

## Cotton Agronomy

### Stand establishment & stand loss

**The Good** - Rainfall amounts ranging from 0.3" to just over 1.5" were recorded by Texas Tech University – West Texas Mesonet stations across the area on [Wednesday](#). Although the lower amounts provided little relief to dryland producers, those fortunate enough to receive higher amounts may actually obtain a stand of cotton. However, more rainfall will be needed in a timely manner to maintain a crop to harvest. When considering irrigated cotton fields, mostly subsurface drip (SSD), the lower amounts may just provide that little extra needed to fill in some "skippy" stands if viable seed remains. For those with good uniform stands, the extra moisture provided assistance with filling the soil profile.

**The Bad** – Unfortunate for some locations, the precipitation that fell was in a "frozen" state. Where promising young cotton seedlings previously stood, in some severe cases, barely visible "toothpicks" remained. With reports still coming in and warmer, sunny days needed to appropriately assess the degree of damage; it is too early to know how many acres were affected. Although discussed in the previous edition of FOCUS, this weather event provides reason to mention the "[Making Replant Decisions in Cotton](#)" again. This is an excellent publication for assisting Texas cotton producers with the difficult decisions they may face following a hail storm or other stand reducing event. Important considerations such as remaining stand uniformity

and density, condition of surviving plants (including the root system), calendar date, and associated replanting costs are discussed in detail.

**The Ugly** – In the previous paragraph, "other stand reducing event" was included as a reason for considering replanting fields back to cotton, or other crop depending on calendar date and location. This brings us to the final Texas High Plains visitor that accompanied the storm.

Extremely strong, straight, long lasting winds were experienced across the region affected by the storm. Wind gusts as high as 84 mph (Wolfforth Mesonet Station) were recorded. Where these strong winds were observed, significant damage to young cotton plants is likely. However, where cover crops are present, damage from the wind has been observed to be considerably less when compared to bare soil plantings.

Finally, if following appropriate assessment of damage the decision is made to keep the remaining cotton stand, producers should be patient and allow the seedlings to recover and be cautious before resorting to applications of foliar nutrient products to "speed up" the growth and development process. If a sound soil nutrient management program has been adhered to, the young seedlings will be provided through the root system with everything they need to recover and restart growth and development. With warmer temperatures and clear skies forecast for next week, recovery should be quick and producers can return to the task of maintaining and managing the crop for optimum yields. MSK

# Non-cotton Agronomy

## Hail Damage & Replant/Late Plant Decisions

With the advent of significant hail and wind damage the night of June 5, producers may find themselves already needing to evaluate damaged cotton, corn, or grain sorghum crops. Refer to the [May 2 edition of FOCUS](#) for grain crop damage assessment information, and the May 24 edition for cotton hail damage information. I am working the update of my annual hailout/replant/late plant guide, which should be finalized the week of June 10. In the meantime, you may refer to the [2012 edition](#) for a wide range of information on crop damage assessment, current cropping options moving forward, and how late you can plant if hail, wind, or drought places you in a replant or late plant situation.

### Purpling in Grain Sorghum Seedlings

Occasionally, grain sorghum seedlings growing in early cool conditions, especially if prolonged and coupled with cloudy weather, will demonstrate pronounced purpling of the leaf sheaths and leaf margins/leaf blades (see photos below). This may be coupled with interveinal yellow striping (chlorosis) related to iron deficiency. The purple color occurs from the accumulation of anthocyanin in the tissue and results from insufficient phosphorous uptake or from the plant's inability to move sugars from the leaf blade ("Sorghum Growth & Development, Texas A&M AgriLife Extension, B-6137). Symptoms usually disappear when favorable temperatures return. These conditions can occur throughout Texas whether you are planting in early March in the Coastal Bend or in early May in the High Plains. You have not done anything wrong with P nutrition for your sorghum crop. The seedling in the left picture is at leaf stage 4 and has only recently developed sufficient roots to drive the growth and acquire P beyond what may have been available in seed reserves.



If you find a field with the purpling color and you have had cool conditions, it is advisable to recheck the field ever few days as warm weather resumes to track the return to normal colored tissue. Look for the newly emerging leaf to be green in color. As long as the plants are otherwise healthy yield potential is generally not compromised though it is possible individual plants might appear stunted. Could this be herbicide injury? In some cases when pre-emergent chloroacetamide herbicides (Dual, Lasso, Frontier) were applied, rain or irrigation may have moved the chemical into the root zone. Under cool conditions the plants absorb more chemical, and some purpling may occur. Like the above scenario, the return of warm conditions and good growing conditions will diminish the symptoms and injury potential. How does cool-induced purpling compare to conventional P deficiency? P-deficient sorghum plants are stunted, spindly, and dark green with overtones of dark red on the leaves. The red pigment first appears on older leaves and characteristically progresses upward toward younger leaves. Interveinal (between veins) tissue is sometimes red separated by green veins. On individual leaves redness first appears on the leaf tip and margins then progresses toward the base and midrib of the leaf.

## Beef Cattle

### Effect of Age & Castration on Performance & Carcass

Calves were: castrated at 3 months of age, 8 months of age, or left intact; fed on a high-concentrate ration; and slaughtered at 10, 12 or 14 months of age. Castration at either age reduced ADG and feed efficiency. Bulls had heavier carcasses, less carcass fat cover, higher percent lean, higher percent bone, and lower marbling. Compared to castration at 8 months, 3-month castrates had lower ADG, no difference in efficiency, slightly more fat cover, lower percent lean, and higher marbling. Cattle slaughtered later (fed longer) had higher feed consumption, lower efficiency, no difference in ADG, greater fat cover, lower percent lean, and higher marbling. Immediately after slaughter there were some differences in tenderness, but this was not true after aging for 7 days. NOTE: Bulls are often fed for slaughter in some other parts of the world. However, due to considerations of some management problems and lowered carcass quality, bulls are rarely finished in the U. S. (J. Animal Sci. 91:1129; Spanish Institute for Agricultural Research) Calves were: castrated at 3 months of age, 8 months of age, or left intact; fed on a high-concentrate ration; and slaughtered at 10, 12 or 14 months of age. Castration at either age reduced ADG and feed efficiency. Bulls had heavier carcasses, less carcass fat cover, higher percent lean, higher percent bone, and lower marbling. Compared to castration at 8 months, 3-month castrates had lower ADG, no difference in efficiency, slightly more fat cover, lower percent lean, and higher marbling. Cattle slaughtered later (fed longer) had higher feed consumption, lower efficiency, no difference in ADG, greater fat cover, lower percent lean, and higher marbling. Immediately after slaughter there were some differences in tenderness, but this was not true after aging for 7 days. NOTE: Bulls are often fed for slaughter in some other parts of the world. However, due to considerations of some management problems and lowered carcass quality, bulls are rarely finished in the U. S. (J. Animal Sci. 91:1129; Spanish Institute for Agricultural Research)

## Trends in Composition and Price at Auction Barn

Data were collected in 2000, 2005, and 2010 at 10 weekly auctions involving a total of 137,894 head. Some results were:

- premiums for steers and discounts for heifers were highest in 2010;
- percentage of horns declined over the years and discounts for horns increased;
- percentage of large frames was 56% in 2000, 66% in 2005, and 60% in 2010;
- from 2000 to 2010, percentage straight Angus increased by 160% and blacks by 69%;
- premiums for black and black baldies were lower in 2000;
- spotted and striped calves were more highly discounted in 2010;
- fewer calves were sold as single lots in 2010 than 2000;
- premiums for group sales were higher in 2005 and 2010 than in 2000;
- discounts for full or tanked calves were higher in 2005 and 2010 than in 2000;
- discounts for very thin calves were highest in 2010 and for fleshy calves in 2005;
- discounts for fat calves were highest in 2000;
- less than 5% of calves were identified as being not healthy;
- premiums for preconditioned calves increased over time.

(Univ. of Arkansas Extension Beef Cattle Research Newsletter, March, 2013)

### “HEART HEALTHY” BEEF CUTS

The beef industry continues to be challenged by often misleading information on adverse effects of beef on heart health. The American Heart Association certifies food products as being heart healthy with its Heart Check mark. To qualify, a product must be low in total fat, saturated fat, trans fat, cholesterol, and sodium and contain at least 10% of daily need for vitamin A, vitamin C, iron, calcium, protein or dietary fiber. Six lean cuts of beef now have the Heart Check mark. Source must be from carcasses graded U. S. Select. The cuts are sirloin tip steak, bottom round steak, top sirloin fry, boneless top sirloin petite roast, top sirloin filet, and top sirloin kabob.

(<http://www.beefretail.org/americanheartassociationcertificationprogram.aspx>)

## CHARACTERISTICS OF THE MILLENNIALS

Those born from 1980 to 2000 have been referred to as the Millennials. There are about 80 million of them in the U. S. This represents a significant number of potential and actual consumers of beef. What is known of their eating habits, especially beef:

- they view food as a cultural and social adventure;
- over half say they have trouble choosing items in the meat case;
- over half have been disappointed in a beef meal, versus about one-third of Boomers;
- many have trouble cooking steaks and even burgers;
- about three-fourths of them want information on steaks and how to prepare them;
- they tend to buy the same cuts, but would diversify if they knew more about other cuts;
- almost 40% of them eat out during a month versus less than 30% of Boomers.

It appears more education of Millennials about beef could be good for the industry. (Summary of Beef Checkoff Research in Texas Cattle Feeders Assn. Newsletter, 3/15/13)

## Evaluating Crop Damage and Remaining Stands for Cotton as well as Corn, Grain Sorghum, and Sunflower

Hailout, wind, and blowing sand damage on West Texas cotton are frequently heavy in May and June, up to 400,000 acres in some years (~10% of the total crop). Additional dryland cotton, as much as 1 million acres, may not emerge in time (late June) to produce a viable crop that will mature. Marginal cotton stands or marginal cotton seedling health may be evaluated for possible termination. In typical years through early to mid-June cotton might be replanted as soon as possible, especially south of Lubbock (full and reduced coverage insurance cut-off dates are later), or growers may consider taking insurance disaster payments and leave it at that. Other producers will consider replanting to catch crops if alternative crop options, herbicide rotation restrictions, etc. are favorable.

As we may encounter further significant hail and wind damage on cotton in the coming weeks, growers with damaged cotton stands will await crop insurance adjuster decisions. Although your crop insurance may have considerable influence on your decision regarding damaged cotton, here are suggestions to keep in mind.

### Don't Terminate Questionable Cotton Stands Too Quickly

Moving past early to mid-June, however, will cause some growers to go ahead and replant to other crops rather than wait any longer for insurance decisions. As is the case with any crop, sometimes replant decisions are made on insufficient information and emotion, and tearing up a

stand that in fact still has respectable yield potential is a mistake to avoid. Dr. Mark Kelley, Texas AgriLife Extension Service cotton agronomist, Lubbock, suggests producers may find it appropriate to retain surviving cotton stands with as low as 1.5 healthy plants per foot of row, particularly if the remaining stand is uniformly spaced (see references below).

There is adequate time to replant to other crops, so that shouldn't factor in terminating a questionable cotton stand. Numerous replant options are readily available through early July. As usual, cotton herbicides, goals of the producer, available equipment for other crops, and production economics will dictate which crop may be more suitable to a particular situation. As planting dates move toward late June, however, maturity class (shorter) will increasingly become a consideration for some replant crops such as grain sorghum.

## Evaluating Stand Loss & Replant Decisions

### Cotton

The primary cotton assessment publication from Texas AgriLife Research & Extension, Lubbock, is useful for evaluating cotton stand loss and replant decisions. Contact your county agricultural extension agent (CEA) or the Texas AgriLife Research & Extension Center's Lubbock website at <http://lubbock.tamu.edu/files/2011/10/makingreplantdecisions07.pdf> for the following information:

Making Replant Decisions in Cotton, Randy Boman & Robert Lemon, Texas AgriLife Extension Service, Lubbock (2007), SCS-2007-08.

### Corn, Grain Sorghum, and Sunflower

For many growers, particularly from the Lubbock area and northwest, if cotton has been hailed out then other crops may be heavily damaged as well. The following resources are also available from your local AgriLife Extension agent/office or <http://lubbock.tamu.edu>

Assessing Hail and Freeze Damage to Field Corn and Sorghum, John Bremer, Cloyce Coffman, and Steve Livingston; Texas AgriLife Extension Service, publication B-6014 (1995), <http://agrilifebookstore.org>, then type in 'hail' in the search box.

Evaluating Hail Injury and Stand Reduction in Texas Sunflower, Calvin Trostle, Texas AgriLife Extension Service, Lubbock (2001) <http://lubbock.tamu.edu/programs/crops/sunflowers/hail-injury-stand-reduction>, or call Calvin Trostle.

For information on evaluating weather damage to other crops, contact Calvin Trostle, Extension agronomy, Lubbock.

## Replanting and Compliance with Government Programs

Some undesirable quirks in Farm Service Agency (FSA) rules preclude planting of some vegetable and fruit crops on program crop ground. In making decisions to replant cotton to alternative crops producers should check how planting other crops may affect their compliance with government programs. These programs may dictate which alternative crops can be planted without losing base or benefits. Contact the Farm Service Agency (FSA) office serving your county for specific information regarding your farm. Unfortunately, crop programs may render agronomically sound cropping practices untenable if it will hurt your base acreage, particularly for cotton. See FSA for details.

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# Drought & Climatology Seminar

## August 8

### 11:00 a.m. to 2:00 p.m.

At Wayland Baptist University—  
McClung Bldg.

Please register for meal. No Charge for seminar.

Call our office: 806-291-5267

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<http://hale.agrilife.org>

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Articles taken from FOCUS on South Plains Agriculture

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