

The Latest Paradigm Shift For Ranchers Is A Profit Every Year Even In A Severe Drought

By Steven D. Lukefahr

KINGSVILLE, Texas: Since 1994, I have maintained a small cattle operation in south Texas. In 2012, I began the year with an inventory of 50 cows and breeding heifers on a little more than 500 acres of mostly leased land. Since 2002, I have not fed hay after reducing stocking rates by over 50%. I also implemented a rotational grazing system and adopted a low-input production system using adaptable cattle genetics.

However, in the wake of years of extreme to exceptional drought since 2009, it has become evident that my beef cattle business must now have a focus on drought management using a holistic approach. I have recently redefined my business goal. It is now to make a profit every year - even in years of drought.

To realize this goal, several key aspects of the business must be integrated into a holistic model of drought management. Each of these aspects entails critical factors that relate or connect to drought management. These key

aspects include: Genetics, Herd Management, Forage and Land, Low-input System, and Business Decisions. The purpose of this article is to describe each of these aspects based on over 15 years of experience in coping with drought conditions.

Analogies of this holistic model are parts of an engine or pieces of a puzzle. Needless to say, if even one part of an engine is missing the engine will simply not run. Likewise, I know that if any aspect or part of an aspect is not appropriately addressed or ignored my entire operation could be at serious risk of business failure. As a visual guide to the model, see the graph on page 2.

GENETICS

As presented in previous articles appearing in the *Stockman Grass Farmer* (Nov. '11 and Nov. '12), at Lukefahr Ranch a composite herd of "STAR" cattle has been developed based on Red Angus, Senepol and Tuli breeds. Angus is a reputable breed but red color

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Severe Drought

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offers more heat resistance than black color. Senepol was developed on the island of St. Croix in the Caribbean, based on crossings of N'Dama cows to Red Poll bulls.

Both N'Dama and Tuli are *Bos taurus* breeds that evolved over 5,000 years in Africa. These cattle were exposed to the harsh elements - climactic, nutritional and parasitic - posed by the tropical environment. Nature molded these cattle into tough genotypes, being both heat resistant and drought adapted.

In addition, N'Dama and Tuli cattle were not traditionally fed dietary supplements; they subsisted entirely on grass. Nor is there extremism in the amount of bone, flesh or milk or in mature body size, which is the recipe for easy care cows. In the Tuli breed it is not unusual for cows to produce calves every year for 20 or more years.

This unique combination of breed genotypes (in addition to hybrid vigor) has resulted in STAR cattle that maintain high fertility

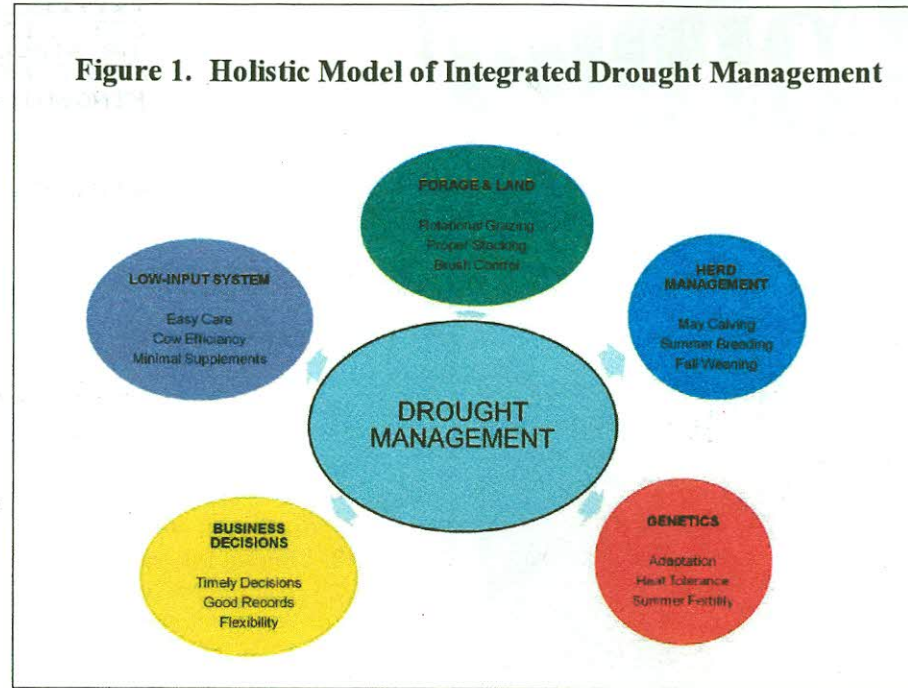


Figure 1. Holistic Model of Integrated Drought Management

levels (100% in most years) and good body condition during persistent drought. Also, daytime summer grazing is the norm. These slick-haired cattle are also very fly resistant. Many visitors have been impressed too by the gentle nature of these cattle.

HERD MANAGEMENT

Besides utilizing appropriate genetics, it is essential to work with Nature. In 2009 a hard lesson was learned when cows mostly calved in March when there was less than one inch of rain received from January through March, and

especially when only about one and one-half inches were received during the entire spring.

By calving too early in the year, cows dropped in condition, which only worsened later due to the spring drought. It became necessary to provide costly energy and protein supplements to extricate cows from this nutritional predicament (by keeping them at a minimal BCS of 5) so that they would later rebreed. As a consequence, the feed cost per cow was \$185 in 2009.

Since 2010, calving occurred mostly in May. In 2010, 2011, and 2012, feed costs dramatically dropped to \$44, \$44, and \$16 per cow. Both 2011 and 2012 were serious drought years. Indeed, I learned my lesson.

Even if there is some moisture in the ground from the winter but no significant spring rains, the increasingly higher temperatures will likely result in some green-up of forage so that cows can ideally be at a minimum body condition score (BCS) of 6 before calving. Among other advantages, this practice will help to ensure that cows will readily rebreed some

three months later. Also, calves are not born in freezing or hot temperatures.

Bulls are turned out with cows from mid-July through August. Typically, bulls are fertility tested prior to turn-out. STAR bulls tested to date, have had live/normal sperm scores between 85 and 95 percent.

The genetics for heat tolerance certainly pays off in terms of using bulls with both high fertility and sex drive during this brutal time of year in south Texas. Moreover, being heat tolerant, matings occur even in the afternoons at above 100 degree F temperatures.

Calves are weaned not according to the calendar but rather at the onset of fall rains. This is another critical way of working with Nature. The forage flush or green regrowth will give cows an opportunity to recoup condition before winter such that feed costs will again be kept to a minimum throughout the winter season. Being in the dry-maintenance stage is important because this is the time in the cow's production cycle that she has the lowest nutritional requirements.

However, in years of exceptional drought, calves have been weaned as early as three months of age. This practice minimized feed costs of cows and maintained BCS to ensure timely rebreeding success.

Early weaning was practiced most recently in 2012. Subsequently, spring 2013 calving results were 97.0 percent cows calving per total cows exposed with 81.5 percent cows calving within 28 days (April 27-May 24) based on conceptions during the 1st heat cycle.

The above discussion is reflected in Figure 2 on page 4 that shows the natural seasonal cycle as related to forage quality and the cow's nutritional (TDN) needs.

FORAGE AND LAND

As stated at the beginning of this article, I lease a little over 500 acres. In 2012, the stocking rate was 10 acres per animal unit. Being conservative is imperative, especially during drought. For example, during the drought year of 2009 it was not necessary to feed hay or destock cows because a proper stocking rate was used and there was close monitoring of

