Beef Tips

Upcoming Events

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Tarpoff joins Animal Science & Industry faculty as extension beef veterinarian

Dr. A.J. Tarpoff has joined the Kansas State University Department of Animal Sciences and Industry department as assistant professor and extension beef veterinarian specialist.

Tarpoff was born and raised in Edwardsville, Illinois. His family owned and operated a beef processing plant and a steakhouse. He received his bachelor's in animal science at K-State in 2010. In 2012, he received his DVM and Master's in biomedical science at K-State.

After earning his DVM, he accepted an associate feedlot veterinarian position at Alberta Beef Health Solutions in Southern Alberta, Canada. His focus in practice was herd based cattle production medicine, research field trials, hands on feedlot employee training, disease surveillance and mitigation and federal import/export duties.

At K-State, Tarpoff's appointment is 70% extension, 20% research and 10% teaching. He will work closely with the state's extension team to develop an extension program to help improve the health of cow-calf, stocker and feedlot cattle for beef producers throughout the state.

Tarpoff can be reached at KSU Department of Animal Science and Industry, 228 Weber Hall in Manhattan, by phone at 785-532-1255 or email tarpoff@ksu.edu.

Launch of New Genetic and Reproduction Education Website

Researchers at the University of Missouri, University of California-Davis, Kansas State University, and the University of New England, New South Wales have been working on a USDA grant aimed at identifying "broken genes" that impact reproduction in beef cattle for the past several years. The project team has developed a website to host educational tools that stem from the grant at beefreproduction.org.

The website includes links to fact sheets developed by eBEEF.org and animated videos that explain genetics and genomics topics relevant to the grant, such as the impact of genetic antagonisms on beef cattle selection. New videos will be released periodically, so please check back often for new content.

For more background on the project see this link (https://vimeo.com/134776296) for the October 22, 2014 webinar entitled Identification and Management of Alleles Impairing Heifer Fertility While Optimizing Genetic Gain. Dr. Megan Rolf, who is a member of the grant team, gives the first segment of this presentation. Dr. Rolf, a native of east-central Kansas and undergraduate alumnus of ASI, has just joined the Animal Sciences and Industry faculty at K-State in a teaching and research position. Megan can be reached at megrolf@ksu.edu. Other webinars in this series can be found at http://www.nbcec.org/professionals/brownbag.html

Tally Time – Measuring cow size and maintenance energy
Sandy Johnson, livestock specialist

The Beef Improvement Federation meetings were hosted by Kansas State University in Manhattan, June 15-17. If you missed this meeting, you might want to check out the online coverage provided by Angus Productions, Inc. at www.bifconference.com. In the newsroom you will find links to proceedings, presentations and audio. More material will be posted in the future.

One of the more interesting discussions for me was the second general session on Thursday morning that revolved around the cowherd and cow efficiency. Feed cost associated with maintaining cows accounts for 60 to 75% of the total feed cost of the herd. This makes maintenance energy requirements economically important and the trait has also been shown to be highly heritable (h^2=0.52).

Key factors impacting maintenance energy requirements are mature cow weight, height and body condition score. Milk production also influences energy requirements but it accounts for less than a tenth as much variability in maintenance energy as mature size. Maintenance energy EPD are available in many breeds but differ in construction and thus interpretation, (higher isn't better in all cases).

Genetic trends show a clear increase in mature cow size in Angus (Figure 1) and other breeds have changed as well (Figure 2). As important as cow size is to feed costs and profitability of the industry,

breed associations report that they only receive 2 to 5 mature cow weights for every 100 weaning weights submitted. This lack of information results in much lower accuracy for EPDs that will slow any genetic change.

I commend those in the seedstock industry that do report cow body weights and body condition scores and submit reports on all their cows (whole herd reporting). Commercial producers should encourage their genetic suppliers to do so if they aren't already and make sure they take the same measures on their commercial cows.

Knowledge of body weight for all classes of cattle is important for accurately dosing anthelmintics and antibiotics. Under dosing may result in no improvement in the condition that warranted the treatment while still incurring the treatment cost and lead to the development of resistance. Overdosing is expensive and could alter any needed withdrawal times.

You can't manage what you don't measure. Cow body weight and body condition score impact maintenance energy requirements, feed cost and profitability.

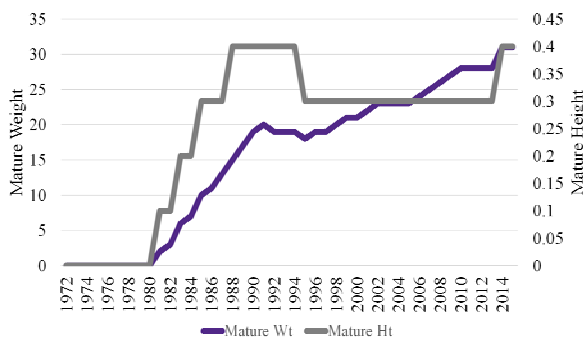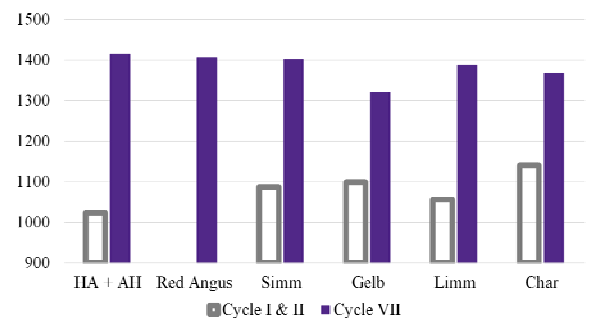Figure 1. 2016 Genetic Trends for mature weight and height for Angus

Figure 2. Breed group means for mature weight of cows in Cycle I & II (birth years 1970-1974) and Cycle VII (birth years 1999-2000), lb

Adapted from Cundiff et al, 2007

Breed and gender interact to affect the sale price of beef calves sold through video auctions from 2010 through 2014

E.D. McCabe[1], M.E. King[1], K.E. Fike[1], K.L. Hill[2], G.M. Rogers[3], and K.G. Odde[1]
[1]Department of Animal Sciences and Industry, [2]Merck Animal Health, [3]Grassy Ridge Consulting

In recent years, the sale price of beef calves has increased as a result of many factors. While the industry rebuilds the cowherd, there is more demand from producers for high quality females with maternal traits. There are fewer heifer calves sent to feedlots and more being retained for the cowherd. In addition, increased demand from consumers for beef as a source of protein contributes to the price of calves. There are many avenues producers can take to market their calves; auction markets, video auctions, private treaty, and branded beef programs are a few of the options. The objective was to quantify the effect of the potential interaction of breed and gender on sale price of beef calves marketed through video auctions while accounting for all other factors that significantly influenced price.

Information describing factors that could potentially affect the sale price of lots of beef calves that were marketed through a livestock video auction service (Superior Livestock Auction, Fort Worth, TX) was obtained from the auction service. These data were collected for all lots of beef calves that were offered for sale from 2010 through 2014.

Breed description of the calves in the lots was 1 of 19 factors included in the original model and was characterized into five groups: English, English crosses, English–Continental crosses, Black Angus sired out of dams with no Brahman influence, Red Angus sired out of dams with no Brahman influence, and Brahman influenced.

The fixed effects included in the original models were year of sale, calf sex, whether the lot was a mixed-gender or single-sex lot, geographical location, breed description, health protocol, base weight variation within the lot, frame score, flesh score, presence of horns, Certified Natural program nested within implant status, Non-Hormone Treated Cattle program nested within implant status, age and source verified, whether the lot qualified for Superior progressive Genetics program, size of the lot (linear and quadratic terms), base weight (linear and quadratic terms), whether the lot qualified for Bovine Viral Diarrhea-Persistently Infected Free program, number of the days between auction and planned delivery, and the implant status. At each step of the backwards selection procedure, the variable with the largest P-value was eliminated from the model. A value of $P<0.05$ was used to include a fixed effect in the model. Of the 19 fixed effects, only 16 were significant and included in the final model.

The data analyzed were collected from 116 livestock video auctions from 2010 to 2014. There were 2,106,181 total steer calves and 1,239,645 total heifer calves used in the analyses (Table 1, pg 4). Breed and gender of the lot interacted to affect sale price of calves and was 1 of 16 factors that were significant in the final model. Implant status, number of days between auction and planned delivery, and calves that qualified for Bovine Viral Diarrhea-Persistently Infected Free program did not significantly affect the sale price of beef calves.

For the steer calves, lots of Red Angus and Black Angus sired steer calves had similar sale prices and sold for significantly higher prices than all other steer breed groups. English, English crossed and English-Continental crossed steer lots had similar sale prices but were greater than Brahman influenced steer calves.

Among heifer calves, lots of Red Angus heifers sold for the highest price. Black Angus sired heifer calves sold followed and sold for more than English-Continental crossed and English, English crossed heifers. Brahman influenced heifer calves sold for the lowest price compared with heifers of all other breed descriptions.

These data show the value differences of specific breed compositions of beef calves and the influence of gender. Price differences among breed of heifer calves may relate to supply and demand for use as replacements in the cowherd.

> **"Among heifer calves, lots of Red Angus heifers sold for the highest price."**

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July 2016

Table 1. Breed and gender interact to affect the sale price of beef calves sold through video auctions from 2010 through 2014

Breed description	Number of lots	Number of calves	Least squares mean of sale price ($/cwt)	Price difference ($/cwt)[a]	P value
Gender by breed description interaction	33,811	3,345,826			<0.0001
		Steer calves			
English, English crosses	2,114	219,762	170.66[d]	4.82	
English-Continental crosses	5,252	543,043	170.06[d]	4.22	
Black Angus sired[b]	6,620	759,975	171.52[e]	5.68	
Red Angus sired[c]	879	88,532	171.95[e]	6.11	
Brahman influenced	5,142	494,869	165.84[f]	0.00	
		Heifer calves			
English, English crosses	1,407	123,356	154.74[d]	2.95	
English-Continental crosses	3,770	348,627	154.90[d]	3.11	
Black Angus sired[b]	4,124	388,294	156.92[e]	5.13	
Red Angus sired[c]	494	38,737	161.49[f]	9.70	
Brahman influenced	4,009	340,631	151.79[g]	0.00	

[a]Within gender, price difference from Brahman influenced calves.
[b]Lots of calves in this breed group were sired by Black Angus bulls and out of dams with no Brahman influence.
[c]Lots of calves in this breed group were sired by Red Angus bulls and out of dams with no Brahman influence.
[d,e,f,g]Values within a gender without a common superscript differ (P<0.05).
The model was adjusted for all other factors that significantly affected the sale price of beef calves and for the random effect of auction date nested within year.

K-State Anaplasmosis Symposium Videos available on the KSU Beef You Tube channel

Resources from the recent K-State Anaplasmosis symposium held in Salina have been archived on-line at www.ksubeef.org including links to videos which may also be viewed at KSU Beef on You tube https://www.youtube.com/channel/UCqmrflCbWBTake6k5IUKqLA.

Did you know the KSU Beef team is now on You Tube? We will continue building and adding to the channel. However, we need your help. Please subscribe to the channel so we can build a following and thus create a unique URL.
 To subscribe go to:
https://www.youtube.com/channel/UCqmrflCbWBTake6k5IUKqLA

Then click on the red "subscribe" button.

Save the Date!

Oct. 7, 2016

K-State Ranching Summit,
9:30—4:30 pm
KSU Union,

ASI Family and Friends Reunion,
5:30 pm
Stanley Stout Center,

Manhattan, KS