

# Cattlemen's Corner Beef Newsletter

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## Calf Scours

*K. Scott Jensen, Owyhee County Extension*

Calving season is often accompanied by an unwelcome visitor. Calf scours can ride in out of seemingly nowhere and wreak havoc on young calves and your wallet. Research has shown that scours can cause a performance loss of 20 lbs./calf which equates to ~\$36/head. Additionally, heifers treated for scours as calves are 3 times more likely to calve later than 30 months of age.

Calf scours can be caused by environmental conditions, stress, poor nutrition of the dam, and different bacteria and viruses which are present in the corral or pasture. Environment conditions such as wet, muddy lots and crowded conditions become a catalyst for infectious causes. Inadequate nutrition of the dam, especially during the third trimester, decreases the quantity and quality of colostrum. These non-infectious causes can encourage the proliferation of infectious pathogens. As the calving season progresses, the concentration of scours-causing bacteria and viruses increases significantly.

Infectious causes of calf scours attack the lining of the gut. These include E. Coli and Salmonella bacteria, Rotavirus and Coronavirus, and Coccidia parasites. Each of these specific pathogens has their own window of time when they are most likely to cause scours. The most overlap, and therefore the highest risk period, is from two days to two weeks of age. Determining the cause will aid in determining the best treatment. The following table (credit: Carmen Wilmore) will aid in making that determination.

If you do have a calf with scours, fluid therapy can be vitally important to survival. Research has shown that prompt and dedicated oral rehydration therapy is 95% successful in treating scours. Additionally the research showed that feeding milk, plus electrolyte solution, did not prolong or worsen the diarrhea. The most important thing is early intervention when treating a calf with scours. University of Idaho Extension Veterinarian Dr. Jim England recommends alternating fluid therapy of 2 quarts of milk and 2 quarts of electrolytes every 4 hours, through an esophageal feeder if necessary. As the calf improves, the treatments can be cut back. Consult your herd veterinarian for any animal health product recommendations.

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## University of Idaho Extension, Canyon County

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Calf Scours: Recognition Guide			
Cause	Most Common Age for Occurrence	Color Of Feces	Description
E. Coli	0 - 3 days	White or yellow to tarry black	Severe diarrhea, may be flecked with blood, foul-smelling. Possibly high temperature. Good chance of survival with early treatment.
Clostridium perfringens	2 days to 2 months	Bloody, white to gray	Depression, abdominal pain. Leg thrashing may or may not precede sudden death. Often affects calves of heavy-milking dams.
Rotavirus	5 - 15 days	Yellow	Large amounts of watery diarrhea. Calves continue to nurse. High morbidity, low mortality if by itself.
Coronavirus	5 - 15 days	White to Yellow	Large amounts of soft to liquid diarrhea. Can also infect lungs and upper respiratory tracts.
Cryptosporidium	5 - 20 days	Yellow to brown	Persistent, creamy textured diarrhea filled with gas bubbles. Anorexia, weight loss, sometimes central nervous system signs.
Salmonella typhimurium	5 days to 6 weeks	Yellow to brown	Foul-smelling, pasty to fluid fibrinous diarrhea with mucus, shreds of intestinal lining and blood clots. Depression, fever.
Dietary causes: lactic acidosis, grain overload, milk replacer	3 weeks to 12 months	Light	Large volume of watery feces with a sweet-sour odor containing undigested feed particles. Excessive or soy-based milk replacer can result in diarrhea due to allergic reaction.
Coccidiosis ( <i>Eimeria spp</i> )	1 - 12 months	Bloody	Blood and/or tissue in thin feces or discharge. Dehydration. Self-limiting in a few weeks unless reinfected.
Bovine Viral Diarrhea	Newborn to adult		Usually subclinical. Watery diarrhea that may contain mucus or blood. Oral lesions. Erosions and hemorrhages in intestinal tract. Nasal discharge.

K. Scott Jensen - UI Extension Educator  
County Chair Owyhee County, ID



## Are We Making Strides in Shortening the Calving Season?

*J. Benton Glaze, Jr., UI Extension Educator*

Most in the beef cattle industry would agree that a shorter calving season (45 to 60 days) is a desired goal. Those producers that have taken steps to achieve this goal are likely reaping some of the benefits of their efforts. Some of these benefits include such things as increased weaning weights and increased calf crop uniformity.

Calves are only able to gain so much weight each day, given the milk supplied by the cow and the nutrients acquired from available forage. As a result, calves born early in the calving season will be heavier at weaning than those calves born later in the calving season. Extended calving seasons result in wide ranges in age of calves at weaning. These wide ranges in age equals wide ranges in weaning weights. Groups of cattle that include animals with wide ranges in ages and weights may be less acceptable at marketing than groups of cattle that include animals of similar ages and weights.

The increased weaning weights and improved calf crop uniformity resulting from tighter calving seasons have been well documented and widely reported. However, the implementation of practices to shorten the calving season may not have been as widely adopted. To gauge the beef industry's efforts to shorten calving seasons consider the results of the 2007 and 2017 USDA National Animal Health System (NAHMS) surveys.

In 2007, NAHMS initiated a study to examine the cattle management practices on cow-calf operations in the U.S. The study was conducted in the 24 states with the largest beef cow populations and represented approximately 88% of all U.S. beef cows and approximately 80% of all U.S. beef operations. To gain some perspective on the length of calving seasons in the beef industry, questions related to the month of calving, the number of months that cows calved, etc. were included in the survey. Results from the 2007 NAHMS survey showed that approximately thirty percent (27.9%) of the operations had calves born in a 60-day calving season. Approximately one-half of the operations (50.4%) had calves born in a 90-day calving season. The other approximately one-half of the operations (49.6%) had calving seasons lasting longer than three months.

In similar fashion, the 2017 NAHMS study was conducted in the 24 states with the largest beef cow populations and represented approximately 87% of all U.S. beef cows and approximately 79% of all U.S. beef operations. Results from the 2017 NAHMS survey showed that about twenty-five (25.8%) of the operations had calves born in a 60-day calving season.

Approximately forty-five percent (45.6%) of the operations had calves born in a 90-day calving season. The remaining 54.4% of the surveyed operations had calving seasons lasting longer than three months. The calving season/calving distribution results from the 2007 and 2017 NAHMS surveys suggest that the length of the calving season increased, and fewer producers are reaping the benefits of shorter calving seasons.



Historically, the most recognized benefits of a shorter calving season have been increased weaning weights and more uniform calf crops. The results of these previous studies are supported by the results from a study from Nebraska. In 2012, data spanning the years 1997 to 2010 was analyzed to determine the effect of calving period on progeny performance. The spring calving season was divided into 21-day periods and cattle were classified as being born in the first, second, or third period of calving. Weaning weights of steers born in the first, second, and third 21-day period averaged 524, 486, and 449 pounds, respectively. These steer calves were followed through harvest and carcass performance measures were recorded. In addition to weaning weights, steer calves born early

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in the calving season were found to also excel in hot carcass weight, marbling score, empty body fat percent, percent grading average Choice or better, and overall carcass value. Most cow-calf producers would agree that shorter calving seasons (45 to 60 days) are a desired goal for their operations. However, the results of the 2007 and 2017 NAHMS surveys suggest that management practices to tighten the calving season have not been fully implemented. In the 10 years covered by these studies, the percentage of operations with short (60-day and/or 90-day) calving seasons decreased. Operations that tighten their calving seasons can potentially reap the benefits of improved weaning weights and greater calf crop uniformity, as well as improvements in several other traits.

*J. Benton Glaze, Jr., Ph.D. - UI Extension Educator  
Beef Cattle Specialist Twin Falls, ID*

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**Questions? Contact:**  
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Or contact your local UI Extension office's livestock educator

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## The What's and Why's of EPDs and \$Value EPDs

*Rebecca Mills, Boise & Gem County Extension*

It's bull sale season! A time when producers are evaluating traits of cows in the pasture and calves on the ground to gauge how they fit into the goals of the future. It's been said that choosing a herd sire is one of the most important genetic decisions a producer can make. The bull that sires the next crop of calves has the potential to change the maternal look of a beef herd and ultimately the bottom line of profitability either in the short or long term. It's an important decision with far reaching impacts. Luckily there are tools available to help producers make the best decision possible.

One of the tools available to producers are EPDs which stands for Expected Progeny Differences. These are the charts in sale catalogs with all the numbers and acronyms. The numbers represent data collected on the genetic line of each animal and are an estimate of how that animal will perform based on how it's relatives have performed. Things that are very important to know about EPDs:

1. EPDs are breed specific (i.e. Hereford indexes aren't comparable to Angus, etc.).
2. EPDs are intended to be used as comparison tools (i.e. comparing one bull to another bull or to the breed average).
3. EPD information and accuracy change as more information is submitted about the genetic lines involved. Young sires may have low accuracy because they don't have as many offspring that have contributed data.
4. It's valuable to compare several traits on an EPD chart for a given animal to the same traits on another animal rather than picking one trait to focus on.

The EPD system has been around for decades and breed associations have added in new traits over time. Another element that has been added are the Dollar Value indexes, which are show with a \$ before a given letter or acronym. The \$Value indexes are a way that breed associations are helping commercial producers choose sires based on a combination of traits that create economic value. It's like point number 4 above but with past years of average economic data added in. The indexes are weighted so that the traits that will have greater impact on production goals are given more emphasis. The breed association will have information online about which traits are weighted positively and which are rated negatively in each \$Value index.

Each breed association has different \$Value indexes. As an example, the following chart shows the different \$Value indexes for two different breed associations and what traits are considered in each index:

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Breed	\$Value Index	Traits considered
Angus	Maternal Weaned Calf Value (\$M)	Calving Ease Direct (CED), Weaning Weight (WW), Calving Ease Maternal (CEM), Maternal Milk (MILK), Mature Cow Size (MW), Docility (DOC), Heifer Pregnancy (HP), Claw Set (CLAW), Foot Angle (ANGLE)
Angus	Weaned Calf Value (\$W)	Birth Weight (BW), Weaning Weight (WW), Maternal Milk (MILK), Mature Cow Size (MW)
Angus	Cow Energy Value (\$EN)	Maternal Milk (MILK), Mature Cow Size (MW)
Angus	Feedlot Value (\$F)	Post-Weaning Gain (Yearling Weight-Weaning Weight), Dry Matter Intake (DMI), Carcass Weight (CW)
Angus	Grid Value (\$G)	Carcass Weight (CW), Ribeye Area (RE), Marbling (MARB), Fat Thickness (FAT)
Angus	Beef Value (\$B)	Post-Weaning Gain (Yearling Weight -Weaning Weight), Carcass Weight (CW), Ribeye Area (RE), Marbling (MARB), Fat Thickness (FAT)
Angus	Combined Value (\$C)	Calving Ease Direct (CED), Weaning Weight (WW), Post-weaning Weight (Yearling weight-weaning weight), Calving Ease Maternal (CEM), Maternal Milk (MILK), Mature Weight (MW), Docility (DOC), Heifer Pregnancy (HP), Claw Set (CLAW), Foot Angle (ANGLE), Dry Matter Intake (DMI), Carcass Weight (CW), Ribeye Area (RE), Marbling (MARB), Fat Thickness (FAT)
Hereford	Baldy Maternal Index (BMI\$)	Sustained Cow Fertility (SCF), Weaning Weight (WW), Mature Cow Weight (MCW), Maternal Milk (MM), Dry Matter Intake (DMI), Carcass Weight (CW), Marbling (MARB), Ribeye Area (REA)
Hereford	Brahman Influence Index (BII\$)	Sustained Cow Fertility (SCF), Weaning Weight (WW), Mature Cow Weight (MCW), Maternal Milk (MM), Dry Matter Intake (DMI), Carcass Weight (CW), Marbling (MARB), Ribeye Area (REA)
Hereford	Certified Hereford Beef Index (CHB\$)	Carcass Weight (CW), Average Daily Gain (ADG), Dry Matter Intake (DMI), Marbling (MARB), Ribeye Area (REA), Rib Fat (FAT)

**Note:** Other breeds that have \$Value indexes include: Charolais, Gelbvieh, Limousin, and Simmental; consult online resources for each breed to learn more.

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To get the most benefit from EPD or \$Value index data start with an evaluation of production goals. Is this the year to build herd numbers by keeping replacement heifers? Or, is the goal pounds of beef in the supply chain? Next, shop around. It's not necessary to wait for the bull sale catalog to do research as breed associations have thousands of EPDs available online. Pick a couple sires and do the math to compare the differences between their numbers then pick another and another. Pretty soon it will be clear what types of numbers will best fit with production goals.

Additional Resources:

Spangler, M. & Schiermiester, L. (2013). Economic Indexes for Beef Sire Selection. University of Nebraska- Lincoln Extension Publications. Available online at: <https://extensionpublications.unl.edu/assets/html/g1847/build/g1847.htm>

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## Stockmanship

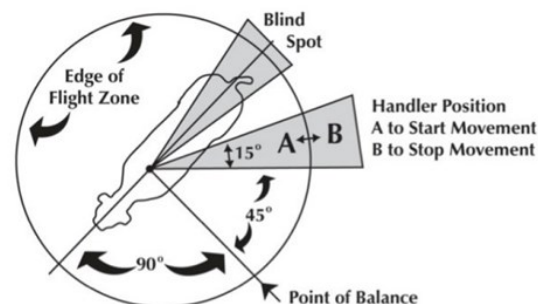
Samantha Ball, Canyon County Extension

So, what is stockmanship exactly? Stockmanship is the art and science of properly handling cattle or other livestock while being calm, quiet, and avoiding any quick movements. One of the first steps to stockmanship is knowing your livestock. You will need to make time for some simple observation of your livestock. To do this you should schedule time every day to observe; how they spend their time, how they move, eat, and interact with one another, and how they respond to you. This is the best way to understand their nature, learn the herd, and know what is normal versus what is not.

As a rancher the odds of all of your cattle being halter broke is pretty slim. So, you won't be able to grab a cow and calf any given day to bring them in for vaccinations or branding... it takes a little more work than that. This means ranchers have to learn to use their bodies (or horses) to move cattle. Positioning your body around your livestock in certain manners will get your livestock to move in a calm manner with no yelling! Cattle are fight or flight animals meaning they often want to run when a predator comes their way, they also prefer to move in circular patterns rather than in straight lines. Knowing these things, we can help increase production and decrease unnecessary stress on your livestock.

Understanding the flight zone. Start by imagining a large invisible ring around the animal, this is their flight zone. Each animal's flight zone will be different depending on their comfort level with humans, and their natural fight or flight reaction.

By walking into their flight zone in certain areas you can get them to move forwards, backwards, away and even towards you. Each animal will need a different level of pressure depending on their fight or flight reaction and level of comfort with humans. Using their natural flight zone and movement patterns will help increase production and reduce stress on the animals. It is also safer for humans as you are not stressing the animals out to the point, they feel the need to use their fight reaction.



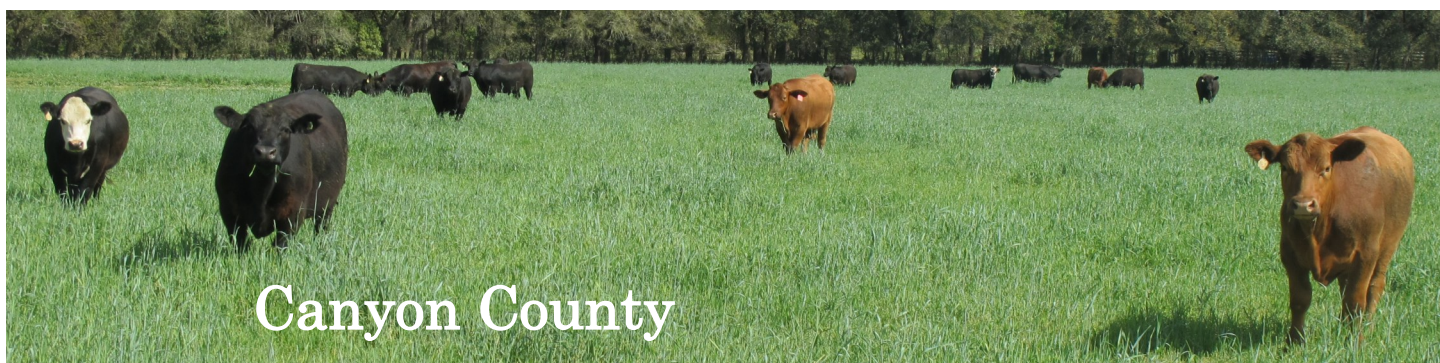
Livestock who are less stressed are also more likely to be healthier, meaning you will save money on less medications and vet bills, and they are more likely to gain weight better and be more productive in your operation.

*Calm handling is extremely important for both animal and human welfare,  
and the economics of your farm. -Temple Grandin*

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