Master Cattleman Quarterly

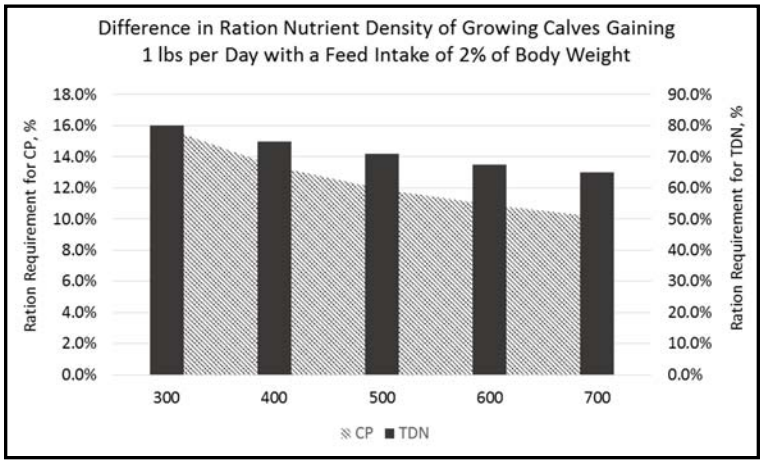
Oklahoma State University

Weaning Nutrition

Earl Ward, NE Area Livestock Specialist

When calves are weaned they are not just being separated from the dams but they are also being separated from her nutritious milk. That loss of nutrition must now be supplied through forage and feed. With the correct approach and execution of weaning, calves can handle the stress of weaning and begin to pack on pounds of muscle, bone, and flesh.

It is recommended to have the calves "bunk broke" prior to weaning. This is accomplished by feeding the pairs and allowing the dam to show the calves what those big concrete blocks are. Calves that have been taught where the feed and water are located make an easier transition at weaning and begin consuming nutrients faster.



The diet of a weaning calf needs to be nutrient dense but balanced for that specific animal. The protein and energy levels change drastically depending on the animal's size and the targeted average daily gain (ADG). For instance, a 400 pound calf gaining one pound a day requires 1.07 pounds of crude protein (CP) and 6.0 pounds of total digestible nutrients (TDN) whereas a 600 pound calf gaining the same amount now requires 1.31 pound of CP and 8.1 pounds of TDN. So does this mean that the bigger calf needs a ration with higher nutrient contents? No, because we have not considered their dry matter intake. If both calves are eating 2% of body weight, then the 600 pound calf is eating four more pounds of feed per day than the 400 pound calf. The lighter calf would need a ration containing 13.4% CP and 75% TDN, whereas the bigger calf would require a ration containing 11% CP and 67.5% TDN.

The targeted ADG will also require a specific nutrient density of the ration. If a producer wants a calf to increase in ADG he must change the amount of feed fed, the ration density, or both. For instance, if he wanted his 400 pound calf that was gaining one pound per day to jump to 2.5 pounds, per day he would need to increase the intake and increase the nutrient density. So instead of 8 pounds of a 13.4% CP and 75% TDN ration, the calf now needs 10 pounds (2.5% of body weight) of a 17.2% CP and 78% TDN ration. For comparison, a 14% creep pellet would normally contain approximately 14% CP and 68% TDN.

The nutrition supplied at weaning is extremely important to the calf's growth, health, and response to stress. A correctly balanced ration will allow your calves to pack on the pounds and give you a better return. If you need any help with weaning or rations, please contact your county's OSU Extension Office.

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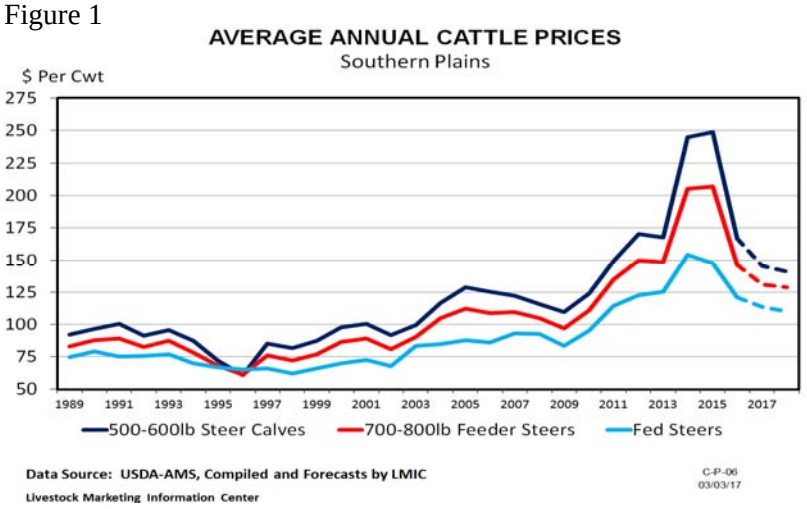
In this issue:

Oklahoma Pasture Rental Rate Update

Roger Sahs, Extension Assistant

Pastureland rental rates continues to generate lots of discussion around Oklahoma. Results from the OSU farmland leasing survey conducted with the assistance of the USDA-NASS, Oklahoma Field Office in late 2016 show some rental rate gains over the past two years despite a price decline in the cattle sector over the same period (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.

Figure 1



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 2014 averages are shown in italics. The state average rental rate for native pasture was $13.95 per acre. Regional averages varied from $10.94 in northwest Oklahoma to $16.73 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, roads, pasture condition, hunting privileges or personal ties. The statewide average was up 4% from 2014.

The state average rental rate for Bermuda pasture was $22.79 per acre, up $1.74 (8%) per acre. Rates were lowest in southwest Oklahoma and highest in eastern Oklahoma. Pasture rates of other improved/introduced forage types increased 6% statewide. Other pasture types consisted primarily of Old World Bluestem and Fescue in the southwestern and eastern regions respectively. 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 that has provided a steady demand for good-quality pastures around the state.

Small grain pasture rental rates on a gain basis were down sharply since the 2014 report, again a reflection of lower earnings in the cattle sector and cheaper grain sources as a competitor for putting on gain. It should be noted that the small grain rates on a gain basis are based on relatively few responses and the averages are less reliable than they would be with more observations.

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 third of the 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.

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. However the market rate 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

Oklahoma Pasture Rental Rate Update (cont.)

both parties (land owners and their tenants) 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:

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/2016/ok_cash_rent_2016.pdf

OSU CR- 216, Oklahoma Pasture Rental Rates: 2016-17. http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-8705/CR-216web16-17.pdf

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

	NW	SW	NC	E	State	2016 vs 2014
Native	**10.94**	**12.78**	**13.95**	**16.73**	**13.95**	**+4%**
Median	10.00	12.00	13.00	14.50	12.00	
No. of responses	31	39	21	50	141	
2014 average	*9.76*	*13.63*	*15.29*	*14.16*	*13.39*	
Bermuda		**20.27**	**24.55**	**23.96**	**22.79**	**+8%**
Median		(D)	17.50	20.00	(D)	
No. of responses		25	14	39	79	
2014 average		*19.10*	*20.91*	*21.33*	*21.05*	
Other Pasture[1]	**17.83**	**17.40**		**25.55**	**22.09**	**+6%**
Median	10.66	(D)		20.00	20.00	
No. of responses	4	5		13	26	
2014 average	*15.23*	*15.31*		*25.86*	*20.89*	
Winter grazing (Nov-March)					**0.38/lb. of gain**	
Median					0.35	
No. of responses					6	
2014 average					*0.61*	
Winter grazing and Grazeout (Nov-Oct)					**0.45/lb. of gain**	
Median					0.45	
No. of responses					11	
2014 average					*0.65*	

[1] Other pasture types consisted primarily of Old World Bluestem and Fescue in the southwestern and eastern regions respectively.

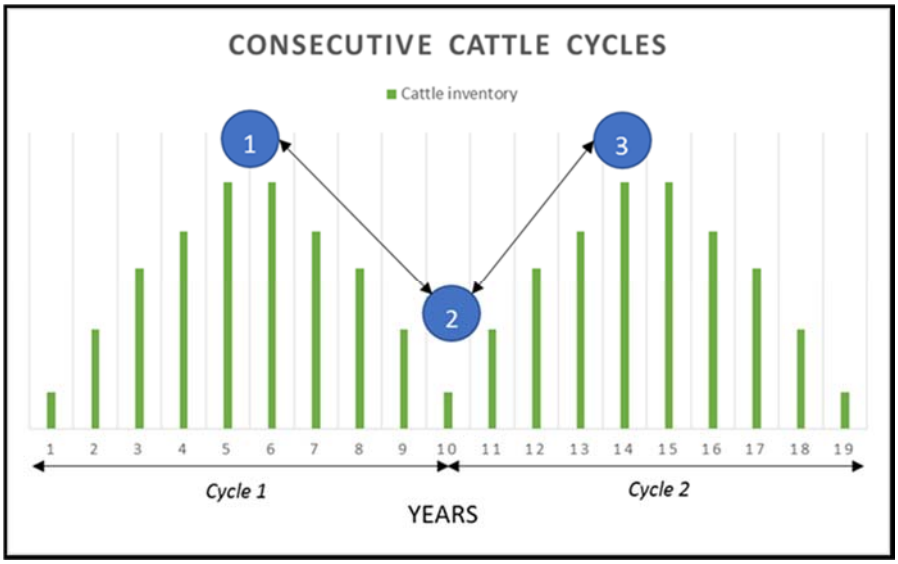
D Not published to prevent disclosure.

Source: OSU CR-216

When Should We Keep Replacements?

Scott Clawson, Northeast Area Agriculture Economics Specialist

Discussion of the cattle cycles has surfaced again and for good reason. The USDA Cattle Inventory Report confirmed expansion again at a rate of 3%. Oklahoma specifically expanded at a shocking rate of 9% for beef cows. Generally, most everyone knows about and discusses cycles. But how do we use that fundamental knowledge to put ourselves in a position to make savvy management decisions? The point at which we decide to retain heifers or how many heifers to retain annually can have lasting impacts. Retained heifers from our own operation do have a cost even though we may not write a check for them. Unfortunately, factors that may influence this decision can lead us to retain at a less beneficial time.



At point one in the graph, we are at the height of cattle inventory in the cycle. At this point we would anticipate prices to be experiencing downward pressure and per cow profits to be low. It's a possibility that we could reach this point in 2017 or 2018. At the peak inventory point in the cycle, we should explore the possibility of retaining a higher proportion of heifers. Unfortunately, two strong forces may urge us not to retain. The first is per cow returns and thus annual debt obligations. At a low profit point we may be forced to market all or most of our calves to satisfy our debt obligations for the year. The second is the negative outlook on profit. Specifically, it seems counterintuitive to retain females when their mothers are generating meager returns. Retaining heifers here would be done at a low cost in terms of price per head considering one part of the cost is the revenue forgone to keep her. The second argument to retain at this point is what takes place from point one to point two. Heifers retained at point one will be at their most productive age when we reach point two. This is also the point when profits are generally the strongest and the cattle inventory is low. In other words, we have the most productive cows when we have the chance at the greatest returns. The system continues as we reach the high inventory period (point 3) as we are looking to cull and replace again.

Like many other management strategies, there is expected error in the process. We will most likely not know exactly where we are in the cycle or what to expect in the upcoming year. Even missing these points by one or two years, we can still have a positive impact. The issue of cash and liquidity is important as well as it will allow us to make the best strategic decision for the operation.

Rent a Cow (or Bull)?

Damona Doye, Farm Management Specialist

Leasing land is common both in Oklahoma and the U.S.; however, livestock leasing is less common in Oklahoma than in some other parts of the country. Leasing assets offers a way to get into production agriculture without having to purchase many assets. Leasing assets is particularly helpful for beginning producers as it requires less capital, focuses working capital on operating costs rather than debt payments, and lessens exposure to risk. While many beginning producers have purchasing assets as a goal, it may contribute to cash flow as well as profitability problems in the short run, even if ownership is a good long term investment strategy.

Rent a Cow (or Bull)? (cont.)

Livestock leasing arrangements can be either cash or share leases. For the cow owner, leasing can generate income while reducing labor requirements. A cash lease provides fixed income for the cow owner, often on a per cow basis, with the cow operator incurring production risk. With a share lease, the cow operator may benefit from favorable production while the cow owner and operator share production risk and production decisions, which may complicate management. Table 1 highlights the advantages of share and cash lease agreements to different parties.

Through share lease arrangements, the livestock owner typically shares the production risks, expenses, and returns with an operator. While the owners may give up some of the risk, they may also give up some of the decision-making power. In developing a lease, owners and operators generally want an arrangement that is equitable to both parties.

As a rule, share arrangements are considered equitable for the parties if income is shared in the same proportion as costs are contributed. Some of the factors that need to be determined for a share-leasing arrangement to be equitable are:

- Costs to be included.
- Cost of resources contributed by each party and costs to be shared.
- Percent of costs contributed by each party.
- Quality of cattle furnished.
- Methods for valuing inputs and products.
- How death losses or other adverse outcomes will be shared.

These factors provide the necessary ingredients for estimating cash flow and profitability, both of which are critical for sustainable production.

For a lease agreement to work, these additional factors must be present:

- The owner and operator must be willing to risk some capital.
- The owner and operator should have mutual trust and confidence in each other.
- The operator must convince the owner that he or she has the managerial ability, honesty, and integrity to capably manage the livestock enterprise.
- The operator must be confident that the owner will deal fairly and honor the contract arrangements for shared returns.

Need more information? A publication, spreadsheet and downloadable, fillable lease form are available in the Documents library on http://aglease101.org/

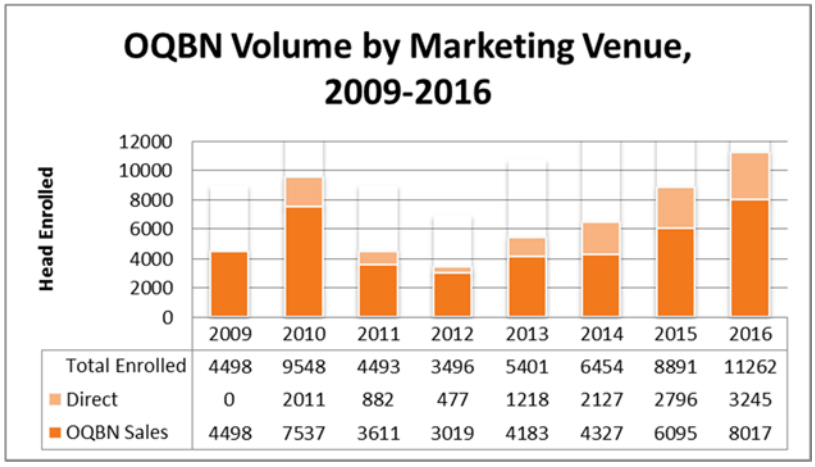
Table 1. Advantages of share and cash lease agreements to different parties

Share Lease Advantages to Livestock Operator:	Share Lease Advantages to Livestock Owner:
• Makes use of working capital without tying up capital for breeding stock. • Shares the risk of the operation with the owner. • Obtains capital over and above the limits of credit agencies. • Allows borrowing of capital at a fair rate of interest (This assumes the lease is equitable!) • Permits an increase in the volume of business • Helps the beginning operator get started in livestock production • Provides more efficient utilization of labor if the operator is underemployed.	• Allows an owner to maintain a breeding herd, even though labor is not provided. • Provides a sources of rental income. • Provides an opportunity for returns on capital investment • Provides a means of transferring ownership over a period of time. • Has possible income tax and social security advantages.
Cash Lease Advantages to Livestock Operator:	**Cash Lease Advantages to Livestock Owner:**
• Generally provides the operator full control and responsibility for management. • Allows the operator to benefit from above average prices and production	• Provides a fixed income without any operating expenses.

Oklahoma Quality Beef Network: 2016 Calf Program Numbers Top 11,000 Head

Kellie Raper, Associate Professor and Livestock Market Specialist, Agricultural Economics
Gant Mourer, Beef Value Enhancement Specialist, Animal Science
Eric DeVuyst, Professor and Farm Management Specialist, Agricultural Economics
Derrell Peel, Professor and Livestock Market Specialist, Agricultural Economics

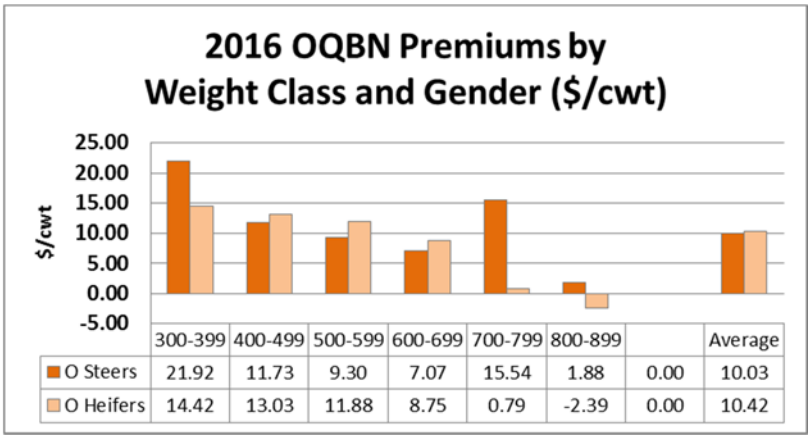
The Oklahoma Quality Beef Network's (OQBN) continued program growth resulted in record numbers in 2016, even as cattle prices continued to decline. A total of 11,262 calves were enrolled in OQBN's third-party verified preconditioning program, the highest in program history (Figure 1). The majority of OQBN calves are marketed through special OQBN sales at auctions across the state, though some are marketed directly by producers (Figure 1).



	2009	2010	2011	2012	2013	2014	2015	2016
Total Enrolled	4498	9548	4493	3496	5401	6454	8891	11262
Direct	0	2011	882	477	1218	2127	2796	3245
OQBN Sales	4498	7537	3611	3019	4183	4327	6095	8017

Figure 1. OQBN Volume by Marketing Venue, 2009-2016.

During Fall 2016, OSU collected data on 19,456 calves (including OQBN calves) at 9 sales across Oklahoma. OQBN premiums remained strong, at an average of $10.20/cwt above non preconditioned calves. 2016 premiums by gender and weight category are reported in Figure 2. Premiums reported here are calculated as a weighted average and do not reflect differences attributable to lot size, breed, hide, color, sex, fleshiness, and muscling. The majority of 2016 OQBN calves were marketed between 400 pounds and 800 pounds, including 94% of steers and 95% of heifers. Note that premiums per hundred weight are generally higher for lighter weight calves. This reflects the higher likelihood of illness for lighter weight calves and the corresponding value of preconditioning's role in decreasing that likelihood. For OQBN steers, 2016 premiums equated to approximately $76/head for 3-weights and ranged from $46/head to $53/head for 4-, 5-, and 6-weights. Similarly, premiums for OQBN heifers ranged from $50 to $57 per head from 3-weights to 6-weights. The resulting increase in revenue to Oklahoma cow-calf producers is estimated at $777,379 for 2016. The overall impact of OQBN is, however, much higher. The educational efforts of the OQBN team, including OSU faculty, state staff, and county staff, have increased the use of value-added marketing practices by Oklahoma producers substantially since the re-launch of the program in 2008, even outside of the OQBN verified program. A new survey effort in 2017 will help to quantify those gains.



	300-399	400-499	500-599	600-699	700-799	800-899		Average
O Steers	21.92	11.73	9.30	7.07	15.54	1.88	0.00	10.03
O Heifers	14.42	13.03	11.88	8.75	0.79	-2.39	0.00	10.42

Figure 2. OQBN Premiums by Weight Class and Gender ($/cwt)

For more information on OQBN, including program information, sale dates, weaning and management protocols, go to the OQBN Website (http://oqbn.okstate.edu/). The website includes additional educational information related to beef calf production in general that you may find useful. You can also like OQBN's Facebook page and visit Oklahoma State University's Beef Extension website (http://www.BeefExtension.com) for more information on management recommendations and more.

New Survey Will Reveal Stocker Industry Details

Derrell S. Peel, Breedlove Professor of Agribusiness and Extension Livestock Marketing Specialist

Kellie Raper, Associate Professor and Extension Livestock Marketing Specialist

Researchers at Oklahoma State University hope that Oklahoma stocker producers will provide never-before-available information about the stocker industry in a new survey. The stocker industry is the least understood sector of the beef cattle industry. Stocker production takes place in many different locations using a wide variety of forage and feed resources. Stocker programs occur at all times of the year in production activities that typically vary from three to six months but may be shorter or longer. Since complete cattle inventory data is only available once per year from the USDA's National Agricultural Statistics Service (NASS), on January 1, many stocker production activities are never captured in NASS data. Little data is available on when, where and how stocker production takes place.

One of many stocker industry functions is the assembly of calves from dispersed cow-calf production into larger production groups. Cattle may be shipped across several states for stocker production. This has obvious implications for disease threats and spread and yet, we have little information about how stocker cattle move into and out of stocker production and the distances that cattle move. In some cases stocker production is limited to specific forages available seasonally and in other cases stockers are produced year around or across multiple seasons using combinations of warm and cool season forages. However, no data is available to quantify and contrast the many variations of stocker systems. Stocker production can be quite variable from producer to producer and over time and the survey will provide information on the motivations and flexibility that stocker producers use to adjust stocker production. The survey will address these and many other aspects of stocker production and marketing.

Oklahoma is a major stocker production state. We developed the survey, in conjunction with USDA's Animal and Plant Health Inspection Service, to provide a wide range of procurement, movement, production and marketing information about stocker production in Oklahoma. The survey will be mailed by USDA-NASS to several thousand Oklahoma producers in the next few weeks. NASS developed the mailing list to ensure statistically representative coverage of producers across Oklahoma. However, producers are not identified in the survey and will remain anonymous to researchers who receive the completed surveys from NASS.

If you happen to be one of the producers who receive the survey, we appreciate your willingness to provide information on the survey. The survey includes many questions in order to cover widely varied stocker production programs. However, most producers will find that several sections of the survey do not apply to them and they will be able to skip those sections. We know your time is valuable and we have worked hard to streamline the survey as much as possible and minimize the burden on you to complete the survey. Thank You!

Did you Know? 2016 U.S. Hamburger Facts

Derrell S. Peel, Breedlove Professor of Agribusiness and Extension Livestock Marketing Specialist

- Ground beef consumption is estimated at 25 lbs. per person.
- Ground beef consumption is 45% of total beef consumption.
- Fed steers and heifers produce about 144 lbs of trimmings per carcass, which is about 64% lean.
- Total ground beef production is 33 percent of total beef production.
- 190 lbs of lean trim from cows, bulls and imported beef is mixed with fed trim to make 334 lbs of ground beef per steer and heifer slaughtered, which averages about 79% lean.
- Imported beef makes up about 27% of U.S. ground beef supplies.
- Domestic cow slaughter would have to double to replace the imported beef used in ground beef.
- Lean trimmings represent 72 percent of total beef imports.

Save the Date! Statewide Women in Ag and Small Business Conference, Aug 3-4

Sara Siems, Extension Assistant Risk Management Education

The Oklahoma Cooperative Extension Service along with USDA's Risk Management Agency is pleased to announce the annual conference for women in agriculture and small business scheduled for August 3-4 at the Moore Norman Technical Center in Oklahoma City. The 2-day conference offers a variety of sessions to assist participants in successfully managing risk for their families, farms and/or business. Over 25 concurrent sessions are offered from four tracks — agriculture, alternative enterprises, business and finance, and beginning farmer — with participants able to choose whatever session is of most value to them. Registration is $50 per person and includes breakfast, lunch and refreshments for both days.

The conference also features a Made in Oklahoma mini-mall and exhibits on the available resources to help people be more successful in their farming or small business efforts. Anyone with an interest in agriculture or small business should consider attending this event — it really has something for everyone.

For more information visit http:// okwomeninagandsmallbusiness.com/ or contact Sara Siems at 405- 744-9826 or sara.siems@okstate.edu.

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