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ARE TODAY'S BEEF COWS HIGHER PRODUCING ?

Excerpt from Texas A&M University Beef Cattle Browsing Newsletter

Author: Dr. Steve Hammack

Dr. David Lalman, Oklahoma State University, addressed this topic at the recent 2016 Beef Improvement Federation Annual Meeting and at the 2016 Texas A&M Beef Cattle Short Course. There is no question that cattle are steadily increasing in body



size, that is, weight, and also are higher producing. According to data from major breed association genetic evaluation programs, genetic trend for both weaning and yearling weight and for milk has steadily increased over the last 40 years. At one time years ago, finished cattle came out of feedyards at around 1000 lb. Current average finished weights are nearing 1400 lb, about the same as current average breed-wide mature cow weight in American Angus Association

performance records. But does that same picture hold at the commercial cow-calf level?

Lalman summarized data from the Kansas Farm Management Association, North Dakota Cow Herd Performance Appraisal, Texas/Oklahoma/New Mexico Standardized Performance Analysis, and Upper Midwest Center for Farm Financial Manage-

ment. Depending on the source, yearly data were available over the last 20 to 25 years. Over that period, weaning rate (number of calves weaned ÷ number of females exposed to breeding, often called calf crop percent) has varied across years due primarily to variation in precipitation.

But average weaning

rate across time has stayed almost the same at 83-89%, depending on the state or region. It seems that level of reproduction/survivability is probably about as high as can be feasible and economical in US cowherds. But what about weaning weight?

Angus association weaning weight records are available for bulls and heifers. To more accurately compare to commercial herd performance, these Angus bull records should be adjusted to a steer equivalent. Using this

adjustment, over the last 25 years, weaning weight in pure-bred Angus has increased from about 550 lb to 615 lb, reflecting the change in breedwide genetic trend for weaning weight. But in the commercial herd state/regional data summarized by Lalman, average weaning weight has changed little (currently around 525 lb to 575 lb depending on the source). So, in these commercial herds, pounds weaned per exposed female also has changed little.

As cow weight and milking potential increase so does nutritional cost per cow. In the Angus association genetic evaluation, genetic trend for annual cost of dietary energy has steadily increased about \$60 per cow over 40-45 years, due to increase in both body weight and milking level.

Lalman suggested that "either 1) the producers in these datasets are not selecting for increased weaning weight or 2) lower nutrient availability and (or) less intense management restrict the expression of genetic potential for weaning weight growth".

(2016 Beef Improvement Federation Annual Meeting; Oklahoma St. Univ.; <http://beefimprovement.org/content/uploads/2016/06/2016-BIF-Proceedings-1.pdf>)

Cow - Calf Corner

One of the areas that I think, though, that we're getting a little better understanding of fetal programming taking place is in the area of immune status of these calves.

Fetal Programming

There is a new kind of research being conducted in the area of animal science, particularly in the beef industry. A phenomenon termed fetal programming is being investigated on numerous fronts in beef cattle production.

What is fetal programming? Fetal programming refers to the impact that different planes of nutrition and types of nutrients provided to the mother cow during gestation has on the long term performance of the calf following birth. However, there are still more question than answers in this area of research.

One of the areas of this research that is beginning to be better understood is the role fetal programming can play in the immune status of these calves. Research

recently published by South Dakota State University examined cows that were provided different levels of nutrition during the middle 1/3 (2nd trimester) of pregnancy. The cow were randomly divided into 1 of 2 groups where one group was fed to stay in a good body condition (5.0 – 5.5 BCS) while the other group was restricted to 80% of their maintenance nutritional requirement. Calves born to these cows were monitored closely through the feedlot phase. While they found no difference in birth weight, growth, or feed efficiency of these calves, interesting results in terms of immune response were found. When calves were challenged with a foreign protein, similar to what they might encounter during illness, those calves born to

cows that remained in the good body condition through the middle third of gestation had a higher antibody response to that foreign protein. This means that their immune status was stronger and that they were going to have a better response to any vaccinations given and more successfully fend off diseases they encounter. In short, those calves born to cows that were fed to maintain a better body condition through gestation were able to stay healthier through the stocker and feedlot phase.

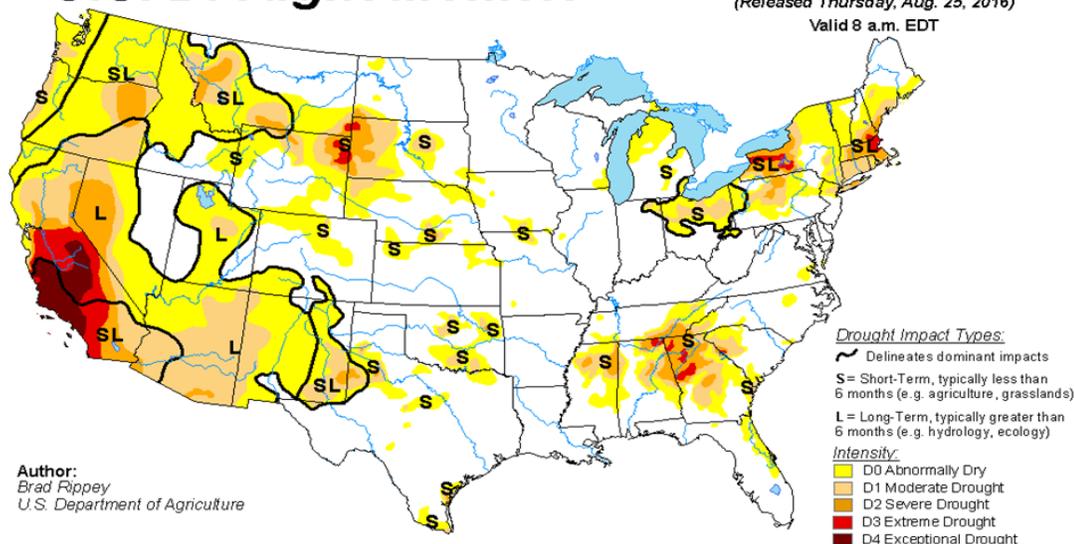
This is a growing area of interest that you will read about more in the future and hopefully this will help you begin to understand the concept of fetal programming.

U.S. Drought Monitor

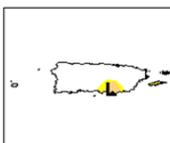
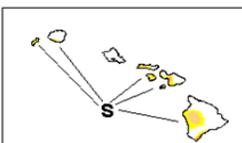
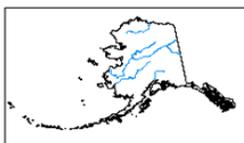
August 23, 2016

(Released Thursday, Aug. 25, 2016)

Valid 8 a.m. EDT



Author:
 Brad Rippey
 U.S. Department of Agriculture



<http://droughtmonitor.unl.edu/>

Texas A&M AgriLife study shows bull selection critical in rebuilding herds

Writer: Blair Fannin, 979-845-2259, b-fannin@tamu.edu



COLLEGE STATION — The importance of a breeding soundness exam in herd bulls can prevent costly revenue losses, according to a Texas A&M AgriLife Extension Service economist.

Stan Bevers, AgriLife Extension economist in Vernon, shared the data from a large New Mexico ranch recently during the 62nd Texas A&M Beef Cattle Short Course in College Station.

In his evaluation of the past 25 years of income and expenses on the ranch, veterinary services and breeding per herd accounted for 3.1 percent of total expenses, or \$27.88 per breeding female.

But in 2003, disaster set in. Bevers said pregnancy rates in 2003 dropped 50 percent.

“The ranch wasn’t doing any breeding exams and it hit them hard,

very hard,” Bevers said. “The initial loss was \$62,000 in calf sales. It also hurt their breakeven costs.”

Stan Bevers, Texas A&M AgriLife Extension Service economist in Vernon, discusses the importance of breeding soundness exams in herd bulls at the Texas A&M Beef Cattle Short Course recently. (Texas A&M AgriLife Extension Service photo by Blair Fannin)

Bevers said breakeven costs were calculated by taking the expenses divided by the total pounds of production. At the time pregnancy rates decreased, breakeven expenses increased from \$1.19 per hundredweight to \$1.75 per hundredweight.

The impact of the increase had significant repercussions later as the ranch looked to expand the herd.

“The board of directors purchased an additional 15,000 acres and wanted to stock it with replacement heifers,” Bevers said. “By missing out on the \$62,000 in calf sales, needless to say, this set them back at least two years.”

Ultimately, Bevers said six bulls out of the 26-bull battery were sterile. A breeding soundness exam would have cost the ranch \$1,560 versus losing \$61,677 in calf sales.

“What this tells us is that it all begins with reproduction,” he said.

Bevers said cattle producers should view the expense of breeding soundness

exams as purchasing an insurance policy.

“If she doesn’t get bred, nothing else matters. How much are you willing to assume, how much insurance can you afford to purchase?”

After Bevers’ presentation, he thanked the audience and told attendees he would be retiring after 27 years with AgriLife Extension at the end of August.

A breeding soundness exam in herd bulls is vital to protecting against revenue losses. (Texas A&M AgriLife Extension Service photo by Blair Fannin)

“It’s been a pleasure to serve you all of these years and provide you with information to help your operations become more profitable,” he said.

“The ranch wasn’t doing any breeding exams and it hit them hard, very hard,” Bevers said.



Wildlife Survey

Author: John M. Tomecek, PhD, Assistant Professor and Extension Wildlife Specialist for Texas A&M

Dr. Tomecek is working with a graduate student who is examining specific predation problems producers experience across Texas, what they are currently using as predation control techniques and the economic burden on them. This survey will help the Texas A&M AgriLife Extension Service understand county-by-county predation issues so that programs that provide information to help producers manage predator problems can be organized by the county extension agent in their respective county. Once these surveys are completed and submitted to the county extension office, a predation report for each county will be submitted to the county extension agent so programs can be planned according to producer needs.

Surveys need to be completed by October 1, 2016. Surveys can then be mailed back or returned to the Crane County Extension office at 900 W 6th St., Crane, TX 79731. The survey can also be completed online at <https://www.surveymonkey.com/r/predatorsurvey>.

AgriLife Extension experts inform Texans on protecting from Zika, other mosquito-borne diseases

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SAN ANTONIO – Texas A&M



AgriLife Extension Service entomologists are informing Texans on how to protect themselves from the mosquito vectors that spread Zika and other diseases.

“The ongoing outbreak of the Zika virus has spread throughout most of South America, Central America and the Caribbean,” said Sonja Swiger, AgriLife Extension entomologist, Stephenville. “The effects this virus will have on the United States are not entirely known, but experts are concerned about the possibilities.”

The *Aedes aegypti* mosquito has been identified as the primary vector for transmission of the Zika virus. (Texas A&M AgriLife Extension Service photo)

According to health officials, more than 350 travel-associated cases of Zika have been confirmed in the U.S., with 160 to date being in Texas. All of these cases occurred when the affected individual traveled to an endemic location and was bitten by an

infected mosquito.

“The primary means of contracting Zika virus is through the bite of an infected mosquito, but it can also be transmitted sexually through semen,” Swiger noted.

The Centers for Disease Control and Prevention officially confirmed Zika virus as the cause of the increased cases of microcephaly in newborns that have been occurring in Brazil and other countries since fall 2015.

“Microcephaly is a condition affecting unborn children where the baby’s head is much smaller than expected,” said Swiger, who recently coordinated the North Texas Mosquito Education Conference in Grapevine and is conducting workshops throughout Texas.

“This occurs due to the decreased development of the baby’s brain while infected with the virus. Microcephaly can occur under other conditions but a significant increase of cases has been seen in Brazil since fall of 2015 and new cases are now being reported in Colombia.”

Swiger said the CDC is instructing pregnant women or women who plan to become pregnant to not travel to endemic outbreak areas at this time. The CDC’s website also has tips for men who plan to visit endemic areas at <http://wwwnc.cdc.gov/travel/page/zika-travel-information>.

“Thus far, Zika is not here in the Texas mosquito populations, but what the future holds for Zika in the U.S. is not entirely known,” Swiger said.

Previous diseases have entered the U.S. by means of travelers bringing them in, but have failed to infect the local mosquito populations long term, she said.

“The *Aedes aegypti* mosquito is the main vector of the Zika virus, as well as dengue and chikungunya,” said Molly Keck, AgriLife Extension entomologist, Bexar County. Keck recently presented

mosquito education programs in Bexar, Comal and Atascosa counties.

“Health professionals have established a strong connection between the Zika virus and Guillain-Barré syndrome and microcephaly, as well as an autoimmune disease with neurological symptoms similar to multiple sclerosis,” Keck said. “And while media reports tend to emphasize the risk to pregnant women, the virus holds potential dangers for people of all ages.”

The National Center for Atmospheric Research has mapped the U.S. cities which it has determined have the highest risk for Zika. (Graphic courtesy of NCAR)

Houston, Dallas, San Antonio and Brownsville have been identified by the National Center for Atmospheric Research as some of the highest-risk cities in Texas for Zika. According to public health officials, if it does enter Texas it will likely begin as small “pockets” of locally acquired human cases that are the result of infected travelers returning from countries where the disease is endemic.

“Currently the chances are slim for anyone in Texas to get a disease such as Zika or chikungunya, but there is a possibility these could become endemic through transmission by the *Aedes aegypti*, which is prevalent in this state,” Keck said.

She explained chikungunya was recently brought to the U.S. by travelers returning from places where the disease is endemic. Its symptoms include fever and joint pain, headache, muscle pain and swelling.

Keck also noted the hundreds of cases of another mosquito-borne disease — West Nile virus — in Texas during recent years. According to the Centers for Disease Control

Zika Continued..

and Prevention, in 2013 there were 183 human cases of West Nile in Texas. In 2014, there were 379 cases, and in 2015 there were 252 cases.

“The common denominator in each of these diseases is there is a mosquito vector that transmits them,” she said.

There are various locations in the typical backyard that can serve as a breeding ground for mosquitoes. (Texas A&M AgriLife Extension Service graphic)

Both Keck and Swiger said the best means to defend against any mosquito-borne illness is to eliminate the vector or, if that is not possible, to defend against it using what they call the “four Ds.”

The Ds are to dress in long, loose-fitting, light-colored pants and shirts; drain any standing water from containers, ponds, tires, gutters, etc. around the home; reduce outdoor activity during dusk and dawn; and defend using a U.S. Environmental Protection Agency or CDC-approved insect repellent.

Keck recommended homeowners “attack the mosquitoes at the larval stage” by removing standing water and using mosquito



dunks in areas where they might breed.

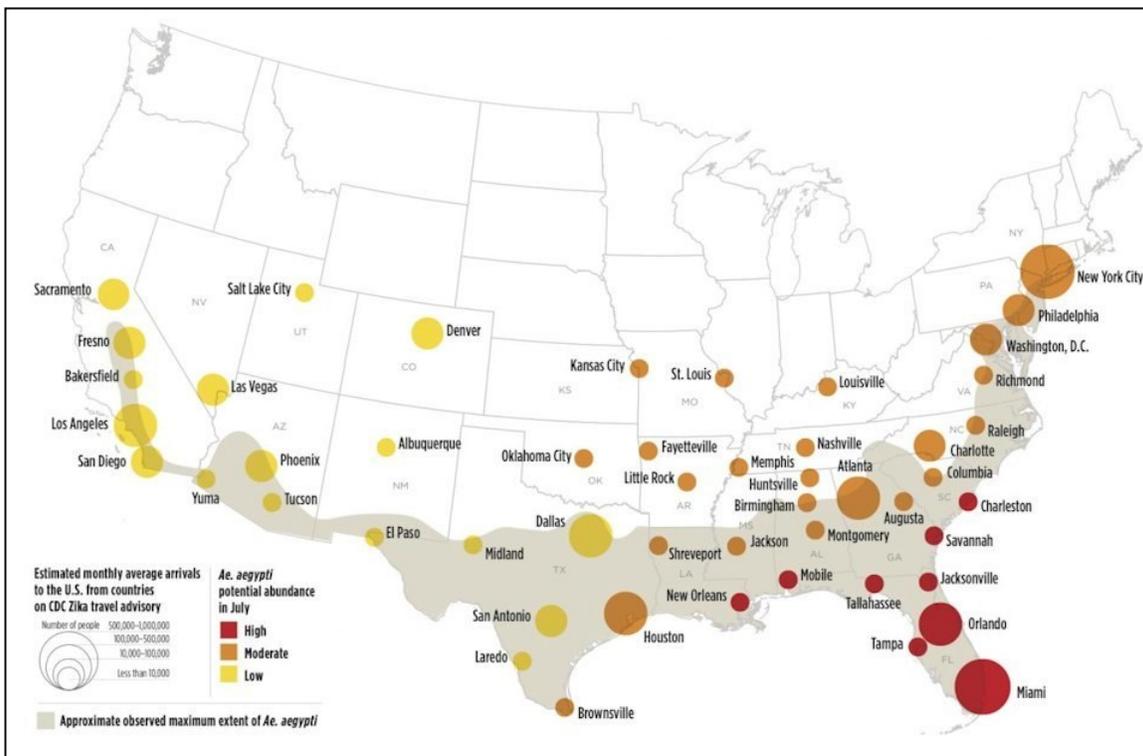
“Homeowners should apply their efforts to draining and removing the items that might make for a good mosquito breeding ground and/or putting mosquito dunks into any pools of standing or stagnant water,” she said. “A mosquito dunk is a small, brown donut-looking object that floats on water and slowly dissolves, releasing a bacterium that kills mosquito larvae.”

Keck said generally it’s a waste of time, money and effort for the average homeowner to try and control mosquitoes at the adult stage.

“The best you can do when they’re at the adult stage is try to avoid them. If that’s not practical, be sure to wear a good repellent when outdoors.”

Additional information on Zika can be found at these websites of the Texas A&M University System: <http://preventingzika.org> and <https://vitalrecord.tamhsc.edu/zika360>.

For more information about mosquito types, biology and control, go to <http://mosquitosafari.tamu.edu/>.



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Agent's Note



Hello All! I'm glad to see that it is beginning to cool off, but I'm not sure whether or not I trust it stay cool. I hope you all have received some rain within the last few weeks and, whether you have had rain or not, let's pray there is more to come! Of all of the things that I do as the County Extension Agent, finding articles and putting together this newsletter is something that I thoroughly enjoy. I would love to hear from you all on what you would like to see in the next newsletter, programs that you would like to see in 2017, and result demonstrations you all would be interested in. If you have a question or issue that you would like to see addressed, don't hesitate to call (558-3522), email (lyndi.owensby@ag.tamu.edu) or stop in to the office to visit with me!

I hope this finds you all well,

A handwritten signature in cursive script that reads "Lyndi R. Bryant".

CEA-AG/NR
Crane County