

Should Cows Receive a Nutritional Boost in the Fall?

Britt Hicks, Ph.D., Area Extension Livestock Specialist

For spring-calving herds, weaning season has arrived. Weaning would be an excellent time to evaluate the body condition of your cows. Body condition scoring (BCS) is a practical management tool to allow beef producers to distinguish differences in nutritional needs of beef cows in the herd. Simply put, BCS estimates the energy status (fat cover) of cows. The scoring system used is a 1 to 9 point scale where a BCS 1 cow is extremely thin while a BCS 9 cow is extremely fat and obese. A BCS 5 cow is in average flesh or body condition. Most commercial range cows will have scores ranging from 4 to 6. A BCS of 5 to 6 is a logical target for most cow herds. A change of 1 BCS is equivalent to about 90 lbs. of body weight.

Assessing BCS at weaning can be useful to determine which cows or heifers need the most gain prior to calving providing producers an opportunity to give spring-calving cows, especially first- and second-calf cows, a little nutritional boost if needed.

The BCS of beef cows at the time of calving has a huge impact on subsequent rebreeding performance. It is recommended that the target BCS at calving should be at least 5 for mature beef cow.

Since 1st-calf-heifers have only reached about 85% of their mature weight after calving and require additional nutrients to support growth, it is recommended that they be fed so they are a BCS of 6 at calving. Data presented in Figure 1 (summary of seven trials, cow and heifers)

illustrates the effect that BCS at calving has on pregnancy rate. These data clearly show that the variation in pregnancy rate narrows considerably as BCS approaches 6.

The time period from weaning to calving has proven to be the easiest and most economical time to add condition to cattle since nutrient requirements are at the low point of the production year. In addition, weather is not as stressful and forage value of warm-season grasses is still decent enough to put some condition on a cow. So evaluate body condition and determine whether a little boost might be beneficial. As pregnancy advances, it becomes more difficult to add condition.

This nutritional boost can come from feeding a low rate (pounds per day) of a high protein supplement at a time most producers are not feeding supplement. If forage availability is adequate and a cow can achieve a full intake daily, a key nutrient lacking in the forage is crude protein (CP). The cow requires protein, but just as importantly, the ruminal microorganisms require protein (nitrogen) to digest the forage providing energy and protein to the cow.

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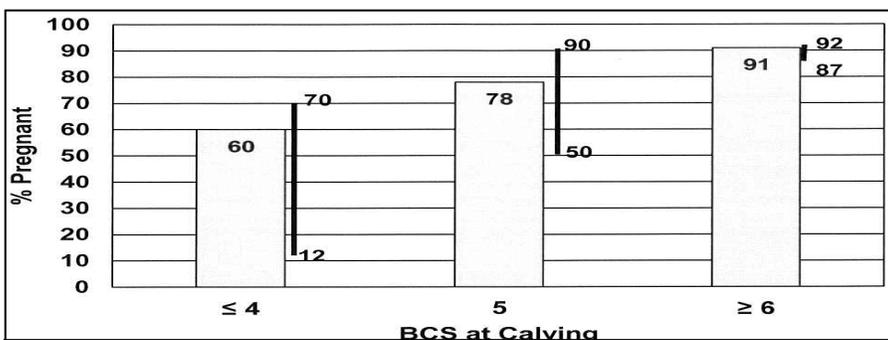


Figure 1. Effect of Body Condition Score (BCS) at calving on pregnancy rate. The lines represent the variation in pregnancy rates between trials. Adapted from Kunkle et al., 1994.

Low dietary protein can reduce microbial activity, which in turn, reduces forage digestion and intake which results in reduced energy consumption by the cow. Crude protein content declines as warm-season forages grow and progress to dormancy. As rule of thumb, when forage crude protein drops below 7 to 8% (dry matter basis), the rumen is nitrogen-deficient and forage intake declines rapidly (see Figure 2).

Providing a small amount of supplemental crude protein can elicit a very efficient response.

The total amount needed is about 0.35 to 0.4 pounds of supplemental CP per day, or about 1 pound per day (7 pounds per week) of a supplement containing 35 to 40% CP. The supplement does not have to be delivered to the cattle daily.

When feeding cubes, the week's allotment of supplement can be divided into two or three feedings. The supplement can also be delivered in a self-fed product such as a liquid, a poured tub, or a block. If the supplement contains non-protein nitrogen (NPN), then feed the dry supplement more frequently and allow cattle to adapt to the self-fed products. With low to medium quality forages, natural protein sources are better utilized than protein provided by NPN (urea). Research results and field experience suggests that that the CP equivalent of NPN should be discounted by 50 to 70% in range and pasture supplements.

Choose your method of delivery based on the cost per unit of crude protein in the supplement and the cost to deliver to the cattle.

If calves are still on the cows, the supplement will act as a creep feed for the calves. Not all cows will need a push. But some may benefit from a little push in the fall to put on additional condition before the winter sets in.

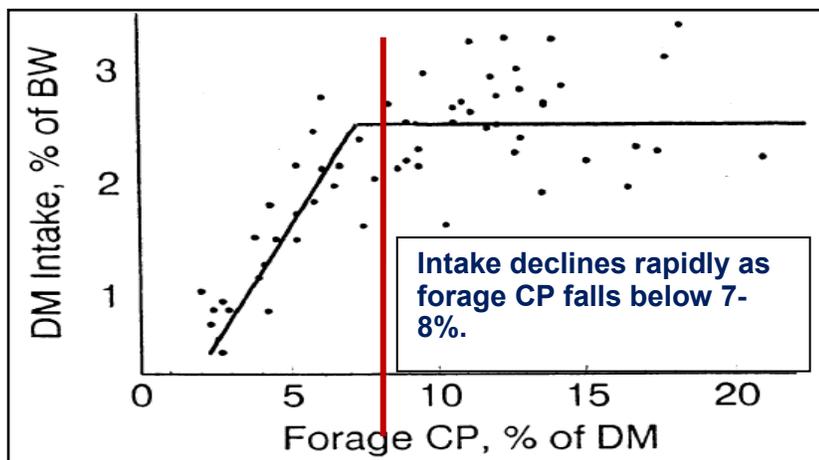


Figure 2. Forage intake in relation to crude protein concentration in forage. Adapted from Moore and Kunkel, 1994.

Fall Weed Control

Josh Bushong, Area Extension Agronomy Specialist

Many of our herbicide options for weed control in wheat need to be applied during favorable growing conditions in order to achieve satisfactory results. Often many herbicide applications applied late fall fail to provide satisfactory results because they were either applied when the weeds were too big or when the weeds were not actively growing.

It is easier to control small actively growing weeds compared to well developed weeds late fall. For example, well tillered grassey weeds become more difficult to control due to the plant now having multiple growing points (each tiller). Certain herbicides, like Group 1 ACCase Inhibitors, will need better spray coverage to get the product on each tiller otherwise parts of the plant will survive.

Another disadvantage to spraying late would be the wheat crop itself is bigger, which could cause spray skips from intercepting the spray. As winter approaches, winter annual weeds will start to go dormant and cease growth. This greatly reduces herbicide uptake and can ultimately reduce control. Read herbicide labels for guidance on spraying in cold temperatures. Some labels will even provide statements about growing conditions prior to application, at application, or even days after application.

Many wheat producers are familiar with the Clearfield Plus system. The herbicide Beyond used in this system is a great example of needing to be applied to actively growing feral rye to achieve adequate control. To improve control, it is recommended to use sequential applications of Beyond using a methylated seed oil (MSO) adjuvant. The first 4 oz/a application in the fall and the other 4 oz/a applied in the spring.

In addition to Clearfield systems, wheat producers now have another technology to utilize to control grass weeds.

The new system is called CoAXium Wheat Production System. The trait for CoAXium is called AXigen. The only labeled herbicide for this technology is Aggressor, which is Quizalofop-P-ethyl a Group 1 ACCase Inhibitor. Variety names ending with an AX designates varieties that have the AXigen trait.

Varieties are bred to have a 2-gene tolerance to this herbicide. Since these varieties are technically not fully resistant, application timing is important to reduce crop injury. Applications can be made once the wheat reaches 5 leaves in the fall and up to jointing in the spring. Recent field trials at OSU have confirmed crop injury can occur when Aggressor is applied after jointing.

Apply Aggressor at 8-12 fl oz/A for single applications in the fall or spring. Apply 8 fl oz/A for sequential fall and spring applications if heavy infestations are present in the fall. To delay onset of herbicide resistance, it is recommended to not use the CoAXium Wheat Production System for 2 consecutive crop years.

Since the Aggressor herbicide only controls grasses, tank mixing another herbicide will be needed to control broadleaf weeds. Do not tank-mix with dimethylamine salt (Amine) formulations of 2,4-D or MCPA as these herbicides are very antagonistic with Aggressor and will severely reduce grass control. Ester formulations of 2,4-D or MCPE can tank mixed with Aggressor.

The CoAXium system will be a great option for controlling many annual winter annual grass weeds, including feral rye, jointed goatgrass, cheat, bromes, rescuegrass, and wild oats. Caution is warranted for use on ryegrass especially if ACCase resistance is suspected. Use of another ACCase herbicide, Axial XL, has been heavily used for ryegrass and resistance has been confirmed by OSU.

OSU has a [Backyard Poultry Website](#)

<https://extension.okstate.edu/programs/backyard-poultry/index.html>

<https://osuextension.catalog.instructure.com/>

Resources

[News | For the Birds: Tips for Backyard Chicken Keeping](#)

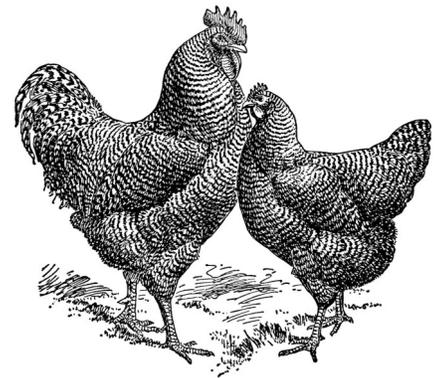
[News | Small flock production provides benefits, but good management remains a must](#)

[Oklahoma State University Extension releases poultry processing video](#)

[OSU Backyard Poultry YouTube Channel](#)

[OSU Extension Poultry Fact Sheets](#)

[Poultry Ration Calculator](#)



Extension Experience – Insights into Oklahoma Agriculture

The Northwest Area Extension Staff would like to announce the creation of our new podcast *Extension Experience*. The *Extension Experience* podcast is brought to you by Josh Bushong, Trent Milacek, and Dana Zook. Each week we provide perspective on Agriculture topics and offer insight from our experience working with Extension Educators and Producers across Oklahoma.

The *Extension Experience* podcast is available on Spotify, Google Podcasts, and Apple Podcast platforms.

You can also access the episodes on spotlight <http://spotlight.okstate.edu/experience/>.

We hope you consider listening to Extension Experience.



CFAP-2 Program Offers Assistance to Farmers

Trent Milacek, Area Ag Economics Specialist

The USDA has announced another round of Coronavirus Food Assistance Program payments through CFAP-2. This round of payments will assist farmers with losses to 2020 commodities to include row crops, wool, livestock, specialty livestock, dairy, specialty crops, floriculture and nursery crops, aquaculture, broilers and eggs and tobacco. Sign up started on September 21, 2020 and will continue until December 11, 2020. Interested producers should contact your county FSA office to determine their preference for sign-up. For more details on the program, producers are encouraged to visit farmers.gov/cfap to get further details. If you would like to call with questions, there is a call center that can be reached at 877-508-8364.

This is a separate program from the initial CFAP program so producers will have to fill out a separate application. Details are still emerging, but for now CFAP-2 will pay on 2020 crop year acres and livestock. This will include fall crops planted in 2019 and harvested in 2020 like wheat and spring planted crops harvested in the fall of 2020 like corn, milo and soybeans. Livestock are also included in the new round of payments. The highest inventory of non-breeding cattle, sheep and swine owned between April 16, 2020 and August 31, 2020 are eligible. This means any animal that has not had offspring or is not a breeding bull is eligible.

Payment rates are fairly straightforward for livestock, but are more complex for crops. Crops are broken down into price trigger commodities and flat-rate crops. Price trigger commodities suffered a five-percent or greater national price decline. Flat-rate crops either did not experience that large of a decline or data was not available to calculate the decline. The price trigger row crop payment will be the greater of eligible acres multiplied by the payment rate of \$15/acre, or eligible acres of the crop multiplied by a nationwide crop marketing percentage, multiplied by a crop-specific payment rate, and then by the producer's weighted 2020 Actual Production History (APH) approved yield.

In other words, producers will receive at least \$15/acre on eligible crop acres. Flat-rate crops will be paid a \$15/acre flat rate. Livestock payments will be made at \$55/head for cattle, \$27/head for sheep and \$23/head for swine. Remember that this payment is based on the highest inventory of non-breeding livestock between April 16, 2020 and August 31, 2020. For more information on application or other crops please contact your local FSA office, visit farmers.gov/cfap or call the CFAP 2 call center at 877-508-8364.

Safe Handling of Wildlife Carcasses

Dwayne Elmore, Ph.D., Extension Wildlife Specialist

It is once again hunting season in Oklahoma. As hunters find success in the field and harvest wildlife, it is important to consider how to safely handle the carcasses to stay safe. Wildlife can be infected with various zoonotic diseases that are transmissible to humans. Additionally, wildlife often harbors ticks and fleas which are disease vectors and can transmit diseases. Some of the diseases that may be encountered in Oklahoma and can infect hunters include ehrlichiosis, leptospirosis, Lyme disease, tularemia, trichinosis, rabies, Rocky Mountain spotted tick fever, salmonella, and swine brucellosis. Hunters often become wary when they observe odd behavior in wildlife or notice injury or signs of disease on animal carcasses. However, the absence of these obvious signs should not cause complacency in the safe handling of harvested animals. Any animal should be treated as a potential source of infection.

There are several ways to protect yourself when handling wildlife carcasses. First, avoid direct contact with any body fluids such as blood, lymph fluid, urine, feces, and saliva. When handling carcasses, always wear disposable gloves that provide a barrier between you and the animal. Two layers of gloves are a good idea to provide an extra layer of protection in case a tear develops in a glove. Also, wear some type of eye protection to keep body fluids from splashing into your eyes. A face shield will provide better protection by also covering your mouth and nose which could be points of entry. Take your time when cleaning harvested animals and make sure you have adequate lighting which will help prevent cutting yourself with a knife or being injured by broken bones on the carcass. When removing gloves, look for any injury on your hands that might indicate a glove was pierced. If you see any cuts, immediately treat them with antiseptic. Wash your hands, arms, and face immediately after handling the carcass. Also wear gloves and face protection when packaging meat for storage.

Wildlife often have ticks and fleas. These potential disease vectors will seek a new host as the wildlife carcass cools. Spraying yourself with insect repellent prior to handling the wildlife will help keep them off you, but be sure to examine your entire body immediately after handling the carcass and remove any ticks or fleas found. When cooking wildlife, use a meat thermometer to ensure you are heating the meat to USDA recommended safe temperatures. Note that the safe temperature for wildlife may differ from recommendations for domestic animals. For example, while trichinosis has largely been eliminated from domestic pork, it may be present in feral hogs and bear. Therefore, cook the meat to 160°F to kill this disease.

Finally, if you develop symptoms that may indicate a zoonotic disease, be sure to tell your doctor that you have recently handled wildlife. Many diseases have similar symptoms such as fever, body aches, diarrhea, and nausea. Doctors may attribute your symptoms to a more common illness such as influenza since many zoonotic diseases are rarely encountered by the general public. It is critical to communicate with your healthcare provider to get proper care.



Feral hogs provide quality meat, but they also carry multiple diseases that can infect humans. Notice this hunter is wearing disposable gloves to hold the animal.

Cattle Herd Infertility

Brian Freking

Having a controlled breeding season will help narrow down issues with a cow herds overall reproductive efficiency. Let's consider a producer with a spring calving herd that has a 90 day or less breeding season and calls his Veterinarian out to pregnancy check the cows and it is determined that only 60% of the cows are bred. Hopefully, everyone is saying this doesn't match typical industry benchmarks for pregnancy rates that should be 85-95%+ rates.

$$\text{Pregnancy \%} = \frac{\text{\#Cows+Heifers diagnosed pregnant}}{\text{\#Cows+Heifers exposed @ breeding}}$$

What could have gone wrong? Is it the cows? Is it the bull?

My thoughts go to looking at the bull first and would recommend retesting the bull to see how his fertility score stacks up to his previous score that was hopefully done prior to turn out. A standard breeding soundness exam seems like a good option to start with and while the bull is at the veterinary clinic possibly look toward a disease like Trichomoniasis and have it tested and ruled out as a potential cause. Bull dominance versus infertility in multi-sired breeding pastures (Table 1)?

A definite social ranking develops among bulls, and this ranking may affect the number of cows a given bull will service in a multiple-sire herd (Table 1). Livestock managers must be aware of these relationships to ensure normal breeding rates. For example, a dominant bull with poor semen quality or low libido could reduce pregnancy rates for an entire herd even when more fertile, subordinate bulls are present.

A bull's seniority is the major factor influencing its social ranking; the dominant bull in a breeding group is likely to be an older bull. Therefore, it is important not to introduce a young (yearling) bull into a herd with an older, more mature bull. This can be avoided by separating cows into single-sire breeding groups. In multiple-sire breeding groups, multiple bulls tend to breed the same sexually responsive females. This leads to females being bred by more than one bull as well as the potential for increased injury to bulls of any age.

Table 1. Percent calf crop sired by individual sires in multiple-sire pastures.

| Social Rank | Pasture | | | |
|---------------|---------|-----|-----|-----|
| | 1 | 2 | 3 | 4 |
| Bull 1 | 30 % | 34% | 92% | 75% |
| Bull 2 | 21% | 29% | 3% | 25% |
| Bull 3 | 12% | 21% | 3% | |
| Bull 4 | 10% | 6% | | |
| Bull 5 | 9% | 4% | | |
| Bull 6 | 9% | 1% | | |
| Bull 7 | 5% | 1% | | |
| # Calves Born | 73 | 64 | 28 | 32 |

Source: Adapted from Lehrer, A.R, M.B. Brown, H. Schindler, Z. Holzer, and B. Larsen. 1977. Paternity test in multi-sired beef herds by blood grouping. ACTA. Vet. Scand. 18:433-441. Infertile Bulls?

The impact of dressing percent on cull cow marketing

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

October is often the month of calf weaning and cow culling (for spring calving herds). Cull cows represent about 20% of the gross income in commercial cow calf operations. Understanding the major factors impacting cull cow prices is important to the bottom line. Remember cull cows that are destined to go to the packing house are graded by their fleshiness. In the USDA Market News reports cull cows are reported in four grades. The fattest cows are called “Breakers”. Moderately fleshed cows are “Boners” or “boning utility”. Thin cows are called “Leans” or “Lights”, depending upon the weight of the cow. There will be price differences among these four grades.

However, within each grade, large variation in prices per hundredweight will exist because of differences in dressing percentage. Cow buyers are particularly aware of the proportion of the purchased live weight that eventually becomes saleable product hanging on the rail. Dressing percentage is (mathematically) the carcass weight divided by the live weight multiplied by 100.

Key factors that affect dressing percentage include gut fill, udder size, mud and manure on the hide, excess leather on the body, and anything else that contributes to the live weight but will not add to the carcass weight. Most USDA Market News reports for cull cows will give price ranges for High, Average, and Low Dressing Percentages for each of the previous mentioned grades. As you study these price reports, note that the differences between High and Low Dressing cows and bulls will generally be greater than differences between grades. Many reports will indicate that Low Dressing cows will be discounted \$8 to \$15 per hundredweight compared to High Dressing cows and will be discounted \$5 to \$7 per hundredweight compared to Average Dressing cows. These price differences are usually widest for the thinner cow grades (Leans and Lights). See examples from last week’s sale in Oklahoma City National Stockyards: https://www.ams.usda.gov/mnreports/ams_1823.pdf.

As producers market cull cows and bulls, they should be cautious about selling cattle with excess fill. The large discounts due to low dressing percent often will more than offset any advantage from the added weight.

On the cow side I would do a quick inventory of open cows to see if a particular age set has a higher incidence of opens i.e., say cows with its first calf at side which has some disadvantages on the nutritional demand and may explain that some additional management is need for this particular set. Body condition score among these age groups may also shed some light on potential cause and effect.

Here’s my check list to evaluate the reproductive efficiency of a herd:

Separate open cows by age. If this is primarily young cows, females trying to become pregnant for the second calf. The likely cause is a deficiency in energy in the nutrition program. Cows in ages 4 to 10 should be at their prime so this becomes a concern because the genetics should match the environment. If the majority of the open cows are old cows....then you may have kept them too long.

Bull to cow ratio. For young bulls < 24 months, we want to keep 1 cow to the age of the bull in months as the ratio. Mature bulls can handle more but should probably stay around 1:25 or 1:30. Maybe a bull was good early and got hurt or sick later in the breeding season. If this were the case consider a future rotation schedule during the breeding season with a mature bull early and then rotate in a young bull with smaller female numbers to cover within a single sired pasture.

Consult with your Veterinarian about the vaccination program to make sure reproductive diseases are covered or if a product wasn't labelled for the time it was actually administered.

Did you notice any other bulls in your pasture? Trichomoniasis is not common but can't be ruled out completely. Consider your observations where very few cows cycling towards the end of the breeding season, but you then observed cows cycling after the breeding season ended, might indicate early abortions.

Was there any calving difficulty issues as an increase in dystocia can lead to longer postpartum anestrus therefore resulting more open cows.

In any particular scenario the smoking gun may not be easily identified. As a manager it is particularly important to evaluate and learn from each situation. Hopefully, all your cows are bred and this event only occurs on rare occasions.

Rancher's Thursday Lunchtime Series



Live Webinars



- ▶ **Thursday, October 15, 2020 | 12:30 - 1:30 p.m.**
Managing Wheat and Small Grains for Grazing
- Amanda Silva and Alex Rocateli, OSU Plant and Soil Sciences
- ▶ **Thursday, October 22, 2020 | 12:30 - 1:30 p.m.**
Pest Management in Small Grain Pasture
- Tom Royer, OSU Entomology and Plant Pathology
- ▶ **Thursday, October 29, 2020 | 12:30 - 1:30 p.m.**
Managing Market Expectations and Risk of the Stocker Cattle Enterprise
- Bryan Nichols, Nichols Family Farm and Dan Childs, Noble Research Institute
- ▶ **Thursday, November 5, 2020 | 12:30 - 1:30 p.m.**
Setting Stocking Rates and Supplementing Calves on Wheat
- Ryan Reuter, OSU Animal and Food Sciences
- ▶ **Thursday, November 12, 2020 | 12:30 - 1:30 p.m.**
Managing Grazing Cows and Stockers on Wheat Pasture
- David Lalman and Paul Beck, OSU Animal and Food Sciences
- ▶ **Thursday, November 19, 2020 | 12:30 - 1:30 p.m.**
What If It Is Not Wheat? Managing Cool-Season Cover Crops for Livestock
- Jaymelynn Farney, KSU Animal Sciences and Industry

Register Online:

https://dasnr.zoom.us/webinar/register/WN_ZK7qAyshTJ2rRpl33UYsXA

Upcoming Events:

Major County Cattlemen's Association Fall Gathering

At the Major County Fairgrounds in the Exhibit Building, Saturday, November 14th, Breakfast at 8:00am and 9:00am OCA Leadership Updates, followed by door prizes (*must be present to win*) and program. Membership Encouraged. For more information call Garet Edwards at 580-227-7255 or follow us on facebook.

