



**BEAVER COUNTY
EXTENSION**

Agriculture

Beaver County

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Beaver County OSU Extension

IN THIS ISSUE

Page 2

**The Livestock Forage
Program Disaster
Assistance**

Page 3

**HOW DO YOU HANDLE
YOUR SOIL SAMPLE.....**

Page 4

Calendar

**Slapout Fire Assistance
Info
Understanding Hearing
Loss**

Anticipating calf colostrum needs following wildfire

One of the impacts of the recent wildfire in Texas and western Oklahoma is the reality that some surviving heavily pregnant cows may have injuries that prevent them from feeding their calves following birth.

[Dr. Rosslyn Biggs](#), a veterinarian and [Oklahoma State University Extension](#) beef cattle specialist, and [Dana Zook](#), OSU Extension west district livestock specialist, advise producers facing this situation to obtain a high-quality source of colostrum to ensure calves receive an immunity boost soon after birth. Milking the cow or maintaining a supply of frozen colostrum are the best options for colostrum replacement. Commercially prepared colostrum replacers are acceptable if a cow-derived source is not available.

Colostrum replacement and colostrum supplements are the two commercially available options. They are two very different sources of colostrum that each play a different role for a new calf. When it is determined that calves have not or will not be able to obtain colostrum directly from the cow, a colostrum replacer should be used.

Colostrum replacers may be more costly than colostrum supplements, however, they may provide a more substantial boost in immunity beyond what a supplement can provide.

Delays in a calf receiving colostrum have both short- and long-term impacts on the immune system. Ideally, a calf should receive colostrum within the first two hours of life. Administering colostrum to calves without a suckle reflex using an esophageal feeder should be done with extreme caution due to the increased risk of aspiration pneumonia. Consult a veterinarian if advice or assistance is needed to use an esophageal feeder.

On average, a calf should receive 5% to 6% of its body weight within the first four to six hours of life, with a repeated feeding of the same amount four to six hours later. About 2 quarts of colostrum should be administered to an 80-pound calf. Ongoing research supports early colostrum feeding is best if delivered by four hours of age. Understanding that most births occur unattended, producers should not wait to administer colostrum if there is evidence the calf has not nursed.

Cleanliness is important when collecting and administering colostrum. Esophageal feeders and bottles can serve as sources of disease if not adequately sanitized. Questions surrounding colostrum administration and calf care should be directed to a veterinarian or Extension educator.

CHECK OUT THESE WEBSITES:

[Wildfires: Carcass Disposal](#)

Doug Hamilton, OSU Extension waste management specialist, talks with SUN-UP Host Lyndall Stout about proper livestock carcass disposal in the aftermath of wildfires in Oklahoma and Texas.

[Wildfire Donation Centers](#)

[Livestock Marketing](#)

Derrell Peel, OSU Extension livestock marketing specialist, says the potential for more record prices will continue. He analyzes the resulting challenges for producers and how it all translates to consumers.

[Market Monitor](#)

Kim Anderson, OSU Extension grain marketing specialist, covers crop prices and the latest stocks-to-use ratio measurements.

The Livestock Forage Program Disaster Assistance

Of the three primary livestock disaster assistance programs authorized in the 2014 Agricultural Improvement Act—the Livestock Forage Program (LFP); the Livestock Indemnity Program (LIP); and the Emergency Assistance for Livestock, Honeybees and Farm-raised Fish Program (ELAP)—the Livestock Forage Program has been the most utilized. From January 2011 to December 2018, LFP distributed \$6.82 billion, and Oklahoma received 20 percent of those payments (FSA Data, Figure 2). LFP provides disaster assistance to eligible producers who experience specified periods of drought during a normal grazing season, resulting in grazing losses that require commercial livestock to be sold or otherwise disposed of (FSA, 2018). The program partially offsets the impact of drought-related damage to native or improved pastureland. Payment levels are determined based on the cost of feed or forage and drought category, rather than livestock market prices.

How are payments tied to drought?

Drought is categorized into four levels by the U.S. Drought Monitor¹: Moderate (D1), Severe (D2), Extreme (D3) and Exceptional (D4). U.S. Drought Monitor also tracks areas that are abnormally dry (D0). If a county is rated as having severe (D2), extreme (D3) or exceptional (D4) drought for eight consecutive weeks, then producers in that county may apply for an LFP payment. The drought rating is tied to the county level, not the farm level, so land that crosses county lines may not be eligible for the same level of payment on all acres. The degree and length of drought also factors into the payment levels. LFP payments are made based on a portion (60 percent) of either monthly feed cost for all livestock or the carrying capacity of the grazing land. The lowest of the two monthly livestock feeding cost proportions is used to determine the payment rates, which are published by FSA. For example, in 2018 the payment rate per head was \$28.07 per head for adult beef cows (FSA, 2018). The payment rate per head is then multiplied by a factor determined by the degree and length of drought that is published once a year as shown in Figure 1. USDA-FSA refers to this factor as the “payment months,” and are determined as follows (FSA, 2018):

The payment month will equal one when severe drought (D2) was experienced for eight consecutive weeks in the county during the normal grazing season.

- The payment month will equal three when extreme drought (D3) was experienced at any time during the normal grazing season in the county.
- The payment month will equal four when extreme drought (D3) was experienced for at least four weeks or when exceptional drought (D4) was experienced at any time during the normal grazing season in the county.
- The payment month will equal five when four weeks of exception drought (D4) were experienced in the county, and they do not have to be consecutive weeks.

Payments will not exceed five payment months in any given grazing season for a particular piece of land.

What are the eligibility requirements?

A key part of the program is that the livestock and the land must be in the applicant’s control, though this does include cash land rent situations. Land can include owned land, cash-rent pasture or rangeland managed by a federal agency² for which the applicant has access during the normal grazing season. Livestock must be owned, purchased or under the applicant’s control within 60 days of the qualifying drought or fire event. Livestock must have been sold or disposed of due to the drought or fire in the production year. During the grazing season, the livestock must have been held on grazing land for commercial purposes, meaning some types of livestock are ineligible. This includes livestock that were used for pleasure or hunting including wild deer or elk; kept as pets; or roping or show animals. Commercial livestock that would not be grazing under normal conditions, such as livestock in a feedlot, also are not eligible. However, the types of commercial livestock eligible for LFP is quite diverse, including: alpacas, beef cattle, buffalo/bison, beefalo, dairy cattle, commercially raised deer and elk, emus, goats, horses, llamas, reindeer and sheep.

Use of LFP in Oklahoma

Historically, Oklahoma producers have taken advantage of the LFP drought relief funds. According to Farm Service Agency data, in 2018 almost 40 percent of LFP payments went to Oklahoma producers. In that year, more than 10,000 Oklahoma farmers applied for LFP and received a total of \$65 million in payments. The greater the drought, the more extensively the program has been used. For example, in 2012 — a year of significant drought in Oklahoma — 34,000 Oklahoma producers met the LFP eligibility requirements and received a total of almost \$397 million. In fact, across the last eight years (2011 to 2018), Oklahoma producers have received almost \$1.4 billion in relief funds from this program.

How might a livestock producer in Oklahoma use the LFP program? An example of a cow-calf producer in Washita County that experienced drought in the summer of 2018 on his native pasture can be examined. Rather than feed hay, he sold 20 cow-calf pairs in August due to those drought conditions. Is he eligible for an LFP payment? He would first talk to his Washita County FSA agent to make sure he met all of the eligibility requirements. He owned the land and owned the cows in the 60 days leading up to the drought. He has a sales receipt for the pairs, which were commercial purpose livestock. He filed an acreage report when he realized that he might be eligible for an LFP payment, if he didn’t already have one on file. Assuming he met all of the requirements, he would receive a payment of \$2,245.60.

LFP payment = head × payment rate per head × payment months

Washita County cow-calf producer example payment = 20 × 28.07 × 4 = \$2,245.60

What can I do to prepare for drought?

Weather is a risk that Oklahoma farmers and ranchers are familiar with and drought, in particular, threatens pasture quality in the state. The wind can quickly dry out the little bit of available moisture in some counties. The LFP is one of several disaster payment programs that ranchers can take advantage of when drought occurs. If the LFP might be a program you can benefit from, there are some things you can do now. To receive a payment, you will need to have an acreage report on file with FSA for all grazing land. For example, to claim a payment on a native pasture for the 2018 grazing season as shown in Figure 1, you will need to have had a pasture acreage report filed between November 15, 2017 and November 14, 2018. Applications for payment can be submitted until 30 days after the calendar year when the loss was incurred, but only if that acreage report is on file. Also, you will need to certify that you have suffered a grazing loss due to drought or fire on the application and provide documentation that the livestock were physically located in a county eligible for an LFP payment.

For more information

The LFP is administered by the Farm Service Agency (www.farmers.gov). This fact sheet is designed to give you some general information before meeting with the local FSA agent. If you have any questions on the process, eligibility and limitations, contact the local FSA office to have a discussion specific to your business.

HOW DO YOU HANDLE YOUR SOIL SAMPLE.....

It's that time of year where wheat producers are in all stages of prep across the state, the graze out folks are wondering when the rains will hit to get the dusted in wheat up and the grain only folks are prepping grain drills or dealing with summer crop harvest. While this blog is focused on the wheat producers it should be acknowledged as a work of caution for anyone who pulls soil samples in environments where the temps during sampling can be above the mid 80's.

Following some fantastic work by our Wild Cat Soil Fertility Counterparts ([see blog](#)) we dug into the same question of how does soil sample handling post collection impact the results. Dr. Ruiz-Diaz results on the impact of storage on nitrogen values was not surprising. But we wanted to go the next step and add in sample bag type.

Our Project

We collected a soil ground and homogenized. Placed in three types of bags Ziploc, Commercial (resin lined paper that is closed) and SWFAL bag (breathable material). Placed samples in a mini-van (Field) and brought a group onto campus (Office). With both sets of samples we had temperature loggers collecting hourly data. Every three days we collected four samples from each location determined moisture content and ran a full spectrum soil analysis including CO₂ burst. The soil we used had a OM of 1.1% and soil pH of 6.1

Now let's back up. Why was the KSU data not surprising. Well for those certified and honorary nitrogen ninjas we understand that the N-cycle processes of mineralization, immobilization, and nitrification are biological reactions which are significantly impacted by soil moisture and soil temperature. But the short and quick version is that the microbes that convert organic N to mineral N (NH₄) and convert NH₄ to NO₃ like warm conditions with good soil moisture. So, when you pull soil samples, hopefully there is some moisture in the soil and then you place it in a bag and seal it. This creates an effective greenhouse environment where moisture cannot escape and is the perfect place for microbes to microbial things. Therefore, you expect the organic cycle and nitrogen cycle to move and move quickly through the processes of mineralization, ammonification, and nitrification.

Back to the data.

First, we have the average daily temperatures from the sitting vehicle and the lab. On days 2-5 the average temp of the van was over 100°, after that the temps dropped. One thing to remember is the temp of the van is an average of a wide-ranging highs and lows between morning and midday while the office temperature being stable throughout the entire day.

What is the most interesting and revealing data may be the soil moisture of the samples. Unfortunately, day 3 samples went straight to the oven, but you can see by day 6 the SWFAL bags (yellow line) had dried significantly while it wasn't until day 27 did the Commercial bags in the van (Black line w/ triangle) show signs of drying. It's also important to note that while there are two lines (Field and Office) for the Commercial bags and Ziploc bags, but only one for the SWFAL bags. That is because for all variables measured there was never a significant difference between the SWFAL Field value and the SWFAL Office value.

We are going to start off with the variable that changed the most, NO₃-N. This is also the form of N that is measured in most soil test. With a starting point of 3.4 lbs. N ac⁻¹ (based on a six inch soil sample depth) by day 6 the Field samples had jumped to 15.6 lbs. The office samples had much slower increase in NO₃ with it taking 9 days to reach 10 lbs. You can also see that the error bars start showing up in the samples after about two weeks. The bars show the range in the sample results of a treatment. The interesting thing we saw was that the location within the van was significant. We set each replication of samples in a different spot in the van, the front seat, middle seat, and rear. The thermometers set with each replications showed that each area of the van had slightly differing temperature, which in turn affected the samples.

Ammonium (NH₄-N), which is only reported by a few labs is also impacted by the storage location and bag type, however not to the sample level as NO₃-N. Effectively the SWFAL bags and all samples taken to the office maintained consistent NH₄ levels. The Com bag and Ziplocs left in the van however saw a significant increase in NH₄ over time, basically a 2 lb per day increase.

Of the other measured parameters such as potassium, sulfur, and CO₂ burst data were effected. These will be discussed more in depth in a peer reviewed publication and factsheet.

Take Home's from the Work

While the majority of the nutrients were relatively un affected by the bag type or storage those that are more heavily influenced by organic matter and biological activity where, this includes many of the soil health parameters. The use of SWFAL soil bags resulted in data that was not impacted by storage or time. While most clients of the OSU lab use these bags, more than one samples been brought into the county via a sealed Ziploc baggie. However the majority of the soil samples collected are placed into the resin lined paper bags and sealed. This data set is also important to those who use laboratories that run the Haney test which includes measures of NO₃, NH₄, Organic N, CO₂ respiration and H₂O extracted Organic C. It is critical that when using these type of bags that the samples be brought into climate controlled facilities as soon as possible. Its good to remember when looking at the data that the soil we used had a OM of 1.1%, initial NO₃ of 3.4 lbs. and NH₄ of 14 lbs. A soil with a higher OM% could have even greater change. Another viable is if the soil sample depth is greater than 6". If your sample depth is 8" then the value is 33% higher.

Bags used for the study. SWFAL permeable material, resin lined paper commercial bag, and Ziploc bag-gies.





OSU EXTENSION
4-H YOUTH DEVELOPMENT

**Beaver County
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PO Box 339
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CALENDAR

May 17.....Lahoma Wheat Trial
May 21.....Balko Wheat Trial
May 22.....Hooker Wheat Trial
Aug 21-24Beaver Co. & 4-H Fair

SLAPOUT FIRE ASSISTANCE

**CONTACT the FSA OFFICE AT
580-625-3302 EXT 2 OR
LOREN AT THE BEAVER CO. EXTENSION OFFICE
580-625-3464**

Can You Hear Me Now? Understanding hearing loss and prevention strategies for farmers and ranchers

Hearing loss in farmers and ranchers due to conducting loud tasks without hearing protection.

Farmers and ranchers work daily in noisy environments. From the engine of a tractor to squealing hogs in a swine barn, sound levels on the farm present a serious danger to one’s hearing. A U.S. study by the National Safety Council revealed that 92% of the farmers who participated were exposed to extreme noise levels while carrying out daily tasks. Of those participants, 78% reported suffering from hearing loss.

As a result of hearing loss, farmers and ranchers can become increasingly susceptible to other hazards on the farm that can impact personal safety and the safety of workers, including family members, on the farm. Examples of situations include:

- Hearing warning signals. As a machine operator shifts equipment into reverse when needing to back the machine up, having hearing loss may prevent the farmer or rancher from hearing the warning signal from the machine that indicates the machine is traveling in reverse, resulting in an injury or fatality.
- Reduced concentration. Excessive noise may adversely affect farm workers’ concentration, easily putting farmers, ranchers and their workers at risk for injuries from machinery.
- Physical exhaustion. Farmers and ranchers often have to exert more energy in order to perform their tasks in a noisy environment. The excess energy required can lead to fatigue and increase the risk of work-related injuries on the farm or ranch.
- Decreased moral and mental health. Losing hearing can also contribute to feelings of isolation and depression and affects the overall mental health of workers.

Please check the link below for more information and impact on hearing.

<https://www.ndsu.edu/agriculture/extension/publications/can-you-hear-me-now-understanding-hearing-loss-and-prevention-strategies>

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“Persons with disabilities who require alternative means for communication or program information or reasonable accommodation need to contact Liz Gardner McBee or Loren Sizelove at 580-625-3464 or beaverext@okstate.edu at least two weeks prior to the event.”