



Ag Insights

From the Desks of Your Northwest Area Ag Specialists

Oklahoma Cooperative Extension Service - Division of Agricultural Sciences and Natural Resources - Oklahoma State University

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War on Fall Armyworms

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Fall planting has begun for those hopeful in producing some fall forage. With recent rains, planting conditions have been very favorable for most with over a third of the wheat pasture in the ground. Fields that have been sown have started to emerge with reports of decent to excellent initial stands. Unfortunately, this forage is under heavy attack from fall armyworm infestations.

These fall armyworms did not just show up right before planting, they have been here since August. The armyworms feed on many crops and weeds, including alfalfa, Bermuda, native grass pastures, sorghum, pigweeds, soybean, canola, and many more. In general, armyworms prefer grasses, but can infest broadleaf crops from time to time.

As their name suggests, these caterpillars move in large groups and can take you out in a matter of days just as any well-organized army. Fall armyworms are not known to overwinter in Oklahoma. They invade the state from the south, usually from Texas or Mexico. They thrive following late warm summer rains when humid climatic conditions persist.

Flights of the moths invade an area and lay up to 1,000 eggs over several nights. After a few days, these eggs will hatch if weather conditions are favorable. After hatching the caterpillars can move in large groups as they forage on the crops. The caterpillars will molt six times as they grow over an 18 to 28 day period.

When the caterpillars are young, they typically can only remove the outer layer of the leaf when feeding. This damage is called "window paned", since the small patches on the leaf look transparent. Caterpillars are white, yellow, or light green and darken as they mature. They can be easily distinguished from other caterpillars and worms because they will have a prominent "Y" on their head.

Damage from the fall armyworm can happen, seemingly overnight, but usually over a few days. It will be critical to scout early and often in order to make economical and timely management decisions. If caught early, there is still a chance of saving the crop but if the caterpillars get to be an inch to an 1.5 in length they can completely take out a stand.

In addition to young small larvae not consuming much forage, they are also much easier to control. Control of caterpillars longer than an inch becomes more difficult. About 94% of all the food that a fall armyworm caterpillar will consume in its life will occur in its last 5-6 days.

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Waiting until the threshold of 1-2 caterpillars per linear foot of row is OSU's current recommendation. Checking at least 8 places in each field every few days.

There are several insecticides on the market labeled for fall armyworm control. Most will be synthetic pyrethroids. These products are contact type products with very minimum residual. Products containing chlorpyrifos can work good on smaller caterpillars, but mature caterpillars may only be suppressed. Products containing chlorantraniliprole would be a good option to get a few weeks of residual activity, but this product must be consumed so the crop needs a couple inches of growth on it prior to application. Consult the OSU Factsheet CR-7194 for more information on products, rates, and grazing restrictions. Always read and follow the label provided with the product you use.

Insecticide seed treatments will not control fall armyworms. Rigorous scouting is going to be a necessity this fall. Not all fields are going to be infested or reach treatment thresholds. Some fields may only need the outside borders treated. Holding off insecticides can allow beneficials to keep fall armyworms populations in check.

If weather conditions stay favorable, these armyworms will continue to repopulate and infest fields until we get a killing frost. Unfortunately, if you need fall forage it can easily get expensive if multiple insecticide treatments are needed or if fields will need to be replanted. If a producer is only after grain then it would be wise to delay planting.

2018 Crop Insurance Workshop

Trent Milacek, NW Area Ag Economics Specialist, OCES

This year the 2018 Crop Insurance Workshop will be at Autry Technology Center in Enid, OK on November 2. The workshop is a 4-state collaboration with Nebraska, Colorado, Kansas, and Oklahoma to provide crop insurance and industry updates to ag producers, crop insurance agents, ag lenders, marketing consultants and ag educators.

This year the workshop is titled *Successfully Navigating Washington DC Waters –Government Programs to Commodity Markets*. This is a fantastic opportunity to hear from speakers outside of our state that are experts in their fields.

The workshop begins at 8:00 a.m. with registration, donuts and coffee. The first presentation starts at 9:00 a.m. with Congressman Frank Lucas, Oklahoma's Third Congressional District. Congressman Lucas's talk is titled *Washington Update*.

Following Congressman Lucas's talk will be a Farm Bill update from Dr. Amy Hagerman, Agricultural and Food Policy Specialist.

To round out the morning program, Shelly Bilderback and Wylie Rickstraw, Risk Management Specialists, RMA will provide a talk titled *Whole Farm Revenue Protection –How It Really Works*.

After participants enjoy a catered lunch of prime rib, mashed potatoes and green beans, they will hear from Dr. Kim Anderson, OSU grain marketing specialist and Trent Milacek, NW Area Ag Economics Specialist for an update on grain and livestock market outlooks.

After the outlook talks, Dr. Norm Dalstead, Extension Farm/Ranch Economist for Colorado State University will provide a presentation titled *Federal Monetary Policy*.

To round out the afternoon program Dr. Art Barnaby, Professor and Extension Agricultural Economist for Kansas State University will present his topic titled *Which Policy Should I Buy?*

Those interested in attending the workshop are encouraged to visit cropinsure.unl.edu and click on *Workshop Registration* to register. Early registration is \$100 and after Oct. 27th registration increases to \$120. Registration can also be completed by mail using a workshop brochure that can be picked up at your local county extension office. If you have questions about the workshop or registration, please call Trent Milacek at 580-237-7677.

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. A BCS of 5 to 6 is a logical target for most cow herds (5+ for mature cows vs. 6 for 1st-calf heifers). A change of 1 BCS is equivalent to about 90 lb of body weight.

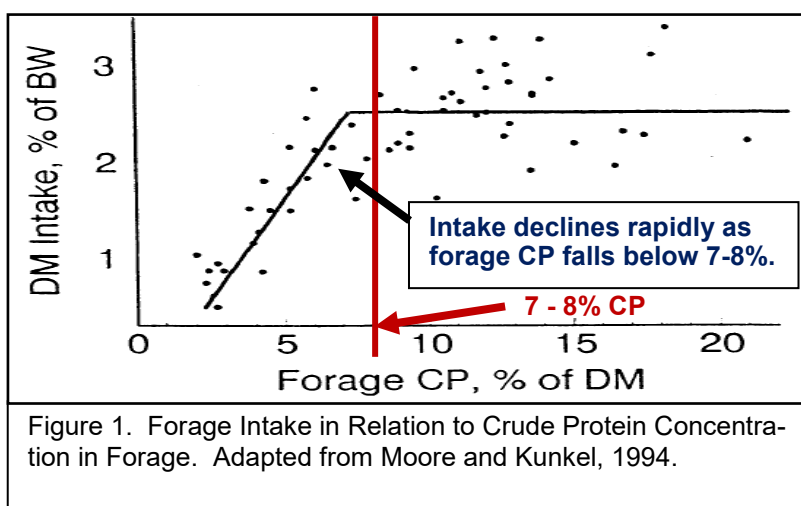
Assessing BCS at weaning can be useful to determine which cows or heifers need the most gain prior to calving providing producers an opportunity to give spring-calving cows, especially first- and second-calf cows, a little nutritional boost if needed. The BCS of beef cows at the time of calving has a huge impact on subsequent rebreeding performance. It is recommended that the target BCS at calving should be at least 5 for mature beef cow and 6 for 1st-calf-heifers.

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.

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 1).

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 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.

Simple Steps to Winter Supplementation

Dana Zook, NW Area Livestock Specialist

Fall is the start of feed season. While I hope producers haven't had to feed much yet, however, I do expect most have given their winter feed options some thought. The time to lock in feed prices is right around the corner and I know producers are looking for assistance making feeding decisions for the coming season. Never fear, supplement guidance is here! Review these simple steps before you decide on a winter supplement and I guarantee you will be more informed to make the decision.

Start by preparing yourself with a review of cow requirements for crude protein (CP) and energy (TDN). Dry cows require 8% CP and a minimum of 54% TDN. Alternatively, a lactating cow needs 10% CP and no less than 58% TDN to adequately feed her calf and maintain body condition. You may notice that I mention requirements of both protein and energy. There is a tendency in the industry to refer only to protein but this is only one part of the equation. Cows in adequate body condition may only need protein but cows needing to gain body condition may need a supplement with more energy. All these details are crucial in determining supplemental need.

The next step is identifying available forage options in the coming season? Will cows be grazing stock piled pastures or is the plan to feed hay? Most producers balance their herd with grazing in late fall and hay feeding later in winter. Extension can provide good estimates of standing forage quality but harvested hays are not as simple. Forage quality can vary greatly from year to year due to a variety of factors; rainfall, temperature, forage variety, time of harvest, fertility, and storage. Because of these factors, harvested forages in the bale or silage pile need to be properly sampled and submitted for analysis. Remember cows require protein and energy and getting an analysis with each of these measures is imperative to recognizing a possible deficiency in a cow's diet.



The final step is to evaluate the supplement source. Do you really need a 20% CP cube this winter or can you get by with feeding a 38% supplement? There is a tendency to only look at the cost per pound of supplements but I would challenge producers to look at the cost per pound of the nutrient that is needed. For example, if producers are comparing a 20% protein supplement that costs \$270/ton to a 38% protein supplement that costs \$340/ton, they should first calculate how many pounds of protein are in each of these supplements. A 20% supplement contains 400 pounds of protein (0.20×2000) and a 38% supplement contains 760 pounds of protein (0.38×2000). With these values, you can determine the cost per pound of protein is \$0.67 for the 20% ($\$270/400$) and \$0.44 for the 38% ($\$340/760$). In addition to the cost savings, producers also benefit from feeding less each day. For instance, if cows are deficient by 1 pound of protein, producers would feed around 2.5 pounds of a 38% compared to 5 pounds of a 20%.

By re-evaluating supplements, producers could have the opportunity to save hundreds of dollars (and maybe more!). Contact your local Oklahoma Cooperative Extension Ag Educator for assistance evaluating supplements for the coming season.



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