.4	1.18	32.3	84.9	54.33	\$823.01
ST4550GLTP	1,500	42.0	4.3	1.21	35.6	86.0	54.51	\$817.63
ST5600B2XF	1,480	40.2	4.5	1.25	33.0	84.9	54.31	\$804.16
PX3D32W3FE	1,473	39.0	4.0	1.28	35.1	85.7	54.46	\$802.48
DP1646B2XF	1,453	40.5	4.2	1.27	31.6	85.0	54.38	\$790.18
DP1845B3XF	1,441	41.0	3.9	1.31	34.6	86.3	54.54	\$786.07
NG3994B3XF	1,437	41.3	4.7	1.22	30.8	84.2	54.15	\$778.18
PHY350W3FE	1,406	40.1	4.0	1.22	33.4	85.2	54.45	\$765.63
PX3D43W3FE	1,398	42.1	4.0	1.22	36.4	85.7	54.49	\$761.55
DP1518B2XF	1,361	39.5	4.1	1.20	30.3	84.8	54.18	\$737.22
AMX19A006B3XF	1,338	38.7	4.2	1.31	35.9	86.0	54.51	\$729.25
PHY500W3FE	1,330	39.9	3.8	1.21	37.0	85.5	54.51	\$725.22
PHY580W3FE	1,322	40.6	4.1	1.23	35.8	85.9	54.55	\$721.01
AMX1828B3XF	1,321	41.2	4.5	1.24	32.4	84.5	54.35	\$717.84
PX5C05W3FE	1,298	44.6	4.1	1.18	34.9	85.8	54.46	\$707.24
DG3520B3XF	1,294	37.2	3.8	1.29	34.7	86.3	54.56	\$706.12
DG3526B2XF	1,272	41.7	4.3	1.19	31.6	85.4	54.26	\$690.05
PX5E34W3FE	1,256	40.7	3.7	1.26	35.4	86.1	54.53	\$685.10
UA222	1,235	38.1	4.3	1.26	32.7	84.9	54.38	\$671.40
NG4936B3XF	1,234	37.9	4.1	1.29	31.2	87.0	54.39	\$671.13
PX5E28W3FE	1,226	38.3	3.5	1.24	35.9	85.8	53.14	\$654.30
NG5711B3XF	1,221	41.5	4.0	1.25	32.7	84.7	53.41	\$655.65
PHY480W3FE	1,216	41.0	3.9	1.19	34.1	84.9	54.41	\$661.70
ST5471GLTP	1,202	39.3	4.5	1.22	35.1	84.6	54.43	\$654.19
DP1851B3XF	1,202	40.9	3.8	1.27	36.2	85.7	53.60	\$649.24
NG3930B3XF	1,190	38.5	4.2	1.23	29.7	85.7	54.10	\$643.83
NG3522B2XF	1,183	39.2	4.3	1.18	30.1	84.4	53.99	\$639.10
H959B3XF	1,178	37.7	4.4	1.24	33.2	84.7	54.38	\$640.63
CP9830B3XF	1,168	43.0	4.0	1.26	31.7	83.6	54.24	\$633.61
DG3615B3XF	1,154	40.4	4.4	1.25	33.3	85.2	54.41	\$627.60
UA114	1,153	36.6	4.7	1.23	33.0	86.6	54.44	\$627.78
DP1555B2RF	1,143	40.7	4.3	1.22	34.1	85.3	54.46	\$622.72
DP1916B3XF	1,127	40.3	4.2	1.24	34.6	85.3	54.44	\$613.63
DG3402B3XF	1,091	39.1	4.2	1.29	32.5	86.6	54.44	\$593.56
AMX1816B3XF	1,087	36.9	4.1	1.25	31.5	85.7	54.40	\$591.23
DG3605B2XF	1,085	39.1	3.9	1.31	31.5	84.7	54.34	\$589.64
AMX1818B3XF	1,039	37.9	4.3	1.25	35.3	86.0	54.48	\$565.89
DGX18503-BB3XF	1,018	38.1	4.4	1.24	33.8	85.4	54.44	\$554.25
DG3427B3XF	996	40.1	4.3	1.21	33.2	84.0	54.33	\$540.91
FM2398GLTP	976	41.5	5.0	1.24	32.5	84.4	53.14	\$519.22
Overall mean	1,295	40.1	4.191	1.2363	33.314	85.336	54.2944	\$703.50
LSD (0.05)	217.96	2.077	0.241	0.0293	1.292	1.219	NS	120.35
C.V. (%)	14.37	4.42	4.91	2.02	3.31	1.22	1.09	14.61

**Table 12. Summary of lint yield performance for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Phytogen PHY400W3FE	1,629	1,420	1,192	1,140	1,194	1,252	1,007	1,449	1,234	1,248	1,277
Deltapine DP1646B2XF	1,482	1,272	1,300	1,147	1,063	1,394	1,268	1,329	994	813	1,206
Americot NG4936B3XF	1,304	1,199	1,276	1,131	1,088	1,193	966	1,418	991	928	1,149
Dyna-Gro DG3605B2XF	1,314	1,202	1,342	1,087	932	1,278	1,119	1,324	851	954	1,140
Stoneville ST4550GLTP	1,302	1,372	1,086	923	1,024	1,058	972	1,197	1,142	1,111	1,119
Dyna-Gro DG3427B3XF	1,204	1,163	998	1,121	974	941	1,082	1,408	1,035	1,046	1,097
Deltapine DP1845B3XF	1,406	1,261	1,110	940	1,064	986	1,033	1,326	950	886	1,096
Stoneville ST5600B2XF	1,311	1,206	1,145	1,002	902	899	927	1,268	1,003	974	1,064
Americot NG3994B3XF	1,238	1,213	1,169	997	864	968	1,096	1,245	850	792	1,043
Phytogen PHY580W3FE	1,279	1,298	865	909	976	803	845	1,213	798	1,103	1,009

**Table 13. Summary of percent turn-out for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Phytogen PHY580W3FE	42.9	44.8	43.9	43.9	44.3	43.9	41.8	42.2	47.2	45.0	44.0
Stoneville ST4550GLTP	41.5	41.3	43.7	43.6	43.4	44.3	43.5	42.2	46.9	42.6	43.3
Dyna-Gro DG3427B3XF	41.9	41.9	42.0	42.7	44.2	43.2	42.3	42.5	46.9	41.9	42.9
Phytogen PHY400W3FE	42.8	40.3	42.5	43.5	43.6	42.4	41.4	42.3	46.3	42.0	42.7
Deltapine DP1646B2XF	42.2	41.7	41.8	43.1	42.9	43.9	42.3	41.7	44.1	40.5	42.4
Americot NG3994B3XF	42.0	42.4	42.3	41.7	42.9	42.0	42.3	40.6	45.7	40.7	42.3
Deltapine DP1845B3XF	42.8	40.1	40.7	40.9	42.8	41.6	41.3	41.2	46.1	40.7	41.8
Dyna-Gro DG3605B2XF	41.3	40.2	42.7	41.8	42.0	42.4	41.2	40.6	43.0	40.3	41.6
Stoneville ST5600B2XF	41.3	39.4	41.0	41.7	41.6	42.4	41.6	40.7	44.9	40.4	41.5
Americot NG4936B3XF	38.4	37.5	38.7	39.9	39.6	40.7	38.5	38.8	42.9	38.5	39.3

**Table 14. Summary of micronaire values for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Stoneville ST5600B2XF	4.6	4.8	4.8	4.8	4.9	5.2	5.1	4.9	4.9	5.5	5.0
Dyna-Gro DG3427B3XF	4.6	4.6	4.6	4.6	4.7	4.8	4.9	4.7	4.6	4.8	4.7
Americot NG3994B3XF	4.4	4.4	4.7	4.6	4.7	4.7	5.0	4.6	4.5	5.0	4.7
Phytogen PHY580W3FE	4.4	4.3	4.4	4.8	4.6	4.8	4.7	4.4	4.5	5.0	4.6
Stoneville ST4550GLTP	4.5	4.3	4.3	4.7	4.4	4.8	4.8	4.4	4.5	4.9	4.6
Deltapine DP1646B2XF	4.4	4.3	4.5	4.4	4.7	4.7	4.7	4.2	4.2	4.7	4.5
Americot NG4936B3XF	4.5	4.4	4.2	4.2	4.4	4.5	4.7	4.4	4.4	4.9	4.5
Phytogen PHY400W3FE	4.2	4.2	4.3	4.5	4.4	4.4	4.6	4.4	4.1	4.7	4.4
Dyna-Gro DG3605B2XF	4.3	4.2	4.2	4.5	4.1	4.3	4.5	4.0	4.0	4.7	4.3
Deltapine DP1845B3XF	3.9	4.0	3.8	3.9	4.4	4.2	4.2	3.8	4.5	4.6	4.1

**Table 15. Summary of fiber length values for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Dyna-Gro DG3605B2XF	1.25	1.23	1.29	1.21	1.29	1.33	1.29	1.28	1.27	1.25	1.27
Deltapine DP1845B3XF	1.26	1.26	1.24	1.18	1.27	1.34	1.32	1.28	1.28	1.23	1.27
Deltapine DP1646B2XF	1.24	1.25	1.26	1.22	1.26	1.26	1.30	1.25	1.27	1.24	1.25
Americot NG4936B3XF	1.22	1.23	1.22	1.20	1.23	1.26	1.29	1.25	1.21	1.23	1.23
Phytogen PHY400W3FE	1.25	1.20	1.22	1.21	1.21	1.26	1.25	1.23	1.26	1.20	1.23
Americot NG3994B3XF	1.23	1.17	1.19	1.24	1.20	1.26	1.25	1.24	1.22	1.18	1.22
Stoneville ST5600B2XF	1.20	1.19	1.17	1.21	1.21	1.23	1.26	1.21	1.23	1.22	1.21
Phytogen PHY580W3FE	1.18	1.18	1.21	1.18	1.20	1.20	1.24	1.23	1.21	1.18	1.20
Stoneville ST4550GLTP	1.21	1.18	1.19	1.16	1.18	1.19	1.24	1.19	1.21	1.24	1.20
Dyna-Gro DG3427B3XF	1.18	1.14	1.22	1.20	1.13	1.19	1.24	1.21	1.17	1.17	1.19

**Table 16. Summary of fiber strength values for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Phytogen PHY400W3FE	34.0	34.4	34.8	34.1	32.8	34.5	35.5	34.0	34.9	34.8	34.4
Stoneville ST4550GLTP	33.1	35.0	34.2	34.4	33.4	33.6	34.7	34.4	33.3	37.3	34.3
Phytogen PHY580W3FE	31.7	33.3	34.2	33.9	33.1	36.0	35.1	33.7	33.5	35.7	34.0
Stoneville ST5600B2XF	32.4	33.3	33.2	34.6	34.0	32.0	34.9	34.2	32.6	35.5	33.7
Deltapine DP1845B3XF	32.8	34.3	35.2	31.7	32.1	33.8	34.3	34.1	33.8	34.0	33.6
Americot NG3994B3XF	30.9	29.5	32.2	32.2	31.2	34.8	33.2	31.3	32.2	33.1	32.1
Dyna-Gro DG3427B3XF	30.3	30.5	31.5	33.1	30.8	32.6	33.9	32.6	30.9	32.4	31.9
Dyna-Gro DG3605B2XF	31.2	30.4	31.2	30.0	31.2	31.7	32.7	34.1	30.1	31.4	31.4
Americot NG4936B3XF	29.3	29.9	29.5	31.3	31.0	30.6	32.6	30.9	29.8	32.2	30.7
Deltapine DP1646B2XF	28.6	30.2	30.6	29.6	30.9	31.3	31.8	31.4	29.9	31.2	30.6

**Table 17. Summary of fiber uniformity values for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Deltapine DP1845B3XF	83.6	85.7	84.7	83.8	86.3	87.7	86.1	84.8	86.3	85.6	85.5
Stoneville ST5600B2XF	85.2	85.4	83.9	84.6	85.4	86.7	85.8	85.6	85.2	84.7	85.3
Phytogen PHY400W3FE	86.1	84.5	84.0	84.6	84.7	86.2	85.8	85.5	85.8	84.4	85.2
Americot NG4936B3XF	83.9	85.0	83.5	84.2	85.6	86.3	86.5	84.2	85.0	86.5	85.1
Stoneville ST4550GLTP	84.6	84.1	86.3	82.8	84.0	85.4	85.4	85.0	84.8	86.6	84.9
Phytogen PHY580W3FE	83.7	85.4	83.6	85.4	84.0	87.5	85.8	84.4	84.0	84.9	84.9
Deltapine DP1646B2XF	83.6	84.6	86.0	84.0	85.2	85.3	85.6	84.6	84.9	83.7	84.7
Dyna-Gro DG3605B2XF	84.0	83.5	84.6	83.1	85.9	86.0	84.5	83.6	84.6	84.6	84.4
Americot NG3994B3XF	85.2	84.2	84.2	83.7	83.4	85.6	83.7	83.7	86.1	84.6	84.4
Dyna-Gro DG3427B3XF	83.5	83.2	83.9	86.0	83.5	84.1	85.1	83.6	85.1	82.8	84.1

**Table 18. Summary of loan values for the on-farm core block demonstrations across locations, 2019.**

	Avoyelles	Franklin	Morehouse	Ouachita	P. Coupee	Rapides-1	Rapides-2	Rapides-3	Tensas	W. Carroll	Average
Phytogen PHY400W3FE	54.60	54.45	54.35	54.35	54.25	54.50	54.45	54.45	54.55	54.35	54.43
Deltapine DP1845B3XF	54.30	54.55	54.45	54.30	54.40	54.60	54.60	54.45	54.15	54.45	54.43
Stoneville ST4550GLTP	54.35	54.45	54.50	54.20	54.35	54.45	54.45	54.45	54.35	54.50	54.41
Dyna-Gro DG3605B2XF	54.25	54.15	54.35	54.05	54.45	54.40	54.25	54.40	54.20	54.25	54.28
Dyna-Gro DG3427B3XF	54.05	54.00	54.20	54.50	53.75	54.25	54.45	54.20	54.15	54.10	54.17
Deltapine DP1646B2XF	53.80	54.20	54.25	53.90	54.20	54.35	54.35	54.35	54.00	54.20	54.16
Phytogen PHY580W3FE	54.20	54.55	54.30	54.45	54.35	54.50	54.45	54.35	54.35	52.05	54.16
Americot NG4936B3XF	53.85	53.90	53.95	54.35	54.35	54.25	54.40	54.10	54.00	54.40	54.16
Americot NG3994B3XF	54.20	53.85	54.25	54.20	54.20	54.45	52.00	54.20	54.40	52.05	53.78
Stoneville ST5600B2XF	54.35	54.45	54.25	54.35	54.45	52.10	52.15	54.45	54.35	50.55	53.55

**Table 19. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Avoyelles core block demonstration, 2019.**

**Parish:** Avoyelles

**Community:** Moreauville

**Cooperator:** Adam Lemoine

**Agent:** Justin Dufour

**Planting date:** 5/14/19

**Harvest date:** 10/9/19

**Previous crop:** Soybeans

**Soil type:** Coushatta silty clay loam

**Tillage Type:** Conventional

**N rate (lbs/acre):** 60

**Seeding rate:** 35,000

**Row Spacing:** 38 inches

**Irrigation?** No

**Pivot or furrow?**

**GPS coord:** 31.043255N,

91.985341W

**Plot size:** 8 rows by 468 feet

**Misc:**

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Phytogen PHY400W3FE	1,629	42.8	4.2	1.25	34.0	86.1	54.60	\$889.43
Deltapine DP1646B2XF	1,482	42.2	4.4	1.24	28.6	83.6	53.80	\$797.32
Deltapine DP1845B3XF	1,406	42.8	3.9	1.26	32.8	83.6	54.30	\$763.46
Dyna-Gro DG3605B2XF	1,314	41.3	4.3	1.25	31.2	84.0	54.25	\$712.85
Stoneville ST5600B2XF	1,311	41.3	4.6	1.20	32.4	85.2	54.35	\$712.53
Americot NG4936B3XF	1,304	38.4	4.5	1.22	29.3	83.9	53.85	\$702.20
Stoneville ST4550GLTP	1,302	41.5	4.5	1.21	33.1	84.6	54.35	\$707.64
Phytogen PHY580W3FE	1,279	42.9	4.4	1.18	31.7	83.7	54.20	\$693.22
Americot NG3994B3XF	1,238	42.0	4.4	1.23	30.9	85.2	54.20	\$671.00
Dyna-Gro DG3427B3XF	1,204	41.9	4.6	1.18	30.3	83.5	54.05	\$650.76

**Table 20. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Franklin core block demonstration, 2019.**

**Parish:** Franklin  
**Community:** Winnsboro  
**Cooperator:** Macon Ridge Research Station  
**Agent:** Keith Collins

**Planting date:** 5/15/19  
**Harvest date:** 10/10/19  
**Previous crop:** cotton  
**Soil type:** Gigger silt loam  
**Tillage Type:** Reduced

**N rate (lbs/acre):** 100  
**Seeding rate:** 44,850  
**Row spacing:** 40 inches  
**Irrigation?** Yes  
**Pivot or furrow?** Furrow

**GPS coord:** 32.141842N,  
91.700928W  
**Plot size:** 4 rows by 45 feet  
**Misc:** Four replications in a RCBD

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Phytogen PHY400W3FE	1,420	40.3	4.2	1.20	34.4	84.5	54.45	\$772.92
Stoneville ST4550GLTP	1,372	41.3	4.3	1.18	35.0	84.1	54.45	\$746.78
Phytogen PHY580W3FE	1,298	44.8	4.3	1.18	33.3	85.4	54.55	\$707.95
Deltapine DP1646B2XF	1,272	41.7	4.3	1.25	30.2	84.6	54.20	\$689.15
Deltapine DP1845B3XF	1,261	40.1	4.0	1.26	34.3	85.7	54.55	\$688.04
Americot NG3994B3XF	1,213	42.4	4.4	1.17	29.5	84.2	53.85	\$653.09
Stoneville ST5600B2XF	1,206	39.4	4.8	1.19	33.3	85.4	54.45	\$656.67
Dyna-Gro DG3605B2XF	1,202	40.2	4.2	1.23	30.4	83.5	54.15	\$650.88
Americot NG4936B3XF	1,199	37.5	4.4	1.23	29.9	85.0	53.90	\$646.42
Dyna-Gro DG3427B3XF	1,163	41.9	4.6	1.14	30.5	83.2	54.00	\$627.91

**Table 21. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Morehouse core block demonstration, 2019.**

**Parish:** Morehouse  
**Community:** Bonita  
**Cooperator:** Dan and Matt Turner  
**Agent:** Richard Letlow

**Planting date:** 5/24/19  
**Harvest date:** 11/8/19  
**Previous crop:** Corn  
**Soil type:** Gallion silt loam

**Tillage Type:** Conventional  
**N rate (lbs/acre):** 95  
**Seeding rate:** 39,000  
**Irrigation?** Yes  
**Pivot or furrow?** Furrow

**GPS coord:** 32.838031N,  
91.780104W  
**Plot size:** 12 row by 1,750 feet  
**Misc:**

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Dyna-Gro DG3605B2XF	1,342	42.7	4.2	1.29	31.2	84.6	54.35	\$729.38
Deltapine DP1646B2XF	1,300	41.8	4.5	1.26	30.6	86.0	54.25	\$705.25
Americot NG4936B3XF	1,276	38.7	4.2	1.22	29.5	83.5	53.95	\$688.40
Phytogen PHY400W3FE	1,192	42.5	4.3	1.22	34.8	84.0	54.35	\$647.85
Americot NG3994B3XF	1,169	42.3	4.7	1.19	32.2	84.2	54.25	\$634.18
Stoneville ST5600B2XF	1,145	41.0	4.8	1.17	33.2	83.9	54.25	\$621.16
Deltapine DP1845B3XF	1,110	40.7	3.8	1.24	35.2	84.7	54.45	\$604.40
Stoneville ST4550GLTP	1,086	43.7	4.3	1.19	34.2	86.3	54.50	\$591.87
Dyna-Gro DG3427B3XF	998	42.0	4.6	1.22	31.5	83.9	54.20	\$540.92
Phytogen PHY580W3FE	865	43.9	4.4	1.21	34.2	83.6	54.30	\$469.70

**Table 22. Lint yield, gin turn-out, fiber characteristics, loan values, and dollar return per acre, Ouachita core block demonstration, 2019.**

**Parish:** Ouachita                      **Harvest date:** 10/10/19                      **Seeding rate:** 41,400                      92.116194W  
**Community:** Fondale                      **Previous crop:** Corn                      **Row spacing:** 38 inches                      **Plot size:** 8 rows by 2,715 feet  
**Cooperator:** Tripp Faulk                      **Soil type:** Rilla silt loam                      **Irrigation?** No                      **Misc:**  
**Agent:** Keith Collins                      **Tillage Type:** Reduced Tillage                      **Pivot or furrow?**  
**Planting date:** 5/19/19                      **N rate (lbs/acre):** 75                      **GPS coord:** 32.358069N,

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Deltapine DP1646B2XF	1,147	43.1	4.4	1.22	29.6	84.0	53.90	\$618.23
Phytogen PHY400W3FE	1,140	43.5	4.5	1.21	34.1	84.6	54.35	\$619.59
Americot NG4936B3XF	1,131	39.9	4.2	1.20	31.3	84.2	54.35	\$614.70
Dyna-Gro DG3427B3XF	1,121	42.7	4.6	1.20	33.1	86.0	54.50	\$610.95
Dyna-Gro DG3605B2XF	1,087	41.8	4.5	1.21	30.0	83.1	54.05	\$587.52
Stoneville ST5600B2XF	1,002	41.7	4.8	1.21	34.6	84.6	54.35	\$544.59
Americot NG3994B3XF	997	41.7	4.6	1.24	32.2	83.7	54.20	\$540.37
Deltapine DP1845B3XF	940	40.9	3.9	1.18	31.7	83.8	54.30	\$510.42
Stoneville ST4550GLTP	923	43.6	4.7	1.16	34.4	82.8	54.20	\$500.27
Phytogen PHY580W3FE	909	43.9	4.8	1.18	33.9	85.4	54.45	\$494.95

**Table 23. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Point Coupee core block demonstration, 2019.**

**Parish:** Pointe Coupee                      **Harvest date:** 10/4/19                      **N rate (lbs/acre):** 70                      **GPS coord:** 30.80634N,  
**Community:** Innis                      **Previous crop:** Soybeans                      **Seeding rate:** 33,000                      091.78441W  
**Cooperator:** George LaCour                      **Soil type:** Commerce silty clay loam                      **Row spacing:** 38                      **Plot size:** 6 rows by 1259 feet  
**Agent:** Mark Carriere                      **Tillage Type:** Conventional                      **Irrigation?** No                      **Misc:**  
**Planting date:** 5/24/19                      **Pivot or furrow?**

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Phytogen PHY400W3FE	1,194	43.6	4.4	1.21	32.8	84.7	54.25	\$647.75
Americot NG4936B3XF	1,088	39.6	4.4	1.23	31.0	85.6	54.35	\$591.33
Deltapine DP1845B3XF	1,064	42.8	4.4	1.27	32.1	86.3	54.40	\$578.82
Deltapine DP1646B2XF	1,063	42.9	4.7	1.26	30.9	85.2	54.20	\$576.15
Stoneville ST4550GLTP	1,024	43.4	4.4	1.18	33.4	84.0	54.35	\$556.54
Phytogen PHY580W3FE	976	44.3	4.6	1.20	33.1	84.0	54.35	\$530.46
Dyna-Gro DG3427B3XF	974	44.2	4.7	1.13	30.8	83.5	53.75	\$523.53
Dyna-Gro DG3605B2XF	932	42.0	4.1	1.29	31.2	85.9	54.45	\$507.47
Stoneville ST5600B2XF	902	41.6	4.9	1.21	34.0	85.4	54.45	\$491.14
Americot NG3994B3XF	864	42.9	4.7	1.20	31.2	83.4	54.20	\$468.29



**Table 24. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Rapides-1 core block demonstration, 2019.**

**Parish:** Rapides-1  
**Community:** Boyce  
**Cooperator:** Trevor and Doug Verzwylvelt  
**Agent:** Justin Dufour  
**Planting date:** 5/1/19

**Harvest date:** 10/11/19  
**Previous crop:** Soybeans  
**Soil type:** Commerce silty clay loam  
**Tillage Type:** Conventional  
**N rate (lbs/acre):** 80

**Seeding rate:** 37,000  
**Row spacing:** 38 inches  
**Irrigation?** No  
**Pivot or furrow?**  
**GPS coord:** 31.33592N, 92.67932W

**Plot size:** 5 row plots (4-1 skip row) by 1230 feet  
**Misc:**

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Deltapine DP1646B2XF	1,394	43.9	4.7	1.26	31.3	85.3	54.35	\$757.64
Dyna-Gro DG3605B2XF	1,278	42.4	4.3	1.33	31.7	86.0	54.40	\$695.23
Phytogen PHY400W3FE	1,252	42.4	4.4	1.26	34.5	86.2	54.50	\$682.34
Americot NG4936B3XF	1,193	40.7	4.5	1.26	30.6	86.3	54.25	\$647.20
Stoneville ST4550GLTP	1,058	44.3	4.8	1.19	33.6	85.4	54.45	\$576.08
Deltapine DP1845B3XF	986	41.6	4.2	1.34	33.8	87.7	54.60	\$538.36
Americot NG3994B3XF	968	42.0	4.7	1.26	34.8	85.6	54.45	\$527.08
Dyna-Gro DG3427B3XF	941	43.2	4.8	1.19	32.6	84.1	54.25	\$510.49
Stoneville ST5600B2XF	899	42.4	5.2	1.23	32.0	86.7	52.10	\$468.38
Phytogen PHY580W3FE	803	43.9	4.8	1.20	36.0	87.5	54.50	\$437.64

**Table 25. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Rapides-2 core block demonstration, 2019.**

**Parish:** Rapides-2  
**Community:** LeCompte  
**Cooperator:** Dean Lee Research Center  
**Agent:** Justin Dufour

**Planting date:** 5/29/19  
**Harvest date:** 10/29/19  
**Previous crop:** Cotton  
**Soil type:** Coushatta silt loam  
**Tillage Type:** Reduced Tillage

**N rate (lbs/acre):** 80  
**Seeding rate:** 44,850  
**Row spacing:** 38 inches  
**Irrigation?** No  
**Pivot or furrow?**

**GPS coord:** 31.10866N, 92.24315W  
**Plot size:** 4 rows by 50 feet  
**Misc:** Replicated four times in a RCBD

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Deltapine DP1646B2XF	1,268	42.3	4.7	1.30	31.8	85.6	54.35	\$689.32
Dyna-Gro DG3605B2XF	1,119	41.2	4.5	1.29	32.7	84.5	54.25	\$607.06
Americot NG3994B3XF	1,096	42.3	5.0	1.25	33.2	83.7	52.00	\$569.66
Dyna-Gro DG3427B3XF	1,082	42.3	4.9	1.24	33.9	85.1	54.45	\$588.88
Deltapine DP1845B3XF	1,033	41.3	4.2	1.32	34.3	86.1	54.60	\$564.02
Phytogen PHY400W3FE	1,007	41.4	4.6	1.25	35.5	85.8	54.45	\$548.20
Stoneville ST4550GLTP	972	43.5	4.8	1.24	34.7	85.4	54.45	\$529.15
Americot NG4936B3XF	966	38.5	4.7	1.29	32.6	86.5	54.40	\$525.50
Stoneville ST5600B2XF	927	41.6	5.1	1.26	34.9	85.8	52.15	\$483.17
Phytogen PHY580W3FE	845	41.8	4.7	1.24	35.1	85.8	54.45	\$460.10

**Table 26. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Rapides-3 core block demonstration, 2019.**

**Parish:** Rapides-3                      **Planting date:** 5/29/19                      **N rate (lbs/acre):** 90                      **GPS coord:** 31.10655N,  
**Community:** LeCompte                      **Harvest date:** 11/6/19                      **Seeding rate:** 44,850                      92.23362W  
**Cooperator:** Dean Lee Research                      **Previous crop:** Soybeans                      **Row spacing:** 38 inches                      **Plot size:** 4 rows by 50 feet  
Center                      **Soil type:** Latanier clay                      **Irrigation?** No                      **Misc:** Four replications in a RCBD  
**Agent:** Justin Dufour                      **Tillage Type:** Reduced Tillage                      **Pivot or furrow?**

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Phytogen PHY400W3FE	1,449	42.3	4.4	1.23	34.0	85.5	54.45	\$789.14
Americot NG4936B3XF	1,418	38.8	4.4	1.25	30.9	84.2	54.10	\$767.30
Dyna-Gro DG3427B3XF	1,408	42.5	4.7	1.21	32.6	83.6	54.20	\$763.30
Deltapine DP1646B2XF	1,329	41.7	4.2	1.25	31.4	84.6	54.35	\$722.31
Deltapine DP1845B3XF	1,326	41.2	3.8	1.28	34.1	84.8	54.45	\$721.90
Dyna-Gro DG3605B2XF	1,324	40.6	4.0	1.28	34.1	83.6	54.40	\$719.98
Stoneville ST5600B2XF	1,268	40.7	4.9	1.21	34.2	85.6	54.45	\$690.32
Americot NG3994B3XF	1,245	40.6	4.6	1.24	31.3	83.7	54.20	\$674.79
Phytogen PHY580W3FE	1,213	42.2	4.4	1.23	33.7	84.4	54.35	\$658.99
Stoneville ST4550GLTP	1,197	42.2	4.4	1.19	34.4	85.0	54.45	\$651.77

**Table 27. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, Tensas core block demonstration, 2019.**

**Parish:** Tensas                      **Planting date:** 5/23/19                      **N rate (lbs/acre):** 100                      **GPS coord:** 32.03204N,  
**Community:** Newellton                      **Harvest date:** 10/6/19                      **Seeding rate:** 40,000                      91.24291W  
**Cooperator:** L. Stonecipher,                      **Previous crop:** Corn                      **Row spacing:** 38 inches                      **Plot size:** 6 rows by 3,960 feet  
B. Kifer                      **Soil type:** Sharkey clay                      **Irrigation?** Yes                      **Misc:**  
**Agent:** Dennis Burns                      **Tillage Type:** Minimum Till                      **Pivot or furrow?** Furrow

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Phytogen PHY400W3FE	1,234	46.3	4.1	1.26	34.9	85.8	54.55	\$673.33
Stoneville ST4550GLTP	1,142	46.9	4.5	1.21	33.3	84.8	54.35	\$620.72
Dyna-Gro DG3427B3XF	1,035	46.9	4.6	1.17	30.9	85.1	54.15	\$560.31
Stoneville ST5600B2XF	1,003	44.9	4.9	1.23	32.6	85.2	54.35	\$545.25
Deltapine DP1646B2XF	994	44.1	4.2	1.27	29.9	84.9	54.00	\$536.91
Americot NG4936B3XF	991	42.9	4.4	1.21	29.8	85.0	54.00	\$535.12
Deltapine DP1845B3XF	950	46.1	4.5	1.28	33.8	86.3	54.50	\$517.90
Dyna-Gro DG3605B2XF	851	43.0	4.0	1.27	30.1	84.6	54.20	\$461.22
Americot NG3994B3XF	850	45.7	4.5	1.22	32.2	86.1	54.40	\$462.32
Phytogen PHY580W3FE	798	47.2	4.5	1.21	33.5	84.0	54.35	\$433.45

**Table 28. Lint yield, gin turnout, fiber characteristics, loan values and dollar return per acre, W. Carroll core block demonstration, 2019.**

**Parish:** West Carroll  
**Community:** Goodwill  
**Cooperator:** Zeb Benton  
**Agent:** Bruce Garner  
**Planting date:** 5/23/19

**Harvest date:** 11/11/19  
**Previous crop:** Soybeans  
**Soil type:** Perry and Forestdale clay  
**Tillage Type:** Reduced tillage

**N rate (lbs/acre):** 110  
**Seeding rate:** 38,500  
**Row spacing:** 38 inches  
**Irrigation?** Yes  
**Pivot or furrow?** Furrow

**GPS coord:** 32.84283N,  
 91.56829W  
**Plot size:** 24 rows by 1000 feet  
**Misc:**

Variety	Lint Yield (lbs/acre)	Lint %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity (%)	Loan Value (¢/lb)	Dollar Return (acre)
Phytogen PHY400W3FE	1,248	42.0	4.7	1.20	34.8	84.4	54.35	\$678.29
Stoneville ST4550GLTP	1,111	42.6	4.9	1.24	37.3	86.6	54.50	\$605.50
Phytogen PHY580W3FE	1,103	45.0	5.0	1.18	35.7	84.9	52.05	\$574.11
Dyna-Gro DG3427B3XF	1,046	41.9	4.8	1.17	32.4	82.8	54.10	\$565.89
Stoneville ST5600B2XF	974	40.4	5.5	1.22	35.5	84.7	50.55	\$492.36
Dyna-Gro DG3605B2XF	954	40.3	4.7	1.25	31.4	84.6	54.25	\$517.55
Americot NG4936B3XF	928	38.5	4.9	1.23	32.2	86.5	54.40	\$504.83
Deltapine DP1845B3XF	886	40.7	4.6	1.23	34.0	85.6	54.45	\$482.43
Deltapine DP1646B2XF	813	40.5	4.7	1.24	31.2	83.7	54.20	\$440.65
Americot NG3994B3XF	792	40.7	5.0	1.18	33.1	84.6	52.05	\$412.24

**Prepared and provided by these LSU AgCenter personnel:**

Dr. Dan Fromme, State Cotton Specialist, Dean Lee Research and Extension Center  
Dr. Josh Copes, Research Agronomist, Northeast Research Station  
Dr. Sebe Brown, Extension Entomologist, Dean Lee Research and Extension Center  
William Waltman, Research Associate and Farm Manager, Red River Research Station  
Dr. Blair Buckley, Research Agronomist, Red River Research Station  
John I. Dickson, Instructor, Cotton Fiber Testing Laboratory  
Keith Shannon, Research Associate, Dean Lee Research and Extension Center  
John Stapp, Research Associate, Macon Ridge Research Station  
Owen Clark, Research Associate, Northeast Research Station  
Melanie Netterville, Research Associate, Northeast Research Station  
Wade Walker, Research Associate, Macon Ridge Research Station



Visit our website:  
[www.LSUAgCenter.com](http://www.LSUAgCenter.com)

William B. Richardson, LSU Vice President for Agriculture  
Louisiana State University Agricultural Center  
Louisiana Agricultural Experiment Station  
Louisiana Cooperative Extension Service  
LSU College of Agriculture

PUB. 2135 750 REV. 1/20

The LSU AgCenter and LSU provide equal opportunities in programs and employment.