



# Master Cattleman Quarterly

Oklahoma State University

## OK Steer Feedout Provides Helpful Beef Herd Information

*Greg Highfill, OSU Extension Agriculture Educator*

The goal of raising cattle is to produce tender, economical, high-quality beef cuts for today's consumers. Selection of breeding stock involves balancing production traits that are of economic importance to the ranch with those traits that beef buying consumers desire. Producers often select traits to emphasize that are not evaluated until long after the calf leaves the home ranch. Ranchers often ask questions such as: What percentage of my calves graded USDA Choice following the feeding phase? Did a large percentage of the calves have lean carcasses, Yield grades 1 & 2? What was their conversion of pounds of feed to pounds of weight gain in the feedyard? They are very interested in the progress they are achieving in their herd improvement selections.

Cattle producers who want to learn more about the post-weaning performance of their steers may want to consider feeding a set of their calves in the OK Steer Feedout. The OK Steer Feedout is an information feedback program that allows beef cow producers the opportunity to evaluate their calf crop for carcass merit and feedlot performance. Steer calves are assembled and fed in a commercial feedlot under the coordination of the OSU Extension Service. Working with the feedyard and beef packer, the gain performance and carcass data are collected and reported to each producer. Knowledge of the carcass value and gain potential of your cattle can be of great benefit to cattlemen whether they are selling the calves at weaning or marketing them in a carcass grid program.

Steers for the 2013-2014 OK Steer Feedout test should be delivered to Cattleman's Choice Feedyard west of Woodward, Oklahoma on November 17 or 18, 2013. One of key ingredients on having a successful test is to ensure that the health status of your steers is as good as possible. We strongly recommend the OQBN 45-day weaning and vaccination protocol be followed for all steers enrolled in the Feedout program. This would require a weaning date of October 5, 2013 to participate in this year's test. Ranchers are encouraged to send a representative set of steers to achieve a snap-shot of their genetic program with a minimum of 5 head required per entry. Steers remain the property of the consignor and the feed expenses are financed to the end of the feeding period and removed from the final payment. The 2013-2014 test is for steers born after November 1, 2012. There is a \$25 per ranch entry fee. For more details and an entry form go to <http://www.beefextension.com/new%20site%202/steerfeedout.htm>

Vol. 20 September 2013

In this issue:

Oklahoma Agricultural Land Values Continue Upwards Trend	2
2014 Crop/Forage Insurance Deadlines	3
Master Cattleman Summit Fall , October 11-12, 2013	4
Reproductive Tract Scoring	4
The Impacts of Genetics on Fed Cattle Profitability	6
OQBN Preparing for Fall Sales	7
Got Records?	8



## Oklahoma Agricultural Land Values Continue Upwards Trend

Roger Sahs, OSU Ag Economics Department

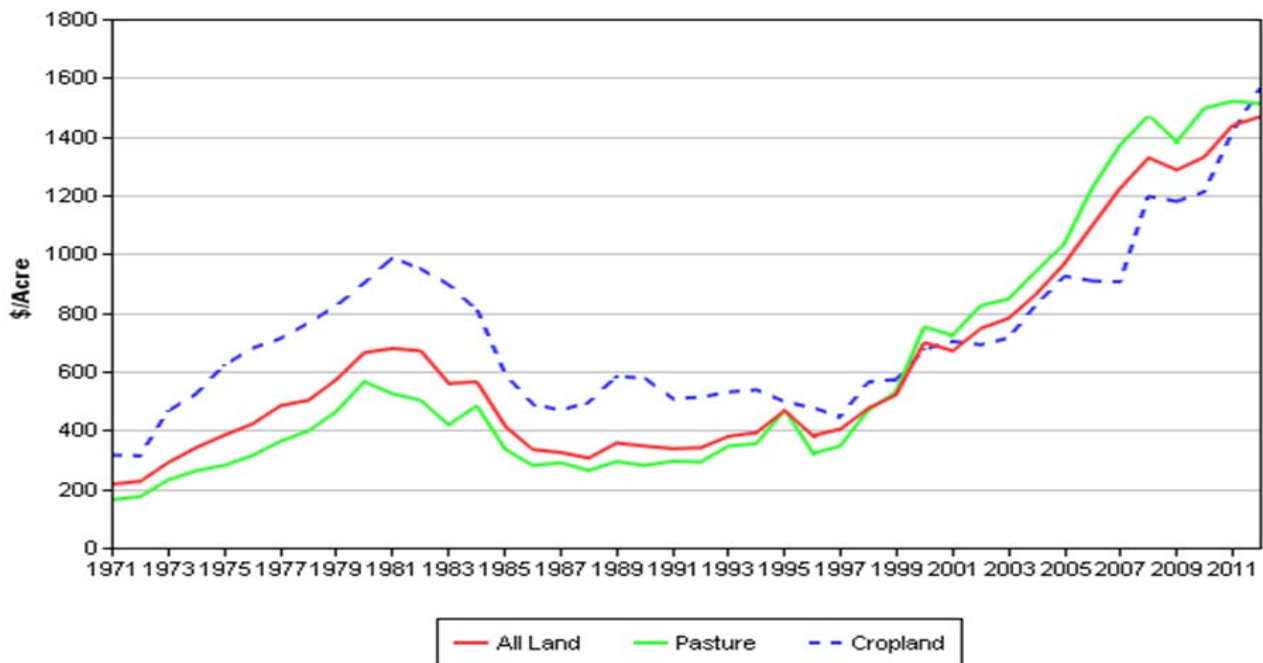
Along with rental rates for cropland and pasture, agricultural real estate values remain a hot topic in coffee shop conversations in rural Oklahoma. A perspective of Oklahoma land value trends and patterns can be found at: <http://agecon.okstate.edu/oklandvalues/> State wide statistics, regional comparisons, and county summaries are presented in chart and tabular form (see chart example below). Cropland and pasture tracts are defined as having 85%+ cropland and pasture utilization, respectively

Data is based on contributions from Farm Credit Services with information summarized on tracts larger than 40 acres valued up to \$3,000/acre through 2007 and up to \$6000 since 2008. Recent agricultural land markets have been characterized by buyers (both active farmers and non-farm investors) who are

financially strong, wish to expand their acreage base, and are looking for alternative investment options.

Average land values for agricultural real estate increased 2.1% in 2012, the latest year data was available for this study. Oklahoma experienced double-digit growth in cropland values as last year's drought conditions in the corn-belt boosted grain prices and further enhanced farm incomes. For the first time since 1999, statewide cropland values are higher than pasture. On the other hand, it appears that Oklahoma pasture values did not fare so well. Continued drought conditions damaged existing stands that didn't have a fair chance to recover from 2011. Although there were instances where demand for pasture was sharpened just to secure limited forage supplies, many buyers were discouraged by dry

**Oklahoma Agricultural Land Values**  
**Tracts >= 40 Acres Selling up to \$3,000/ac. through 2007 and \$6,000/ac. since 2008**  
**Annual Average**



stock ponds and pastures that may have burned up literally. Although there were western regions that experienced an increase in pastureland real estate, the statewide average was heavily influenced by the poor

performance within the northeastern and north-central regions of the state.

While it is reasonable to expect a level of anxiety over future anticipated earnings and asset apprecia-

## Oklahoma Agricultural Land Values Continue Upwards Trend (cont.)

tion, Oklahoma's agricultural land values should at least hold steady in the short-term given low interest rates and the fact that recent land markets have been characterized by buyers who have relatively strong balance sheets. In addition, crop insurance and oil/gas/wind lease money have provided additional liquidity in various areas of the state.

However, there may be a few headwinds on the long-term horizon. I will mention two of them here. First, farmers tend to produce themselves out of prosperity. As the old saying goes, "The cure for high prices is high prices". We have already witnessed the ramifications of expected large 2013 corn and soybean crop on the grain markets. Lower farmland returns due to a reduction in commodity prices could be a very real possibility for many grain producers.

The other risk is higher interest rates. Rising interest rates apply downwards pressure on farmland prices for two reasons. First, escalating interest rates make it harder to finance farmland purchases. When interest rates increase, loan repayment amounts increase which dampens the demand for farmland. Second, interest rates represent returns on alternative, fixed income investments to farmland. The current low interest rate environment has helped to support

farmland values by lowering the opportunity cost of capital as investors view farmland as a very appealing investment. This interest will begin to decline even with modest interest rate increases that move towards historical average levels. Fortunately, it appears that interest rates will still be relatively low moving forward into 2014.

In summary, Oklahoma has experienced steady growth in agricultural real estate over the past several years. While there are always concerns over farmland price declines, it is likely the current market will at least hold steady in the short run. This attraction will begin to decline even with a modest interest rate increase that moves towards historical average levels.

The Oklahoma Agricultural Land Value website reflects a composite of sales activity intended to provide a realistic assessment of general trends and patterns.

For more information:

Agricultural Land Values, National Agricultural Statistics Service, USDA. <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1446>

Survey of Tenth District Agricultural Credit Con-

---

## 2014 Crop/Forage Insurance Deadlines

*Jody Campiche, OSU Ag Economics Department*

Crop and forage insurance sign-up deadlines are quickly approaching. Here is a list of upcoming deadlines:

**August 31, 2013:** Crop insurance for canola.

**September 3, 2013:** Noninsured Crop Disaster Assistance Program (NAP) coverage for alfalfa, all small grain grazing acreages, small grain acreages that will be harvested as forage, small grain inter-seeded in perennial grasses, cool season perennial or mixed grasses intended for grazing, and crops that have had a loss in value such as nurseries.

**September 30, 2013:** Crop insurance for wheat, oats, barley, and rye.

**November 15, 2013:** Pasture, Rangeland, Forage Insurance (PRF) for losses of forage harvested for hay

or produced for grazing due to lack of rainfall.

**November 30, 2013:** Noninsured Crop Disaster Assistance Program (NAP) coverage for perennial crops, including pecans or native/improved grasses intended for hay.

**December 15, 2013:** Annual Forage Index (AF) for spring planted crops - new rainfall index program similar to PRF which covers perennial forage produced for grazing or harvested for hay. Coverage includes, but is not limited to: small grains (wheat, oats, barley, rye, triticale) intended for grazing or forage, corn for silage, sorghum forage for grazing or forage, annually planted grasses (sudan, ryegrass, etc.) for grazing or forage, and annually planted mixed forages for grazing or forage.

## Master Cattleman Summit Fall , October 11-12, 2013

*Dave Lalman and Megan Rolf, OSU Animal Science Department*

Please join us on the Oklahoma State University Campus for the Master Cattleman Summit October 11 and 12, 2013. This year's Summit is focused on enhancing ranch profitability and sustainability through improved forage utilization, grazing distribution, fencing, water systems, and brush control. We are very excited to feature Mark Green from Southwest Missouri as a keynote speaker. Mr. Green is a well-known expert on management intensive grazing systems, electric fencing and livestock water systems. Mark's hands-on workshop will include both classroom sessions and field demonstrations. Dr. Matt Spangler from the University of Nebraska will also participate in the two-day hands on workshop. Dr. Spangler is a leading beef cattle ge-

netics expert working in cattle selection for improved forage utilization efficiency. Our Animal Science Graduate Student Association has become well known around Stillwater for their roasted prime rib dinners. We look forward to enjoying a meal prepared by them on Friday evening, followed by a musical performance by another of our graduate students, Mr. Scott Shelby, who just happens to be a phenomenal country singer and songwriter!

Registration will be \$30 before October 1 and \$40 thereafter. We hope you will join us for the Master Cattleman Summit on October 11 and 12! For more information contact, Amy Lavicky at 405-744-6060 or see [agecon.okstate.edu/cattleman](http://agecon.okstate.edu/cattleman).

## Reproductive Tract Scoring

*Dan Stein, OSU Animal Science Department*

Reproductive Tract Scoring (RTS) is a subjective measurement which involves the rectal palpation of the heifer reproductive tract (uterine horns and ovarian structures) and the subsequent assignment of a reproductive tract score, ranging from 1 to 5 (1 = immature; 5 = presence of a corpus luteum), to assist the producer in making replacement heifer decisions. Since age at puberty is difficult to measure directly, RTS can estimate pubertal status, and if performed before the onset of the breeding season, can be a predictor of heifer reproductive performance allowing for heifers with a poor breeding potential to be removed from the breeding group before any further costs are incurred. The RTS system has been shown to a repeatable measure between and within practitioners and to be moderately heritable (.32 + 0.17).

A RTS of 1 is refers to a prepubertal heifer, a RTS of 2 or 3 is refers to a peripubertal heifer (transitional stage), and a RTS of 4 or 5 is refers to a pubertal (cycling) heifer. The reproductive performance of heifers with an RTS of 1 or 2 is less than that of heifers with an RTS of 3 or greater. Heifers with a RTS of 1 or 2 are less likely to be cycling at the beginning of the breeding season and therefore are less likely to become pregnant or if they do become pregnant, do so later in the breeding season (see Tables 2 and 3) suggesting that heifers with a RTS of 1 should possibly be eliminated from the breeding group. It is worth men-

tioning, that some heifers do not exactly fit a particular RTS score and it is up to the producer and/or practitioner to decide on which of the measures are to be given the most emphasis.

RTS should be done about 1 month or less prior to breeding if the score is to be used as a culling tool as an indicator of a heifer's ability to conceive early during the first breeding season. If RTS is to be used as a selection tool to place pressure on age at puberty, the best time to evaluate the heifers is when approximately 50% of the heifers are thought to be cycling based on age, weight, and occasional observations for estrus.

Another possible application of the RTS system is to assess the nutritional program being utilized by the producer. If RTS is taken within a sufficient time before the start of the breeding season (approximately 30 to 60 days); based on the results of the tract scores, the producer can adjust the ration to help the heifers reach developmental goals prior to the beginning of the breeding season *or* the beginning of the breeding season can be adjusted.

The uterine and ovarian dimensions for each of the reproductive tract scores are described in Table 1. The reproductive tract score is based on the degree of uterine horn development and ovarian status (size of dominant follicle and presence or absence of a CL).

Reproductive Tract Scoring (cont.)

Reproductive Tract Score	Uterine Horns (diameter, mm)	Ovarian Length (mm)	Ovarian Height (mm)	Ovarian Width (mm)	Ovarian Structures
1	Immature, < 20 mm, no tone	15	10	8	No palpable Follicles
2	20-25 mm, no tone	18	12	10	8 mm Follicles
3	20-25 mm, slight tone	22	15	10	8-10 mm Follicles
4	30 mm, good tone	30	16	12	> 10 mm Follicles, CL possible
5	> 30 mm	>32	20	15	CL present

Reproductive Tract Score	Exposed	Pregnant	Open	Pregnancy Rate (%)
1	75	46	29	61.3
2	1055	854	201	81
3	4504	3911	593	59.8
4	4912	4322	590	87.9
5	3675	3261	414	88.7
Totals	14221	12394	1827	87.2

Reproductive Tract Score	Exposed	1 <sup>st</sup> 21 days		2 <sup>nd</sup> 21 days		3 <sup>rd</sup> + 21 days	
		Hd.	%	Hd.	%	Hd.	%
1	75	26	35	13	27	7	17
2	1055	505	48	185	34	164	45
3	4504	2443	54	842	41	626	51
4	4912	2875	59	855	42	592	50
5	3675	2269	62	586	42	406	50
Totals	14221	8118	57	2481	41	1795	50



### The Impacts of Genetics on Fed Cattle Profitability

*Nathanael M. Thompson, Eric A. DeVuyst, B. Wade Brorsen, and Jayson L. Lusk, OSU Ag Economics Department*

Cattle producers know that genetics influence performance, yield, quality, and profitability of fed cattle. The rapidly expanding science of genomics is improving our understanding of which genetic markers affect these traits and the extent that they influence them. Igenity (Neogen Corp.) is a leader in providing commercial genetic testing services to beef producers. Igenity has genetic tests for critical determinants of fed cattle profitability including average daily gain, hot carcass weight, yield grade, rib-eye area, marbling, and days-on-feed. While currently not considered in most individual producers’ economic returns, Igenity’s products also include a test for tenderness genetic potential.

Igenity’s test results are reported as marker panel scores for each of these traits. Scores are reported on both indices ranging from one to ten and in terms of molecular breeding values (MBVs). MBVs are a measure of an animal’s genetic potential for a given trait with a higher MBV indicating the potential for a larger genetic effect on a trait.

We recently conducted a study to measure how MBVs as measured by Igenity’s marker panels impact fed cattle profitability. Data from over 10,000 fed steers and heifers were made available from Igenity for this study. Data were collected from several commercial feedlots. Data included phenotypic information at placement, MBVs for the traits listed above, and carcass data. These cattle were of high quality with 53% grading Choice or Prime and 95% were Yield Grade 3 or less.

Using statistical modeling, we measure the impact of selecting and managing (i.e., varying days-on-feed) feeder cattle based on MBVs. Cattle were divided into four genetic potential groups, or quartiles, from the lowest to the highest. Economic returns were then computed for each of the four groups. None of the MBVs had economically significant impacts on days-on-feed. However, selecting feeder cattle based on MBVs has economic merit. In table 1, we report the differences in fed cattle profit between the highest genetic potential cattle and the three lower quartiles of cattle based on MBVs.

The largest gains for feedlots are found by selecting

based on marbling and average daily gain potential. Cattle in the highest scoring marbling MBV quartile earn over \$46 per head over the lowest marbling potential cattle. Cattle in the highest average daily gain MBV quartile earn over \$43 per head over the lowest average daily gain potential cattle.

Not all the MBVs of desirable traits are associated with higher economic returns. The highest genetic potential cattle for yield grade, rib-eye area, and days-on-feed have the lowest returns on average. This is due to a negative correlation between observed marbling and the MBVs for yield grade, rib-eye area, and days-on-feed.

Most feeder cattle are currently sold based on visually available or easily measured information, such as hide color, frame score, flesh cover, weight, and ear. With significant differences in returns explainable by genetic tests, we can expect markets to evolve to take advantage of MBVs to help price feeder cattle. At \$38/head, testing costs are currently too high and take too long to justify testing every prospective feeder calf. Alternatively, lots could perhaps be randomly sampled to estimate genetic potential. Or, producers could provide third-party verified genetic information on breeding animals to buyers. Just as with third-party verification of vaccinations, provision of genetic information may someday provide another value-added marketing opportunity for cow-calf producers in Oklahoma.

Trait	Quartile 1 vs Quartile 4	Quartile 2 vs Quartile 4	Quartile 3 vs Quartile 4
Average daily gain (lbs)	43.19	28.12	16.74
Hot carcass weight (lbs)	35.35	23.10	14.83
Yield grade	-23.42	-12.63	-8.27
Rib-eye area	-36.49	-28.66	-20.03
Marbling	46.36	26.48	10.84
Tenderness	9.93	10.77	6.51
Days-on-feed	-7.53	-4.72	-4.69

### OQBN Preparing for Fall Sales

*Gant Mourer, OSU Animal Science,*

With the start of school and football season, many cattle producers are gearing up to wean spring born calves. Last year many producers weaned early due to drought, but what a difference a year makes. With ample amounts of moisture in eastern Oklahoma and timely rains in western Oklahoma, cattle producers have been able to keep calves on the cow longer. Also, with access to hay and pasture as well as feed prices somewhat lower, producers who were not able to precondition calves prior to sale are finding it easier and cost effective to do it this year.

The Oklahoma Quality Beef Network (OQBN) is available to aid producers in making preconditioning decisions and capturing value of preconditioned calves when it comes time to market. The Oklahoma Quality Beef Network (OQBN) is a program, which began in 2001, and is a joint effort by Oklahoma Cooperative Extension Service (OCES) and the Oklahoma Cattlemen’s Association. At its core, OQBN provides improved communication among producers of all segments of the beef industry and allows for increased education while providing tools to improve access to value-added programs. One way in which this is done is through the OQBN Vac-45 health verification program. Cattle meeting the management requirements are verified through OCES and can be marketed as OQBN Vac-45 cattle. Once verified, producers have the option but are not obligated to market cattle in a certified OQBN sale.

The program benefits both buyers and sellers in several ways, including reduced shrink, improved immune system, added weight gain during the weaning period, increased market demands and improved feedlot performance. In addition to healthier, heavier calves when sold, sellers may earn higher prices per cwt. Research has found buyers paid \$3-6/cwt more for preconditioned calves in recognition of buying healthier, higher-performing calves for a stocker or feedlot program. In 2012, OQBN participants realized over \$9/cwt premium over cattle that had no weaning or health history. Large feedlots have also confirmed the effectiveness of preconditioning prior to entry. The USDA reports that more than 80% of yards find introduction to bunks, prior vaccinations, weaning at least 4 weeks and castration are extremely or very ef-

fective for reducing sickness and death in the feedlot (USDA-APHIS-VS, 2013).

The following is a list of several OQBN sales scheduled this fall across the state. For a producer to take advantage of these value-added opportunities, the cattle must be enrolled in the OQBN Vac-45 program, follow one of three health protocols, wean calves by the deadline, and have calves third party verified by Extension personnel.

For additional information or questions about the Oklahoma Quality Beef Network, contact your local OSU Extension Office or Gant Mourer, OQBN Coordinator at 405-744-6060 or at [gantm@okstate.edu](mailto:gantm@okstate.edu). Additional information may also be found at [www.oqbn.okstate.edu](http://www.oqbn.okstate.edu)

Location	Sale Date	Wean Date
Cherokee Livestock	Oct. 30, 2013	Sept. 15, 2013
Elk City Livestock	Nov. 1, 2013	Sept. 17, 2013
Jordan Livestock, Caddo	Nov. 5, 2013	Sept. 21, 2013
OKC West	Nov. 6, 2013	Sept. 22, 2013
McAlester Stockyards	Nov. 19, 2013	Oct. 5, 2013
Blackwell Livestock	Nov. 23, 2013	Oct. 9, 2013
Tulsa Stockyards	Dec. 2, 2013	Oct. 18, 2013
OKC West	Dec. 4, 2013	Oct. 20, 2013
Durant Livestock	Dec. 5, 2013	Oct. 21, 2013
Pawnee Livestock	Dec. 7, 2013	Oct. 23, 2013

### Got Records?

Records are an important component of the farm/ranch management information system that supports informed decision-making. With a good record-keeping system, you understand your business and family cash flow plus know your financial position. This knowledge prepares you to capitalize on opportunities and communicate with business partners, lenders, tax preparers and family. And you have documentation that may be needed in event of a disaster. Both financial and production records are important. Financial records obviously assist in filing taxes, but more importantly they can help assess profit and loss centers within the business. By understanding what hay or wheat pasture costs to produce you can choose whether to raise or pur-

chase it. Inexpensive commercially available software such as Quicken or QuickBooks can be easily adapted for farm use. AGEC-266, “Quicken or QuickBooks: What’s the Best Choice for Agricultural Producers?” is in the online OSU Facts library at facts.okstate.edu compares and contrasts the features of these two packages. Also in OSU Facts, CR-3279 lists features of commercial cow-calf production records software. If you aren’t satisfied with your current recordkeeping system, now is the time to do some research and choose a tool that you can begin to use this fall. You’ll then be ready to implement your new system fully for the next calendar year and it can support business risk management.

Damona Doye  
515 Ag Hall  
damona.doye@okstate.edu

David Lalman  
201 Animal Science  
david.lalman@okstate.edu



**Risk Management Agency**

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, religion, sex, age, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.