



# Master Cattleman Quarterly

## Oklahoma State University

### Management Practices for Added Value in Market Calves:

#### What's in Your Tool Box?

*Gant Mourer, Oklahoma State University Beef Value Enhancement Specialist*

Lack of forage and increased input costs for beef producers continue as we move ahead in 2013. However, there are several tools that producers can use to increase efficiency of cattle planned for market and in doing so increase margins. All it takes is a little prior planning for cattle that may be hitting the ground as we speak or calves that producers may be thinking about weaning this spring.

Information and documentation on a cow herd always adds value. Keeping records allows producers to make informed culling, marketing, nutrition and planned mating decisions. After all a quality calf is what adds the most value when it comes to marketing. Good records also allow producers to document the types of management practices that they have implemented, and records can be easily passed from one segment of the beef industry to the next making a more integrated system, adding value at every step.

Improved record keeping and collecting calf birth dates and weights often times leads to a defined calving season. This may include a spring or fall calving herd or possibly both and typically be 90 days or less in length. Defining a calving season for your cow herd adds value to calves in several ways: a shortened calving season allows reproductively efficient cows to be easily identified and cows that do not settle with a calf within the time allowed can be palpated as open and culled. A defined calving season means producers can better target calving during

a time of the year where high quality forage is more readily available and able to meet a cow's increased nutritional requirement during early lactation without increasing supplementation.

In addition, with a shorter calving season, a more uniform calf crop is realized, management of calves is easier and \$2-7/cwt premiums are often earned for those uniform calves as they are sold at market. Along with uniformity, increased lot size adds value at auction. Cattle sold in lots of 6 hd or more can bring \$10-16/cwt more than smaller lots (Stuts et al. 2012). Larger sale lots can be achieved not only through a shortened calving season but also through alliances, whether that is locally with a neighbor or participating in a specific alliance program for which requirements have been met.

Improving feed efficiency at any time, especially during a drought can help increase profit for any producer. A lesson can be taken away from feedlots, 99% of which use implants and ionophores to improve margins. The use of such technologies would be warranted in a traditional marketing program if a natural or organic program has not been established and is not planned by a producer. Approved implants can be used on suckling calves and can increase average daily gain (ADG) by .12 lbs/day but may be more effective during the stocker phase as calves are weaned and retained for a period of time. Increases in ADG have been documented at 8-20% on calves post weaning. This can easily be a \$10 return

Vol. 18 March 2013

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## Management Practices for Added Value in Market Calves , What's in your tool box?

for every \$1 invested in implants. Similarly, ionophores are a cost effective way to increase feed efficiency in cattle. Fed at 100-200 mg/hd/d, ionophores can increase gain by 0.15-0.2 lbs/day with a cost of about \$0.02 a day and act as a coccidiostat and bloat preventer in grazing cattle on high quality forage.

Dehorning calves as well as castration of intact males are management tools that require little overhead cost to accomplish and can add substantial value. Horned cattle can be discounted up to \$15-20/cwt. Similarly, bulls may be discounted from \$3-6/cwt as compared to steers. Some people believe that an increase in weight gain can be obtained by leaving a steer intact, but castration of steers at weaning adds stress and decreases post-weaning gains while leaving the calf more vulnerable to disease. An approved implant for a suckling calf can obtain the same results with less stress at weaning. Bottom line, the earlier a calf can be dehorned or castrated, the better off and less stress occurs when that calf goes to market.

Drought effects over the last two years are becoming more apparent as cattle enter the grower yard or feedlot. Death loss recently in yards has been upwards to 8-10%, in some instances, for calves that are not considered high risk. Research has shown that cattle which have been restricted from adequate diets have calves that lack proper immunity (Hough et. al, 1990). This coupled with high feed prices add just another difficult hurdle for many producers who are feeding cattle. Proper vaccination and mineral supplementation by the cow/calf producer can aid in prevention of disease and sickness whether or not retained ownership is part of the marketing plan.

Preconditioning cattle prior to sale can seem like an expensive investment when forage is limited and feed prices often times are over \$400/ton. Research shows that incidences of sickness and death loss can be decreased significantly if calves are weaned a minimum of 45 days. However, if value of gain from calves continues to be high, the added gain in a weaning program can offset those high feed costs, especially if feed costs are properly managed and calves gain 2 lbs/day or more. Individual producers need to assess their particular situation to see what

fits their management program best and see if preconditioning is right for them during a drought year. Calculators are available at [www.beefextension.com](http://www.beefextension.com) to aid in making retained ownership decisions.

Vaccinations, along with a preconditioning period over 45 days, qualify many cattle to be enrolled in a value added program. These programs work by combining many of the management strategies listed above and offering those cattle for sale to buyers for a premium. Buyers will pay premiums for cattle that have been managed correctly because they perform better in the feedlot with less sickness and death loss as compared to cattle not previously weaned. Pfizer's "Select Vac", Merial's "Sure Health", OSU's OQBN VAC-45 are examples of value added programs and all have slightly different requirements. Cattle that qualify in a value added program normally see premiums from \$6-10/cwt over non- weaned calves.

These are only a few of the "tools" that a producer can choose to put into their tool box that comes from what is considered a "traditional" beef cattle system. Some producers may choose to use only some of the tools or some may choose not to use any of them but, the bottom line is producers should have the information at hand to make informed decisions as they go to market calves in 2013 and not leave any money on the table when they do so.

### References

- Hough, R. L., F. D. McCarthy, H. D. Kent, D. E. Eversole, and M. L. Wahlberg. 1990. Influence of nutritional restriction during late gestation on production measures and passive immunity in beef cattle. *J. Anim. Sci.* 68:2622-2627.
- Stutts, K., M. Beverly, S. Kelley and B. Freel. Management practices on selling price of Texas feeder cattle. *J. Anim Sci* 90 (e-Suppl. 1):5.

### Time to Refinance?

*Eric A. DeVuyst, Extension Economist*

Interest rates are at historic lows. Home mortgage rates range from 2.5% for 10-year notes to 2.75% for 25-year notes. Farm mortgages are also available at very low rates. Many producers purchased land in the last 10 years when interest rates were at 5-6%. With drought ravaging crop yields and stocking rates, refinancing has a bonus impact of reducing principal payments by amortizing remaining balances over more years. In the example below, the producer purchased 160 acres of land in 2005 for \$1,100 per acre, 25% down, and 6% interest over 25 years. Current principal and interest payments are \$10,326 per year. The original note is scheduled to be paid off in 2030.

If the producer takes advantage of current rates, an interest rate of 3.5% (or better) can be found. Re-amortizing the balance as of January 1, 2013 over 25

years generates a new annual payment of \$6,784. This reduces cash flow demands by over \$3,500 per year. While the new note is not retired until 2037, total interest paid over the life of the note from 2006-2013(old note) and 2013-2037 is just under \$110,000 compared to just over \$126,000 for the old note without refinancing. For farms facing a cash flow problem, refinancing over 25 years may be a workable solution. For farms that are able to continue paying the higher payments, refinancing can save thousands over the life of the note. It's a good time for producers to visit their ag lenders.

Years	Current Mortgage		Refinanced Mortgage	
	Payment	Principal balance	Payment	Principal balance
2006	\$10,326	\$129,594		
2007	\$10,326	\$127,044		
2008	\$10,326	\$124,340		
2009	\$10,326	\$121,475		
2010	\$10,326	\$118,438		
2011	\$10,326	\$115,218		
2012	\$10,326	\$111,805	--	--
2013	\$10,326	\$108,187	\$6,784	\$108,935
2014	\$10,326	\$104,353	\$6,784	\$105,964
2015	\$10,326	\$100,288	\$6,784	\$102,889
2016	\$10,326	\$95,979	\$6,784	\$99,706
2017	\$10,326	\$91,412	\$6,784	\$96,412
2018	\$10,326	\$86,571	\$6,784	\$93,003
2019	\$10,326	\$81,439	\$6,784	\$89,474
2020	\$10,326	\$76,000	\$6,784	\$85,822
2021	\$10,326	\$70,234	\$6,784	\$82,042
2022	\$10,326	\$64,122	\$6,784	\$78,130
2023	\$10,326	\$57,643	\$6,784	\$74,081
2024	\$10,326	\$50,776	\$6,784	\$69,890
2025	\$10,326	\$43,497	\$6,784	\$65,553
2026	\$10,326	\$35,780	\$6,784	\$61,063
2027	\$10,326	\$27,601	\$6,784	\$56,417
2028	\$10,326	\$18,931	\$6,784	\$51,608
2029	\$10,326	\$9,741	\$6,784	\$46,631
2030	\$10,326	\$0	\$6,784	\$41,479
			\$6,784	\$36,147
			\$6,784	\$30,629
			\$6,784	\$24,917
			\$6,784	\$19,005
			\$6,784	\$12,887
			\$6,784	\$6,554
			\$6,784	\$0

### Farm Bill Update

*Jody Campiche, Assistant Professor and Extension Economist*

The 2008 farm bill was extended through the end of September 2013. The farm safety net has been extended to another crop year and producers will continue to be eligible for direct payments, counter-cyclical payments, ACRE payments, and marketing loans for the 2013 crop year. The extension does not include

mandatory funding for the livestock disaster assistance programs but does include an authorization of appropriations for the programs (meaning that the appropriations committee can decide to fund the livestock disaster programs). Some programs in the 2008 farm bill did not have baseline funding past 2012 and

## Farm Bill Update (cont.)

will not receive funding through the 9 month extension. However, most Oklahoma producers will not see much of a change in farm bill programs from the 2012 crop year. Even though funding for livestock disaster programs is extremely important to Oklahoma producers, these programs have not been available since October 2011, so livestock producers did not receive payments for 2012 losses.

Commodity producers can now enroll in ACRE or DCP for the 2013 crop year. All eligible producers can enroll in ACRE or DCP regardless of whether or not they were previously enrolled in ACRE. With the current uncertainty in Congress, the best risk management strategy is to enroll early in DCP. At this point in time, it is too early to forecast potential 2013 ACRE payments. However, once more information is available for 2013 ACRE payments, producers do have the option to change their election from DCP to ACRE prior to the June 3rd ACRE sign-up deadline (if ACRE seems to be a better option for their farm).

In previous years, producers had an incentive to wait until mid-May to make the decision to enroll in ACRE or DCP since more information was available to estimate ACRE payments (and this wasn't a problem since funding was available for DCP and ACRE for the 2008 farm bill). However, things are different now and there is a lot of uncertainty in Congress.

Some have discussed the possibility of passing a farm bill this year and not distributing 2013 direct payments in October.

In both the House and Senate versions of the farm bill, direct payments were eliminated so most producers were not expecting to receive direct payments for the 2013 crop year (assuming that a new farm bill was passed). However, now that the extension is in place and direct payments have been extended to the 2013 crop year, producers and lending agencies are depending on these payments to fulfill loan obligations. In many cases, farm loans would not have been possible without the inclusion of 2013 direct payments. It is important to enroll in DCP as early as possible so that DCP contracts will be in place and Congress will understand the importance of 2013 direct payments to the agricultural industry. If producers wait to enroll, this could signal to Congress that fewer producers are depending on 2013 direct payments.

Discussions for the new farm bill are ongoing but have been somewhat delayed due to the sequestration (i.e. automatic budget cuts) that is scheduled to take place on March 1, 2013 (as part of the Budget Control Act of 2011). At this point, much uncertainty remains and it is unclear how agricultural programs will be affected by the sequestration process.

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## Oklahoma Quality Beef Network: Summary of Fall 2012 Sales

*Kellie Curry Raper, OSU Agricultural Economics, Eric A. DeVuyst, OSU Agricultural Economics, Derrell Peel, OSU Agricultural Economics and Gant Mourer, OSU Animal Science*

This past fall, Oklahoma Quality Beef Network (OQBN) value added calf sales were hosted by several livestock markets around the state. Market data were collected at six sales, including McAlester, OKC West (x2), Blackwell, Pawnee, and Tulsa between November 7, 2012 and December 5, 2012. Data were collected for each lot of OQBN calves, as well as for non-OQBN cattle that sold during the period before and after the OQBN portion of the sale. A total of 3,019 OQBN certified calves sold in 333 lots at the six sales represented here. Data were collected on a total of 8,541 calves, including the OQBN calves.

Note that, overall, the number of OQBN calves sold in these special sales decreased significantly as compared to 2010, but the number of OQBN calves was comparable to 2011. In both 2011 and 2012 marketing years, severe drought conditions across much of the state altered the calf marketing choices made by producers as, for many, the resources necessary for retaining calves beyond weaning were scarce at best.

OQBN calves are marketed as calves that have been managed according to a specific health management preconditioning protocol and are third-party cer-

**Oklahoma Quality Beef Network: Summary of Fall 2012 Sales (cont.)**

tified. The preconditioning protocol has been shown to increase the performance of calves as they move through the beef supply chain (e.g. Schumacher, Schroeder, and Tonsor, 2011). The combined value of the management protocol and the third party certification by OQBN is expected to increase the value of calves at marketing, as compared to calves sold with no preconditioning.

Figure 1 illustrates the OQBN premium (weighted average) over non-preconditioned cattle for marketing years 2009, 2010 and 2011, ranging from \$6.54/cwt to \$8.12/cwt, as well as for 2012 (see Raper and McKinney, 2009; McKinney, et al, 2010, Raper, et al, 2011). In spite of lower OQBN calf numbers, the average premium measure increased for 2012. Again, this premium and premiums for other years represented are based on the weighted-average price of all OQBN lots as compared to non-preconditioned cattle and do not consider price differences attributable to lot size, weight, breed, hide color, sex, fleshiness, and muscling.

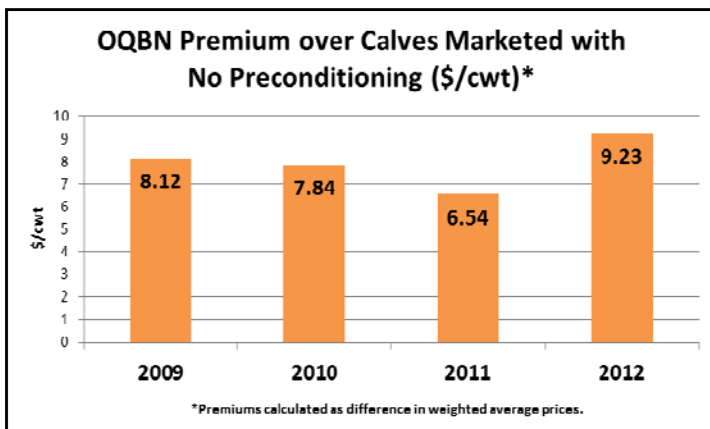


Figure 1. OQBN Premiums at OQBN Calf Sales, Fall 2009 through Fall 2012.

Figure 2 illustrates the weighted average OQBN premiums realized for 2012, sorted by weight category and gender. Note again that price differences attributable to other characteristics are not reflected in the weighted-average. For steers, higher premiums were realized in the 5 and 6 weight categories, while for heifers, premiums were similar across weight categories. OQBN steers and heifers earned market pre-

miums over non-preconditioned cattle in every weight category.

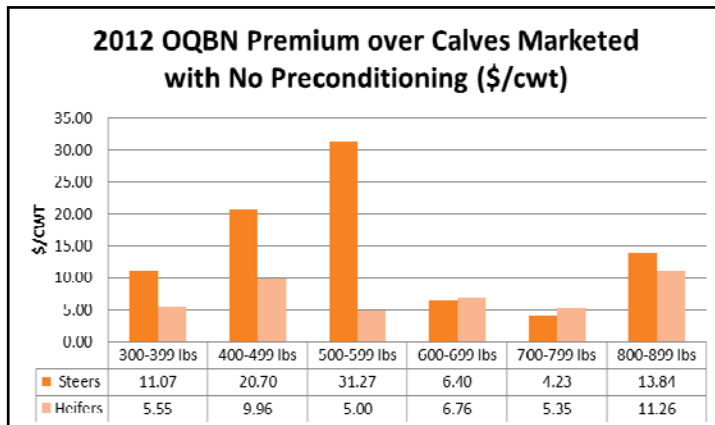


Figure 2. Fall 2012 OQBN Premiums, by Gender and by Weight Category

See <http://www.oqbn.okstate.edu> for more detailed information on the health management protocol and the certification process.

**References**

McKinney, Doug, Eric DeVuyst, Kellie Curry Raper, and Galen Williams. "Oklahoma Quality Beef Network: Summary of Fall 2010 Sales." *Master Cattleman Quarterly*, OCES, Volume 10, Page 4, March 2011.

Raper, Kellie Curry and Doug McKinney. "Oklahoma Quality Beef Network: Summary of Fall 2009 Sales." *Master Cattleman Quarterly*, OCES, Volume 6, Page 6-7, March 2010.

Raper, Kellie Curry, Eric DeVuyst, Derrell Peel and Doug McKinney. "Oklahoma Quality Beef Network: Summary of Fall 2011 Sales." *Master Cattleman Quarterly*, OCES, Volume 14, Page 4-5, March 2012.

Schumacher, Tucker, Ted C. Schroeder, and Glynn T. Tonsor. *Value of Preconditioned Certified Health Programs to Feedlots*, Kansas State University Agricultural Experiment Station and Cooperative Extension Service, MF3017, August 2011. Available at [http://www.agmanager.info/livestock/marketing/bulletins\\_2/marketing/feeder\\_cattle/MF3017\\_6pp.pdf](http://www.agmanager.info/livestock/marketing/bulletins_2/marketing/feeder_cattle/MF3017_6pp.pdf).

## The Importance of Estimating the Economic Value of a Hay Sample

Roger Sahs, OSU Extension Specialist

Winter feeding costs are usually the most expensive component of annual costs in a cow-calf operation. Hay feeding is commonly used and provides a viable source of nutrients when pasture growth is typically slow or dormant during the winter months. When it comes to surviving the current drought, however, managing hay costs is especially important. One key to success is knowing the quality of hay being bought, sold or used and the cost of alternative feed sources. Hay should be sampled and nutritive value determined prior to its use in the cattle operation.

Estimating Hay Value Based on Chemical Analysis is decision tool that estimates the economic value of a hay sample based on its percent total digestible nutrients (TDN) and crude protein (CP) content (a link to free download instructions is in the Summary paragraph). The value of energy and protein in the hay sample is calculated based on TDN replacement cost

from an energy source such as corn and CP replacement cost from an alternative source such as cottonseed meal.

### Results

A chemical analysis for TDN and CP for base alfalfa hay and alternative prairie hay are entered in the example shown; thus, a low quality prairie hay sample is contrasted with higher quality alfalfa hay (Figure 1). An alternative energy concentrate source such as corn along with its market price, % DM (percent dry matter), CP % DM (percent crude protein on a dry matter basis) and TDN % DM (percent total digestible nutrients on a dry matter basis) are also entered. The same data inputs are specified for a crude protein concentrate source such as cottonseed meal.

The analysis value of the alfalfa hay (\$217.96) and sample prairie hay (\$133.08) is calculated by computing the pounds and value of both the replacement

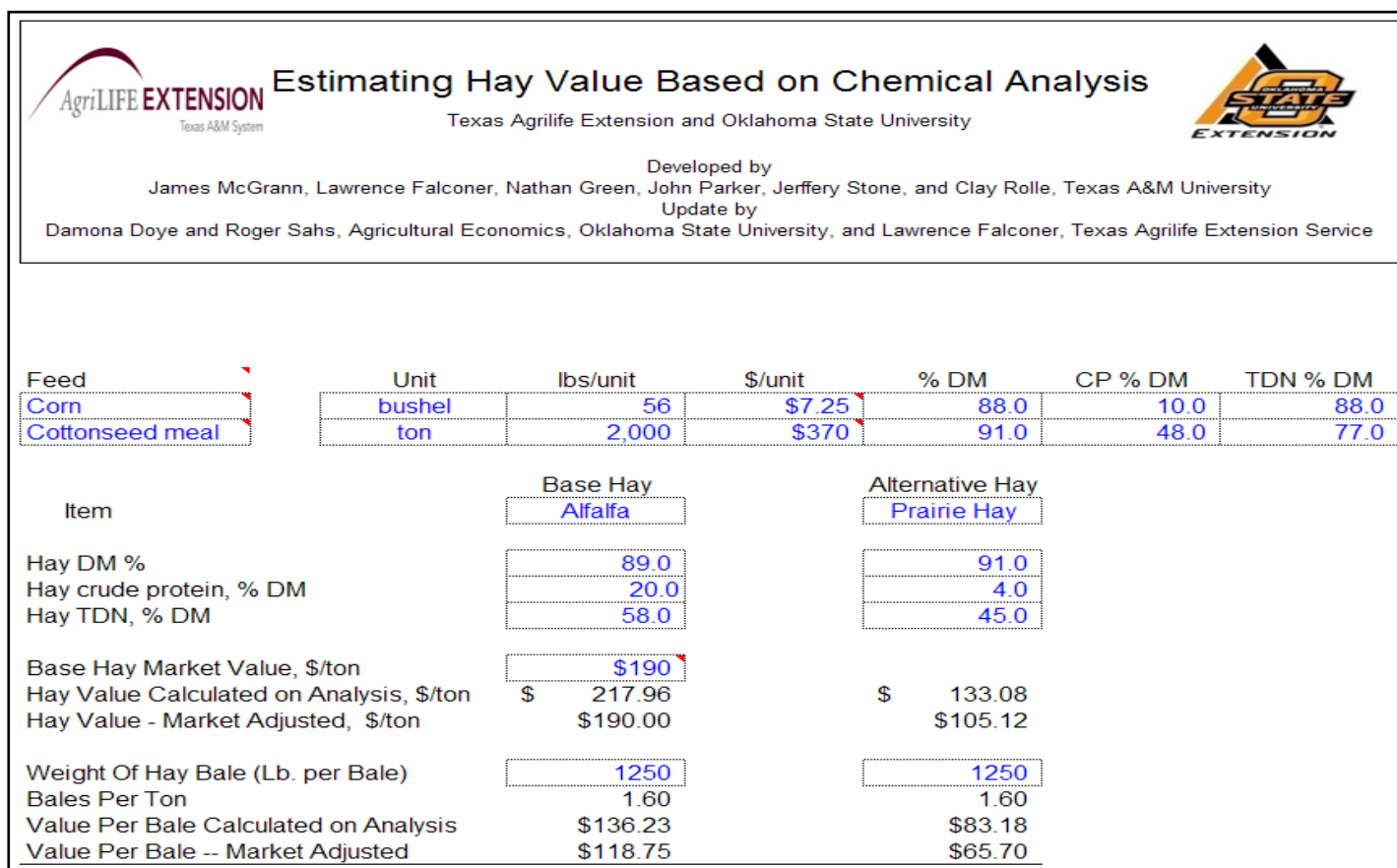


Figure 1.

**The Importance of Estimating the Economic Value of a Hay Sample (cont.)**

TDN source (corn) and the replacement source of crude protein (cottonseed meal) necessary to replace the pounds of TDN and CP in a ton of hay. It is important to note that the values do not account for differences in the efficiency of protein or energy utilization between hay of various qualities or between primary hay replacement sources of TDN or crude protein. However, the analysis does provide a more realistic comparison between the two alternatives given the adjustments based on the calculated values of crude protein and TDN. In addition, an estimated market price for prairie hay is provided (\$105.12 per ton) which illustrates its value in a comparative sense to the known alfalfa market price.

When the situation does arise where nutrient deficiencies exist and a critical nutrient such as protein should be supplemented, a lower priced harvested forage may not turn out to be much of a bargain nutrient-wise. The graph shown in Figure 2 illustrates that important point. In this example, low quality prairie hay translates into protein costs of \$1.31 per pound whereas alfalfa provides a more economical source of protein at \$.48. Cottonseed at \$370 per ton and 48% CP is even less expensive at \$.39 per pound. Of course, these costs ultimately depend on storage and feeding losses which can be significant.

*Summary*

One of the keys to managing hay costs is knowing forage quality and the relative cost of alternative feed sources. This is especially true when hay supplies are tight and expensive. Estimating Hay Value Based on Chemical Analysis, a free spreadsheet from the Agricultural Extension website <http://www.agecon.okstate.edu/extension/>, is a decision tool designed to provide a rapid method for determining the economic value of a feed sample based on its basic nutrient content. Nutritional feed value is determined by nutrient concentration and nutrient digestibility. Oklahoma State University’s Beef Cattle Manual (Table 12.1, page 115) contains average nutrient concentration values for numerous feeds that are common in Oklahoma. Values in the table represent averages from numerous sources, such as the National Research Council’s Nutrient Requirements

of Beef and Dairy Cattle publications, commercial laboratories, research trials, and other publications. Beef magazine also publishes a Feed Composition Guide that is updated annually.

Values published in any table are typical averages and variation among grains, oilseeds, byproducts, and in particular forages and roughages can be extreme. Furthermore, various processing methods may also alter the digestibility. For this reason, producers are advised that feeds and forage testing for nutrient composition by commercial laboratory is valuable.

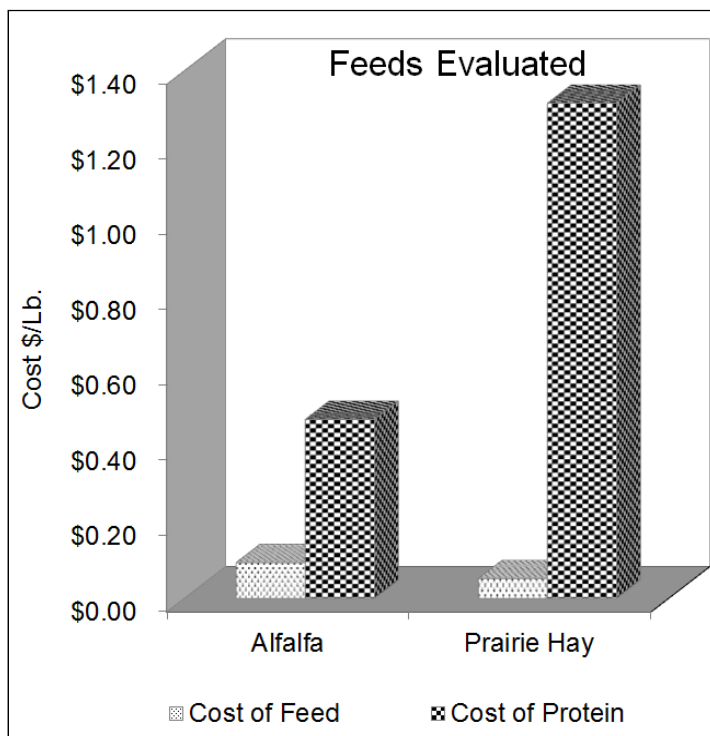


Figure 2.

## Livestock Leasing May Provide New Opportunities for Resource Sharing and Risk Management

Damona Doye, OSU Extension Farm Management Specialist

A new livestock leasing publication, “Beef Cow Rental Arrangements for Your Farm,” has been added to the beefextension.com website (see Cow/Calf, Calculators, Cow/Calf Lease Arrangements). A sample lease form is included in the publication. An accompanying spreadsheet to evaluate livestock share leasing arrangements is posted with the publication on beefextension.com as well. While livestock share leases have been far less common than crop share leases in Oklahoma, they may become more common in the future. Whether parties want to share risk or simply work together while taking advantage of complementary resources (cows and land) or management skills (forage and beef production), a well-designed lease agreement can contribute to clear communication from the beginning and prevent future headaches.

Leasing assets, rather than purchasing them, is a form of risk management as it typically requires less capital. The terms of the agreement depend on the contributions of the owner and operator, as well as the motivation for the lease. A lease agreement may be part of a plan to transfer livestock ownership to a second generation, the means for an older owner to com-

pensate a livestock operator, or simply an alternative form of accessing capital. A pasture owner may also use a livestock lease agreement to generate income without committing labor or additional capital. 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.

A key principal to remember when developing a cow herd lease is to **KEEP IT SIMPLE!** It is recommended that a beef cow lease only involve the beef cows and bulls. While the leasing of other items such as pasture, hay land, and machinery can be part of a cowherd lease, leasing them in a separate agreement provides better flexibility to deal with changing conditions over time. The time and effort spent developing a simple, straight forward, and equitable arrangement in the beginning will be rewarded with better relations between owner and operator and a more efficient beef-cow enterprise .

## Save the Dates! Master Cattleman Summit

The popular Master Cattleman Summit will be held on the OSU campus **October 10-11, 2013**. “Hands On” activities at the Animal Science Building and several of the Animal Science beef cattle research and teaching units will focus on dealing with extended drought, beef cattle genetics for higher input costs, improving efficiency of hay feeding, determining forage availability and stocking rates, al-

ternative enterprises and minimizing risk. As always, participants will enjoy industry leading speakers, great food and entertainment! Please mark your calendars now as Master Cattleman participants will have the first opportunity to register for this program before registration is offered to the general public.

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