

# **An Update on the Drought in South Texas: Dejavu all Over Again!**

Steven D. Lukefahr and J. Alfonso Ortega-S., Dept. of Animal, Rangeland and Wildlife Sciences & Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville

First, a brief background of the present drought situation in deep south Texas. According to national weather records, south Texas has been in a drought for four out of the past five years. In 2011, many area ranchers finally sold out. Those who tried to tough it out did so by purchasing expensive hay (because hay was not cut in 2011), which put them in even greater debt. To make matters worse, most area ranchers practice continuous grazing and overstock their pastures, so pastures were already in poor condition. As a consequence of this natural disaster, coupled with human mismanagement, many pastures have become deplete of forage due to mass plant die-off. Sadly, a growing number of pastures now resemble a desert! This event is also despite major area efforts by NRCS and other groups to educate ranchers how to plan for drought and also become better land stewards.

In last month's issue, Walt Davis penned an excellent article on drought planning measures. He mentioned that normal rainfall levels are relative to the region in terms of the effects of drought on pasture conditions. Here in Kleberg county, 26 inches of rain is considered normal. Both 2011 and 2012, have been among the worst recorded drought years in Texas history. In 2011, only 8.4 inches were received and less than 10 inches from January through August of 2012.

In the last November issue of the Stockman Grass Farmer, we wrote about the serious drought of 2011 that was felt by all ranchers in deep south Texas. A few timely excerpts from this article are used here. The article outlined seven basic measures of minimizing the effects of a serious drought that have been applied at Lukefahr Ranch. Briefly these included the importance of: 1) working closely with Nature, 2) using heat tolerant and drought adapted genetics, 3) maintaining a controlled breeding season, 4) maintaining a conservative stocking rate, 5) stockpiling forage, 6) regularly monitoring forage supply, and 7) regularly monitoring cow body condition.

The primary goal of our operation is to support sustainability of the plant communities (minimize effects of grazing pressure) without adversely affecting

cattle productivity, and while continually breeding for greater drought adaptation in the herd. We presently run 50 cows on mostly leased land.

To provide interested readers with an update since last fall of 2011, as a result of careful planning, we did not have to feed hay or sell any cows or early wean calves. A conservative stocking rate of 8 acres per cow was maintained, while practicing timely rotational grazing. For nearly an entire year, cattle consumed forage that had been stockpiled in 2010.

In 2011, we had a 100% calf crop and in the fall the average, 205-day adjusted weaning weight was 584 pounds. When we closed the financial books on 2011, the feed cost per cow was only \$44 per head. To be conservative, based on auction prices, profit per cow was \$288, although we actually received more revenue from our calves. In fact, most bull calves were sold as breeding stock. Several but perhaps most of our buyers stated that the drought had been a wake up call for them to change their herd's genetics. They now desire to down-scale the size of their cows to enhance efficiency, while infusing vital genetics for heat resistance and drought adaptation (i.e., develop a herd of easy care cattle).

Perhaps it would be useful to inform readers how we managed to keep our production costs low. The breakdown of total costs per cow of \$349 included: lease payments (\$154, 44.1%), and feed (\$44, 12.6%), veterinary (\$17, 4.9%), and maintenance costs (\$134, 38.4%). Mileage accounted for the highest expense towards of maintenance costs (34.9%).

At Lukefahr Ranch, a composite herd of "STAR" cattle has been developed based on Senepol, Tuli, and Red Angus breeds. Senepol was developed on the island of St. Croix in the Caribbean, based on crossings of N'Dama cows to Red Poll bulls. N'dama is a breed from West Africa. Tuli originated in Zimbabwe. Both N'dama and Tuli breeds evolved in Africa for over 5,000 years, being subjected to the harsh elements of the tropical environment. Natural selection genetically molded these cattle to become heat resistant and drought adapted. In addition, N'dama and Tuli cattle were never traditionally fed feed supplements; they easily fatten on grass and maintain body condition on poor quality forage. There is also no extremism in degree of bone, flesh or mature body size or in milk production level, which is the recipe for easy care cows.

At the conclusion of our November article, it was mentioned that due to the severity of the 2011 drought it was anticipated that it might be necessary to search

for more land to lease because forage stockpiling would likely not be possible in the absence of significant fall rains.

So last November, one-third of the momma cows were moved to a new lease location. The remaining cows were dispersed into smaller herds by moving them to several pastures to reduce stocking rate. The new lease property had recently been sold and there had been no cattle on the place for over one year. While there was considerable tonnage of “standing hay”, it consisted mostly of mature Kleberg Bluestem. While a reasonable lease fee was paid to the owner, this cost, when charged to the entire cow herd for the year, related to only \$6 per cow, which represented the cost of the 2011 drought to our operation. In addition, in hopes of a better year in 2012, we retained two-thirds of all our heifer calves for breeding from the 2011 calf crop.

Because all cows had recently weaned their calves and were only early bred, their nutritional requirements would be low (maintenance condition) for the winter season. Our strategy was to maintain cows a minimum body condition score (BCS) of 5 by allowing cows to consume only dry, mature forage without energy or protein supplements. Only a mineral source was offered. Since most calves would be born the following May, it was projected that with some spring rains there would be the opportunity for cows to increase their BCS to a minimum of 6 by calving time to ensure rebreeding success. Just as pastures are monitored every season, cows are visually inspected and a BCS is recorded.

During the winter, there were only two times when cottonseed cubes had to be fed (1/2 lb of crude protein/head/day) for a few days when conditions became either more dry or cold. By January, some good rains were received throughout the winter. In response, and in the absence of freezing temperatures, there was an early green-up of pasture growth. By mid-March, cows were still at a BCS of at least 5. This was achieved at a total feed cost of less than \$5 per head for the winter. This demonstrates the critical importance of working with Nature by managing a timely and controlled breeding season. As stated in our previous article, the traditional practice of having calves born every month of the year offers little opportunity to practice good management by working with Nature!

Although there were some good rains received during the winter that added significant moisture to the soil, there were only a few small spring showers. Nonetheless, the combined winter and spring rains were enough to result in an early flush of green forage in pastures to allow cows to reach a minimum BCS of 6 before calving.

Despite the serious 2011 drought, by calving time (mostly in May), a 97.6% calving rate was recorded. Our records also show that 72% of calves born within 21 days, and reflected those most fertile cows that conceived in their first heat cycle. Cows were first exposed to bulls in mid-July that involved a 60-day breeding season. Interestingly but not surprising was the fact that six cows (86% of late breeders) that conceived in a second or third heat cycle were either: 1) the biggest cows; 2) heavy milkers, or 3) two year-old cows with calves. Cows in the first two groups are obvious candidates for culling on the basis of being less efficient and(or) adaptable.

The estimated forage quantity in late February of 2012 was 1,900 lbs/acre, which was far better than the 700 lbs/acre in the previous fall. However, under more ideal conditions, such as during 2010 when rainfall levels were normal, the forage supply was estimated at about 5,000 lbs/acre.

Especially in times of severe drought it is important that the integrity of the plant community is protected from overgrazing or from rest periods that are too short. It is also important to even more closely monitor pasture response in terms of productivity in order to make timely grazing management decisions that will affect pasture and animal responses for several months ahead. Flexibility is the key! Ignore your calendar and instead make timely decisions based on factors such as the effects of the most recent rains, or the lack thereof in the case of drought.

It is critical that at least 50% of the forage supply is not grazed, but rather is reserved for future grazing. Of course, this means that cattle must be moved to another pasture in a timely manner. In addition, over the years, our rotational grazing system has ushered in the return of native grass, forb, and legume species. A polyculture pasture is more robust to the adverse effects of drought than a monoculture one.

Ultimately, the payback for such efforts can lead to healthier plant communities that are more resilient to drought and that recover more rapidly, and be more productive in response to favorable moisture conditions once the drought is over.

From June through August, only about one inch of rain was received in the county. Even healthy pastures are now showing clear signs of stress, even some plant die-off. Because of the severity of the 2011-2012 drought, it may be necessary to soon remove all cows from our pastures and transport them to new leases either to the north where pastures have benefitted from more rain and(or) to several small

pastures in our area that have had no recent grazing activity. This practice was also mentioned in Walt Davis' recent article. Even after total destocking, a minimum of two years may be required for our pastures to be restored to the state in 2010.

In early September, 1-1/2 inches of rain was received. Of course, much more than this is needed, but at least it is a start and some regrowth is expected because of our healthy plant conditions. Presently, most of our pastures have about 1,000 lb/ac of standing forage. Between this recent rain and the shrinking window of warm daytime temperatures, this amount of cover is needed for plants to start recovering their weakened root systems and for seeds to germinate and replace dead plants.

To allow for a faster pasture recovery, it would be ideal if we moved the cattle out of all our pastures. This is a difficult decision for any rancher. The issue is about whether we use the remaining forage for feeding our cows OR to allow pastures the opportunity for a faster recovery. After a drought as severe as this one, it is clearly not possible to achieve both objectives. In our case, we will choose the second option of moving cattle to new lease pastures. However, we may decide to cull a few of those bigger and heavier milking cows.

Although new lease payments are anticipated, it is hoped that landowners for whom we maintain present lease contracts will be understanding and agree to our request to not receive lease payments for the months in which no cattle are on their property. If this materializes, it would be yet another advantage of the low risk of leasing rather than owning land.

In the September issue of the Cattlemen magazine, there was mention of an emergency program where ranchers can find land that is temporarily available for leasing. The purpose is to help ranchers to avoid selling good cattle. The website address is <http://pasturescout.com/blog/about-us/>.

In conclusion, we would be pleased to continue to keep SGF readers informed of our progress, which will hopefully help ranchers to develop effective drought management practices to not only stay in the cattle business, but to remain profitable in the cattle business.

Steven Lukefahr and J. Alfonso (Poncho) Ortega offer consulting services to like-minded producers interested in sustainable operations. They can be reached at [slukefahr@gmail.com](mailto:slukefahr@gmail.com) and [poncho.ortega@tamuk.edu](mailto:poncho.ortega@tamuk.edu). Their business website address is [lukefahr-ranch.com](http://lukefahr-ranch.com).