



Vol 2, Spring 2009



Dr. Jason Cleere, Editor
Assistant Professor and Extension Beef Cattle Specialist
Texas A&M Kleberg Center - College Station

Warmer Spring weather is upon us and much of the state received some much-needed moisture within the past month. However, many more inches of moisture will be needed across the state in the coming months to bring us out of the drought. This issue of Beef Cattle Penning has two articles by Joe Paschal that address the drought, "Managing for Drought" and "Rebuilding the Cow Herd". Additionally, Bruce Carpenter offers us some of his thoughts on "Early Weaning" and Tom Hairgrove provides us with an update on two important "Diseases that Affect Cattle". Finally, I provided a glimpse of the topics that will be addressed during the 2009 Texas A&M Beef Cattle Short Course.

In This Issue:

Early Weaning

Sexually Transmitted Diseases

Managing for Drought

Rebuilding the Cow Herd

TAM Beef Cattle Short Course

Upcoming Events:

Texas Beef Quality Producer Program (p.7)

55th Annual Texas A&M Beef Cattle Short Course August 3-5, 2009

Early Weaning as a drought Management tool



Dr. Bruce Carpenter
Associate Professor and Livestock Specialist
Texas A&M AgriLife Center - Ft. Stockton



Dr. Ron Gill
Professor and Livestock Specialist;
Associate Department Head for Extension
Texas A&M Kleberg Center - College Station

As ranchers across most of Texas continue to cope with drought and poor forage conditions, early weaning of calves might be something many either have done, or are considering doing. Depending on how early weaning is used and managed, it can improve cow body condition and reduce reproductive failures in cows and heifers. It can also somewhat reduce forage needs for the herd. It can be done on calves as young as 6 weeks-of-age, or on older calves approaching normal weaning age. Realize that there are basically two types of early weaning. These are discussed below.

Early weaning will be most effective when it is used in combination with other drought management tools. First and foremost: conduct a survey of available forage and determine how long it will last under current growing conditions with proper grazing. See: "How Much Forage Do You Have?" http://agrilifebookstore.org/publications_details.cfm?whichpublication=85

If you determine that the forage standing in the pasture will not sustain current cow numbers, then the main options to consider are culling cows or moving them to leased lands. Feeding extra energy (hay or concentrate) may help, but it is often not economical for long periods. Early weaning of calves may help, depending on how early it is done; but remember - cows eat a lot more grass than calves. The main reasons to early wean are to benefit the cow, and that comes after you've made sure there is enough forage to sustain them at whatever stocking rate you've elected to try and keep.

How much forage could I save? Consider an 1100 lb cow that eats 2% of her body weight per day in dry forage and weans a 7 month old calf at 500 lbs. The calf eats 3% of his body weight per day while gaining 1.75 lb per day his last 2 months. Selling him 60 days early at 395 lbs would save 13.4 lbs of forage per day, or 806 lbs of forage for the whole 60 day period. That works out to about 2 calves per cow. That is: for every 2 early weaned calves, you'd save enough forage for 1 cow for that same 60 day period. [continued on p.5]

Managing Sexually Transmitted Disease in Texas Cattle

Texas has joined with other western states in enacting regulations to control *Tritrichomonas foetus* (Trich). These regulations were enacted in response to requests from the Texas Livestock Industry. All bulls imported into Texas will require testing effective April 1, 2009 and all bulls changing possession within the state will require testing beginning January 1, 2010. Details of these regulations can be found at <http://www.tahc.state.tx.us/>, as well as summaries published by Texas AgriLife Extension.

Regulation will certainly help in restricting disease introduction into uninfected herds. An understanding of the characteristics of disease, and how it is spread and maintained is imperative to disease management.

Campylobacter fetus venerealis (Vibrio) is another cattle STD that its manifestations are very similar to Trich. Vibrio is a bacterium and Trich is a protozoan and can occur simultaneously. Clinical signs, management and control and economic impacts are similar for both diseases.

Both diseases are spread by natural breeding, and once infected the male is potentially a lifelong carrier, showing no clinical signs. The female suffers the consequences of infection which are abortion and infertility, but typically sheds the infection and develops short term immunity. After a period of sexual rest and then rebreeding she will maintain a normal pregnancy. Immunity is short lived and the female will be subject to infection on subsequent breeding. The pregnancy wastage is usually experienced in the 1st three months of pregnancy and if the cow is over five months pregnant she is not likely to be infected with either disease. This concept is very important in the management of these diseases.

Both organisms live in the area of the penis and prepuce of bulls. Neither organism thrives in an oxygen rich environment. They grow well in the small folds of tissue (crypts) in bull's external genital area where the oxygen level is low. As bulls age they develop more crypts and therefore are more likely to harbor the organism, this is why young bulls are less susceptible to infection and their use is helpful in management strategies.

After being bred by an infected bull, the female will become infected, but she will conceive. After a period of time, usually 18 to 50 days,

the organisms cause an infection in the uterus of the cow and eventually the embryo or fetus is killed and expelled. Experimentally Trich infection is cleared from the female reproductive tract in 6 to 12 weeks. The clearance of the uterus is about the same time frame with Vibrio, but the cow can retain infection in the vagina for several months. These cows are only infertile for a short time and upon rebreeding can conceive and deliver a normal term calf. Cows infected with Vibrio are a threat to susceptible bulls and thus to the cowherd. Rarely (only a fraction of 1%) of cows infected with Trich will deliver a normal term calf while remaining infected.

Cows exposed to Trich or Vibrio should be carefully managed. Separation of the cows herd into cows bred over 5 months and cow bred less than 5 months or open. Cows pregnant for 5 months are likely to carry their calves to term and can remain in the cow herd. Cows less than 5 months bred should be isolated until 5 months pregnant and then can be added to the cow herd. Open cows can be sent to slaughter, or if retained they should be vaccinated according to manufactures recommendations and given 3 months sexual rest. Only vaccinated young, preferably virgin bulls should be used. Bulls should receive a double dose of oil based Vibrio vaccine repeated in 1 month. There is evidence in the literature that the extra label use of Vibrio vaccine in this manner will assist in clearing infected bulls and impart good immunity. Efforts should be made to restrict the breeding season and cows should be confirmed pregnant and any open cows should be managed as if infected.

Purchased replacements should be vaccinated for Vibrio and females less than 5 months pregnant should be isolated and not added to the herd. Purchased bulls should be tested for Trich, given an extra label vaccination with oil based Vibrio product and have a breeding soundness exam. Annual whole herd vaccination is recommended, but if perception of risk is low vaccinating the bulls is an alternative control measure. If the bull is difficult to infect, the disease is not as likely to be spread. Annual screening for Trich is recommended at time of breeding soundness exam unless there is confidence that rigid biosecurity practices have not been compromised.

Dr. Thomas B. Hairgrove,
Program Coordinator for Livestock and
Food Animal Systems
Texas A&M Kleberg Center - College Station



**Both diseases are spread by natural breeding and once infected the male is potentially a lifelong carrier, showing no clinical signs.*



Managing for Drought

One of the most difficult things to do in ranching is to manage in a drought. Maintaining the level of production in a herd during a drought when both forage quantity and quality is limited (or sometimes nonexistent) and the cost of supplemental feed is high, is difficult if not impossible. Most folks know that feeding the entire herd doesn't make economic sense so some form of culling (destocking) has to take place. The level of destocking will depend on when you begin to recognize you are in a drought and decide to do something about it.

If you are in the relatively early stages, early weaning and selling calves and older and open cows will extend the remaining forage and reduce the amount and cost of supplementation needed for the remaining cattle. It may also maintain the level of performance of the remaining cows in the herd. If you wait until you are in the middle of the drought to do something, chances are you will have to cull much deeper than if you had started earlier. Even then your forage supplies will be significantly reduced and your supplemental feeding costs significantly higher. In addition, when you wait hoping for rain, your neighbors are probably waiting too and you are all competing for the same dwindling supplies of more costly hay and selling your calves in markets already flooded with light calves and cull cows from the drought stricken area.

Drought is not a once in a lifetime or even a once in ten-year event but nearly an annual one for some part of the state. A good friend of mine who ranches in South Texas monitors rainfall (he has over 20 years worth of records) and he begins a drought watch when rainfall is below normal for 3 months in a row. Of course he knows his stocking rate (he almost never gets to stock the ranch fully), practices rotational grazing and pays attention to the drought forecasts and El Nino predictions. But the most important thing he does is recognizing that at some point he has to put his drought plan in action. He does have a drought plan and a destocking plan to make his ranch more drought proof. He generally runs around a 75% carrying capacity and for the most part has to feed very little hay (probably not even a bale per cow annually), He supplements with whole cottonseed to improve digestibility of the winter or drought affected stubble. In our current

situation, this plan is as true for him today as it has been in the past.

Probably not everybody can accumulate 20 years of rainfall records but everyone can record rainfall and recognize abnormal rainfall patterns. Once the lack of rainfall is established then the drought management plan can begin. The plan should focus on destocking the least productive animals (open cows) and those with the highest nutrient requirements such as young cattle and calves (or reducing the nutrient requirements by early weaning). Perhaps the best plan is:

- 1) selling open cows
- 2) then early weaning and selling heavier calves
- 3) then early weaning and selling the lighter calves (that might be heavier as they are sold a bit later)
- 4) then selling replacement heifers (bred or open or perhaps these are sold before the calves)
- 5) then selling younger bred cows (less adapted to drought and higher nutrient requirements).

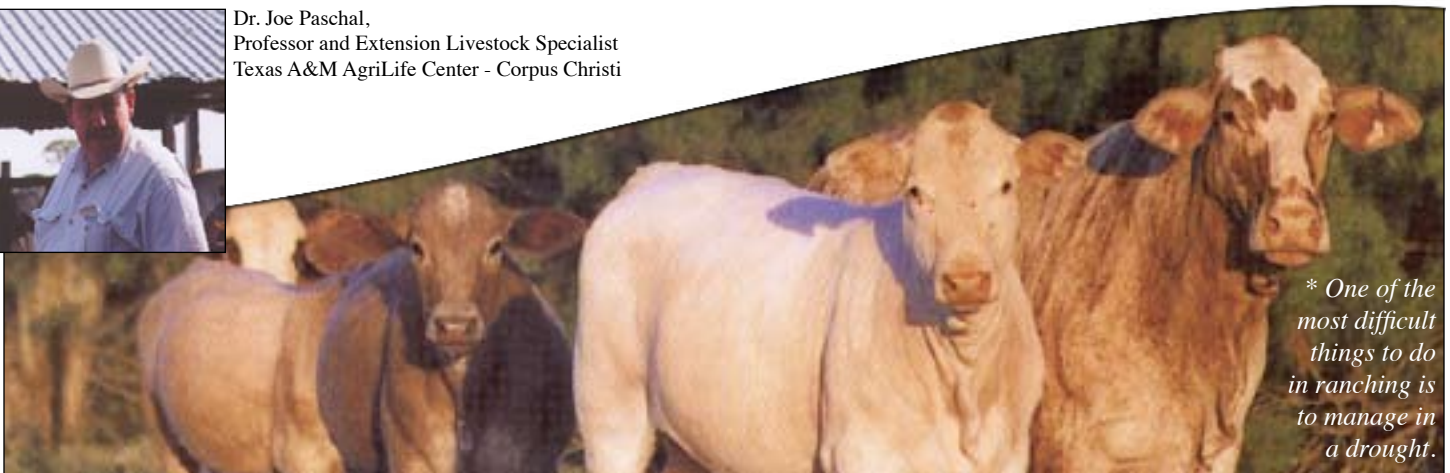
This plan needs to be based on reducing nutrient needs of the entire herd without significant reduction in productivity.

Another consideration is that many of us overstock by basing our herd numbers on the average rainfall for our area. In South Texas, that would include rainfall from hurricanes that can drop an additional 30-60 inches of rainfall and that really pushes our average up, even if we haven't had a hurricane like that in decades. I think that using rainfall averages (if you don't have your own records) is misleading unless you can account for those unusual events like hurricanes and 50- or 100-year floods. Many ranchers prefer to stock at something less than 100% of their ranch's carrying capacity. Maybe they don't sell as many calves but often they sell more total pounds and buy less feed and hay when the weather doesn't cooperate. Some of my colleagues suggest stocking at about 75% of your carrying capacity, e.g. 75 instead of 100 cows. I am not suggesting that particular percentage but certainly we might all make a little more money (or spend less) if we stocked a little less than our actual carrying capacity. In good years we might save some calves or buy some

[continued on p.6]



Dr. Joe Paschal,
Professor and Extension Livestock Specialist
Texas A&M AgriLife Center - Corpus Christi



** One of the most difficult things to do in ranching is to manage in a drought.*

Rebuilding the Cow Herd

Even though many parts of the state (like mine) are still gripped in a severe drought, other parts have received welcome rains and folks have naturally wanted to rebuild their herds. One of the questions I often get at times like these is when can I start rebuilding my cowherd? My answer is often based on when did they recognize they were in a drought and begin destocking and how much rain have they had and when.

One of the problems in the past has been that many were slow to recognize that we were in one of the many droughts that we have experienced over the last couple of decades (or didn't want to, hoping that saving rains were just one less day away). As we continued to supplement cattle and then cull (perhaps in time but mostly too late) we were ruining our permanent native and introduced pastures and weakening the grasses thru overgrazing and hoof damage. So, in addition to the havoc caused by the drought, the cows were compacting soil, increasing exposed soil surface and reducing litter.

When we do get rain, the remaining cows will tend to chase any green that grows and not give those plants a chance to recover and rebuild root system and leaf structure. If the rain is light and slow and these plants get a chance to rest and rebuild without being grazed then chances for recovery are improved. However often times droughts are busted by heavy and frequent rains and the drops fall on compacted soil severely depleted of healthy plants and litter so runoff ensues. I saw in a range publication that only about 10% of a rainfall event actually has deep penetration in the soils that affects the plant roots. Most is lost to runoff and evaporation.

One way to determine when it is time to restock, even partially, is to have some idea of how fast plants re-grow and recover. Native grasses, the bulk of the grazed forage west of I 35 in Texas, are slower to grow back but it are more resilient than introduced forages. East of I 35, there are more introduced (non-native) plants that have a faster growth rate but are not as resilient. Regardless of the type of grass in your area, if the roots of the plant are damaged due to extended drought or overgrazing, they may not grow back at all. Another thing to consider is that the seed bank, the accumulated seeds in the soil and the litter from previous years, may have been partially or totally destroyed and that is a significant source of new seedlings to replace dead plants. Recovery time is longer for natives than for most introduced grasses. Many times brush species or cactus can serve as a source of protection for grasses and their seeds since cattle seldom eat thorns or spines (unless they are really hungry).

The height of the grass is proportional to the length or development of the plant's root system. Plants that are over grazed or drought stressed have shorter root systems, bring in fewer nutrients and produce fewer (or no) leaves. When the rains do come, we need to allow the grasses time to recover and rebuild their root systems and re-grow leaf material to be able to process sunlight and nutrients. Grazing too early will stress the plant, deplete its food

making ability and reduce its root development. Continued grazing of these grasses will eventually kill them.

It is important to know the difference in the growth form of the grasses your cattle eat. If they are sod forming grasses like the Bermudas they can grow fairly fast and spread over a lot of bare ground rapidly. One of the reasons for this is that its leaves are exposed to sunlight nearly all day. Their leaves are almost parallel to the surface and so intercept nearly all the sunlight all day long. This source of energy allows them to grow more as a result. Their root system is also extensive and deep allowing mining of nutrients and water from a larger quantity of soil.

If your grasses are bunch type grasses, like most natives and quite a few introduced grasses (e.g. Johnson, Bahia, Buffel, and Klein to name a few) they tend to grow a bit more slowly. The natives are even slower than the introduced bunch grasses, which can be quite fast growing. Bunch grass leaves are generally not parallel to the soil surface but at an angle that allows them to intercept maximum sunlight only during the mid-morning to mid-day period. In addition, although some can have quite extensive root systems due to rhizomes (like Johnson grass), generally their root systems are not as extensive as the sod forming grasses.

The grass form, sod or bunch, also affects the ability of cattle to graze (or over graze). Bunch grasses are often more easily over grazed. I have noticed that hungry cows will graze even smut grass and KR bluestem (both bunch grasses) to the ground in a drought but I don't recommend it as a means of control of those undesirable invaders.

In some extreme instances grasses may have to be replanted or pastures deferred for long periods of time to allow for replanting or regrowth. During this time the open ground will be susceptible to weeds, some undesirable and potentially toxic and their spread needs to be controlled.

One simple method to determine when to restock is to consider the height of the grass by type. If you have a sod forming grass, the grass should hide the muzzle (both mouth and nose) of grazing cattle. If it is a bunchgrass, it should be the height of a grazing cow's eyes.

There are a number of excellent Extension bulletins written by my Extension Range and Forage colleagues at the beef.tamu.edu website including Adapted Grasses for Texas Pastures, Selection of a Grass Variety, Balancing Forage Demand With Forage Supply, Do You Have Enough Forage?, Improving Rainfall Effectiveness on Rangelands, Stocking Rate Decisions, and Stocking Rate & Grazing Management.

Dr. Joe Paschal
Professor and Extension Livestock Specialist
Texas A&M AgriLife Center - Corpus Christi



[continued from p.1]

The first type of early-weaning is done primarily to improve body condition on cows that have already bred and are carrying a calf. This is, it is an "insurance policy" for next year. Lactation stress is removed and body condition improves. If body condition is maintained over the winter, then risk of breeding failure next spring is reduced. In this scenario, calves are typically weaned 1 to 3 months early. The "price" of this "insurance policy" is that calves weaned at lighter weights are worth less at weaning. A 395 lb calf might be worth \$494, whereas a 500 lb calf might be worth \$530. Thus, for a "cost" of \$35 we improve that cow's odds of breeding back, and doing it early. And we will probably save enough forage to buy her another month of grazing which she might not otherwise have had.

If ownership on calves is retained through the feedlot phase, then the cost of weaning two months or so early could be minimal. Oftentimes better feed conversion on lighter calves makes up for their longer time on feed. In the 2001 trial below, July - weaned calves were worth \$63 more at weaning than May - weaned calves. But by the end of the feedlot finishing period this difference was reduced to only \$9.52 (table 1). Table 2 describes calves as they entered the feedlot.

The second type of early weaning is done just prior to, or during the breeding season in order to increase the chance of getting cows or heifers pregnant. This type of early weaning requires that calves be weaned at much younger ages than was discussed above. Oklahoma researchers demonstrated a 38 percent improvement in pregnancy rates for thin first calf heifers whose calves had been early weaned at 6 to 8 weeks of-age (Table 3).

If a breeding season is 90 days or even 120 days, then calves would probably have to be weaned anywhere from 45 to 100 days-of-age depending on when their mothers

calved. The younger that calves are weaned, the more opportunities their mothers may have to breed back and the more likely they will become pregnant sooner. Thus, early weaning will be of most benefit to early calving females (Figure 1).

Management of early weaned calves. If calves are weaned early because of drought, then they probably need to be removed from the ranch. Options include selling them immediately, finding leased pasture, growing in a trap with hay and supplement, or growing them in a feedlot with full feed.

The older a calf is the better it will be able to consume a forage based diet. Still, Purvis (et. al. 1995; Figure 2) reported weaning calves at 2 months-of-age. These calves were weaned and placed on pasture and given 2.5 lbs. per day of a 25% CP pellet. They weighed 444 lbs by the normal weaning date vs. 506 lbs. for herd mates that were not early weaned. Myers (et. al. 1999; Figure 3) reported that calves weaned and grown in a feedlot weighed more at the normal weaning date than calves that were not early weaned.

In summary, if early weaning is used and managed properly, it can improve cow body condition and reduce reproductive failures in cows and heifers. It can also help reduce forage needs for the herd - somewhat. The decision to sell calves or grow them should be made by evaluating feed costs vs. calf market value at a given weight.

Cull cow numbers to match forage availability and maintain body condition on cows through weaning strategies and supplementation of protein. If the decision is made to purchase high energy feed to maintain production and conserve forage during a drought remember that lightweight calves are much more efficient at converting feed into weight than cows are at converting energy feeds into body condition. [charts continued on p.6]

Table 1. 2001 West Texas Early Weaning Field Trial. Calf Description as Feeders (Entering Feedyard)

	In wt/hd	Projected Price	Weighted Avg. Value/hd ¹	Preconditioning Cost	Net Value/hd ²
May - Weaned Calves	643 lb	\$93.78/cwt	\$603	\$75/hd	\$528
July - Weaned Calves	749 lb	\$87.94/cwt	\$659	\$75/hd	\$583

¹Projected prices from USDA Clovis Auction Report; Weighted for price slide by weight.

²Net Value per head = weighted value/hd less cost of preconditioning

Table 2. 2001 West Texas Early Weaning Field Trial. Calf Description as Finished (Leaving Feedyard)

	Days on Feed	ADG	Feed Conv. (DM)	Cost/hd/day	Feeding Cost/hd	Out wt	Avg. Price cwt	Gross Value/hd	Net Value/hd
May - Weaned Calves	217	2.92	5.06	\$1.32	\$286.44	1277 lb	\$67.15	\$857.50	\$578.32
July - Weaned Calves	154	2.63	7.08	\$1.62	\$249.48	1238 lb	\$62.15	\$831.32	\$587.84

¹Net Value/hd = Gross Value less feeding cost

Table 3. Pregnancy rate, postpartum interval, and calf weight at normal weaning time (Oct. 11) for very thin first-calf Hereford heifers and their calves

	Treatment			Difference
	Normal Weaning 7 mo.	Early Weaning 6-8 weeks		
Pregnancy Rate (%)	59	97		38
Calving to conception (days)	91	73		18
Cycling at 85 days postpartum (%)	34	90		56
First-calf heifer weight on October 11 (lb)	788	875		87
	Normal	Pasture	Drylot	Norm. - Past.
Calf weight on Oct 11 (lb)	373	330	374	43

^aLusby et al. 1981
^bEarly weaned calves were managed in drylot or pasture

Figure 1. Influence of time of calving on calf age at early weaning



Figure 2. Weight on the normal weaning date (Oct 10) for calves weaned at 2 months-of-age and grown on pasture vs. weaned at 7 months-of-age (Purvis et al., 1995)

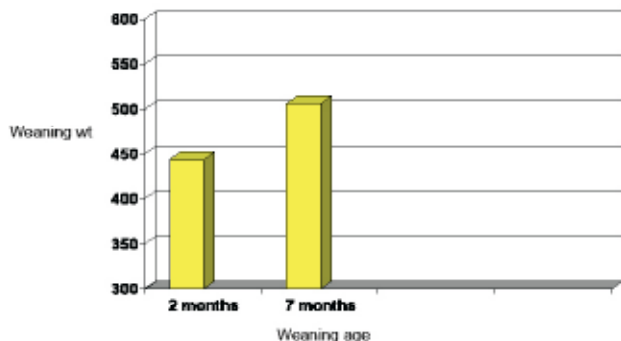
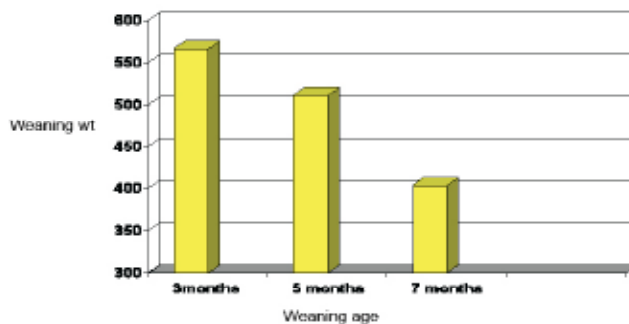


Figure 3. Weight on the normal weaning date for calves weaned at 3 and 5 months-of-age and grown in a feedlot vs. weaned at 7 months-of-age (Meyers et al., 1995)



[Managing for Drought, continued from p.4]

stockers to grow out on the surplus forage.

There are a number of approaches to destocking in preparation for a drought but some of the most useful ones are presented in *Managing the Consequences of Drought*, *Destocking Strategies During a Drought*, *Maintaining Herd Performance During Drought*, and *Alternatives for Cattle During a Drought: Moving Cattle off the Ranch*. There are also four publications in the *Rangeland Drought Management for Texans* series, *Livestock Management*, *Supplemental Feeding*, *Stocking Rate and Grazing Management*, and *Toxic Range Plants*. All of these can be downloaded from the Texas AgriLife Extension Animal Science Program Unit's website beef.tamu.edu under the publications list.



**Click on the logo for more information.*



55th Annual Texas A&M Beef Cattle Short Course

Planning is under way for the 55th Texas A&M Beef Cattle Short Course which is scheduled for August 3-5, 2009. Each year more than 1,400 beef cattle producers from across the U.S. and other countries converge on the campus of Texas A&M University to attend the Texas A&M Beef Cattle Short Course. The Short Course, in its 54 year history, has become the largest beef producer educational event of its kind in the U.S. The 2 ½ day educational event is known for being one of the most comprehensive beef cattle adult educational programs available. More than 50 different university faculty and industry leaders from across Texas and the U.S. help form a very diverse and cutting edge educational program. The most popular part of the Short Course each year is the Cattleman's College which is a group of workshops that are devoted to specific topics. Soil fertility, forage quality, nutrition, genetics, reproduction, cattle health and cattle handling are just a few of the topics covered in 20 different sessions. This format allows participants to choose the specific workshops that they are interested in. The Beef Cattle Short Course trade show is also a popular part of the conference with more than 110 different exhibitors on hand to discuss their products and services. The following are just a few comments taken from surveys completed by the beef producers attending the 2008 Beef Cattle Short Course:

"The entire program was very educational. I wish I had known about it years ago."

"The ability to interact with other cattlemen and wealth of knowledge in the sessions."

"Excellent speakers, relevant topics."

TAM Beef Cattle Short Course will be held August 3-5, 2009. For more information, call (979) 845-6931 or visit <http://animalscience.tamu.edu/ansc/BCSC/index.html>.



I'll bet the beef is good.

It had better be. The Texas Beef Quality Producer program is all about the food.

The TBQP program was developed to assist cattlemen in producing a safer, more wholesome food product. Better beef management practices help deliver a better meal for the all-important consumer. Get ready to participate in an upcoming Texas Beef Quality Producer training near you.

The TBQP program is built upon a proven system of Best Management Practices. This half-day session allows producers to become BQA certified. You should get your seat reserved now because producers are finding the benefits go well beyond the ranch gate... through the sale barn, to the feedyard and most importantly, all the way to the consumer.

Our nation's Beef Quality Assurance (BQA) programs are vital. They help cattlemen give the consumer a wholesome eating experience – even with market cows and bulls. And a good eating experience with beef brings the consumer back for more.

Call or go online to RSVP for your seat.
Stacy Fox, TSCRA, sfox@texascattleraisers.org
800-242-7820 • www.texasbeefquality.com

A collaborative effort of:



Next Session: Belton, TX

April 16th, 2009 - Bell County Expo Center

Registration - 8:30 am

Program - 9:00 am

Free lunch included!

Bell County Expo Center

301 West Loop 121

Belton, TX

Please RSVP by April 13th to:

TSCRA at (800) 242-7820 or the Bell Co. Extension Office at
(254) 933-5305

Next Session: Lubbock, TX

April 21st, 2009 - AgriLife Research and Extension Center

Registration - 9:30 am

Program - 10:00 am

Free lunch included!

Texas AgriLife Research and Extension Center

3 miles North of Lubbock on East FM 1294

Lubbock, TX

Please RSVP by May 1st to:

TSCRA at (800) 242-7820 or the Lubbock Co. Extension Office
at (806) 775-1680

Next Session: La Grange, TX

May 5th, 2009 - Fayette County Agriculture Building

Registration - 7:30 am

Program - 8:00 am

Free lunch included!

Fayette County Agriculture Building

255 Svoboda Lane Room 104

La Grange, TX

Please RSVP by May 1st to:

TSCRA at 800-242-7820 or the Fayette Co. Extension Office at
(979) 968-5831

Next Session: Hondo, TX

May 19th, 2009 - Hondo Community Center

Registration - 8:30 am

Program - 9:00 am

Free lunch included!


Hondo Community Center

1014 18th Street

Hondo, TX

Please RSVP by May 15th to:

TSCRA at (800) 242-7820 or the Medina Co. Extension Office
at (830) 741-6180



Certification programs cover Beef Quality Assurance, industry updates, record keeping, environmental stewardship and proper management practices associated with genetic selection, cattle handling, culling, vaccination, drug use and more.

Can't make the next training?

BQA certification is available online! Visit www.texasbeefquality.com