



# Master Cattleman Quarterly

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## The Herd Rebuilding Challenge

*Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist*

There is little doubt that the biggest issue in the cattle industry right now is the question of when herd rebuilding will begin. The challenge of herd rebuilding can be summed up with the following three questions.

### What do we need to do?

Drought-forced herd liquidation due to roving drought from 2020-2022 has pushed the beef herd smaller than intended and smaller than it needs to be. The January 1 beef cow herd at 28.9 million head, is the smallest since 1962. The beef cow herd has continued to decrease in 2023 and will be smaller yet going into 2024.

Domestic and international demand for U.S. beef supports and encourages a significantly larger herd going forward. This will require increased heifer retention and reduced cow culling that will further squeeze cattle slaughter and beef production for at least 2-3 years. After record beef production in 2022, due to drought liquidation, beef production is falling in 2023 and expected to fall sharply for at least two more years. By 2025, beef production is forecast to be down 15-16 percent from the 2022 level. This will be the lowest since 2015 and possibly the lowest since 1993. Herd rebuilding will be needed and encouraged by the market.

### What can we do?

Persistent drought is making it difficult to stop herd liquidation, never mind stabilizing and then rebuilding the herd. As of late November, 36 percent of the U.S. is in some stage of drought with 20 percent in D2 (Severe) to D4 (Exceptional) drought. This includes regions where significant numbers of beef cows are located. While herd liquidation is likely still happening in some regions, from a national perspective, herd liquidation has slowed or stopped. Beef cow slaughter is down year over year in 2023 but is not down enough to suggest that the cow herd has fully stabilized.

Moreover, the continued liquidation of cows and heifers in recent years means that the industry has little ability to begin any herd expansion soon. The latest monthly slaughter data shows that total female (cow+heifer) slaughter has averaged 51.7 percent of total cattle slaughter in the last year, the highest average rate since 1986. It will take several months of reduced female slaughter before any herd expansion will be possible. In the most recent herd expansion, the percentage of female slaughter in total cattle slaughter dropped to a low of 43.3 percent in 2016, two years into the last cyclical expansion. The situation now suggests that, once it starts, it will likely take a year or so before the cow herd inventory will stabilize and any expansion can begin.

### What do we want to do?

Finally, is the question of producer expectations and whether producers are even trying to begin rebuilding. While some can't rebuild due to continued drought or drought recovery, other producers have compelling financial needs to pay down debt or restore equity drained by drought and high input costs before retaining any heifers. Certainly, some producers are beginning to retain heifers but, on balance, it looks like minimal herd rebuilding is starting in 2023. Some older producers are looking at the current market as a means to exit cattle production, or at least, cow-calf production. Sharply higher interest rates and the cost of financing herd rebuilding is also a deterrent for some producers and lenders, especially when combined with some skepticism about how long the current market will last.

All in all, it's beginning to look like 2024 will be, at best, a year of stabilizing the beef cow inventory. Neither Mother Nature nor producers seem to be in much of a hurry to get started with the next herd expansion. When it does start, herd rebuilding is likely to be a lengthy process with strong prices supporting the recovery of the industry.



If you don't think fear can control you, then you've never been chased by a mad mama cow.

### Replacement Heifer Purchase Stress Test

*Eric A. DeVuyst, Professor and Rainbolt Chair, Hannah Shear, Assistant Professor, Derrell Peel, Professor and Breedlove Professor, Agricultural Economics Department*

Recent prolonged drought in the western United States has led to more culled cows and fewer replacement heifers. The inventory of US beef cows was 3.6% lower in January 2023 than the previous year and the lowest since 2014. Similarly, beef replacement heifer numbers were down 5.6% in January 2023 and the lowest in over a decade (LMIC 2023). As a result, the 2023 calf crop is going to be well off from previous years and calf prices will reflect the reduced supply.

When rain comes and pasture and forage conditions improve, cow-calf producers will rebuild herds. Recovery will be expensive, either due to reducing sales to retain heifers or purchasing replacement heifers. A lower supply of heifers (and calves in general) will mean calf prices will be much higher than long-term average prices. In the Fall 2014, the last time the industry was rebuilding from drought, heifer calf prices ranged from \$230 per cwt to almost \$250 per cwt for six weight heifers. There were numerous lots of light weight heifers selling for over \$300 per cwt (LMIC 2023).

Cow-calf producers looking to rebuild cow inventories need to be aware of the potential hit to their financial positions from leveraged replacement heifer purchases. Six hundred pound heifers purchased in Fall 2023 will not generate calf revenue until Fall 2025. So, debt service, feed expense, and other cash expenses will require other sources of cash flow. This adds strain to the ranch business which likely is already stressed from reduced calf production and higher per head feed costs.

Financed purchases can lead to poor financial health as measured by standard liquidity and equity measures. For example, borrowed funds to purchase replacement heifers increases nearby principal and interest payments, so the business' current ratio and working capital are reduced. Debt-to-asset, debt-to-equity, and other measures of equity position are increased due to an increase amount of debt relative to the business' asset base.

To help evaluate the financial stress associated with leverage replacement purchases, we developed a spreadsheet tool. The "Heifer Purchase Financial Stress Analysis Tool" allows producers and lenders to enter infor-

mation related to anticipated replacement heifer purchases, future production expenses, and future calf and cull cow revenues to forecast to impact on cash flow, liquidity, and equity position.

In Figure 1, a screen capture of the tool is shown. The tool is programmed in MS Excel using macros for calculations and formatting. There are four blocks of information in the tool. In the top section, the user enters anticipated purchase, financing information, mature cow weight, and percent of heifer crop retained annually. This information is used to calculate annual principal and interest obligations and future calf revenues.

The second block requires the user to enter information about anticipated production cost (\$/head), culling percentages, cull cow prices (\$/head), and calf weaning weights (lbs. per head) and sale prices (\$/cwt). A weaning weight model taken from Bir et al. (2018) are automatically computed based on mature cow weight, cow age, and calf sex. To use the calculated weaning weights, click on any cell in the light green column under "Steer weaning weight lbs" and/or "Heifer weaning weight lbs" to transfer the calculated weights for steers and heifers, respectively. Enter feed cost and other costs in dollars per head. Steer and heifer sale prices are entered in dollars per cwt. In the column "% calf crop," enter the calf weaning percentage of cows exposed. Next, enter the percent of cows of each age culled. Finally, enter cull cow price in dollars per head.

The last three columns in the third second block report anticipated operating cash flow, principal interest payments, and cash surplus (or deficit) in dollars per head.

In the third block, users enter balance sheet information before heifers are purchased and financing obtained. Assets are on the left side and liabilities on the right side. The program computes the implied Owners' Equity.

The last block reports three financial ratios, current ratio ( $=\text{current assets} \div \text{current liabilities}$ ), debt-to-asset ratio ( $=\text{liabilities} \div \text{assets}$ ), and debt-to-equity ratio ( $\text{liabilities} \div \text{owners' equity}$ ) both pre- and post-

## Replacement Heifer Purchase Stress Test (cont.)

purchase. The macros then format these ratios using green, yellow, and red backgrounds. A green background indicates the ratio is in a healthy range; a yellow background indicates the ratio is in a warning range; and a red background indicates the ratio is a financially unhealthy range. Producers with ratios in yellow and red backgrounds should discuss the implications of a leveraged heifer purchase with their banker before proceeding.

### References

Bir, Courtney A., E. A. DeVuyst, M. Rolf, and D. Lalman, 2018. "Optimal Beef Cow Weights in the U.S. Southern Plains," *Journal of Agricultural and Resource Economics*, 43: 103-117.

Livestock Marketing Information Center. Member reports. <https://LMIC.info>. Accessed 07-April-2023.

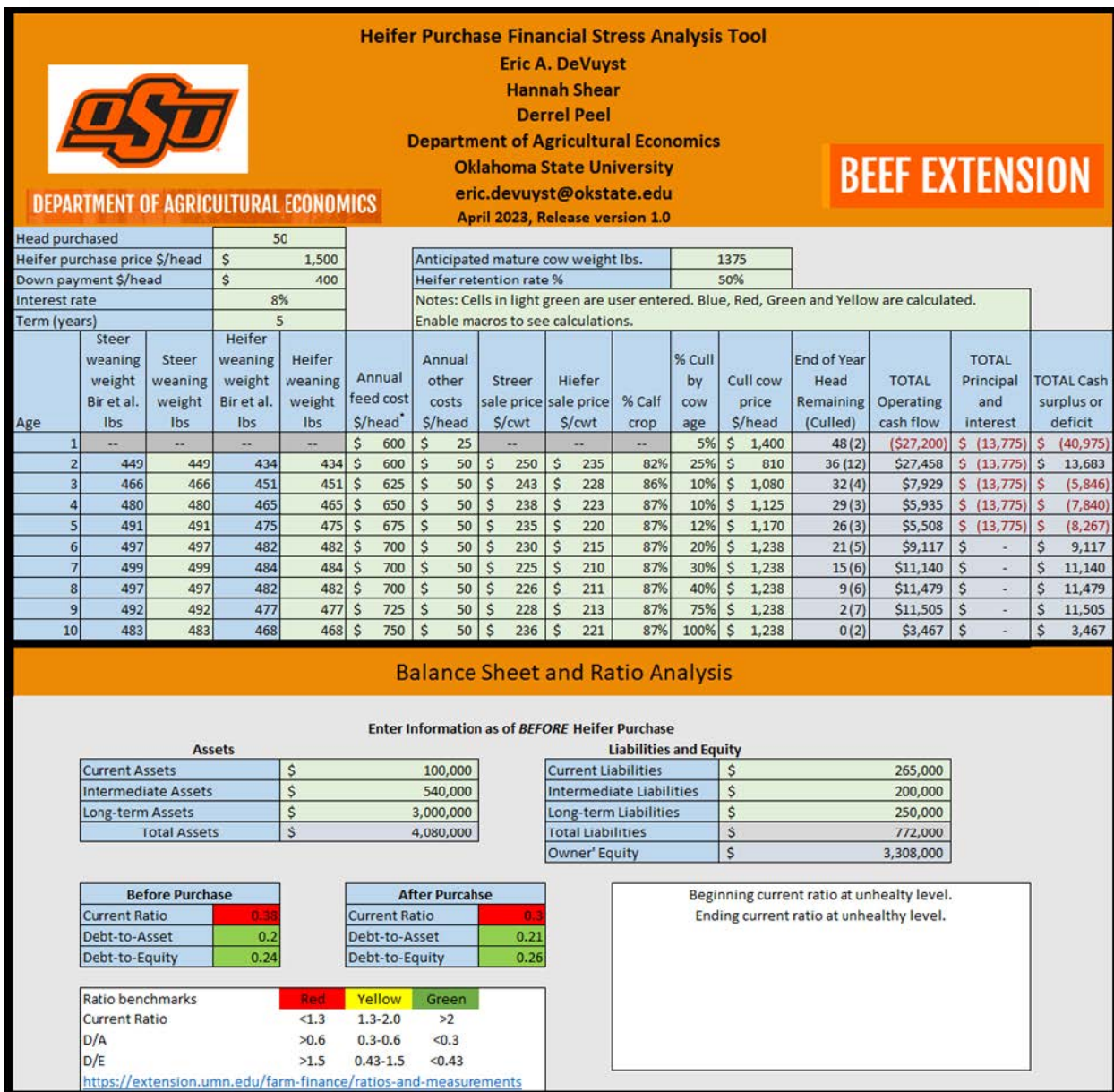


Figure 1. Screen capture of Heifer Purchase Financial Stress Analysis Tool



## Heifer Purchase Financial Stress Analysis Tool

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August 2023, Release version 1.0



**DEPARTMENT OF AGRICULTURAL ECONOMICS**

**BEEF EXTENSION**

Head purchased		100		Anticipated mature cow weight lbs.		1375	
Heifer purchase price \$/head		\$ 1,800		Heifer retention rate %		50%	
Down payment \$/head		\$ 400		Notes: Cells in light green are user entered. Blue, Red, Green and Yellow are calculated. Enable macros to see calculations.			
Interest rate		9%					
Term (years)		5					

Age	Steer weaning weight Bir et al. lbs	Steer weaning weight lbs	Heifer weaning weight Bir et al. lbs	Heifer weaning weight lbs	Annual feed cost \$/head*	Annual other costs \$/head	Streeer sale price \$/cwt	Hieifer sale price \$/cwt	% Calf crop	% Cull by cow age	Cull cow price \$/head	End of Year Head Remaining (Culled)	TOTAL Operating cash flow	TOTAL Principal and interest	TOTAL Cash surplus or deficit
1	--	--	--	--	\$ 600	\$ 25	--	--	--	5%	\$ 1,400	95 (5)	(\$52,375)	\$ (35,993)	\$ (88,368)
2	449	449	434	434	\$ 600	\$ 50	\$ 250	\$ 235	82%	25%	\$ 810	71 (24)	\$54,708	\$ (35,993)	\$ 18,715
3	466	466	451	451	\$ 625	\$ 50	\$ 243	\$ 228	86%	10%	\$ 1,080	64 (7)	\$14,078	\$ (35,993)	\$ (21,915)
4	480	480	465	465	\$ 650	\$ 50	\$ 238	\$ 223	87%	10%	\$ 1,125	58 (6)	\$11,871	\$ (35,993)	\$ (24,122)
5	491	491	475	475	\$ 675	\$ 50	\$ 235	\$ 220	87%	12%	\$ 1,170	51 (7)	\$12,910	\$ (35,993)	\$ (23,083)
6	497	497	482	482	\$ 700	\$ 50	\$ 230	\$ 215	87%	20%	\$ 1,238	41 (10)	\$18,266	\$ -	\$ 18,266
7	499	499	484	484	\$ 700	\$ 50	\$ 225	\$ 210	87%	30%	\$ 1,238	29 (12)	\$22,317	\$ -	\$ 22,317
8	497	497	482	482	\$ 700	\$ 50	\$ 226	\$ 211	87%	40%	\$ 1,238	17 (12)	\$22,988	\$ -	\$ 22,988
9	492	492	477	477	\$ 725	\$ 50	\$ 228	\$ 213	87%	75%	\$ 1,238	4 (13)	\$21,283	\$ -	\$ 21,283
10	483	483	468	468	\$ 750	\$ 50	\$ 236	\$ 221	86%	100%	\$ 1,238	0 (4)	\$6,911	\$ -	\$ 6,911

### Balance Sheet and Ratio Analysis

Enter Information as of *BEFORE* Heifer Purchase

Assets	
Current Assets	\$ 1,325,000
Intermediate Assets	\$ 1,800,000
Long-term Assets	\$ 15,125,000
<b>Total Assets</b>	<b>\$ 4,080,000</b>

Liabilities and Equity	
Current Liabilities	\$ 1,325,000
Intermediate Liabilities	\$ 2,400,000
Long-term Liabilities	\$ 10,587,500
<b>Total Liabilities</b>	<b>\$ 772,000</b>
Owner' Equity	\$ 3,308,000

Before Purchase	
Current Ratio	1
Debt-to-Asset	0.78
Debt-to-Equity	3.63

After Purcahse	
Current Ratio	0.97
Debt-to-Asset	0.79
Debt-to-Equity	3.67

Ratio benchmarks	Red	Yellow	Green
Current Ratio	<1.3	1.3-2.0	>2
D/A	>0.6	0.3-0.6	<0.3
D/E	>1.5	0.43-1.5	<0.43

<https://extension.umn.edu/farm-finance/ratios-and-measurements>

Beginning current ratio at warning level.  
Ending current ratio at warning level.  
Beginning Debt-to-Asset at warning level.  
Ending Debt-to-Asset at warning level.  
Beginning Debt-to-Equity at warning level.  
Ending Debt-to-Equity at warning level.

## Warming Chilled Calves

Brian Freking, Southeast Area Livestock Specialist

Winter/early spring is always difficult to predict weather events such as winter storms that might jolt newborn calves into hypothermia. Even though many calves can recover on their own from mild hypothermia, once their body temperature drops below 95 degrees they will benefit from some assistance in re-warming.

Warm water baths are considered the best method to rapidly re-warm calves but aren't always practical on the farm. Calves need to be monitored constantly to keep them from drowning and then need to be dried thoroughly prior to putting them back outside with their mother. Forced air hot boxes are an alternative to water baths but still need some monitoring. Expect calves to take twice as long to regain normal body temp in a hot box compared to a water bath.

However, that difference in time is generally less than an hour, and the calf should be dry and ready to go back to their mother. Whether using a water bath, hot box or some other method be careful not to overheat the calf. Temperature conditions around the calf should not exceed 105 degrees and calves should be monitored often to determine when they achieve normal temperature. If they are left in a hot 105-degree environment for an extended period of time, they can become overheated. Be careful using forced air shop type heaters as the temperature can be excessive and needs to be closely monitored.

Once calves have been re-warmed, make sure they have received adequate colostrum and do not have any other problems before putting them back outside. If the calf is

too cold to nurse a bottle, give it colostrum by tube. A cold calf only has about two hours' worth of stored energy in brown fat and what was left in the stomach from amniotic fluid. When those stores are used up, it can't stay warm enough in cold weather. Colostrum is the best thing to feed them because it is easy to digest and contains twice the fat energy of regular milk.

If the calf was merely chilled, gets his body temperature back to normal within an hour or so, and has a belly full of colostrum, it can probably go back out with mom. If it suffers from frostbitten ears, tail, or feet,

however, it needs to stay indoors (perhaps with mom in a stall in the barn, with good bedding) until the frostbitten tissues are no longer swollen and painful. Otherwise, they are more vulnerable to freezing again.

My experience with warming a calf was on a set of twins and usually one gets proper mothering care while the other might need some

intervention so remember a cow relies heavily on smell so it may take some extra care for chilled calves or twins in bonding again.

Check calves regularly and be aggressive in keeping calves warm and hydrated this season.

More information on caring for your herd in winter weather can be found at <https://store.extension.iastate.edu/product/16101>.

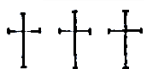
### Reference

Dewell, G.A., E.I. Lundy and Denise L. Schwab. "Caring for Cow Herds During Cold Weather." IBC 143, Iowa Beef Center. February 2021.



### Facts about the history of the cattle industry in North America

- Christopher Columbus brought cattle to Hispaniola on his second voyage in 1493.
- The three crosses brand was the first cattle brand in the Americas and was used by Hernan Cortès.



- Texas Longhorns developed in the 17<sup>th</sup> and 18<sup>th</sup> centuries as wild cattle from the original Spanish cattle escaped or turned loose from early Spanish missions in present-day Texas.
- Cattle were brought to mainland North America by Hernan Cortès in 1521. Ponce De León also brought cattle to present-day Florida on his expedition in the same year.

## Calving Season Management

Barry Whitworth, DVM, Sr Extension Specialist, Animal Science Department

The National Animal Health Monitoring System, Beef Cow-calf Study 2017 (NAHMS2017), found in calves less than three weeks of age, the most common cause of death was calving/birthing problems (24.7%). According to Scott Clawson, Northeast District Area Ag Economist, calves raised is a very important source of income for beef cattle operations. With this in mind, cattle producers need to do everything they can to ensure that newborn calves have the best opportunity to survive. Management of the cow-calf herd to reduce death rates in calves should result in more pounds to sell at weaning. Studies have shown that lack of managing cattle during the calving season increases deaths around the time of birthing. Developing a protocol to deal with heifers and cows during the calving season should be a high priority on beef cow-calf operations.

A calving protocol should be developed with the help of the producer's veterinarian. The protocol should be easy to read and understand. The step-by-step plan will provide details on how to deal with a difficult birth. Producers should consult with their veterinarian about signs to look for that indicate trouble with the birthing process. They should specifically ask their veterinarian when he/she needs to be contacted to assist with the difficult calving. Other helpful sources to use to develop a management strategy are County Extension Agriculture Educators as well as fellow cattlemen. All of these individuals have a wealth of knowledge that can be utilized to write a protocol for the calving season.

The key to any successful calving season is locating animals early with calving difficulty. This requires frequent observation of heifers and cows. Unfortunately, many cattle operations only observe their cattle once or twice per day according to the NAHMS2017. According to Dr. Dawson, a Theriogenologist with the College of Veterinary Medicine at Oklahoma State University, pregnant heifers and cows should be monitored at least three times per day during the calving season. By observing cattle frequently during the calving season, producers should be more aware of heifers and cows in distress.

Birthing occurs in three stages. Stage one is the dilation of the cervix. Stage two is the delivery of the calf.

Stage three is the expulsion of the placenta. Stage two is where all the action is. This stage begins with the presentation of the water bag and ends when the calf is extruded from the birth canal. According to Oklahoma State University fact sheet [E-1006 Calving Time Management for Cows and Heifers](#) written by Dr. Glen Selk, stage two should take about 1 hour for heifers and 30 minutes for cows. When stage two labor lasts longer than two hours, calf mortality increases significantly. Many cattle operations allow heifers and cows to labor for two hours or more before intervening according to the NAHMS2017.

A heifer or cow found not progressing in stage two labor needs assistance. Producers must decide if they are capable of handling the situation or not. If not, a veterinarian should be contacted. Any delays at this time could result in the loss of the calf and/or health issues with the heifer or cow.

Every calf born is a potential source of income for the ranching operation. For this reason, producers should develop a management strategy for the calving season. For additional information on calving management, producers should contact their local veterinarian and/or Oklahoma State University County Agriculture Educator. Another source of information is E-1006 *Calving Time Management for Cows and Heifers* written by Dr. Glen Selk. This fact sheet is available at County Extension Offices or at <https://extension.okstate.edu/fact-sheets/calving-time-management-for-beef-cows-and-heifers.html>.

### References

- Norquay, R., Orr, J., Norquay, B., Ellis, K. A., Mee, J. F., Reeves, A., Scholes, S., & Geraghty, T. (2020). Perinatal mortality in 23 beef herds in Orkney: incidence, risk factors and aetiology. *The Veterinary record*, 187(1), 28.
- SDA. 2020. Beef 2017, "Beef Cow-calf Management Practices in the United States, 2017, report 1." USDA-APHIS-VS-CEAH-NAHMS. Fort Collins, CO. #.782.0520

## Cow Bid Price Estimate Calculator

Roger Sahs, Extension Specialist, Agricultural Economics

Recent rains have improved forage conditions in many areas of Oklahoma. These conditions along with prospects for strong cattle prices down the road suggest that producers may be thinking about rebuilding herds. The markets do look “scary good”. However, purchasing replacements will be an expensive undertaking. How much is too much to pay? The maximum price paid for a replacement considers the evaluation of potential profits associated with the income stream of the sale of one calf annually over the life of the breeding female. While calf price projections appear to be high for the next several years, there is always the uncertainty of drought conditions returning. After all, we are always one day closer to the next drought! And what about leveraged purchases? Since replacements will cost a

chunk of change and interest rates are the highest in many years, can we afford the payments? All these factors build into the expectations of future profits.

The Cow Bid Price Estimate Calculator estimates the net present value of a breeding female that helps users see if the purchase makes financial sense. Pre-tax cash flows are calculated based on information entered by the user. Users enter the purchase price for a cow (or

bred heifer, cow/calf pair, etc.) plus information on projected calf prices and weights. In addition, other inputs such as cull cow prices and weight, the number of calving opportunities, and annual operating costs are specified. The spreadsheet also calculates debt service as needed and the cash flow available for debt service. A range of scenarios can easily be evaluated to assess the likelihood of a positive cash flow. This simple Excel

spreadsheet helps the user consolidate a multi-year budgeting problem into a manageable framework and appropriately accounts for the time value of money.

The example shown here illustrates that if the user believes calf prices will remain relatively high for the foreseeable future, an investment of \$1,600 in a beef cow would yield a positive return over time as shown by the positive net present value (NPV). The NPV calculation directly accounts for the

time value of money, so it is a superior investment analysis tool compared to a simple rate of return or payback period calculation. Of course, there are numerous risks that should be accounted for in this decision environment, but the illustration points out that the current “value” of a young beef cow has the potential to be pretty high based on her earnings potential.

While the estimates provide an idea of how much

Cow Bid Price Estimate Calculator									
Oklahoma State University									
Originally developed by Lawrence Falconer, Professor, Texas Agrilife Extension Service and James McGrann, Professor Emeritus, Texas A&M University									
2011 update by Lawrence Falconer, Mississippi State University and Darmona Doye and Roger Sahs, Oklahoma State University									
Steer Weight (Pounds/Head)	525	Cull Cow Sale Weight (Pounds/Head)		1,150	Lb.				
Heifer Weight (Pounds/Head)	475	Number of Calving Opportunities (Years)		8					
Cow Price (\$/Head)	\$1,600	Discount Rate (%)		3.00	%		Net Present Value (NPV)		
							\$1,213.89		
Year	2024	2025	2026	2027	2028	2029	2030	2031	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	
Calf Crop or Weaning %	90	90	90	90	90	90	90	90	
Steers Price (\$/Cwt)	\$325	\$325	\$325	\$300	\$275	\$250	\$250	\$250	
Heifer Price (\$/Cwt)	\$300	\$300	\$300	\$275	\$250	\$225	\$225	\$225	
Cull Cow Price (\$/Cwt)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90	
Gross Receipts (Calf Sales)	\$1,409	\$1,409	\$1,409	\$1,297	\$1,184	\$1,072	\$1,072	\$1,072	
Cow Operating Cost/Year	\$950	\$950	\$950	\$950	\$950	\$950	\$950	\$950	
Net Above Operating Cost	\$459	\$459	\$459	\$347	\$234	\$122	\$122	\$122	
Financing Information									
Equity Requirement (%)	30.0	Equals		\$480.00	Per Head				
Length of Note (Years)	3								
Interest Rate (%)	8.00								
Interest Payment	\$89.60	\$62.00	\$32.19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Totals
Principal Payment	\$345.00	\$372.60	\$402.41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$183.79
Debt Service Requirement	\$434.60	\$434.60	\$434.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,120.01
Cash Flow Available for Debt Service	\$459	\$459	\$459	\$347	\$234	\$122	\$122	\$122	
Net Cash Flow	\$24	\$24	\$24	\$347	\$234	\$122	\$122	\$122	
Cow Salvage Value	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,035.00	
Pre-Tax Cash Flows									
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
	(\$480.00)	\$24.40	\$24.40	\$24.40	\$347.00	\$234.00	\$122.00	\$122.00	\$1,157.00



## Cow Bid Price Estimate Calculator

Oklahoma State University



Originally developed by  
Lawrence Falconer, Professor, Texas Agrilife Extension Service and James McGrann, Professor Emeritus, Texas A&M University  
2011 update by  
Lawrence Falconer, Mississippi State University and Damona Doye and Roger Sahs, Oklahoma State University

Steer Weight (Pounds/Head)	525	Cull Cow Sale Weight (Pounds/Head)	1,150	Lb.	<table border="1" style="margin: auto;"> <tr><td style="text-align: center;">Net Present Value (NPV)</td></tr> <tr><td style="text-align: center;">\$686.98</td></tr> </table>	Net Present Value (NPV)	\$686.98
Net Present Value (NPV)							
\$686.98							
Heifer Weight (Pounds/Head)	475	Number of Calving Opportunities (Years)	8				
Cow Price (\$/Head)	\$1,600	Discount Rate (%)	3.00	%			

Year	2024	2025	2026	2027	2028	2029	2030	2031
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Calf Crop or Weaning %	90	90	90	90	90	90	90	90
Steers Price (\$/Cwt)	\$275	\$300	\$300	\$275	\$275	\$250	\$250	\$250
Heifer Price (\$/Cwt)	\$250	\$275	\$275	\$250	\$250	\$225	\$225	\$225
Cull Cow Price (\$/Cwt)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90
Gross Receipts (Calf Sales)	\$1,184	\$1,297	\$1,297	\$1,184	\$1,184	\$1,072	\$1,072	\$1,072
Cow Operating Cost/Year	\$950	\$950	\$950	\$950	\$950	\$950	\$950	\$950
Net Above Operating Cost	\$234	\$347	\$347	\$234	\$234	\$122	\$122	\$122

Financing Information									
Equity Requirement (%)	30.0	Equals	<b>\$480.00</b> Per Head						
Length of Note (Years)	3								
Interest Rate (%)	8.00								
								Totals	
Interest Payment	\$89.60	\$62.00	\$32.19	\$0.00	\$0.00	\$0.00	\$0.00	\$183.79	
Principal Payment	\$345.00	\$372.60	\$402.41	\$0.00	\$0.00	\$0.00	\$0.00	\$1,120.01	
Debt Service Requirement	\$434.60	\$434.60	\$434.60	\$0.00	\$0.00	\$0.00	\$0.00		
Cash Flow Available for Debt Service	\$234	\$347	\$347	\$234	\$234	\$122	\$122	\$122	
Net Cash Flow	(\$201)	(\$88)	(\$88)	\$234	\$234	\$122	\$122	\$122	
Cow Salvage Value	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,035.00	
<b>Pre-Tax Cash Flows</b>									
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
	(\$480.00)	(\$200.60)	(\$87.60)	(\$87.60)	\$234.00	\$234.00	\$122.00	\$122.00	\$1,157.00



## Cow Bid Price Estimate Calculator (cont.)

can be paid for the beef cow, there will be a large variability in individual producer profitability. Even in “good years” some producers are losing money while on the flip side, some producers are making money in the “bad years”. This is important because it indicates there are management practices that producers can make to improve their finances. Profitability often boils down to how well the producer controls costs and can maintain herd health. Knowing your costs will greatly assist in improving the accuracy in using this decision tool. That means keeping good production and business records and

utilizing enterprise budgets. .

Beef cow rebuilding presents many financial challenges for producers. The OSU Cow Bid Price Estimate Calculator can help the producer clear the muddy waters during this decision-making process. This tool and other OSU software tools can be accessed online at the Beef Extension website at: <https://extension.okstate.edu/programs/beef-extension/calculators/>

## Three Tips for Better Cow Nutrition

Roslyn Biggs, DVM

Good nutrition is one of the foundations for success in any cattle operation and is one of the largest expenses on the balance sheet. Yet, accurately evaluating a nutrition program can be very challenging. There are many factors that go into nutritional choices, ranging from cow requirements, to availability of feedstuffs, to ease of delivery.

Obtaining a basic understanding of nutrition and making data driven decisions can give every cattleman an advantage in creating a nutrition program best suited to their operation. The following recommendations may help revise or build a new a nutrition program, especially for the coming winter months.

### Recommendation #1: Update Skills

It is never too late to update skills or learn new things. One way to do this is to start with learning more about nutrient requirements and the multitude of factors influencing requirements. Updated knowledge can help when creating a nutrition program that utilizes available resources and remains cost effective. There is an array of readily available options to increase a producer’s knowledge of nutrition.

Oklahoma State University Extension offers a variety of opportunities to increase beef cattle nutrition knowledge, including a recently launched “Introduction to Beef Cattle Nutrition” online

course. The online course is self-paced, introduces participants to the fundamental principles of beef cattle nutrition and walks users through approaches to use this information in an interactive fashion. OSU Extension is offering the course for 20% discount through November 30, and this discount is exclusive to Oklahoma Cowman readers. To receive the discount, use the code OKCow23. More information on the course can be found at [extension.okstate.edu/programs/extension-online-courses/](https://extension.okstate.edu/programs/extension-online-courses/).

### Recommendation #2: Forage Testing

Forage testing provides cattle producers with quantitative data which allows them to make decisions based on quality. The results from forage testing are used to calculate ration formulations, estimate feeding value and establish market price for hay sales.

The Oklahoma State University Soil, Water, & Forage Analytical Laboratory measures three principal forage quality values: crude protein, acid detergent fiber, and neutral detergent fiber. These three values can then be used to calculate other quality parameters such as digestible protein, total digestible nutrients, and net energies for maintenance, lactation, and gain. For more information see, [www.beef.okstate.com](http://www.beef.okstate.com).

## Three Tips for Better Cow Nutrition (cont.)

Producers interested in forage testing should contact their local county extension office for more information on submitting samples.

### Recommendation #3: Use Available Tools

It is unnecessary to start from scratch when evaluating a nutrition program. There are tools such as ration calculators that make the process much easier. The Oklahoma State University Cowculator is used routinely by top producers and veterinarians across the

United States and internationally when assessing or developing balanced rations for the cow herd.

Cowculator is a Microsoft Excel spreadsheet designed to assist cattle producers and veterinarians in making informed decisions associated with beef cow herd nutrition. Animal characteristics (such as cow weight, body condition, stage of production and breed), as well as the feed and forage lists can be customized to each operation or specific scenarios within an operation. More information on Cowculator and other useful beef focused decision aids can be found at



*The Extension Experience-Insights into Oklahoma Agriculture* Podcast is brought to you by Oklahoma Area Extension Specialists from Northwest Oklahoma. Area Extension Specialists provide perspective and insight they have gained from assisting county extension educators and producers in the areas of animal science, agronomy and agricultural economics, as well as interviews with state extension specialists on a variety of topics. Current agriculture topics, personal experience in the industry and a little humor are on tap with Extension Experience. Free at Spotify or online at <https://www.owltail.com/podcast/DsB2c-Extension-Experience-Insights-into-Oklahoma>.



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