The Steer Profitability Competition Newsletter

From the Feedyard

November 2017

Welcome to the SPC

By Chip Kemp

On behalf of the American Simmental Association (ASA), American Junior Simmental Association (AJSA), and the ASA staff, we would like to welcome you to the 2018 AJSA Steer Profitability Competition (SPC). We are excited for the opportunity to work with you and to highlight the performance of your steers.

Being involved in the cattle feeding business is a unique part of the beef industry and is full of excitement and challenges.

Over the next number of months you will learn things about your cattle that few producers ever get to know. Detailed gain information, daily feed intakes, carcass information, and monthly expense reports will offer you knowledge that is rare and hard to capture.

In addition to data on your own cattle, you will be kept up-to-date through a monthly newsletter and you will benefit from outside expertise during our monthly webinars.

You are on the cutting edge of our industry. As a result, you are a part of a program that is equally as bold and creative.

The SPC is a major step in your development as a savvy, serious, profit focused beef producer. Very soon, we will all be seeing reports of your cattle on feed.

I encourage you to start keeping a list of questions and thoughts so that you can share them with all of us involved.

Thanks for taking part in the SPC and preparing for your future in OUR Beef Business!
A Feedlot's Ticket to Profitability

Editor’s Note: This article was originally written by Jerry Woodruff and published in issue 10 September 25th of Progressive Cattleman.

Even in times of such uncertainty and a volatile cattle market, revenue generated from value-added programs, which include a sound vaccination and preconditioning plan, certainly exceed their costs.

Cattle with a logical, well-planned vaccination protocol can handle stress conditions much better than calves that are weaned, separated from their mothers, loaded on trucks and hauled to a sale barn, stocker operation or feedlot.

Proper preconditioning programs should involve quality forage and/or supplemental feed and nutrients, castration, dehorning, weaning, constant access to clean, fresh water and introducing cattle to the feedbunk.

It should also include a vaccination program that protects calves against respiratory, digestive and other disease challenges, and an anthelmintic program designed to control the types of internal and external parasites that may compromise the calf’s health status and ability to convert feed to gain efficiently.

All of these things prepare calves for the challenges they’re about to face and give buyers confidence in their purchase as they’re bringing new animals to the feedlot.

Shipping is a high-stress time for cattle. Stress contributes to immunosuppression, leaving animals more susceptible to developing disease. In addition to transporting, commingling with animals from other sources in unfamiliar surroundings also adds to the animal’s stress.

Cattle brought together from multiple sources are likely to bring in several different strains of respiratory disease pathogens – increasing the risk of disease.

Because preconditioned cattle have received multiple rounds of vaccines, they’re less susceptible to becoming infected with pathogens and can have a more rapid immune response to the various pathogens that cause bovine respiratory disease (BRD), commonly referred to as shipping fever.

BRD is the most costly feedlot disease in the US and accounts for annual feedlot losses of $1 billion due to loss of production, increased labor expenses, pharmaceutical costs and death. The highest incidence of BRD occurs shortly after arrival to the feedlot through the first 45 days.

Preconditioned cattle will have fewer out-of-the-ordinary things in their new environment to cope with than freshly weaned calves upon arriving at the feedlot. They’ll be able to adapt in a much more manageable fashion because they’ll be accustomed to eating prepared feed out of a bunk, drinking water from a tank and being surrounded by other animals in a more confined space.

Research continues to show that calves preconditioned for 45 days or longer have lower morbidity and mortality rates once they enter the feedlot, as well as lower medicine cost, improved feed efficiency and a greater average daily gain.

To help calves succeed once they enter the feedlot, it's important to provide comfortable, clean pens with adequate space and ventilation, especially during times with inclement weather. Nutrition is also key. Provide your new animals with a palatable mixed ration that has been professionally formulated for proper protein, energy, vitamin and trace mineral inclusion based on the size and age of animal.

Providing fresh grass hay for the first few days will help entice new arrivals to the feedbunk. It’s also important to pay attention to cattle-handling techniques to keep cattle calm and as stress-free as possible.

Monitoring for BRD during this time is crucial too, as 91 percent of calves diagnosed with BRD are diagnosed within the first 27 days after arrival. Classifying arriving cattle based on disease risk groups can be helpful in managing expectations – high-risk cattle will require greater observation and care than low-risk groups.

Preconditioned calves that have received at least two rounds of respiratory disease vaccines, came from a single source with low transportation stress, are castrated, dehorned and are bunk broke can be classified as low-risk.

High-risk calves, often times, are freshly weaned, have had no or minimal pre-arrival vaccinations and have not been introduced to feed. These calves are under a significant amount of stress, so there’s a greater chance they’ll become ill.

A preconditioning vaccination program allows the animal’s system to be better prepared immunologically to fight off some of those challenging respiratory pathogens from an immune standpoint, rather than getting the infection and having to treat later with an antibiotic.

Choosing calves that have an immune system better prepared to fight off infectious diseases and prevent the animal from getting sick in the first place, or at least reducing the incidence of that type of disease, will result in less use of antimicrobial therapy in the future.

This is good for the calf, the owner, the buyer of the calf and the industry because antibiotic therapy is relatively expensive compared to vaccinations. It’s also beneficial to consumers because it can ease some of their fears about excessive use of antimicrobial therapies.

While you may have to pay a little more at the time of purchase, a well-managed, preconditioned calf will have less health risk, lower treatment costs, less labor invested and much better likelihood of achieving its genetic potential for performance. It's true when they say, “You get what you pay for.”
Terms to Know - Genetics of Beef Cattle

Editor’s Note: These terms were originally published by Matt Spangler, Assistant Professor, Animal Science, University of Nebraska-Lincoln

1. Additive Genetic Effects – Average individual gene effects that can be transmitted from parent to progeny.
2. Allele – Alternate form of a gene. It can also be thought of as variations of DNA sequence. For instance, if an animal has the genotype for a specific gene of Bb then both B and b are alleles.
3. DNA Marker – A specific DNA variation that can be tested for association with a physical characteristic (marbling, tenderness, etc.).
5. Genotyping (DNA marker testing) The process by which an animal is tested to determine the particular alleles it is carrying for a specific genetic test.
6. Simple Traits – Traits such as coat color, horned status, or some diseases. These traits are generally controlled by a single gene.
7. Complex Traits – Traits such as reproduction, growth, and carcass that are controlled by numerous genes.

These are also referred to as Economically Relevant Traits (ERTs).
8. Homozygous – Having two copies of the same allele for a single gene such as BB.
9. Heterozygous – Having different copies of alleles for a single gene such as Bb.
10. Locus – Specific location of a marker or a gene.
11. Marker Assisted Selection - (MAS) The process by which DNA marker information is used along with phenotypic based Expected Progeny Differences (EPDs) to select parents for the next generation.
12. Marker Assisted Management - (MAM) The process by which DNA marker information is used to assist in making management decisions such as sorting cattle entering the feedlot based on their propensity to meet certain grid criteria as determined by a genetic test.
13. Marker Panel- A combination of two or more DNA markers that are associated with a particular trait.
14. Non-Additive Genetic Effects – Effects such as dominance and epistasis. Dominance is the interaction of alleles at the same locus while epistasis is the interaction of alleles at different loci.
15. Nucleotide - A structural component of DNA that includes one of four base chemicals: adenine (A), thymine (T), guanine (G), and cytosine (C).
16. Phenotype – The outward appearance of an animal that can be measured. Phenotypes are influenced by the genetic makeup of an animal and the environment.
17. Single Nucleotide Polymorphism (SNP) - Pronounced ‘Snip’. A SNP is a single nucleotide change in a DNA sequence. For instance, AAGGTTA is changed to ATGGTTA. Here the second ‘A’ is changed to a ‘T’. Not every SNP causes a physical change in an animal. SNPs occur in the hundreds of thousands across the genome.

Sponsorship Highlight

Allflex® is the world leader in design, technology, manufacturing and delivery of animal identification for traceability systems across all production. The company brings cutting-edge, practical applications of visual, electronic and radio frequency animal identification technology to livestock industries across the world, contributing to a safer global food supply.

“Allflex has more experience in livestock identification than any other manufacturer and we are committed to helping producers with quality products that exceed industry standards for performance. We pioneered electronic identification and custom tags. Now with Tissue Sample Units (TSU) and animal health monitoring, Allflex continues its dedication to the livestock industry.”

Allflex has been a generous sponsor of the SPC for the past two years. Without their generosity, this program would not have had the success that was seen last year. We appreciate their willingness to support the youth programs offered by the ASA.

Helpful Links

The first webinar will be November 7 at 7:00 p.m. Central Time. Please register by following the link listed below. Pre-registration is required for the webinar. www.juniorsimmental.org/spc.

Allflex has provided a link to a Youtube video which demonstrates how to tissue samples are collected in cattle. goo.gl/BYJGok