



Master Cattleman Quarterly

Oklahoma State University

Get a Grip on Production Costs with OSU Enterprise Budgets

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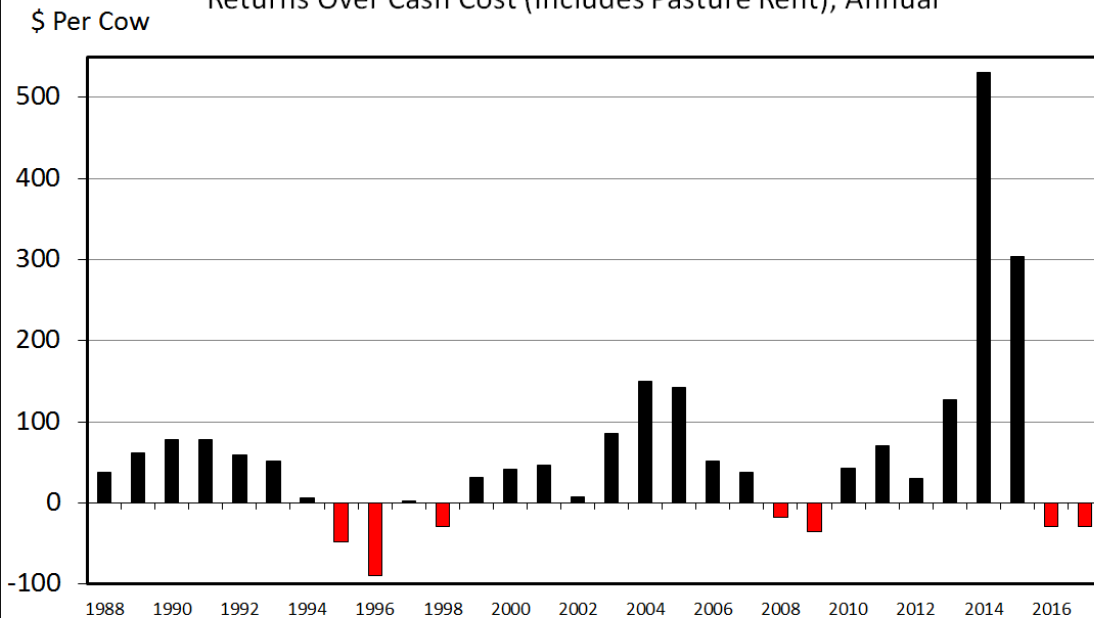
There is no doubt that the past year and a half in the cattle markets has brought everyone from a state of euphoria back to reality. According to the estimated returns at the cow calf producer level (see figure), returns over cash cost dropped from record large in 2014 all the way to negative territory in 2016. This remarkable turn of events has put the industry in a vise grip, squeezing profit margins and eating up liquidity like a starving lion. But even in the face of adversity, cow calf producers will continue to do what they have always done, raise calves. And to ride out the storm, they will need to focus on financial management just as much as production performance. Enterprise budgets are a tool do it.

OSU Enterprise Budgets can help determine your costs and make sure the operation is as cost-effective as possible. It's important to know what's making money and what's losing money in your operation. Keeping good records - financial and production - will help ensure that budgets provide accurate guidance with your decision-making efforts. Many times you can make the most money from right behind your desk.

So don't delay and wait until tomorrow. Check out the latest information available on OSU Enterprise Budgets today at your local county extension office, at <http://agecon.okstate.edu/budgets> or by calling Roger Sahs at 405-744-7075. You'll be glad you did.

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ESTIMATED AVERAGE COW CALF RETURNS
Returns Over Cash Cost (Includes Pasture Rent), Annual



Data Source: USDA & LMIC, Compiled by LMIC
Livestock Marketing Information Center

C-P-66
11/01/16



The Importance of Breeding Soundness Exams

Elisabeth J. Giedt, DVM

The breeding soundness examination (BSE) plays an important role in successful herd reproduction. Successful operations require that bulls have the ability to identify estrus females, service the females and produce high quality sperm to fertilize the waiting egg.

Cow calf operations depend on calves for replacement animals and as a revenue stream. Feeding open cows for an entire season can have a major impact on farm success. Performing BSEs on herd bulls can help rule out animals with limitations that would likely impact your future calf crop. Even older bulls that have successfully sired calf crops can develop problems that impact their fertility.

It is important to check herd bulls at least once a year. Bulls are inspected for overall general health, conformation and body condition score. The genital organs are examined and an examination of sperm is conducted.

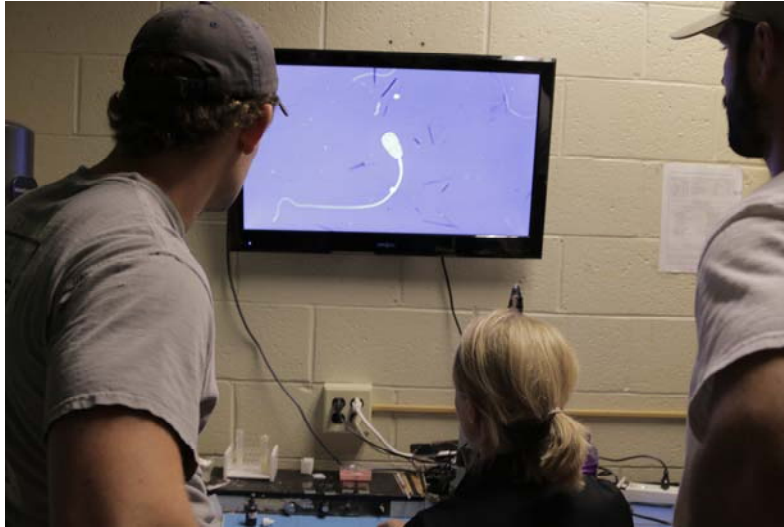
Semen is typically collected via electroejaculation for a BSE.

The potential for sperm production is estimated by measuring scrotal circumference. Scrotal circumference is strongly correlated with daily sperm output and, therefore, the number of females he can settle in a limited time.

It is now highly recommended that each bull that has reached puberty be tested for trichomoniasis, a sexually transmitted disease. Sample collection is quick, easily pre-

formed right after semen collection and can save the livestock producer from a devastating reduction in calf crop.

After the BSE is completed, the bull is classified as a satisfactory, questionable, or unsatisfactory prospective breeder.



An animal with physical defects that may be inherited (including cryptorchidism) should be declared unsatisfactory. Cryptorchidism is the absence of one or both testes from the scrotum.

In order to do a BSE, the bull should be placed in a chute where the veterinarian has easy access to examine the animal.

A BSE routinely takes about 10-20 minutes per male depending on the facilities and animal flow. The cost up front for the BSE can save you thousands down the road when birthing season arrives.

The OSU Veterinary Medical Hospital has been serving food animal owners since 1948. All members of our team utilize state of the art diagnostic and therapeutic

modalities. The common goal is to deliver the highest possible standard of compassionate veterinary care to injured or ill cattle, sheep, goats, llamas, alpacas, and swine. Diagnostic and treatment procedures can be tailored to suit your needs ranging from practical and frugal for commercial production animals to as detailed and intensive as need be for valuable seed stock or companion livestock.

Do Cattle Grazing Crop Residues Need Supplement?

Dana Zook, NW Area Livestock Specialist

Feed costs are the highest expense in the beef enterprise. A large portion of feed costs for beef producers comes from harvested forages. By utilizing this year's ample supply of crop residues, Oklahoma beef producers can extend the summer grazing period. This will bridge the gap between summer range and small grains pasture, and decrease the amount of harvested feed needed per animal. These residues contain adequate nutrition for dry gestating cows but, may not meet the requirements of cattle in other production stages. This article is meant to provide a guide to stocking rate, supplementation needs and performance of cattle grazing crop residues.

Nutrition and Stocking Rate

When grazing crop residues, cattle will select and eat the most nutritious components first (grain, leaves, and husk). Because of this selection process, the overall nutrient content of crop residues will be very high at first but then will drop off substantially after 45 days. Weather is a very important factor in successfully grazing crop residues. It is best to graze these feed sources shortly after harvest and no later than early January to avoid inclement weather that will degrade the nutrient value of the residue.

Dryland crop residues typically have the carrying capacity to stock 1,000 pounds of beef on one acre for 30 days. This means that a producer who owns 1,300 pound cows can stock one cow on 1.3 acres. On a larger picture, 80 acres of sorghum stubble will provide 60 cows with one month of grazing or 30 cows with two months of grazing. Irrigated residues will provide more residue and may be more intensely stocked.

Performance of Cows

Dry gestating cows in a body condition score 5 or better should initially gain 0.5 – 1.0 pounds per head daily on corn and grain sorghum residue. By using the appropriate stocking rates mentioned above, no supplement should be required unless cows are grazing longer than 60 days. First calf heifers in late gestation will need protein and energy supplement throughout the grazing period to support the fetus growth as well as their own nutritional needs. Providing heifers with approximately 5 pounds of a 20% protein supplement or 4 pounds of a 25% protein supplement will allow them to continue to gain the necessary weight. All

lactating females with calves at side will require supplementation to maintain body weight. Amounts will vary depending on the supplement that is being used but lactating cows grazing crop residue will need 7 pounds of a 20% protein supplement or 4 pounds of a 38% protein supplement.

Researchers at the University of Nebraska recently tested the efficacy of supplementing cows on cornstalks. They discovered that spring calving cows grazing corn residue and receiving 1 lb. of a 42% protein supplement daily were 25 pounds heavier and in better body condition at the end of the 90 day grazing season compared to their unsupplemented counterparts grazing corn residue. Later that year, prior to breeding season, body weight and body condition score remained greater for cows that grazed corn residue the previous winter.

Performance of Calves/yearlings

Crop residues can be utilized for growing calves, however supplement will be necessary to allow for continued growth. This is determined by the size of the calves and the capacity of their rumen as well as the palatability of the roughage. Because of this, crop residues are not appropriate grazing for newly weaned calves, but will work for calves who have been preconditioned and trained to feed. These calves will need to be supplemented approximately 1 pound of protein. You could get the equivalent of this protein in 5 pounds of a 20% protein cube or 3.5 pounds of a 38% protein cube. Remember, palatability is key for calves of this size so other supplement options should be considered accordingly.

Keep in mind the potential for toxicity on crop residues. Although the risk is low, regrowth in recently cut milo fields can be high in prussic acid, especially after a hard freeze. There is always the risk for nitrates in crop residues, but appropriately managing stocking rates in the field so consumption is limited to leaves and not stocks will help avoid this toxicity.

This fall, consider crop residues as a way to stretch the feed budget! Contact your local OSU Extension Educator for questions about utilizing crop residues for your beef herd.

2017 Cattle Market Factors and Price Forecasts

Derrell S. Peel, OSU Extension Economist Livestock Marketing

Cattle prices in 2017 are expected to average close to the current fourth quarter 2016 levels, though they will be lower than 2016 for year over year averages (Table 1). Several factors may have a significant impact on cattle and beef markets in 2017 and may change current price expectations. These factors bear close watching in the coming year.

Uncertainty and Volatility Uncertainty and volatility, from a variety of sources, will continue to hover ominously over cattle and beef markets in 2017. Uncertainty about the election has been replaced by uncertainty about the impacts of the new administration. The economic impacts may be positive or negative or, more likely, some combination of both, but the uncertainty surrounding coming changes is without question a negative. The economy is gearing up for potentially higher inflation and almost certainly higher interest rates. In addition to U.S. macroeconomic uncertainty, global market uncertainty will likely continue in 2017. The Brexit vote of last summer has been followed by several additional populist moves in Europe that add to global economic uncertainty. Separate but related to macroeconomic uncertainty, volatility in Live and Feeder cattle futures has significantly reduced the effectiveness of these tools for price discovery and risk management and contributed to additional cash market volatility, which is likely to continue in 2017.

Beef Production Beef production is expected to add an additional 4 to 4.5 percent to total beef production in 2017 in addition to the 5.2 percent year over year increase in

2016. Changes in cattle slaughter and carcass weights from current expectations may cause adjustments in beef production levels and timing in 2017 and could impact current price forecasts. Herd expansion through 2016 ensures increased beef production through 2018. Herd expansion may stop completely in 2017 which will impact heifer flows in 2017 and will determine beef production expectations beyond 2018.

International Beef Trade International trade in beef and cattle is a critical component of price expectations for 2017. Expectations for continued growth in beef exports simultaneous with decreased beef imports will significantly offset a portion of increased beef production in 2017. One of the bigger uncertainties surrounding the Trump administration is the direct impact on current trade patterns as well as potential future beef and cattle trade along with the impact of a continued strong dollar.

Beef Demand and Total Meat Supplies Increased 2017 beef production will combine with increased pork and poultry production for another record total meat supply. Domestic per capita meat consumption is not expected to be a record (depending critically on continued exports of all meats) but is expected to increase another 1.6 percent year over year in 2017, on top of the 1.2 percent year over year increase in 2016. Retail beef prices will continue adjusting down in 2017, which is critical to help the market absorb additional beef in the face of large total meat supplies.

Table 1. Cattle Price Forecasts, Livestock Marketing Information Center, issued November 28, 2016

		Feeder Steer Price (Southern Plains)				Fed Steer	
		5-600 lb. (\$/cwt.)	% chg from Last Year	7-800 lb. (\$/cwt.)	% chg from Last Year	5-mkt avg. (\$/cwt)	% chg from Last Year
2016							
	IV	135-138	-32.9	130-132	-26.1	105-107	-17.0
	Annual	165-167	-33.9	145-147	-29.9	120-121	-18.6
2017							
	I	137-142	-28.7	128-130	-19.4	109-113	-17.7
	II	141-148	-16.9	129-134	-11.9	110-114	-12.3
	III	137-145	-10.3	128-135	-8.7	106-111	-4.2
	IV	132-142	0.3	126-134	-0.8	106-112	2.8
	Annual	139-145	-14.4	127-134	-10.6	108-112	-8.7

Veterinary Feed Directive

Barry Whitworth, DVM, Area Food/Animal Quality and Health Specialist for Eastern Oklahoma

Under the Animal Drug Availability Act (ADAA) of 1996, congress created a new category for drugs called veterinary feed directive (VFD) drugs. Prior to this new rule, all drugs were classified by the Food and Drug Administration (FDA) as over-the-counter (OTC) or prescription (Rx) drugs. The VFD drugs are antimicrobials placed in or on feed or that require veterinary oversight for their use. Up till now, only a select few drugs have been designated VFD drugs.

Over the past several years, the FDA has been reviewing antimicrobial resistance. From this process, the FDA proposed new guidelines for the judicious use of medically important antimicrobial drugs used in food animals with the release of *Guidance for the Industry #209* (GFI #209). Medically important antimicrobial drugs are drugs that are important for therapeutic use in humans. Two main concepts that came from the release of the GFI #209 are limiting the use of medically important antimicrobial drugs in food animals for health reasons only and placing the use of these drugs under the oversight of a veterinarian.

In keeping with the FDA's theme of judicious use of medically important antimicrobials, pharmaceutical companies have voluntarily agreed to remove any growth performance claims from the labels. This means using any of these drugs for weight gain or improved feed efficiency is prohibited. Restrictions are placed on using these drugs for prevention, control, and treatment of diseases under the oversight of a veterinarian.

The labels of OTC antimicrobials drugs that are medically important in human use and used in food animals are scheduled to be changed in December 2016. At that time, these drugs will change status. Antimicrobials used in or on feed will become VFD drugs. Antimicrobials administered in water will become prescription drugs. A few drugs that are not considered important in human medicine such as ionophores, coccidiostats, bacitracin, bambamycin, carbadox, and pleumutlin will continue to be available OTC. However, on January 1, 2017 producers will be required to have VFDs or prescriptions in order to purchase and use those drugs that have changed status. In order for the veterinarian to write a VFD order or prescription, a proper veterinary-client-patient-relationship (VCPR) will need to be

established. The definition of a VCPR is:

1. A veterinarian has assumed the responsibility for making the medical judgements regarding the health of (an) animal(s) and the need for medical treatment, and the client (the owner of the animal or animals or other caretaker) has agreed to follow the instructions of the veterinarian.
2. There is sufficient knowledge of the animal(s) by the veterinarian to initiate at least a general or preliminary diagnosis of the medical condition of the animal (s).
3. The practicing veterinarian is available for follow-up in case of adverse reactions or failure of the regimen of therapy. Such a relationship can only exist when the veterinarian has recently seen or is personally acquainted with the keeping and care of the animal(s) by virtue of examination of the animal(s), and/or by medically appropriate and timely visits to the premises where the animal(s) are kept.

Now is the time for producers to begin to prepare for the changes in status of the drugs. In preparing for the changes, a producer should have a good working relationship with their veterinarian. Producers should take an inventory of the feed grade antimicrobials that they are currently using. Producers should take that list to their veterinarian and feed dealer and learn what information will be needed to get a VFD for that product or products. Producers need to prepare early to avoid any interruptions in getting those products.

Several sources of information are available about VFDs. Producers may want to attend meetings, or review articles, or watch webinars about the subject. Information may be obtained from many websites such as the FDA Center for Veterinary Medicine website or pharmaceutical company websites. Producers should remember that there is plenty of time to prepare for the changes.

Looking at Where We Are

Scott Clawson, NE Area Agriculture Economics Specialist

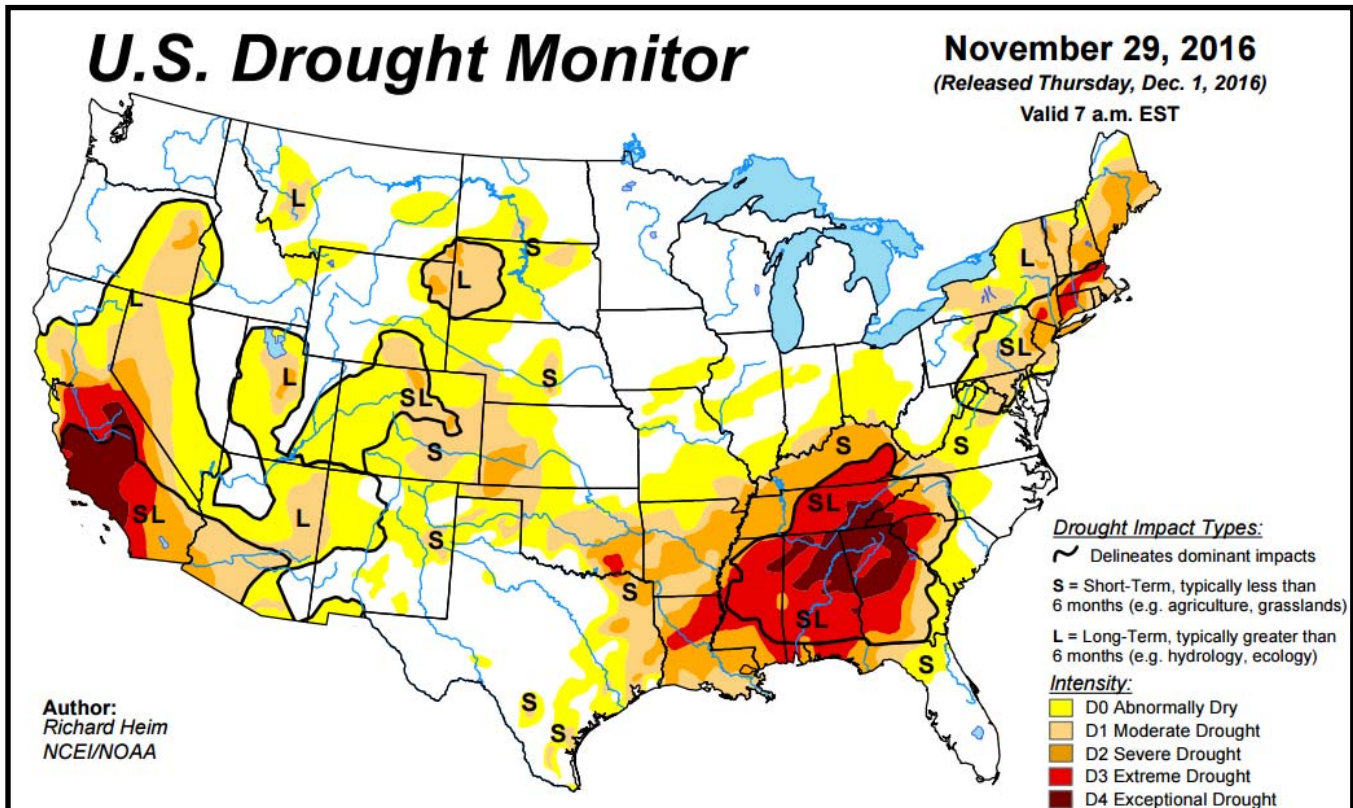
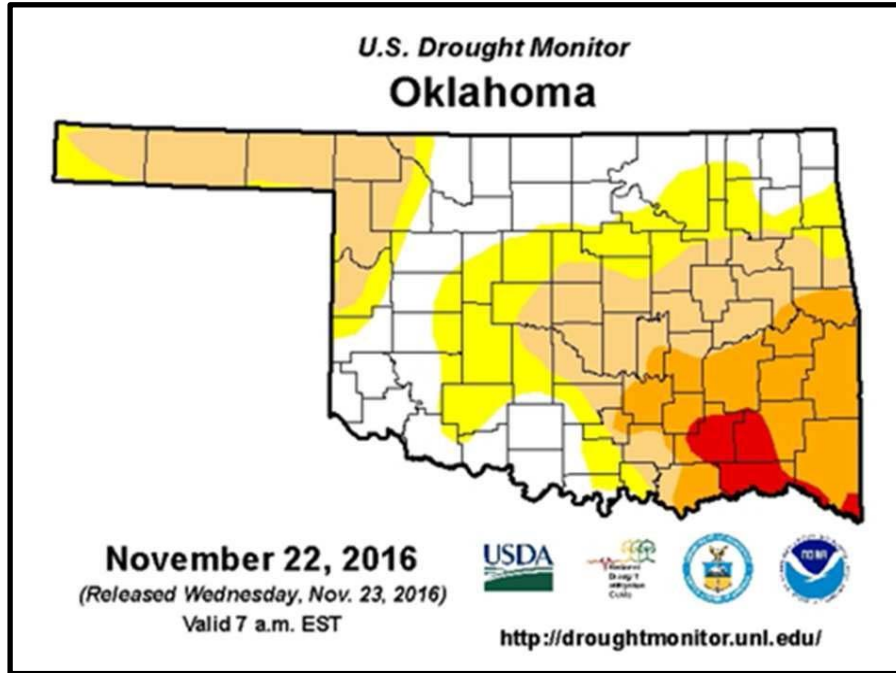
2016 has left most cattlemen in a precarious situation. The rapid and very memorable change in price level has left most scratching their heads. The markets these days do seem to react a bit more drastically than we are used to.

Still, some basic truths still appear to be holding true. When cattle supplies begin to rise, cow-calf profits tend to decline and at the end of the day rain trumps most everything.

Cycles have been a part of the cattle business for decades. We can confirm that we have expanded cat-

tle inventory the past two years. As we await the release of the newest inventory numbers just after the first of the year, there are some indications that we can look at to see what is coming on the horizon. Both heifer and

cow slaughter data indicates that we are harvesting more of them than we did last year but not as many as we were in our most recent liquidation years. This may mean that we will still see some expansion this year but possibly not the rate that we have recently.



Looking at Where We Are (cont)

Beef cow country has also been fortunate to not worry much about rain lately. And as we look at the factors that can spark a growing cowherd, profits and access to grass are at the top of the list. The state of Oklahoma is witnessing just how fast drought can spread across our farms and ranches. From a beef cow standpoint, it's important to understand where our beef cows are located. Missouri and Oklahoma are usually hovering around 2nd and 3rd in the ranking. Oklahoma is certainly experiencing drought via dry ponds and limited fall forage production, and Missouri appears to be entering the initial stages of drought. It's pretty easy to assume that the appetite for these operators to stock heavier is probably limited. Texas tops the charts in terms of beef cow numbers. Interestingly, the UNL Drought Monitor does not show a moisture issue with the majority of the state. Middle and low cost operators may still be looking towards expansion there.

So what does all this mean? First, profits tend to improve when inventory declines. For us to reach that point, we would need to start the trend of cowherd liquidation year over year and for the beef to work its way through the system. While we are not there yet, the collection of drought establishing and more modest profits would lend itself to producers coming out of expansion mode. Drought establishing can/will drive up per cow carrying costs. Hay has been plentiful but the data tells us that it is a perishable product when stored outside on the ground. Together, lower price levels and increased carrying costs will pressure everyone's per cow profits. As a whole, we are at a point in the cycle where we are getting lean and managing costs to preserve the margins that we have. As we wait for the cycle to turn back in our direction, we are encouraged to examine our cost position and allocate our resources to the areas that make a positive impact on our bottom line.

Adding Value with a Defined Calving Season

Kellie Raper, OSU Livestock Marketing

In the beef cattle industry, there is constant discussion about adding value to the calf crop. At least one method of adding value to calves starts with managing the cow herd. Producers often overlook the value that a defined calving season can add to calves, though the benefits are well documented (e.g. Ramsey, Doye, Ward, McGrann, Falconer, and Bevers, 2005). Surprisingly, Figure 1 reports that only 34% of Oklahoma producers surveyed in the 2010 Oklahoma Beef Management and Marketing survey indicated that their cow herd management included managing for a defined calving season

How does a defined calving season add value? When the calving period is defined as a relatively narrow window of time, larger lots of uniform

calves can be offered. Increasing lot size from a one-head lot to a five-head lot increased calf value by approximately \$17/head in Oklahoma auctions with an increase of approximately \$25/head for a ten-head lot over a one-head lot (Mallory, et al. 2016). This suggests that even small producers can benefit from a strategic calving season.

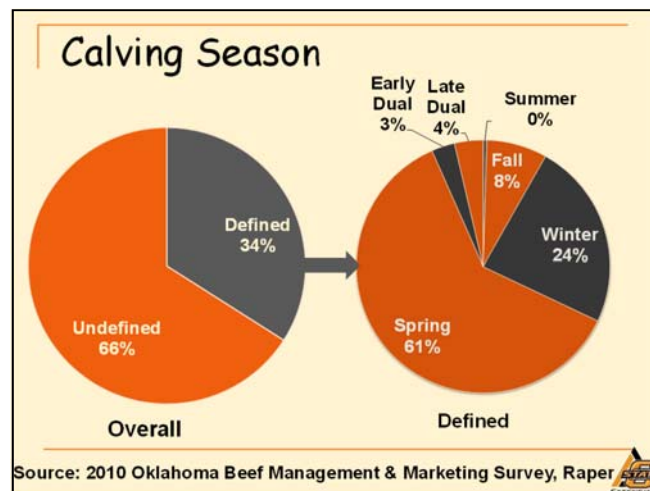


Figure 1. Calving Season

How do you achieve a defined calving season? The preferred calving season will vary by region and producer and is influenced by climate, geography, and producer management preferences, but it starts with a defined breeding season. Limiting bull access to a window less than 90 days is a start. A narrower window will result in a tighter calving window, likely with more uniform calves at sale time. Typical calving season

Adding Value with a Defined Calving Season (cont)

windows are 45, 60 or 90 days. Cows and heifers that do not breed within the breeding window can be preg-checked and culled at weaning. Alternatively, if the bull access period is longer than the strategic calving window, cows that breed but will calve outside of the window can be sold as bred cows. The process of achieving a targeted calving season may take three to five years, but every step closer results in potential added value to your calf crop.

Doye, D., E. DeVuyst, D. Lalman and K. Raper, "Proven Strategies to Maximize Profits to Cow-Calf Producers." *Journal of the NACAA*, Vol. 9, Issue 1, June 2016.

Ramsey, R., D. Doye, C. Ward, J. McGrann, L. Falconer, and S. Bevers. "Factors Affecting Beef Cow-Herd Costs, Production, and Profits." *Journal of Agricultural and Applied Economics* 37, 1(April 2005):91-99.



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