# TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT
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## Pregnancy Testing

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

Many reproductive technologies are readily available to cattle producers. Technologies such as estrus synchronization, artificial insemination, pregnancy diagnosis, and many others are proven to improve reproductive efficiency. However, according to the National Animal Health Monitoring System 2017 Beef Cow/calf study (NAHMS), the uses of these technologies are not well embraced by cattle operations with 37.5% of all cattle operations only using one reproductive technology. One reproductive technology that is not widely used by producers, but should be, is pregnancy testing.

Pregnancy testing improves reproductive efficiency and profits for cattle producers. According to experts, the ideal pregnancy test would easily be able to differentiate between bred and open cows. The test would be cheap. The diagnosis could be made on the farm and the results of the test could be determined at the time of testing. The commonly used pregnancy testing methods used today do not meet all of the above requirements. The three most commonly used pregnancy testing technologies used in cattle are ultrasound, rectal palpation, or blood test. All techniques have advantages and disadvantages. According to the NAHMS, around 8.8% of all cattle operations use ultrasound, 19.3% use rectal palpation, and 3.5% use blood testing for pregnancy diagnosis.

As the price of ultrasound units have decreased, the use of ultrasound for pregnancy diagnosis is increasing. Ultrasound units produce an image that can be visualized by the operator to determine pregnancy status. The advantage of using an ultrasound to diagnose pregnancy is that it is accurate, rapid, and pregnancy status of the cow is determined at the time of testing. Some ultrasound operators can determine pregnant cattle very soon after breeding but most operators are confident at diagnosing pregnancy around 28 days. Other positive attributes of ultrasound are fetal viability can be accessed. A fetal heartbeat can be seen as early as 21 days post breeding. Fetal sexing can be determined using this method as well. Also, the age of the fetus can be determined based on the size of the fetus. Lastly, ultrasound is the best method to determine if a cow has twins. Some disadvantages of using ultrasound for pregnancy testing is cost and operator knowledge. It is the most expensive method to diagnose pregnancy and requires a considerable amount of training for the operator to become proficient at using this method for pregnancy testing.

Rectal palpation is the oldest, most common, and widely used method for diagnosing pregnancy. Most Colleges of Veterinary Medicine continue to train students in this method of pregnancy diagnosis. With practice, this method of pregnancy testing is highly accurate, rapid, inexpensive, and pregnancy status is determined at the time of testing. Some veterinarians can determine pregnancy as early as 30 days post-breeding. Other veterinarians are more comfortable with not pregnancy testing until 45 to 60 days post-breeding.

Over the past few years, blood tests that detect certain proteins associated with pregnancy in cattle have become an alternative to rectal palpation and ultrasound. The tests are accurate. Although some of the test can be done at chute side, the test still requires a certain amount of time to obtain the results. Other blood tests require the blood samples to be shipped to a lab for test results. When comparing to ultrasound or rectal palpation, the test would not be considered rapid nor would it be considered completed at the time of testing. The test is inexpensive. This is an easy pregnancy test for cattle producers to use in their reproductive health management.

One last thought on pregnancy testing. The earlier that a nonpregnant cow can be eliminated from the herd the better. For this reason, some cattle producers wish to pregnancy test 30 days post-breeding. However, one problem with pregnancy testing this early post-breeding is natural fetal loss. Most natural fetal loss occurs in the first 60 days post-breeding. A small percentage of cows found pregnant this early post-breeding will lose their fetus. This will happen no matter which method of pregnancy testing used.

Pregnancy testing is a reproductive technology that is practical and economical. Pregnancy testing can reduce operational cost by reducing feed cost associated with feeding open cows. It will improve reproductive efficiency by allowing producers to remove problem breeders and can alert producers of reproductive disease issues. Cattle producers should contact their local veterinarian and/or Oklahoma State University County Agriculture Extension Educator about the benefits of pregnancy testing.

**References**

USDA. 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

## Feeding Thin Cows

*Earl H. Ward, Area Livestock Specialist*

It is always a recommended practice to be mindful of your cow's body condition score (BCS). The BCS is a great indication of your animal's nutrient and health status. The OSU Factsheet AFS-3283: "Body Condition Scoring of Cows" teaches how to properly assess your animal's BCS and the impacts that low BCS's can have on your herd's health and productivity. If we find ourselves in a predicament where we have low BCSs, how do we recover those energy reserves?

The winter storm in February 2021 was detrimental and even deadly to cows that were in poor condition, and we need to be prepared for the next cold snap. So, it is recommended to start observing BCSs now and determine if you need to change or increase the quality and/or quantity of feed offered to the herd.

When it comes to putting "flesh" back on a cow to increase a BCS, it is important to be cognitive of the amount of energy offered to the animal. Although protein is extremely important as well, it is the energy that deposits the fat cover back on. So how much feed does it take to increase one BCS on an animal? Well luckily with some calculations we can compute that. The 2016 Nutrient Requirements of Beef Cattle gives us the amount of metabolizable energy (ME) it takes to increase one BCS at a given mature weight. However, most of us have no clue how much ME our feeds have. There is a calculation to get ME to total digestible nutrients (TDN, Table 1). From there we can calculate the amount of feed required based of the TDN value of our feed.

**Table 1. Pounds of TDN Required to Increase 1 BCS**

| | Approximate Cow Weight at a BCS 5 | | | | |
|---|---|---|---|---|---|
| **BCS Change** | **1000** | **1100** | **1200** | **1300** | **1400** |
| **3 to 4** | 104 | 115 | 127 | 138 | 150 |
| **4 to 5** | 115 | 127 | 140 | 153 | 165 |
| **5 to 6** | 125 | 138 | 153 | 167 | 180 |

If your cows are typically 1200 lbs (at BCS 5) but are currently in a BCS 4, then it would take 140 pounds of TDN to get her up to a BCS 5. To calculate how much feed is needed, you take the pounds of TDN required and divide it by the percent TDN in the feed, and then divide that number by the percent dry matter of the supplement to equal the total pounds of feed as-fed. If your supplement contains 75% TDN and 90% dry matter, then for you math wizards the equation looks like this: (140 lb ÷ 0.75) ÷ 0.90 =

270 lbs of feed. If we need to increase that BCS in just 60 days then we need to feed the cow 4.5 lbs of supplement per day above the amount of supplement required to maintain body weight.

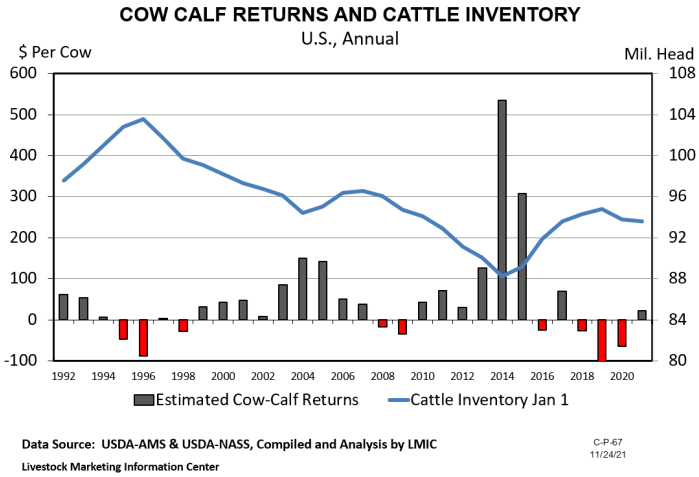
Work with your OSU Extension Educator to develop a plan to regain those body conditions. This plan will take into account your available forage, cow's stage of production, and evaluation of supplementation options. It is not going to be a fast or cheap, but it is important to keep the cow as healthy and productive as possible, especially if winter turns harsh.

## Opportunity Knocking?

*Scott Clawson, Area Ag Economics Specialist*

This fall has brought needed positive news in the cattle markets. It has brought us stronger calf prices when we usually see a seasonal low. The cull cow market, while more sporadic, has respectfully fought off a seasonal breakdown. The fat steer market broke through some price ceilings that had been lingering in recent years. As Spotify reminds us, it's time for a year-end review. My humble opinion is that we need to look a little deeper than just one year in our cattle markets and think a little bit about what could come soon.

There are a few fundamentals that are observed in the cattle markets when looked at from a national view. One is that our market has cycles. For decades and decades, our national cattle inventory rises and falls based on price signals with the blessing of mother nature (droughts can derail everything). Low prices motivate the reduction of beef cow herds and high prices encourage heifer retention and expansion. Over and over, we tend to see this play out. Another way to look at this is shown in the graph. While this does not reflect any specific operation, it does give us a general look at cow-calf returns over time. It reveals the relationship that when our cattle inventory is low the opportunity for profit is stronger and vice versa.




The expectation is that when the next cattle inventory report is released that our beef cow numbers will be lower than last year. While there are differences in how the inventory data is split (total inventory, beef cows, replacements, calves, etc.), this looks to be the third year in a row for generally lower cattle numbers. Again, lower inventory numbers get "cured" by higher prices if the market desires. High cattle prices are not the same as high cattle profits. They are related but they are not the same. Higher prices give us an opportunity to have higher profits, but we must be mindful of what is happening with operating expenses. Figuring out the expense side of the equation will be vital in the coming years.

As we reach the end of 2021, what did we learn the last time profits were high? Did we sell too many? Did we not sell enough? What would we do differently? When evaluating ranch decisions, it is very common (and terribly difficult to avoid) to let cash flow dictate decisions instead of a strategy or plan for the operation. Here are two examples. The analysis of the numbers would encourage heifers to be retained during periods when cattle prices are lower. This leads to a lower cost for that breeding female and with some help from the cattle cycle lets us sell a higher proportion of calves into a stronger market. Unfortunately, the real world gets in the way. We usually need to sell those heifers when

prices are low to generate the cash flow needed in the operation. Building on this, retaining heifers in strong markets is easier since cash flow needs are met. Another example is with fall fertility applications. In eastern Oklahoma with our introduced forage base, a fall fertilizer application and some stockpiled Bermuda or fescue is a good way to minimize our hay usage and feed costs. But the ability to take on that strategy can be limited by our cash flow since most cow-calf operations get their biggest flush of revenue in the fall and there may not be the cash or access to capital in September prior to selling our spring born calves.

I have no idea where our markets will go in the next few years regarding cattle or input prices. But I do know that an investment in planning and preparation is always good idea. Hopefully those activities lead to a strategy that can be implemented based on the ranch's goals, resources, and wishes for the future.

## Access Farm Management Resources Online

*Brent Ladd, Extension Assistant*

The e-Farm Management website has information for producers seeking to strengthen their farm financial management skills. This site includes videos, publications, and software tools for farmers and ranchers. Producers will find resources on many financial, production, marketing, and risk management topics.

One available resource is the Cash Flow video. In this video, viewers learn about cash flow statements. The video lists information that is needed to create a cash flow statement as well as uses of the cash flow statement in managing a farm or ranch. Lastly, the video shows how cash flow statements are related to other financial statements.

To find this video and additional resources on cash flow statements, go to: https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/farm-ranch-balance-sheet-and-cash-flow-statement/index.html.

More information on this and other farm management topics may be found three ways: 1) contact your nearest Extension Educator 2) visit the e-farm management website (https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/index.html) or 3) visit the OSU Ag Econ YouTube Channel (https://www.youtube.com/user/OkStateAgEcon).

# BUILDING YOUR FARM / RANCH BALANCE SHEET *for 2022 – An Interactive Zoom Series*

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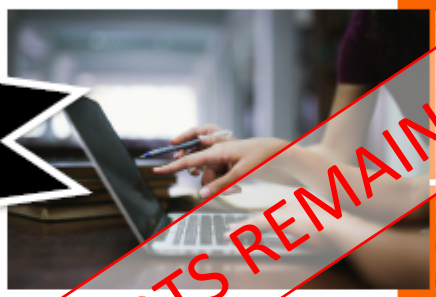
## HOW DOES THIS PROGRAM WORK?

This will be a series of two Zoom meetings, organized so that at the conclusion of the second meeting you will have a complete accurate balance sheet for use in your operation in 2022. Not only will you have support on what information to collect and how to organize it, but also the comfort of doing it conveniently and confidentially from your own home.

**CHECK OUT THE NEW DATE BELOW!**



LIMITED SPOTS REMAINING

**Session 1:** **Where Do We Start and Why?**
**Date:** Thursday, January 6th, 2022
**Time:** 7:00 pm
**Location:** Zoom link to be sent

*A practical discussion will take place on the components of the balance sheet. There will be examples of how poorly prepared balance sheets can reflect on the farm or ranch. We will also discuss what is needed to complete a sound balance sheet and provide the documents needed to gather the information between the two sessions. Then, we will be ready to complete the balance sheet in Session 2.*

**Session 2:** **Putting the Information Together**
**Date:** Tuesday, January 25th, 2022
**Time:** 7:00 pm
**Location:** Zoom link to be sent

*The final session will consist of compiling the information into the balance sheet and understanding what goes where and why. Lastly, we will discuss and complete some basic analysis of the balance sheet. At the conclusion of this session, the goal is that you will have a completed balance sheet for your operation for 2022 or at a minimum have everything ready for it to be completed.*

## What Will You Need?

- Computer with the ability to attend a Zoom meeting
- Email access is preferred but not required

## What Do You Need to Do?

1. Contact us at either scott.clawson@okstate.edu or (918) 686-7800 to sign up.
2. Leave us contact information to receive the Zoom meeting link and the documents needed to participate.

*To promote interaction and to be able to assist everyone through the process, participation will be limited to the first 15 registered.*

*There is no cost to participate in this program.*

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**Value of Gain Calculation**

*OK Weekly Auction Sumary 12/17/21*

| Weight | $/lb | Value/hd | Added lb. | Added $ | $/lb Added |
|---|---|---|---|---|---|
| 331 | $ 2.2473 | $ 743.86 | | | |
| 373 | $ 2.0958 | $ 781.73 | 42 | $ 37.88 | $ 0.90 |
| 425 | $ 2.0511 | $ 871.72 | 52 | $ 89.98 | $ 1.73 |
| 477 | $ 1.9393 | $ 925.05 | 52 | $ 53.33 | $ 1.03 |
| 528 | $ 1.8328 | $ 967.72 | 51 | $ 42.67 | $ 0.84 |
| 576 | $ 1.7317 | $ 997.46 | 48 | $ 29.74 | $ 0.62 |
| 623 | $ 1.6356 | $ 1,018.98 | 47 | $ 21.52 | $ 0.46 |
| 675 | $ 1.5973 | $ 1,078.18 | 52 | $ 59.20 | $ 1.14 |
| 726 | $ 1.6360 | $ 1,187.74 | 51 | $ 109.56 | $ 2.15 |
| 830 | $ 1.6342 | $ 1,356.39 | 104 | $ 168.65 | $ 1.62 |
| 862 | $ 1.5507 | $ 1,336.70 | 32 | $ (19.68) | $ (0.62) |
| 919 | $ 1.5697 | $ 1,442.55 | 57 | $ 105.85 | $ 1.86 |

| Long Stocker Run | | Short Stocker Run | | Heavy Stocker Run | |
|---|---|---|---|---|---|
| *Starting* | | *Starting* | | *Starting* | |
| 331 | $ 743.86 | 331 | $ 743.86 | 623 | $ 1,018.98 |
| *Ending* | | *Ending* | | *Ending* | |
| 919 | $ 1,442.55 | 528 | $ 967.72 | 919 | $ 1,442.55 |
| *Total Gain* | *Δ Value* | *Total Gain* | *Δ Value* | *Total Gain* | *Δ Value* |
| 588 | $ 698.70 | 197 | $ 223.86 | 296 | $ 423.58 |
| *VOG* | | *VOG* | | *VOG* | |
| $ 1.19 | | $ 1.14 | | $ 1.43 | |

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