

Producers Newsletter

November / December



MONTANA
STATE UNIVERSITY

EXTENSION



Winter Feeding

As fall turns to winter and cattle are being brought home many producers are going to start feeding the animals. When feeding livestock throughout the winter it is helpful to know that there are a few different ways that one can provide forage. Additionally, knowing the nutritional requirements of your livestock is the key to knowing how much to feed.

The most popular method is to supply forage directly to cattle in the form of a bale. This allows a producer to manage the amount of feed delivered with relatively great accuracy. By knowing the weight of each bale and how many pounds are needed to feed your herd it is easy to put out enough to forage for cattle. Additional supplementation can also be added with ease when bales are fed by either mixing or topdressing the feed.

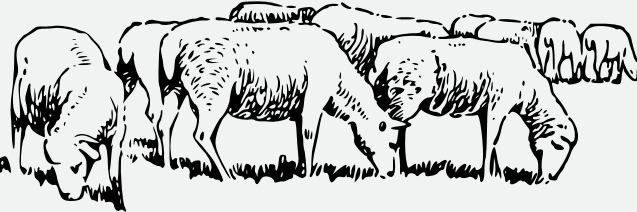


Other methods include providing a total mixed ration (TMR) and grazing throughout the winter. The use of a TMR is best if your goal is to feed animals as closely to the nutrient requirements as possible. This method requires ration formulation and a mixer.

Alternative feedstuffs along with conventional feedstuffs are placed into a mixer and fed to a pre-calculated TMR that will typically meet requirements for protein, energy and gut fill with great accuracy. This is considered the most intensive form of feeding and is typical in feedlots and dairies.

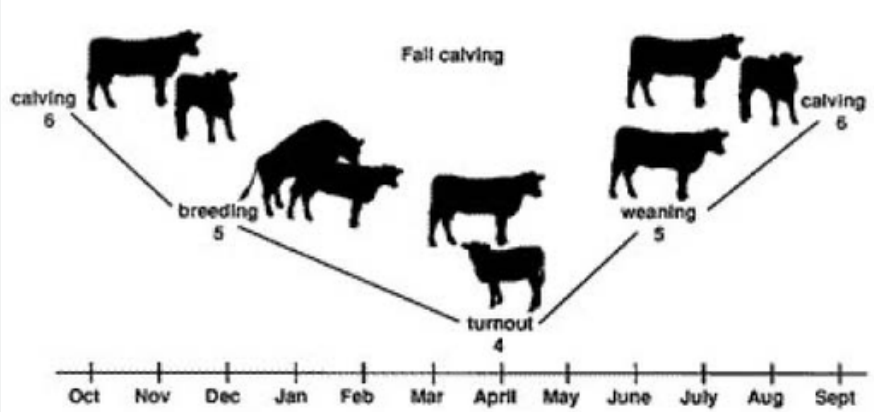
Grazing through the winter months is the third method can be utilized in Montana if the snow allows. Winter grazing is possible when snow levels do not cover all available forage. This method, if possible allows for a great deal of additional time for producers as they will not have to feed cattle throughout the week. Prior planning for grazing is also necessary as forages must be left alone during the summer and fall so that grass can grow. Additionally, this forage will have a lower nutritive value as forages lose protein content the older they grow. Consequently, additional supplementation may be needed to satisfy nutrient requirements of livestock.



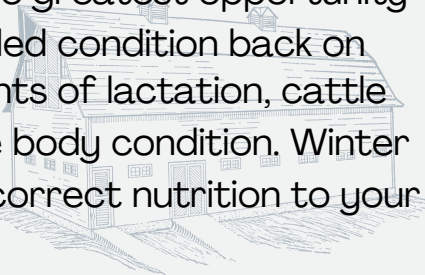


Winter Feeding cont.

In the late fall/early winter after calves have been weaned cattle will fall to their lowest nutrient requirement. This continues until the third trimester when fetal growth requires the increase nutrient requirements before peaking as lactation starts. With spring calving herds all methods of winter feeding are viable options so long as cattle can forage for enough nutrients to support fetal growth and maintain body condition. However, fall calving herds might want to reconsider grazing throughout the winter months. I would also caution anyone who needs to increase body condition score of their herd from implementing the more extensive method of feeding. The period after calving is the greatest opportunity to put needed condition back on



your cow herd. Due to reduced nutrient requirements in the absents of lactation, cattle are able to devote more resources to getting to a more desirable body condition. Winter feeding should be looked as a tool and opportunity to deliver the correct nutrition to your herd in an attempt to set cows up for success the following year.





Leasing Rates for 2022

(Dollars per acre)

Pasture

State wide - \$7.80

Fergus - \$11.50

Petroleum - \$7.30

Dry Land Crop

State wide - \$31.00

Fergus - \$32.50

Petroleum - N/A

Irrigated Cop

State wide - \$104.00

Fergus - \$72.00

Petroleum - N/A

Montana Grazing Lease Rates 2021

(Dollars per acre)

Animal Unit Month (AUM) - \$26.50

Cow-Calf - \$28.00

Per Head - \$26.00

A blue-toned illustration of a farm scene. In the foreground, several cows are grazing. In the background, a horse-drawn hay wagon is filled with hay. The title 'Testing Forages' is written in large, white, bold letters across the middle of the illustration.

Testing Forages

Testing forage for the nutritional value is becoming more important with increasing hay prices. By testing the quality of your forage you will know how much feed is needed and if additional supplementation is needed. Collecting samples is the first step to testing forages, followed by sending samples off for testing. Once nutritional compositions are known, feeds can then be used more strategically.

When collecting feed samples it is important to get a good sample as the numbers need to accurately represent your forage supply. Fortunately, MSU Extension has a MontGuide to help guide you through the process of collecting a quality sample. The MontGuide *Collecting a Forage or Feed Sample for Analysis* (MT201610AG) is a great resource that will clarify how samples should be collected. It is important to gather a sample that is representative of the entire "lot" of forage. A "lot" should consist of forage that is uniform in maturity, type of forage, harvest time, and location grown. Samples that do not meet this criteria should be split into smaller "lots" for more accurate feeding. The equipment that will be needed is a forage probe, a bucket, a Ziploc bag, and a drill depending on the probe used. Probes need to be used so that a core sample can be taken, samples should not simply be "grabbed" from the side of a bale. In order to obtain a good representation of the present forage, 10-20% of bales should be sampled. This means if you have 200 bales, you will want to sample 20-40 bales.



Categorizing bales into more similar kinds will both provide more samples and give better representation of the nutritional content present.

When sampling stands or windrows you will want to sample in an "M" pattern collecting a total of 9 sample points to combine into 1. Sampling a total mixed ration (TMR) is much simpler as all the ingredients are mixed evenly throughout the ration. For a TMR a simple "grab" sample will be adequate.

Once you have collected and sent your sample off for analysis you will need to know how to interpret the results. Similarly to collecting a sample, MSU Extension has created the MontGuide *Forage Analysis Interpretation* (MT201609AG) that explains how to do this. When you first look at a feed analysis sheet you will notice an *As Received Basis* and a *Dry Basis*. The dry basis category is the value after all the moisture has been removed from

Testing Forages cont.



the sample. By doing this, samples can be compared on an even level. Rations can accurately be formulated in a dry basis and then converted back to "as fed" when added to the bunk. When looking at a feed analysis there are a few components that you will want to take note of; crude protein (CP), acid detergent fiber (ADF), neutral detergent fiber (NDF), and any measurement of energy. The most expensive nutrient is going to be CP, which will make it the most important. Labs measure the nitrogen (N) content of a feed in order to estimate the CP ($\% \text{ CP} = \% \text{ N} \times 6.25$) of a diet. By measuring N in the feedstuff, laboratories can give an estimate to all protein present.



Fiber is the next nutrient that producers should be aware of as is the primary source of energy for

ruminants. Fiber is measured in two ways, ADF and NDF. Acid detergent fiber is used as a way to measure the energy content of a feedstuff while NDF is an indicator of how much gut fill a feed will have. Forages that are a younger maturity will have lower levels of NDF than plants that are an older maturity. This is due to the lignification of the plant making the plant more rigid and diminishing the nutritive value.

Along the lines of ADF, energy measurements are also worth noting. Fat is a high energy substance with 2.25x more energy than carbohydrates. A word of caution when feeding fat is to limit it in the diet as fat is anti-microbial and can cause ruminal complications if fed in excess. Energy can also be expressed in a multitude of ways. The Net Energy system accounts for the energy losses from digestion and metabolic functions while Total Digestible Nutrients (TDN) measures the sum of digestible fiber, protein, fat, and carbohydrates. Although TDN is a useful measurement, the Net Energy system allows for greater accuracy when feeding. Net Energy is also broken down into maintenance (NEm), lactation (NEl), and gain (NEg). This breakdown demonstrates how much energy will be available for the desired stage of production. Relative Feed Value (RFV) is a third measurement and one that our office will recommend you get when sending in a sample.



Relative Feed Value

is an index number that measures ADF and NDF. However it is recommended because it will provide the other components such as dry matter and protein.



Youth Beef Show

It's never too early to start getting your show cattle for next year out and about to gain some show experience. Also, who doesn't like a good cattle show?

Date: January 29, 2023

**Where: Fergus County
Fairgrounds**

At the Montana Winter Fair's Youth Beef Show, you can get an early look at what cattle Montana's youth will be showing in the following summer.



EASY CARVE PEPPER AND HERB PRIME RIB

INGREDIENTS:

8 pounds Certified Angus Beef® bone-in ribeye roast
2 tablespoons coarse cracked black pepper
2 tablespoons coarse kosher salt
1 tablespoon granulated garlic
1 teaspoon dry rosemary
1 teaspoon dry oregano
1 teaspoon dry thyme leaves

↑ With a boning knife, carefully cut rack of ribs as one slab away from roast and tie back on with butcher's twine between each bone. (If possible, have your butcher do it.)
Combine pepper, salt, garlic and dried herbs. Rub the entire ribeye roast with seasoning blend and wrap tightly in plastic; refrigerate overnight.
Preheat oven to 325°F. Remove plastic from roast and place roast in a shallow roasting pan with a rack, fat-side down. Roast, uncovered, for 90 minutes.
Flip roast so that fat side is now up. Continue roasting approximately 1 hour or until internal temperature reaches 125°F for a deep pink interior.
Transfer prime rib roast to a cutting board and let rest 20 minutes; remove twine and bones for easy carving.
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INSTRUCTIONS:



Body Condition Score cont.

BCS 1



BCS 2



BCS 3



BCS 4



BCS 5



BCS 6



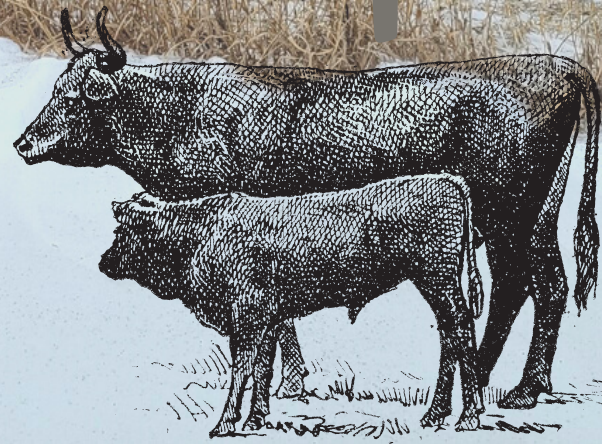
BCS 7



BCS 8



BCS 9



Private Pesticide Applicator Training

December 2nd 2022

Lewistown Eagles Club | Main Hall | 124 W Main St. | Lewistown, MT

Applicators do not need to order training materials which include the core manual and addendum, but it is highly recommended for new applicators to order a set for reference. New applicators will need to fill out a new applicator permit with \$60 fee (if within district 5) and mail to Montana Department of Agriculture.

Registration due to the MSU Fergus/Petroleum County Extension office by Nov. 15 at (406) 535-3919.

8:15 a.m. **Registration**

8:45 a.m. **Reading the Pesticide (60 minutes)**

Jennifer Solf, MSU Musselshell County Extension

How and when to utilize the pesticide product label, active versus inert ingredients, signal words, restricted entry intervals (REI), pesticide product rate (going above or below product rate), pesticide storage, disposal, and importance of crop/site locations.

9:45 a.m. **Herbicide Formulations and Adjuvants: Hands-on lab exercise (60 minutes)**

Makayla Paul, MSU Meagher County Extension

Hands on opportunity to examine the properties of different formulations of herbicides and adjuvants. The demonstration will demonstrate the three-solubility class: water soluble, oil soluble, and non-soluble. It will also demonstrate the effectiveness of agitation.

10:45 a.m. **Break**

11:00 a.m. **Calibration of Backpack, Boom, and Broadjet Sprayers (60 minutes)**

Rose Malisani, MSU Cascade County Extension

Determine output of sprayers (GPA), determine nozzle output, how to read a nozzle specification sheet, understanding the effects of speed and pressure, how many acres can you spray with a given volume, how much pesticide product do you add to the tank, how much pesticide solution do you add to the tank, useful conversions (pints to ounces, gallons to ounces, etc.), using calibration formulations to help you keep pesticide records, and calibration exercises.

12:00 a.m. **Taco Lunch**

1:00 p.m. **Personal Protective Equipment and Safety (60 minutes)**

Colleen Pegar, MSU Hill County Extension

Toxicity definition (acute versus chronic), four routes of exposure, pesticide formulations, applicator safety (liquid versus dry formulations), LD50, signal words, how humans process toxic substances, personal protective equipment (PPE), laundering pesticide contaminated clothing, proper pesticide storage, procedures in event of poisoning, and sprayer/equipment cleaning.

2:00 p.m. **Integrated Pest Management of Grasshoppers (60 minutes)**

Cody Ream, MSU Fergus Petroleum County Extension

Integrated pest management definition, benefits of integrated pest management, economics thresholds, economic injury levels, monitoring techniques, pest identification, control methods (chemical, cultural, biocontrol, transgenic, and mechanical), resistance, and resistance management in regard to grasshoppers.

3:00 p.m. **Break**

3:15 p.m. **Integrated Pest Management of Fergus County Weeds and Weed ID (60 minutes)**

Brenda Mury, Fergus County Weed Coordinator

Integrated pest management definition, benefits of integrated pest management, economics thresholds, economic injury levels, monitoring techniques, pest identification, control methods (chemical, cultural, biocontrol, transgenic, and mechanical), resistance, and resistance management in regard to Fergus County weeds.

4:15 p.m. **Adjournment**

Montana State University Extension is an ADA/EO/AA/Veteran's Preference Employer and Provider of Educational Outreach.

Private Pesticide Applicator Training – December 2nd, 2022

Lewistown Eagles Club | Main Hall | 124 W Main St. | Lewistown, MT | **Registration due November 15th**

The Montana State University Extension Pesticide Education Program (PEP) is an educational program promoting the proper use of pesticides to protect public health and the environment. This includes coordinating the Montana Private Applicator Training Program, as well as providing educational resources regarding pesticide use, pest management, reading the label, pesticide law, health, safety, and the environment. PEP supports all applicators, businesses and homeowners by combining educational resources and knowledge from scientists, governmental agencies and the public.

AGENDA (Subject to Change)

- 8:15 a.m. Registration
- 8:45 a.m. Reading Pesticide Labels; Jennifer Solf, MSU Musselshell County
- 9:45 a.m. Herbicide Formulations and Adjuvants; Makayla Paul, MSU Meagher County Extension
- 10:45 a.m. Break
- 11:00 a.m. Calibration of Backpack, Boom, and Broadjet Sprayers; Rose Malisani, MSU Cascade County Extension
- 12:00 p.m. Taco Lunch
- 1:00 p.m. Personal Protection Equipment and Safety; Colleen Pagar, MSU Hill County Extension
- 2:00 p.m. Integrated Pest Management of Grasshoppers; Cody Ream, MSU Liberty County Extension
- 3:00 p.m. Break
- 3:15 p.m. Integrated Pest Management of Fergus County Weeds and Weed ID: Brenda Mury, Fergus County Weed Coordinator
- 4:15 p.m. Adjournment

Please complete the below registration form. Applicators do not need to order training materials which include the core manual and addendum, but it is highly recommended for new applicators to order a set for reference. Lunch will be roast beef with mashed potatoes and gravy, fixings, dessert, and a beverage. New applicators will need to fill out a new applicator permit with \$60 fee (if within district 5) and mail to Montana Department of Agriculture. Contact the MSU Fergus/Petroleum County Extension office for more information at (406) 535-3919.

REGISTRATION FORM (Please print clearly.)

Name(s) Address _____

City State Zip _____

Phone Email _____

Cash or Check Receipt Number _____

Fee	Price	Quantity	Total
Training Materials (Core Manual and Addendum Set)	\$15.00 per set		\$
Lunch (Roast beef lunch with a beverage, and dessert)	\$10.00 per plate		\$
Grand Totals			

Mail registration form and payment to MSU Fergus/Petroleum County Extension, 712 West Main St, Lewistown, MT 59457 or drop off in person. Make checks payable to MSU Extension. No credit or debit cards accepted, only checks or exact cash. **Registration deadline is November 15th.**

