



# Cotton Comments

OSU Southwest Oklahoma Research and Extension Center  
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## Things have changed!

2018 has brought about several major changes. Dr. Randy Boman has decided to retire for public service and seek other challenges. His farewell is below.

Dr. Seth Byrd has agreed to join the Plant and Soil Sciences faculty as Cotton Extension Specialist on April 30, 2018. We thank Randy for all his hard work and the leadership he has provided. This newsletter was created by Dr. Miles Karner in 1990 as **Cotton Sentry**. Dr. Randy Boman revised it eight years ago as **Cotton Comments**. We will try to keep the same standards they created moving forward.

## Changes in Randy's Life.

*Friends and colleagues,*

*After considerable and thoughtful deliberation, I have decided to retire from my role as a public servant on March 1st. It has truly been a great pleasure and honor to serve the cotton industry via my position with Oklahoma State for the past seven years. We are all a product of our interactions with other human beings during our lifetime. I have been most fortunate, indeed honored to serve the outstanding cotton industry in our region.*

*There is no doubt that I have learned a tremendous amount through my experiences with multiple facets of this industry. I want to particularly thank all of the dedicated colleagues at the OSU Southwest Research and Extension Center at Altus, Extension educators across the state, as well as faculty on the OSU campus. I also appreciate the support of our OSU administration over the past seven years. Others that I have gotten close to during my Extension life include our producer-cooperators and company representatives. Without all of these great people, things just wouldn't happen. Thank you all for providing me with this wonderful opportunity to work directly with you to help make things better for many, and in the end, hopefully more profitable for all involved. We have been blessed with abundant rainfall and good growing conditions over the past three years, and both record lint yields and quality have been obtained. The state's producers and industry made this happen, and it is something of which to be very proud.*

*Another door has opened for me, and I have accepted a position with Indigo Ag. I am sure that most of you do not know a lot about this new company that is beginning to*

*position itself in U.S. agriculture. Indigo Ag has the potential to make a lot of changes in multiple crops, including cotton, and my role will be in Cotton Technical Services. This will allow me to continue to do what I love, and have dedicated many years of my life to – and that is to be a cotton guy. So, although one door is closing and another very exciting door is opening, I want all of you to know that I will still be just a phone call away.*

*Again, thanks for the years of experiences where we all learned together in so many instances and challenges.*

*Randy*

## **2017 Crop and Quality Recap**

According to USDA-NASS, in 2017, 585,000 acres were planted with 555,000 acres expected to be harvested. This is nearly double the state average planted acreage. USDA projects Oklahoma Cotton production to total 1,060,000 bales. Yield is expected to average 917 pounds per acre, compared with 1,021 pounds last year. This would be the largest crop in terms of bale volume since 1933, but that crop was produced on 2.86 million harvested acres. This massive crop by local standards is severely taxing the ginning infrastructure in the state, and many gins will likely be running well into April and May. This is great news for the state, particularly the southwestern counties and is a badly needed economic “shot in the arm” due to current low wheat prices. The season ended with well below normal August temperatures, slightly below normal September temperatures, and a well above normal October until a regional killing freeze occurred on October 27 and 28. Irrigated fields that were planted on time in May were generally unaffected by the freeze, however, late June planted dryland fields encountered some maturity challenges. These dryland fields represented a small fraction of the overall planted acreage in 2017. Many dryland and irrigated producers generated record, or near record yields. High thrips pressure failed to develop in most fields across the state but where populations were detected they were easily controlled. Cotton fleahopper pressure was persistent and multiple control sprays were used in many fields. Bollworms were detected in a several fields with control measures taken in some. No widespread infestation occurred. Aphid populations became a problem in several fields where control measures were initiated they generally provided adequate control.

The other good news is that the USDA-AMS Classing Office at Abilene is reporting that color and leaf grades, staple, micronaire, strength, uniformity, and bark contamination have all been good to excellent for many producers. This is based on classing results for about 540,000 bales of Oklahoma cotton classed through February 16, 91% have been color grades 11, 21 or 31, with 57% with color grade 11 or 21 – the best possible. Leaf grades have averaged 2.4 with 56% exhibiting leaf grade 1 or 2 – the best quality possible. Bark contamination is present in about 9.4% of the bales classed thus far. Staple (fiber length) has averaged 36.7 32nds of an inch. This is outstanding. We have 58% of the crop with a 37 or longer staple, with an additional 22% classed as a 36. Uniformity average is 81.1%. Micronaire (a measure of maturity) averaged 4.2 units, with 94% in the 3.5-4.9 range. Currently our strength average is 30.2 g/tex, with 68% classed as 30 g/tex or higher. It is of utmost importance that growers make good decisions with respect to varieties planted. The Extension cotton crop management program is critical to this success. Incidentally, the Oklahoma-ginned bales classed at Abilene thus far from the 2017 crop have the longest average staple, uniformity and strength averages, and this again is a result of wise variety selection. The Abilene classing office serves east Texas, a portion of west Texas, Oklahoma, and Kansas.

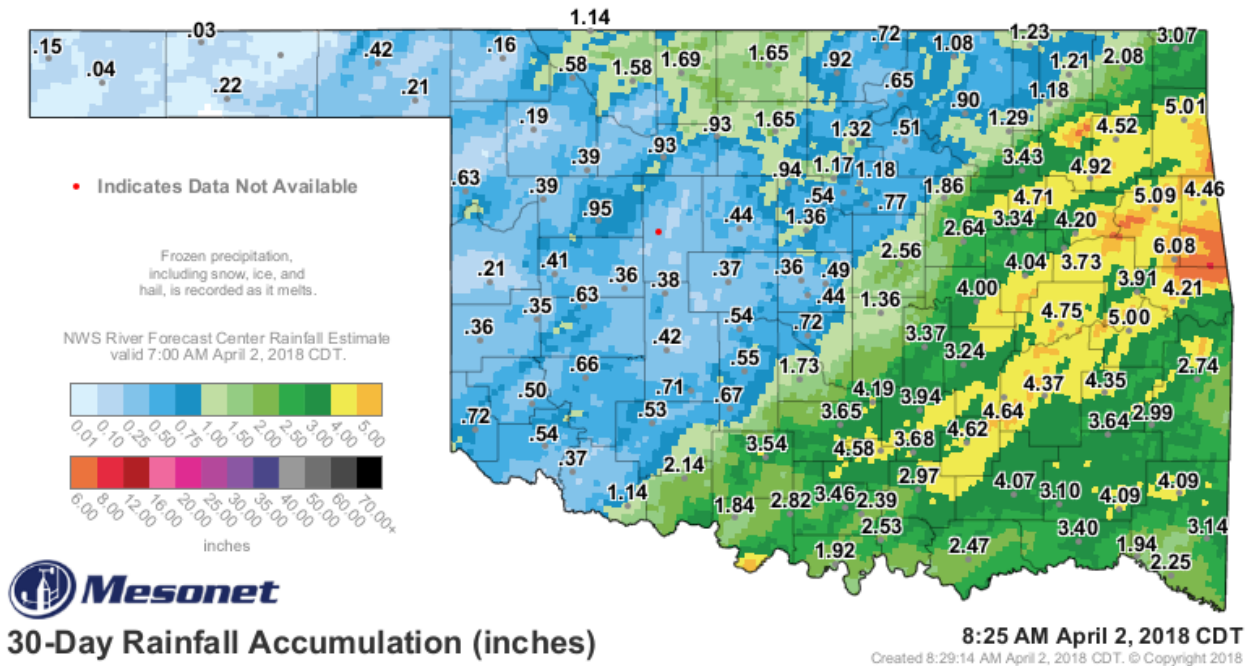
This is the first year that the first newsletter of the year will be issued with cotton still in the field waiting to be ginned.

### **2017 Project Report**

Summaries for several projects pertaining to variety performance, weed control, entomology and plant pathology, harvest aids, etc. can be found in the 2017 project report. This can be downloaded at: <http://cotton.okstate.edu/cttn-ext-annl-rprts> and <http://www.ntokcotton.org/>.

## 2018 Situation

This year winter drought has raised several concerns for producers. Hopefully this month will see improvement with moisture conditions.



**New producers or those who haven't raised cotton in several years should do a thorough job of planning their crop strategies prior to planting. As 2017 illustrated how the crop gets harvested and where it's going to be ginned is critical.**

### Planning for 2018

#### Variety Selection

Selecting productive cotton varieties is not an easy task, especially in Oklahoma where weather can literally "make or break" a crop. Producers need to do their homework by comparing several characteristics among many different varieties, and then keying these characteristics to typical growing conditions. We can't control our growing environment from year to year, but we can select the varieties we plant based on desired attributes. It is very important to select and plant varieties that fit specific fields on your operation. Don't plant the farm to a single variety, and it is strongly suggested to try relatively small acreages of new ones before extensive planting.

## Variety Testing Publications

If disease issues are not concerning, then scrutinize all possible university trial data that are available to see how a specific variety has performed across a series of environments, and if possible, across years. It is best to consider multi-year and multi-site performance averages when they are available. However, due to the rate of varietal release, many new varieties are sold which have not undergone multi-year university testing, or perhaps no university testing at all. Our 2017 variety testing program results are available here: <http://cotton.okstate.edu/variety-tests>

Producers in north Texas who have an interest in Texas A&M AgriLife Extension Service testing results can find them here: <http://varietytesting.tamu.edu/cotton/>

When it comes to variety selection in our area, several factors are important to consider.

### **Maturity (Earliness)**

Scrutinizing the relative maturity rankings provided by seed companies will be beneficial. Don't expect a mid-full season cotton variety to perform well in a short season environment where an early or early-mid might generally work best. Many longer season cotton varieties are better adapted to areas with longer growing seasons, although significant gains in yield may sometimes be obtained in years with warm September and October temperatures. Longer season varieties will typically do much better when planted earlier and then provided an excellent finish. For later plantings, early-mid maturity varieties may be better, and for late plantings or replant situations, early maturity varieties may be better. Relative maturity for most varieties gets compressed when moisture stress occurs. In other words, under drought stress, maturity of longer season varieties will not be expressed to the degree that would generally be noted when under high water and fertility regimes.

### **Pounds**

Yield potential is probably the single most important agronomic characteristic, because it drives profitability and provides for the safety net of higher actual production history (APH) in case of catastrophic loss of acres. The benefit this can provide from the crop insurance perspective is important in our high risk area. Yield stability across environments is going to be important, and basically what we want to find is a variety that has the ability to provide high yield across varying water inputs.

## **Fiber Quality**

Producers should also consider lint quality. We have made a lot of progress in terms of fiber quality over the last several years. As a matter of fact, it is simply unbelievable how far cotton breeders have “moved the bar” for yield and quality while simultaneously introgressing transgenic traits. It is not unusual today to find many upland varieties adapted to our area which exhibit near acala-cotton quality. Staple is generally good to excellent for most new varieties. A lot of things can affect crop micronaire. These factors can include overall environment, planting date, variety, early season fruit loss with later compensation, excessive late season irrigation or rainfall, seedling disease, early season set-backs due to hail damage, blowing sand, thrips, etc. Fiber strength has also significantly improved and many newer varieties tend to be at least 30 g/tex. Length uniformity can be affected by staple, maturity, and harvest method (picker harvested typically higher than stripper harvested). Higher maturity fiber generally results in better uniformity. Leaf grade can be affected by density of leaf hairs on specific varieties in some years. Generally, cool, wet fall conditions can lead to lower quality leaf grades for varieties which tend to be hairy. In drier harvesting environments these differences tend to diminish. Color grades are basically a function of weathering or exposure of the fiber on the plant to wet conditions. The highest quality that a cotton boll can have is on the day that it opens, and after that, if conditions favor microbial growth (warm, wet conditions) or if an early freeze affects immature cotton, then color grade quality will likely be reduced. Bark contamination is generally also driven by significant late season rainfall followed by a freeze. In some years this can't be easily managed if stripper harvested. Conversely, picker harvesting can significantly reduce or eliminate bark contamination.

## **Storm Resistance**

Storm resistance is still a concern for growers in our area. Even though many producers have selected less storm resistant cotton varieties over the last several years, and generally done well with those, the overall management system the producer adopts can be important. Under significant moisture stress on dryland, some newer varieties may provide an unacceptable level of storm resistance, especially if the field is “left to the freeze.” Producers planning to execute a sound harvest aid program as soon as the crop is mature can probably grow some fields of less storm resistant cotton. However, having large acreages of varieties with low storm resistance might be a prescription for disaster if the right environmental conditions align at harvest. Do not plan to leave looser open-boll cottons in the field until a freeze conditions the plants for harvest. Unacceptable pre-harvest lint loss is likely to result. Higher storm resistance varieties are better adapted to our harvesting conditions and they are more likely to

survive damaging weather prior to harvest without considerable seed cotton loss. Inquire about the storm resistance of any variety on your potential planting list. If you do choose a variety with low storm resistance, plan and budget ahead for a good harvest aid program that will let you achieve an early harvest. Good storm resistance data are now being provided by most companies and we evaluated all variety trials for this attribute in 2016.

### **Disease and Nematode Resistance/Tolerance**

Producers should likely not plant the entire farming operation to one cotton variety. A question should be "do I have plant diseases or Root knot nematodes in this specific field?" Although we have not been able to identify substantial acreage with this pest in Oklahoma, varietal tolerance or resistance will be critical for managing this. One thing to consider is whether you know which disease is present. If you have a problem with a wilt disease and don't know what it is, then you need to have the problem identified. If known Verticillium wilt pressure is present, then take a look at Dr. Terry Wheeler's and Dr. Jason Woodward's data from several locations investigating variety performance under constraints from this particular disease. The same should be considered for Fusarium wilt/Root-knot nematode issues. Many times varieties which do well under Verticillium wilt pressure may not be the same ones which rise to the top with Fusarium or Root-knot nematode pressure. **Bacterial blight is an occasional problem in the region. There are several varieties out there that can provide high levels of resistance/immunity.** To determine the disease reaction of many currently available varieties, visit the Texas A&M AgriLife Research and Extension Center Website here: [Texas A&M AgriLife Research and Extension Center](#) .

### **Biotech Trait Types**

Producers should ask themselves "which herbicide-tolerant system do I want?" The list of transgenic trait and herbicide options has recently increased with the availability of new many triple-stacked herbicide tolerant varieties and recently labeled herbicides.

**Only specific herbicide formulations that are labeled by the EPA can be used in XtendFlex cotton and in Enlist crops (corn, soybeans, cotton). NON Labeled dicamba and 2,4-D formulations is an illegal application.**

**It should be noted that dicamba and 2,4-D are absolutely different herbicides.** Although dicamba and 2,4-D are both considered growth regulator (Group 4) herbicides, they are in different herbicide families (benzoic acid and phenyl-carboxylic acid, respectively). There is some confusion circulating concerning the tolerance of the XtendFlex cotton varieties to 2,4-D.

**It should be emphasized that XtendFlex cotton IS NOT TOLERANT to 2,4-D herbicides. Also, in a vice-versa manner Enlist cotton IS NOT TOLERANT to dicamba herbicides. All non-XtendFlex cotton varieties are susceptible to dicamba (and its drift or tank contamination) and all non-Enlist varieties are susceptible to 2,4-D (and its drift or tank contamination). This cannot be overemphasized. Following the labels for each of these system's respective herbicides is critical. Producers must fully read, understand, and follow these labels before use.**

As for Bt caterpillar insect protection, VIP3A is now available in several varieties. Because of the lack of disruption of beneficial arthropods by insecticides used to target bollworms, aphids or other secondary pests will likely not be flared which is of considerable value. **At least weekly insect pest scouting of fields planted to Bt technology is highly recommended.**

The agronomic capabilities of varieties containing the above listed herbicide tolerance and Bt traits continue to improve and the corresponding weed control systems can be very effective if properly executed. *Reprinted from previous Cotton Comments.*

### **New for 2018 Dicamba Training**

EPA reached an agreement with Monsanto, BASF, and CORTEVA agriscience™(formally DOW) concerning dicamba drift minimization of recently labeled dicamba products to nearby crops. Due to these recent EPA label changes for dicamba products labeled for use in XtendFlex cotton, mandatory trainings are being required for all applicators. These trainings are required for all applicators who apply XtendiMax, FeXapan and Engenia herbicides in dicamba tolerant cotton and soybeans in 2018.

The Oklahoma Department of Agriculture, Food and Forestry (ODAFF) is working with the Oklahoma Cooperative Extension Service to meet these new EPA training requirements. Reciprocal agreements have been reached with the Texas Department of Agriculture and Kansas Department of Agriculture, so trainings certified by ODAFF will also be honored in those states and vice versa.

In response to this need, dicamba product training has been provided at multiple locations across the state of Oklahoma over the last few months, in anticipation of allowing all applicators to obtain the EPA required certification prior to use in 2018.



## **2018 Seed and Technology Cost**

Cost should not necessarily be the primary reason for selecting a variety, but it is important. The value of a high yielding cotton variety with biotech traits to ease management requirements across a large number of acres is a serious consideration.

The ***Plains Cotton Growers 2018 Seed Cost Comparison Worksheet*** can certainly be useful for planning purposes. Shawn Wade has updated the Microsoft Excel spreadsheet which can be used within your Web browser, or downloaded and saved to your computer. About 100 varieties of many types can be found in the spreadsheet. The user can select up to 10 varieties to simultaneously compare total seed and technology fee costs based on a specific seeding rate. The row spacing and seed per row-ft can be entered by the user. This then calculates a seed drop on a per acre basis. Then, based on published pricing for the various seed varieties and technology fees, the cost per acre is automatically calculated. It should be noted that the pricing used in the spreadsheet does not include premium seed treatments or any incentive program that might be provided by the various companies. The Seed Cost Comparison Worksheet is available here: [Plains Cotton Growers, Inc.](#)

## **2018 Texas A&M AgriLife Extension Profitability Spreadsheet**

An Excel spreadsheet has been updated by Extension agricultural economist Dr. Jackie Smith at the Texas A&M AgriLife Research and Extension Center at Lubbock.

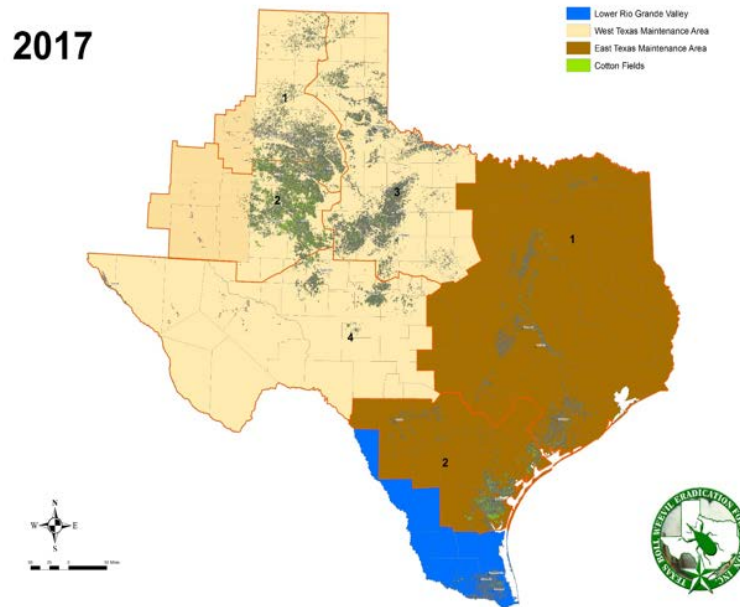
See: [Texas A&M AgriLife Extension Profitability Spreadsheet](#)

The spreadsheet allows the users to select various crops and input their operation's data. This spreadsheet covers a multitude of summer crops including alfalfa, corn, corn silage, cotton, grain sorghum, sorghum silage, peanuts, sesame, sunflowers, etc. The user can enter prices, input costs, etc and calculate potential returns.

## Oklahoma Boll Weevil Eradication Organization Update: Quarantine of Cotton Harvesting Equipment Coming From Certain Areas of Texas

John Henderson, Director of the Oklahoma Boll Weevil Organization, based at Altus, provided the information below. Eradication of the boll weevil across most of the U.S. Cotton Belt, and in the state has been very successful and is a major contributing factor to the continued profitability of cotton production. It has been a long, difficult, and expensive task to rid our state and most of the Cotton Belt of this invasive species that for such a long time negatively impacted our production. There is still a difficult fight with this insect pest in south Texas, and we all need to do our part in keeping this pest from resurfacing in our state.

Cotton harvesting equipment entering Oklahoma from two eradication areas in Texas has to be certified as boll weevil free prior to movement into our state. Please contact the equipment departure from these two areas. This will allow TBWEF to inspect the equipment. A USDA-APHIS phytosanitary certificate is issued and is required before equipment can be transported from these areas. These ONLY include the Lower Rio Grande Valley Eradication Zone (blue area on the map below) or the East Texas Maintenance Area (brown area on the map below). This is critical to meet USDA-APHIS requirements and prevent the re-infestation of boll weevils into eradicated areas. It is illegal to move non-certified cotton harvesting equipment from these areas into the state of Oklahoma.



Texas Boll Weevil Eradication Foundation: 325-672-2800  
After Hours and Weekends: 325-668-7361

Oklahoma Boll Weevil Eradication Organization:  
580-477-4280 Office  
580-471-7962 John Henderson Cell

## Upcoming Meetings

April 12<sup>th</sup> Tillman County Crop seminar Contact Aaron Henson for details.  
(580) 335-2515

The Cotton Comments Newsletter is maintained by Jerry Goodson, Extension Assistant. If you would like to receive this newsletter via email, send a request to:

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