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Premiums Still Strong for Oklahoma Quality Beef Network in 2018 Sales

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Fall 2018 saw strong premiums for OQBN Vac-45 certified calves sold at special sales across Oklahoma. Calves enrolled in Oklahoma Quality Beef Network's (OQBN) third-party verified preconditioning program totaled 8,574 in 2018. Approximately 5,662 of those were marketed through the 8 OQBN special sales held at 6 livestock markets around the state throughout the fall. During that period, OSU collected data on 14,136 calves (including both OQBN program calves and non-OQBN calves) at 8 sales across Oklahoma. OQBN premiums averaged \$12.89/cwt above non-preconditioned calves at the same sales. 2018 premiums by gender and weight category are reported in Figure 1. Premiums reported here are calculated as a weighted average and do not reflect differences attributable to lot size, breed, hide, color, sex, fleshiness, frame size or muscling.

The majority of 2018 OQBN calves were marketed between 400 pounds and 800 pounds, including 96% of steers and 93% of heifers. Premiums per hundred weight tend to be higher for lighter weight calves, reflecting preconditioning's effect on reducing the higher inci-

dence of illness in light weight calves. Note that for steers in 2018, this premium pattern generally holds true and ranges from a high of \$29.89/cwt for 4-weight calves to a low of \$1.24 for 7-weights. 2018 OQBN heifer premiums do not follow that pattern as closely. Premiums range from a high of \$31.22/cwt for 7-weight heifers to a low of \$6.52/cwt for 5-weight heifers. However, the large premiums in the 7-weight category represent only about 3% of OQBN heifers.

For more information on OQBN, including program information, sale dates, weaning and management protocols, go to the OQBN Website (<http://oqbn.okstate.edu/>). OQBN's website also includes additional educational information related to beef calf production in general that you may find useful, even if the VAC-45 program is not a good fit for your operation. You can also like OQBN's Facebook page and visit Oklahoma State University's Beef Extension website (<http://www.beef.okstate.edu>) for information on management recommendations and more.

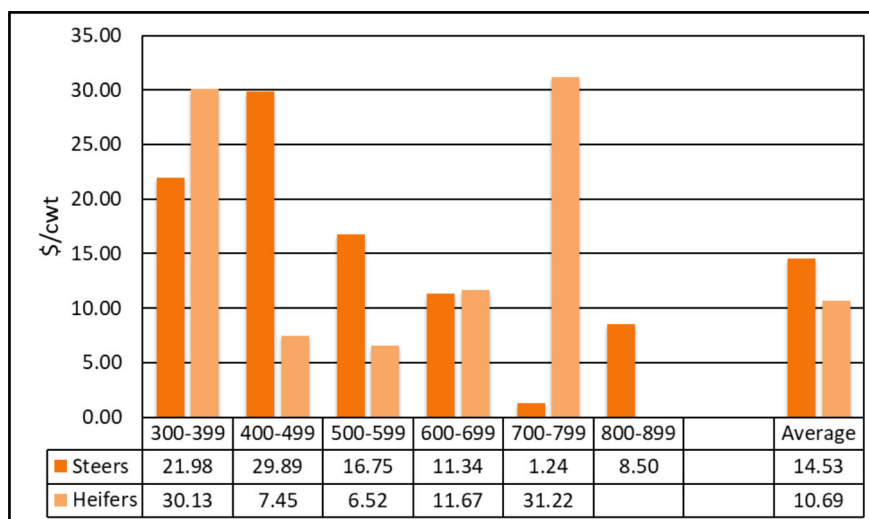


Figure 1. 2018 OQBN Premiums by Weight Class and Gender (\$/cwt)



Oklahoma is the Number 2 Beef Cow State

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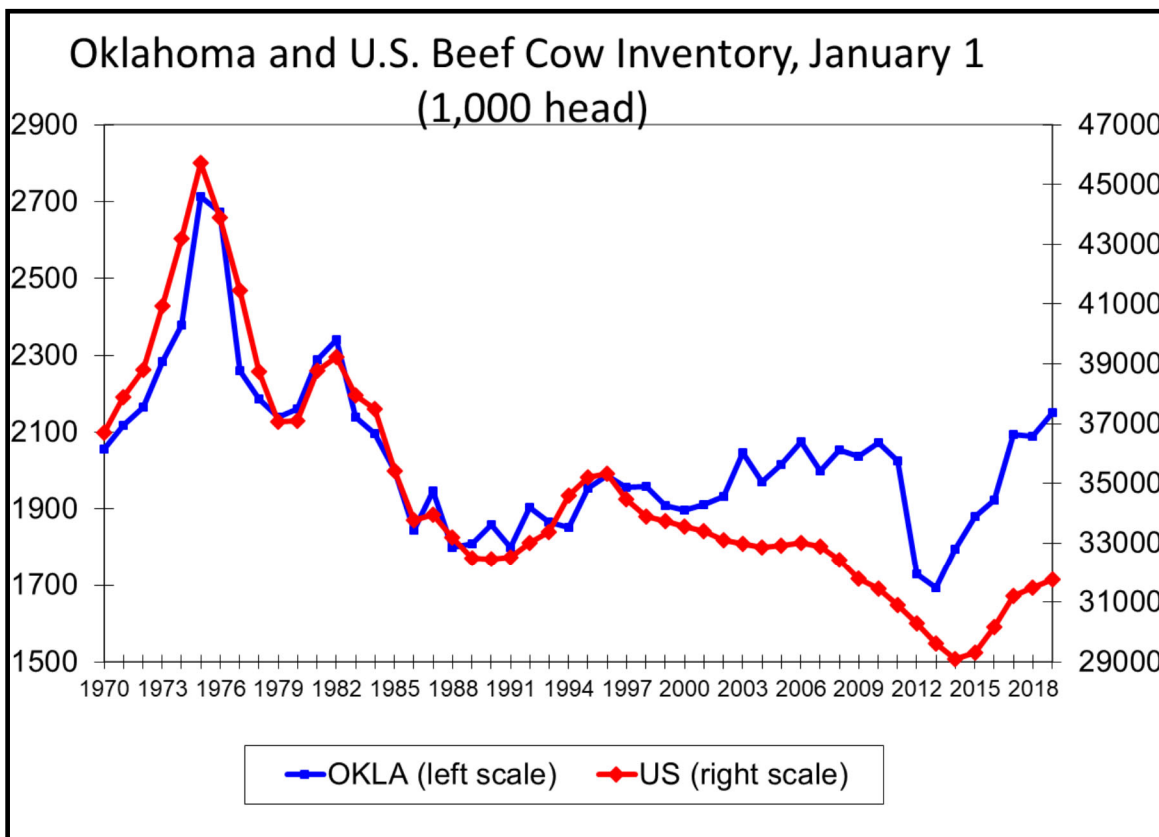
The delayed annual Cattle report was issued by USDA the last day of February. The report shows continued but slowing herd growth in the U.S. The all cattle inventory was 94.8 million head on January 1, 2019, up 0.5 percent from one year ago. The beef cow herd was 31.8 million head, up 1.0 percent year over year. Beef replacement heifers were estimated at 5.9 million head, down 3.0 percent from a year earlier. The 2018 calf crop was 36.4 million head, up 1.8 percent year over year. Total cattle-on-feed was 14.4 million head, up 1.6 percent from the previous year.

From other inventory categories, the supply of feeder cattle outside feedlots is calculated as 26.4 million head, up 1.0 percent year over year. Feedlot production is expected to remain elevated in 2019 leading to modest increases in total beef production for the year.

2018 was the fifth consecutive year of beef cow herd expansion contributing to a total herd increase of 2.68 million since the recent low of 29.1 million head on January 1, 2014, a 9.2 percent increase in five years. In the last significant herd expansion from 1990-1996, the cow herd expanded by 8.8 percent over a six year period. All indi-

cations are that this cyclical expansion is likely complete and cattle inventories may plateau in 2019. While expansion may be nearly complete, there is little indication of herd liquidation at this time indicating stable herd numbers for the foreseeable future.

The Oklahoma beef cow herd was estimated at 2.15 million on January 1, 2019, up 3.0 percent year over year and making Oklahoma the number two beef cow state behind Texas and ahead of Missouri. The inventory of all cattle and calves in Oklahoma is 5.3 million head, up 3.9 percent for the previous year. Beef replacement heifers in Oklahoma were down 2.4 percent, consistent with the national numbers and suggest slowing herd growth in the state in 2019. The estimated supply of cattle outside feedlots in Oklahoma is 2.18 million head, up 6.3 percent year over year. This no doubt reflects better winter grazing conditions compared to 2017/2018. The USDA estimate of cattle grazing small grains pasture in Kansas, Oklahoma and Texas was 1.9 million head, up 26.7 percent from one year ago.



Get Calves Started Off Right with Colostrum

Dana Zook, NW Area Extension Livestock Specialist

In most areas of Oklahoma, calving season is just around the corner. In the craziness of this time period, don't forget the importance of colostrum for the future performance of calves. This is a busy time as producers continue to feed, fix fence, manage the crazy winter weather and grind away at their winter to-do lists. In the midst of all this, sometimes simply getting a calf born alive is a huge success! Adequate colostrum intake within the first 24 hours of life can play a huge role in future health and performance of calves.

The definition of colostrum is the first milk extracted from the mammary gland within 24 hours of birth. During the first day of life, the gut of the baby calf can absorb a unique set of immunoglobulins or large proteins that provide passive transfer of immunity from the cow. The clock starts ticking at birth as the absorptive capacity of these proteins is reduced over time. The gut of a baby calf will have 66% absorptive capacity to these proteins 6 hours after birth, 50% at 12 hours and intestinal closure is finalized 24 hours post birth. In reality, most absorption occurs within 12 hours of birth solidifying the importance of a strong lively calf that is motivated to nurse.

The passive transfer of maternal antibodies through the colostrum will provide a calf with exclusive immunity to diseases that may be encountered later in life. In fact, research from the USDA Experiment Station in Clay Center, Nebraska demonstrated that colostrum may be the key to lifelong health in calves. In this particular study, blood samples were obtained from 263 calves 24 hours after birth to determine colostrum intake reflected by passive transfer of maternal antibodies. Growth performance and health were monitored on these calves through weaning and into the feeding period.

Data from this study established that calves with inadequate maternal antibodies were 6.4 times more likely to be sick in the first 28 days of life as compared to calves that received adequate colostrum. In fact, the risk of death before weaning was 5.4 times greater in calves with poor transfer of immunity. In addition, inadequate colostrum reduced expected weaning weights by 35 pounds and the risk of being sick tripled at the feedlot. This study is a great illustration that passive transfer of immunity is a very important factor of calf health and performance before weaning and into the feeding period.

So what can be done to improve colostrum intake and chances of a healthy calf crop? Many factors of immune transfer are impacted by the cow. Genetics of the cow may influence the quality and quantity of colostrum that is produced. However, tangible factors of cow age, body condition, and udder structure can be more easily addressed by the producer. Mature cows will produce more colostrum compared to a first calf heifer and additional protection may be provided in these older cows due to their exposure to disease and vaccinations. As one would expect, cows in lower body condition and poor health will produce lower quality colostrum for their calves. Udder shape and size can also prevent sufficient colostrum intake. Large teats or a pendulous bag can prevent a new calf from locating the teat and nursing in a timely manner.

Stress is also a crucial player in the timing of colostrum consumption and many factors of stress can cause calves to be sluggish at birth. Long and difficult deliveries, inclement weather, and separation from the cow can hinder intake. In these situations, stress can reduce the absorptive capacity of the intestinal wall even if high quality colostrum is available.

In the event that a calf may not have received adequate colostrum, consider having frozen or replacement colostrum on hand. Keep a tube and bottle in your calving kit for the situation when calling a vet or making a trip to town is not possible. Always thaw frozen colostrum slowly and read label directions on colostrum supplements. Sources recommend providing 5-6% of the calf's body weight in colostrum within the first 6 hours and follow with another feeding at 12 hours. Consult your veterinarian for colostrum guidance and assistance choosing the best supplemental colostrum product.

Is colostrum in your thought process this calving season? Expensive vaccines and attentive management may not be as valuable to an operation as the simple aspect of colostrum intake in the first 24 hours of a calf's life. If you have any questions dealing with colostrum or would like to learn more, contact your local county Oklahoma Cooperative Extension office.

Helping the Newborn Calf Breathe

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Despite our best efforts at bull selection and heifer development, cows or heifers occasionally need assistance at calving time. Every baby calf has a certain degree of respiratory acidosis. Acidosis is the result of the deprivation of oxygen and the accumulation of carbon dioxide that results from the passage of the calf through the birth canal. The excess of carbon dioxide results in a build-up of lactic acid (therefore the acidosis.) In order to correct the lack of oxygen and the excess of carbon dioxide and its by-products, the healthy calf will pant vigorously shortly after birth. Some calves, however, may be sluggish and slow to begin this corrective process.

It is imperative that the newborn calf begins to breathe as soon as possible. To stimulate the initiation of the respiratory process, a few ideas may help. First, manually clear the mouth and nasal passages of fluids and mucus. Traditionally, compromised calves were held up by their hind legs to allow fluid to drain from the airways, but now many veterinarians and animal scientists don't recommend this. Most of the fluid that drains from an upside-down calf is stomach fluid, important to health. Holding the calf by its hind legs also puts pressure on the diaphragm from

abdominal organs, interfering with normal breathing. It's better to use a suction bulb to clear the airways.

Hanging the calf over a fence also is **NOT** a recommended method for a sluggish newborn. The weight of the calf on the fence restricts the movement of the diaphragm muscle. The fence impairs the diaphragm's ability to contract and move. This diaphragm activity is necessary to expand the lungs to draw in air and needed oxygen.

A better method is to briskly tickle the inside of the nostrils of the calf with a straw. This will usually cause the calf to have a reflex action such as a "snort" or cough. The reflex cough or "snort" expands the lungs and allows air to enter. Expect the calf to pant rapidly for a few minutes after breathing is initiated. Panting is the natural response that increases oxygen intake and carbon dioxide release and will allow the calf to reach normal blood gas concentrations. Click on this link <https://www.youtube.com/watch?v=qws5FvuP0QU> to watch a video of this technique.



Prodding the inside of a nostril with a straw is one trick that may stimulate a calf to breathe.

Photo: Heather Smith Thomas, GrainNews, March 2018

Calving Time

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

On many beef cattle operations, the month of February is the beginning of the calving season. In the United States, nearly 60% of beef calves are born in the months of February, March, and April.¹ Since the sale of calves is the primary source of income for most cattle operations, producers need to have a good understanding of the 3 stages of labor, so they know when to intervene during the birthing process to reduce losses.

Stage 1 of labor involves the dilation of the cervix. This is the time that the muscles begin to contract, and the cervix begins to relax. The time that it takes to complete this stage varies. It may be as short as a few hours or last up to 24 hours. Unless producers are observant, this stage may go unnoticed. Typical signs of stage 1 labor are isolation, tail switching, and mucous discharge.

Stage 2 of labor is the birthing process. During this stage, the fetus enters the birth canal and is expelled from the uterus. Typically, this begins with the appearance of the fetal membranes or the “water bag” which is followed by the front feet. According to some references, stage 2 labor last between two to four hours. In fact, according to the National Beef Cattle Study 2007-2008, greater than 70% of cattle operations allow heifers and cows to labor for 2 or more hours before providing assistance.¹ However, other research indicates that stage 2 labor is shorter than the above-mentioned references.^{2,3} A good rule of thumb is stage 2 of labor in heifers should last about 1 hour and for cows about 30 minutes. If progress is not being made after 1 hour in heifers or 30 minutes in cows, producers need to be prepared to examine the animal to assess what the problem is. If a producer cannot correct the problem, they need to contact a veterinarian immediately.

When calving difficulty is seen, the producer should examine the heifer or cow using a palpation sleeve for both his/her protection and the cow’s protection. First, the vulva needs to be washed with soap and water. After the sleeve is lubricated, the producer should insert his/her hand in the vulva to determine the presentation of the calf. Presentation refers to the direction the calf is facing, either frontwards or backwards. Once presentation is determined, the calf’s position calf needs to be assessed. The calf should be right-side up and not upside down. Lastly, the posture should be determined. Both front legs and the head should be in the birth canal. Any abnormality encountered in presentation, position, and/or posture must be corrected before the calf can be extracted. If a producer decides that

he/she is unable to correct the situation, he/she should contact their veterinarian immediately. Any delay in making this decision decreases the chance of getting a live calf.

Stage 3 of labor is the expulsion of the placenta or fetal membranes. Most cows shed their placenta within a few hours after giving birth. On rare occasions, the placenta is not lost for several hours. A placenta that has not been shed within 8 to 12 hours is considered retained. If a cow retains their placenta, producers should consult their veterinarian on what the best treatment options are.

In U.S. beef cattle operations, calving problems account for around 25% of beef calf losses in calves less than 3 weeks of age.⁴ Dystocia or calving troubles need to be dealt with in a timely manner. Delays in dealing with calving difficulties may increase death loss. In a retrospective study at Purdue University on beef cattle undergoing a cesarean section, mortality rate was higher for calves from dams in labor for more than 3 hours.⁵ Fortunately, calving problems are relatively rare. Still, producers need to be prepared to deal with any problems that they might encounter. For more information about calving time management, see Oklahoma Cooperative Extension Fact Sheet *E-1006 Calving Time Management for Beef Cows and Heifers* or contact your local veterinarian.

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Oklahoma Pasture Rental Rate Update

Roger Sahs, Associate Extension Specialist

Pastureland rental rates always generate lots of discussion over a cup of coffee around Oklahoma. Results from the OSU farmland leasing survey conducted with the assistance of the USDA-NASS, Oklahoma Field Office in late 2018 show rental rate gains over the past two years despite recent tight earnings in the cow-calf sector (Figure 1). Will this resiliency continue? To help address this question, we will discuss recent agricultural rental

rates in Oklahoma, an important indicator of relative land profitability.

Pasture rates on a per-acre basis are shown in Table 1 and illustrate some differences in rental rates by region and type of pasture. Averages are shown in bold. The median value is also provided as a central

tendency comparison and is defined as the midpoint of the survey responses. Comparable 2016 averages are shown in italics. The state average rental rate for native pasture was \$15.33 per acre. Regional averages varied from \$11.61 in northwest Oklahoma to \$17.97 in the eastern half of the state. This reflects a wide distribution of productivity, rainfall and of course, negotiated rates associated with location, fencing, water, road access, pas-

ture condition, hunting privileges or personal ties. The statewide average for native pasture was up 10% from the 2016 survey. The state average rental rate for Bermudagrass pasture was \$23.15 per acre, up \$0.36 (2%) per acre. Rates were lowest in southwest Oklahoma and highest in

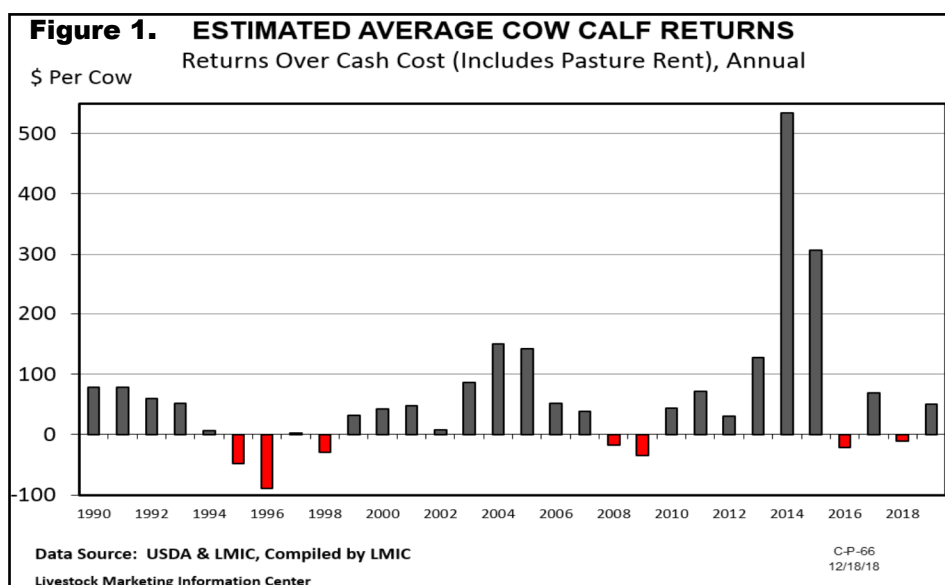


Table 1. Average Annual Pasture Cash Rental Rates (\$/acre)

	NW	SW	NC	E	State	2018 vs 2016
Native	11.61	15.32	16.76	17.97	15.33	+10%
Median	10.00	15.00	15.00	15.00	13.31	
No. of responses	48	23	46	43	160	
<i>2016 average</i>	<i>10.94</i>	<i>12.78</i>	<i>13.95</i>	<i>16.73</i>	<i>13.95</i>	
Bermuda		21.15	25.22	22.85	23.15	+2%
Median		22.19	20.00	20.00	20.00	
No. of responses		6	11	25	46	
<i>2016 average</i>		<i>20.27</i>	<i>24.55</i>	<i>23.96</i>	<i>22.79</i>	
Other Pasture¹	14.43		20.40	26.82	22.27	+1%
Median	14.00		20.00	25.00	20.00	
No. of responses	10		5	21	43	
	17.83		21.00	25.55	22.09	

¹Other pasture types consisted primarily of Fescue in the eastern region.

Source: OSU CR-216

Oklahoma Pasture Rental Rate Update (cont.)

north-central Oklahoma. Pasture rates gains for other improved/introduced forage types were a very modest 1% statewide. Forage-based gains have added value especially as the productivity of the forage base grows as one travels east across the state. Pasture rents have also been supported by the continued expansion of the beef cattle herd in Oklahoma although herd growth has slowed in recent years.

Since rental rates reflect tenant and land owner expectations concerning profit margins, factors such as feed supplies, pasture conditions, water availability, and the cattle economy all will influence income expectations and subsequent pasture rents going forward. Typically, fixed cash rents tend to lag farm earning trends and the reasons vary. Landowners may not become aware of changes in prices or costs as quickly and some lease contracts cover multiple years. According to the survey, about a quarter of the perennial pasture leases are multi-year in duration. Some parties are comfortable in locking in a rent for several years which allows them to budget and plan accordingly over a longer time horizon with a specific cash amount in mind.

Do I Need a Written Lease?

This a common question asked by both parties in a leasing arrangements. Many pasture lease agreements have existed for years without written terms. In fact, over the past several surveys, the percentage of oral leases for perennial pasture has hovered around 63%. Where both parties know and trust each other, an oral lease can work well. However, there can be several reasons why a written lease is beneficial, even encouraged in the most cordial of situations.

Some of the advantages of a written agreement are:

- It encourages a detailed statement of the agreement that assures a better understanding by both parties. It serves as discussion tool during negotiation time and helps flush out the details. It also serves as a reminder of the terms originally agreed upon.
- It helps deal with the unexpected as life doesn't always go according to plan. For instance, it provides a valuable guide for the heirs if either the operator or landowner dies. The agreement should be carefully reviewed each year to ensure the terms of the agreement are still applicable and desirable.

- And finally, it serves as documentation for tax purposes and your tax preparer will appreciate it.

Summary

The regional or state average rental rates in this article may be used as a beginning point for discussion and negotiation of rental rates. Whether you are renting land for yourself or renting pasture to others, knowing the market rates for your area is important and is a good starting point for discussion. However the market rate is just one piece of the puzzle as it is not necessarily the appropriate rate for your lease. Equitable rates consider productive capacity, improvements, and amenities among other things. This implies it is best for both parties to keep their negotiated rates current and flexible enough to adjust to changes in circumstances. And remember that written agreements are an asset to all parties since they help identify relevant issues and clarify specific terms of the lease.

The Ag Lease 101 website at <http://aglease101.org/> offers sample lease forms that may be helpful in developing an equitable agreement.

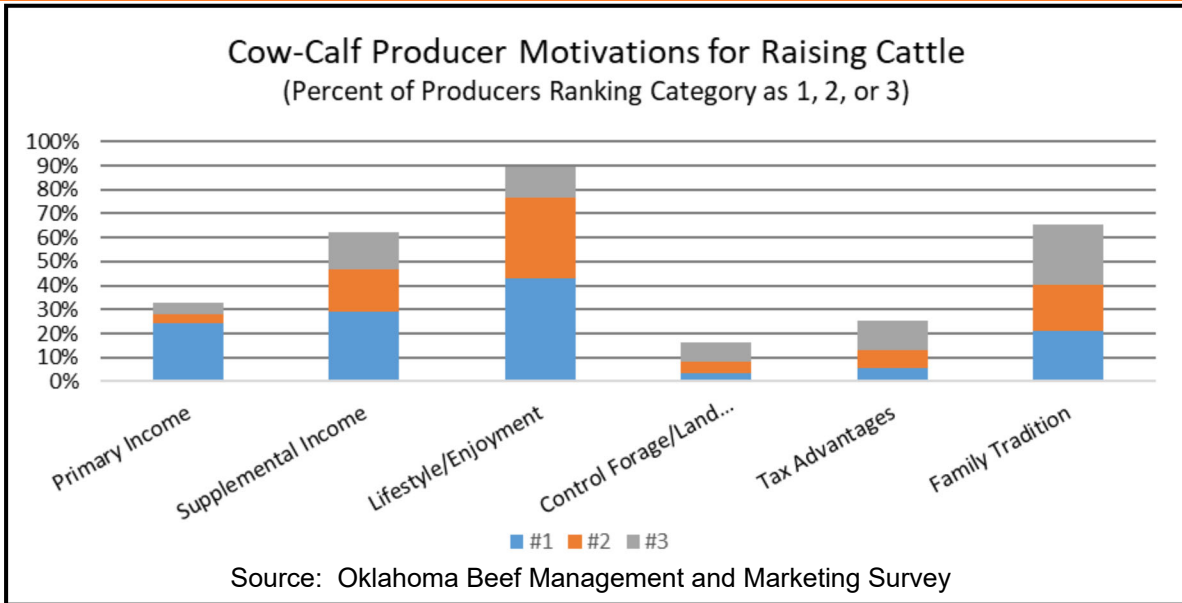
Additional pasture land rental information may be found at the Ag Land Lease website: <http://www.aglandlease.info>

Kansas City Federal Reserve Bank:
<https://www.kansascityfed.org/research/agriculture>

Oklahoma Biennial Cash Rents County Estimates:
https://www.nass.usda.gov/Statistics_by_State/Oklahoma/Publications/County_Estimates/2017/ok_ce_cash_rent_2017.pdf

And finally, OSU CR- 216, Oklahoma Pasture Rental Rates: 2018-19.

<http://factsheets.okstate.edu/documents/cr-216-oklahoma-pasture-rental-rates-2018-2019/>



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