

How much does it really cost to own a cow?

What are the most effective means to control flies and ticks?

Take-home highlights from presentations at the 2016 BWCAA Annual Meeting

Kerry Cornelius, Director of Texas Christian University's Ranch Management Program

Kerry Cornelius, Director of Texas Christian University's Ranch Management Program began his presentation by discussing the current state of the U.S. cattle industry. In short, too many cattle, too much corn and declining cattle prices. But, rather than suggesting we, we meaning BWCAA Cattle breeders, tuck tail and get conservative, he encouraged us to be aggressive in breeding for traits that make our breed more valuable in time of distress and uncertainty in the cattle market.

He said there are indications that the future looks bright for the animal protein industry. He showed predictions of world population growth that would increase by 33% by 2050; and that with the increased buying power of a protein-hungry middle class, animal protein demand would DOUBLE by that time as well.

So what about the British White breed should we be trying to improve? On what genes or traits do we want to concentrate and accumulate in our breeding population? He encouraged us to take a lesson from the last several decades of breeding for specific carcass traits and heavy weaning weights. Large ribeye's and heavy weaning weights were misguided goals that resulted in large inefficient cows with short productive lifespans and expensive feed costs. He said the industry has learned that hardy (in both cold and hot climates), smaller and more feed-efficient cows that live longer are cheaper to feed and produce more calves per pastured-acre. Calves in the feedlot that stay healthy and are more efficient in turning feed into pounds of gain will be in demand.

Cornelius discussed the factors influencing the costs of owning cows. He pointed out that the average cost for keeping a cow is about \$625/year. This cost takes into account depreciation and the opportunity costs of alternatively renting out the pasture. It then behooves British White breeders to recognize input cost when selling their animals. From his recent experience with drought in Texas, he noted that feeding cattle during drought was a mistake. He said it is better strategy to sell cows if drought is highly likely rather than buy feed. Replace the cows when the moisture returns.

Dr. Justin Talley, Oklahoma State University

Dr Talley lists the primary factors to consider when controlling insect pests of cattle revolve around three things:

- The economic threshold. That is, the number flies or ticks can an animal put up with before it impacts their performance or reasonable comfort.

- Pesticide resistance of the insects. Flies are quick to develop resistance to different modes of action, so rotating between different classes of insecticides slows the development of resistance.
- Pest biology. By knowing pests' life cycles, management of them is more effective.

Talley said that often the sub-clinical effects of not treating for insect pests have major impacts on animal health, including increased stress, reduced weight gain, and reduced immune response to other pathogens. Notice in the table below, how horn flies can impact the heart rate, respiration and water intake of steers. It is apparent that it doesn't take a lot of flies create considerable stress to cattle.

He presented some economic data on treatment options available to producers. Insecticidal impregnated ear tags appear to be the most economical treatment option; however, not all ear tag brands are equally effective. XP820 ear tags appear to be the most effective, the most economical and longest lasting of those tested.

Another management option is the use of insect growth regulators (IGR's). These are larvicides that are mixed with salt or mineral supplements and formulated to be acquired in the proper amount as the animal consumes mineral and salt free choice. These larvicides pass through the digestive tract of the animal and remain intact in

Influence of horn fly infestations on physiological measurements of beef steers.^a

the manure. They have no effect on the animal. Larvicides prevent the developing fly larvae in the manure from maturing into adult flies. He said they should be added to the salt/mineral as soon as flies appear in the animal's environment. Below is a map showing the approximate date IGR's should be made available.

Item	Horn flies /animal		
	0	100	500
Heart rate /min ^b	76.6	89.1	101.1
Respiration rate / min ^b	44.6	52.7	62.1
Rectal Temp., °F ^b	101.8	102.2	102.4
Water intake, gal./day	4.4 ^c	4.3 ^c	6.6 ^d
Urine output, gal./day	1.0 ^c	1.1 ^c	3.2 ^d
Feed intake, lbs. DM/day	12.4	12.4	12.4
Nitrogen intake, grams/day	119.1	118.0	119.1
Fecal nitrogen, grams/day	30.9	34.5	34.8
Urine nitrogen, grams/day	24.6 ^c	31.1 ^{cd}	34.7 ^d
Nitrogen retained, grams/day	63.6 ^c	50.2 ^d	49.5 ^d

^a Byford et al., 1992 and Schwinghammer et al., 1986

^b Row values differ (P = 0.05)

^{c,d} Row values differ with different superscript (P = 0.05)



Several ticks are important pests in the southern states. They include the Winter Tick, Black legged Tick, Lone Star Tick, Gulf Coast Tick, American Dog Tick and Spinose Ear Tick. Some ticks are vectors for Rocky Mountain Spotted Fever and anaplasmosis. Anaplasmosis is caused by the rickettsial parasites *Anaplasma marginale* and *Anaplasma centrale*. It causes severe anemia in cattle. It is also known as yellow-bag or yellow-fever. Ticks can be controlled with pasture rotations, insecticidal impregnated ear tags and pour-ons.