AGRICULTURE

NEWSLETTER

January 2025

Supplementing Wheat Pasture Stockers

Paul Beck, Oklahoma State University Cooperative Extension Beef Cattle Nutrition Specialist

In a past article Cow-Calf Corner Newsletter, November 25, 2024. I mentioned that it requires about 5 pounds of wheat forage dry matter (DM) per pound of calf bodyweight at the start of grazing to maximize steer performance. This forage allowance (the pounds of forage DM per pound of steer bodyweight) should result in gains throughout the fall and winter of over 2.5 pounds of gain under normal conditions. For example, to maximize performance of growing 500-pound calf we need to have 2,500 pounds of forage DM per steer. With a normal stocking rate of 2 acres per steer, this is 1,200 to 1,300 pounds of forage DM per acre. (A good thick stand of wheat pasture should be about 6 to 7 inches tall at 1,200 to 1,300 pounds per acre).

If we are slightly overstocked or have less forage available due to poor wheat growing conditions, forage allowance of 3 pounds can provide enough forage for about 2.5 pounds of gain per day. We can increase performance by feeding a small package energy supplement at 2 pounds per day (5.8 pounds/calf 3 days per week) to the growing calves, increasing gain by 0.5 pounds per day. This supplement should provide digestible energy and does not need to be high in protein because of the high protein content of the wheat forage. The supplement can be composed of grains (ground corn or milo work great) and digestible grain milling products with low protein content (soybean hulls and wheat midds), but we can provide extra protein with feeds like corn gluten feed or dried distillers grains if they are competitively priced on an energy basis. We often design these supplements to carry required minerals (calcium and magnesium are often deficient in wheat pasture) and monensin (100 to 200 mg/calf/day), an ionophore that will increase daily gains and reduce the incidence and severity of potential bloat. (Monensin is highly toxic to dogs and horses so care should be taken in storage and feeding feeds containing monensin to keep out of reach of non-targeted animals.) Research at OSU has shown that providing a free-choice complete mineral designed for grazing cattle on wheat pasture along with the energy supplement is as effective as feeding it in a complete package.

If wheat pasture is short but we need to keep the same stocking rate we have in the past, we can maintain stocking rates with higher supplementation rates or other feeding methods to offset the reduced availability of wheat pasture and low forage intake. This will be the topic for my article next week.

Calving and Cow Nutrition in Extreme Cold

Mark Z. Johnson, Oklahoma State University Extension Beef Cattle Breeding Specialist

Calving during the winter months can present some unique challenges. Cold and/or wet weather, higher birth weights, fewer hours of daylight and in most herds this is the time of year when we, as producers, are the primary source of nutrition provided in the form of harvested forage and supplemental feeds. What can we do to make calving in the late winter months as problem-free as possible? GET PREPARED!

Calving Kit and Facilities

Prior to Calving Season it is important to take inventory of our facilities. Our working pens, chutes and alley ways need to be in good working order. If we have a calving barn or indoor facility remember to check cameras, batteries and light bulbs. We want all facilities ready BEFORE we find ourselves assisting that first heifer in the calving process.

Continued on page 2 – see calving

I wanted to share this article with you. Please click below:
CALVING TIME MANAGEMENT FOR BEEF COWS AND HEIFERS

BEAVER County Extension Office

Address
PO BOX 339
111 W. 2ND ST.
BEAVER, OK 73932

Phone
580-625-3464

Email
Elizabeth.mcbee@okstate.edu

Loren.sizelove@okstate.edu

connie.mcminn@okstate.edu

Website
https://extension.okstate.edu/county/beaver/

Social Media
Beaver County OSU Extension

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To be fully prepared, have the following list of supplies in a cooler, bucket or tool box:

- Colostrum, teat cannula and feeding bottle
- Flashlight and batteries
- OB Sleeves
- Non-detergent lubricant
- Antiseptic
- OB chains and calf puller
- Paper towels
- Rope halter
- Large cloth towel

Also, understand the three stages of bovine parturition (covered in Cow-Calf Corner last week). It's important to know what to expect when a cow or heifer goes into labor in order to know when and how to provide assistance.

In regard to colostrum, sooner is better. If you come upon a newborn calf and are not certain it has adequately nursed. Administer colostrum via tube feeder as soon as possible. Insuring an adequate amount of colostrum is ingested by newborns is cost effective.

Cold Weather Impacts Nutritional Requirements

Cold, wet weather drives up cow nutritional requirements and cows should be fed accordingly. The Mesonet Cattle Comfort Advisor is an excellent tool for monitoring weather conditions and the impact they have on cattle. According to the Mesonet Cattle Comfort Advisor, cow energy requirements increase 1% for each degree the cattle comfort index is below 32 degrees F. This energy need will double to 2% if the animal is wet to the skin. In regard to new born calves, consider that in the birth process they are leaving the cozy environment of their mother's womb at a temperature of 101-102 degrees F and hitting the ground at temperatures as much as 100 degrees colder. Add in rain, snow, muddy ground or high winds and the situation can be catastrophic for newborns. While nature equips calves with a limited amount of brown adipose tissue which is burned internally to create heat for survival. Extreme cold can overwhelm the ability to create enough internal heat and hypothermia can occur. Calves suffering from hypothermia are more susceptible to naval infections, pneumonia and scours.

Best management practices for cold weather calving include:

- Provide adequate wind breaks, shelter and bedding so cows can separate and calve in a warmer, dryer, protected environment.
- Plan ahead to provide the additional protein and energy needs of cows during the final trimester of pregnancy and the beginning of lactation.
- Sort first calf heifer from cows and manage accordingly. Heifers are inexperienced and more likely to need a higher level of attention during calving and the initial stages of claiming and raising a calf.

Designing a master Integrated Pest Management plan

Last week this column introduced what an Integrated Pest Management plan is. Now it's time to focus on the elements vital to a good IPM plan.

When designing an IPM master plan, gardeners first use tactics to prevent or minimize pests from making themselves at home. This requires planning, scouting, recordkeeping and education. The plan should be sustainable and flexible for problems that may arise.

Gardeners need to monitor the garden for signs and symptoms of pests and pest damage, which can take some practice. Thoroughly inspect the plants and record your findings, including what insects are found, what weeds are growing and any plant diseases that may be developing. A few tools are needed, including a good magnifying glass, a small trowel or pocket knife and a flashlight in case gardeners are doing some scouting after the sun has gone down. Optional tools include a bucket, shake cloth and plastic vials with snap caps.

When gardeners find a pest, it's important to find out what it is because you can't treat what you don't know. To help with this process, contact an experienced Master Gardener or a local Oklahoma State University Extension educator. The next course of action will be easier to determine once the pest has been identified.

The master plan will include preventative and corrective tactics. Preventative tactics include do nothing, cultural, biological, mechanical/physical and regulatory controls.

Do nothing is exactly what it sounds like. Sometimes the pests aren't numerous enough to be a problem.

Cultural tactics include choosing resistant or tolerant plants, choosing healthy plants, proper placement in the landscape, providing all things needed to keep the plant healthy, good garden sanitation, crop rotation, trap crops/companion plantings and green manures/cover crops. Oklahoma Proven plants are great choices for planting because they have been evaluated by the horticulture faculty at OSU for their wide adaptability in Oklahoma's diverse growing conditions.

Inspect plants for signs of any pests before purchasing. Make sure container plants aren't root-bound and are in a sterilized potting medium. It's important to keep the garden area clean. Use proper sanitation to prevent the spread of disease and keep the area free of dropped fruit, dead branches or infested plant material. Also, keep garden tools clean and sterilized.

It's a good idea to rotate annual crops by plant families. Many insects and diseases are "picky" about which plants they will attack. If plants within the same family are grown in the same place year after year, pests, such as nematodes, soil-dwelling insects and soil-borne diseases can build up. Change the "family" of annual plants that are grown in a spot each year.

Use trap crops and companion plantings to disrupt pests. Trap crops are a way to concentrate a pest into a small planting of a preferred plant to protect the main crop from infestation.
Green manures and cover crops are a way to increase the organic matter in a soil and suppress weeds. They work much like a "living mulch". Some green manures, such as wild brown mustards, can naturally fumigate soil, suppressing some weeds.

Fight those winter blues with sunlight and fresh air

The holiday rush is over, and many people will experience a touch of the winter blues over the next couple of months.

"It's not uncommon in the general public for us to struggle with some level of sadness or an 'I need to get through the season' mindset," said Danyelle Kuss, educator and multi-county specialist for Oklahoma State University Extension in Oklahoma County.

She explained someone who has seasonal affective disorder and a person who generally experiences a lower mood through the winter season are distinctly different.

"SAD is a major depressive disorder with a subtype for seasonal patterns, triggered by a seasonal onset," Kuss said. "Our circadian rhythms start changing, which can disrupt our internal clocks and increase feelings of depression."

The causes of SAD are unknown, but she said other factors that influence it include a decline in serotonin when exposed to less sunlight and an increase in melatonin, a chemical the human body creates to sleep.

"Winter is a time when people isolate more, they're indoors more and they do less of the things that normally make them feel better. Depression feeds on these situations," Kuss said.

Young adults aged 18 to 30 report the highest rate of SAD, while children and older adults experience fewer symptoms. Major signs of depression that impact daily functions like not being able to get out of bed or calling in sick to work indicate the need for professional support.

"It might not just be normal sadness during the holidays or winter months," Kuss said. "A person might need to talk to a therapist or doctor and discuss what adjustments they can make. I always look at how a condition impacts somebody's ability to function as a big distinction."

For those with milder cases of the winter blues, Kuss suggests creating a plan of daily or weekly lifestyle tips that can improve mood long-term:

- Bundle up and go outside for at least 15 to 30 minutes of daily sunlight and exercise.
- Stick to or develop a healthy routine of sleep, movement and eating nutritious foods.
- Be consistent with medication if taking any for depression.
- Limit or avoid alcohol, as it is a depressant and can worsen symptoms.
- Stay connected to a support system – make plans and stick to them. Follow through with commitments.
- Be kind to yourself and others. Practice self-care.

To help with depressive symptoms or seasonal blues, Kuss said people may have to work against their instincts that tell them to stay inside and alone.

I might not feel like going outside for a walk in the cold sunshine or getting out of my warm pajamas to go to a friend's house, but if I can manage that initial discomfort, I will feel better on the other side of taking those actions," she said.

A fun way she advises people to combat seasonal depression is to ride the holiday wave by continuing to meet up with family and friends.

"Weekly get-togethers can help us during those tough times of the month and require us to look at what does and doesn't work for us," she said.

Winter hydration is important for good health

Hydration is important in the heat of the summer, but it is just as crucial — if not more so — during the winter months.

Several factors contribute to dehydration in cold weather, including warmer indoor temperatures, cold air and less water consumption.

"You may not feel as thirsty in the winter as you do in the summer, so it's easier for dehydration to sneak up on you," said Janice Hermann, Oklahoma State University Extension nutrition specialist. "Cold, winter air is less humid, and a home's heating system can pull even more moisture out of the air. Plus, the body loses air breathing out, but the moisture isn't replaced when inhaling due to the dry air conditions."

A person's thirst response diminishes up to 40% in cold weather. Blood vessels constrict to prevent blood from flowing freely to the extremities. Directing that blood flow to the body's core to protect vital organs tricks the body into thinking it's properly hydrated. Therefore, people often drink less water, thus increasing the risk of dehydration.

Hermann said sweat on the skin evaporates almost immediately in the winter, making it more difficult for people to realize they're losing water.

"Dehydration can be life-threatening, even causing heat exhaustion and stroke. We can tolerate losing stores of fat and carbohydrates but not water," she said.

A 1-2% water loss can cause fatigue, weakness and loss of appetite; 3-4% loss can cause impaired physical performance, dry mouth, urine reduction and flushed skin; 5-6% results in difficulty concentrating, headache, irritability, sleepiness, impaired temperature regulation and increased respiratory rate; and a 7-10% loss can lead to dizziness, spastic muscles, loss of balance, delirium, exhaustion or heat stroke.

Hermann said some older adults are particularly susceptible to dehydration because they may limit fluid intake due to concerns about incontinence. Also, the thirst mechanism isn't as effective as the body ages.

"Older adults often deal with muscle loss, which results in the loss of body water," she said. "Unfortunately, many signs of dehydration are misinterpreted as being due to age."

How much water is enough? The Dietary Reference Intake Committee set the adequate intake of liquid at 3.7 liters and 2.7 liters per day for adult males and females, respectively. This includes both water in beverages and food. About 20% of a person's water intake comes from food, but more may be needed with increased physical activity or environmental conditions.

Hermann said any beverage can provide fluids, but some options are better than others.

"Water is the best option. Herbal teas and sugar-free hot cocoa can be soothing on a blustery winter day," she said. "Sodas and juices count for total fluid intake, but the added sugar can pull water into the large intestine and interfere with proper water absorption."

Caffeine does cause some fluid loss, so adults should limit caffeine intake to 400 milligrams per day. Avoid alcohol as it is a diuretic causing water loss and shouldn't be used to meet fluid recommendations.

Tips for staying hydrated in the winter:

Keep a water bottle handy.

Set water-consumption goals and track daily water intake.

Set reminders to hydrate.

Check your hydration meter. Urine should be a pale, straw-like color when properly hydrated.

"Remember, hydration is a year-round effort that has a positive impact on your overall health," Hermann said.

Beaver County Extension Office
PO Box 339
Beaver, OK 73932

CALENDAR

Women in AG Series

Feb 4 ..... Financial Aspects of Estate & Transfer Plan
Feb 11 ..... Putting Your Plan in Place

Feb 1 ..... Beaver Local Livestock Show

FEB 7 ..... Balko Local Livestock Show

Feb 10 ..... Beaver County JR Livestock Show

GARDEN TIPS FOR JANUARY

- If precipitation has been deficient (1" of snow = ~ 1/10" of water), water lawns, trees, and shrubs, especially broadleaf and narrowleaf evergreens. Double check moisture in protected or raised planters.
- Check on supplies of pesticides. Secure a copy of current recommendations and post them in a convenient place. Dilution and quantity tables are also useful.
- Check that gardening tools and equipment are in good repair—sharpen, paint, and repair mowers, edgers, sprayers, and dusters.
- Inspect your irrigation system and replace worn or broken parts. (HLA-6615)
- Control overwintering insects on deciduous trees or shrubs with dormant oil sprays applied when the temperature is above 40°F in late fall and winter. Do not use "dormant" oils on evergreens. (EPP-7306)
- A product containing glyphosate plus a postemergent broadleaf herbicide can be used on dormant bermudagrass in January or February when temperatures are above 50°F for winter weed control. (HLA-6421)

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