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*This newsletter is provided as a public service to producers and others in beef industry related fields. If you do not have an interest in receiving the Cattlemen's Corner Beef Newsletter in the future, please contact the Extension Office and we will remove your name from our mailing list. Likewise, if you know of someone who would like to receive the newsletter, please let us know. <http://www.extension.uidaho.edu/owyhee> 208-896-4104*

## Management Implications for Grazing Irrigated Pastures in the Fall

K. Scott Jensen  
UI Extension Educator, Owyhee County

Fall can be a critical period in the lives of desirable pasture plants. While it is common thought that plants that appear to be dormant can be grazed "to the ground" without hurting anything, perception is far from the truth. Fall residual plant materials (leaves, lower stem bases, and crowns) are essential to maximize next year's production for perennial grasses and forbs.

### Physiology

Fall is considered the beginning of the perennial cool-season grass cycle. This is the time of year when grasses produce the first generation of roots and most of their apical meristems (growing points) for the next growing season. In order to begin this process, grasses must retain enough basal leaf material to "recognize" that days are getting shorter.

Additionally, new roots and apical meristems need a steady supply of nutrients and protection from stress. In the fall, nutrients are supplied from the previous season's tillers, which have stored carbohydrates in the bottom 3-4 inches of their bases. Often these older tillers are dormant and brown at this time of year, but they aren't dead, and their storage function is critical. These older tillers also provide physical protection to the new tillers.

Plants that are grazed short during the fall are less likely to overwinter and will be slower to "green up" in the spring. The result is that these plants/pastures will require

more time in the spring before they are ready to graze.

### Strategies

It is good practice to ensure that adequate phosphorous and potassium are available in the fall. These nutrients help to stimulate apical meristem development. Appropriate irrigation during this time is also important to maximize development. A fall application of nitrogen is generally not recommended as it can encourage additional plant growth and inhibit the natural plant process of preparing for dormancy and the coming growing season. Additionally, nitrogen is very mobile in the soil and winter precipitation could push it beyond the root zone or completely off the pasture in any runoff.

Similar to all other times of year, good grazing management is important in the fall. Livestock grazing should be controlled in order to avoid excessive defoliation of the pasture. For the majority of cool-season grass species, a 3-4 inch residual plant height (after grazing) is appropriate. This will maintain sufficient plant energy reserves for the development of new roots and apical meristems. It will also provide energy for the plants to get a "jump start" in the spring. . . . continued on page 2

**Observations**

There are a couple of small acreage landowners that I have observed in southwestern Idaho the last few years. Their properties are side-by-side with only a fence dividing them. The landowner to the west has consistently left a 4-5 inch residual. The landowner to the east has consistently left cattle on his pasture until well after all grazeable forage was completely removed. When spring arrives, the pasture to the west is growing and ready to graze 3-4 weeks earlier than the pasture to the east.



This repeated practice has also created a much less vigorous east pasture. My estimation is that total annual forage production is 40% lower on this pasture when compared with the neighboring pasture to the west.

**Take Home Message**

Fall is an important time for perennial pasture plants. Grazing should be managed to leave sufficient residual for cool-season grasses to develop the framework for the next season's growth. This will promote improved plant vigor and help to maximize production potential for the next growing season.

**Nutrient Shopping . . . continued from page 3**

- Storage facilities at the ranch
- Cost of feeding the product
- Availability of the product
- Consumption amount required to balance the ration
- Other nutrients required to balance the ration
- Waste
- Salt and mineral content
- Competition when fed (bunk space)
- Opportunity to medicate feed
- Worn and broken teeth on blocks

Remember that not all feed ingredients are equal in nutrient value or price. Have feed analyzed so you know what you are buying or selling and sharpen your pencil to determine the best value that meets your needs.

Even though the price of feedstuffs has increased significantly the biological nutrient demand of the bovine remains the same. The nutrient demand must be met or reduced production will result.

**Hypothermia . . . continued from page 4**

Breathing the warm air coupled with consumption of colostrum heats the calf from the inside out and provides it with the needed energy to overcome the trauma it just went through.

It is paramount to stay focused on the year-round management of your cow herd. There is little that can be done during the last week or two of pregnancy to add brown fat to a fetus gestating in a very thin body condition cow. This process requires a constant effort. Many factors contribute to successful calving. These include selecting cows with good genetics that have functional udders and good mothering ability, providing adequate nutrition to the brood cow, upholding body condition throughout the year, maintaining a quality mineral program, calving in an area that offers protection, and calving in sync with Mother Nature.



## Nutrient Shopping

Ron Torell  
Long-Standing Educator and Advocate of Agriculture

Hay prices are skyrocketing. In some instances the price has doubled from what it was just a few short years ago. These escalating prices are primarily due to a nationwide drought which has reduced supply and increased demand for hay, grain and standing forage. The price relationship of protein and energy sources parallel corn and other grain commodities. Whether you are selling, purchasing or feeding hay it is important to know what you are dealing with. The best and most appropriate way to accomplish this is to compare price per pound of nutrient, not price per ton of feed. This is when an accurate forage/hay sample and analysis will save/earn you valuable dollars.

Feeds should not be compared by cost per ton as this is very misleading. When nutrient shopping you are normally interested in protein and/or energy. When comparing feeds for specific nutrients the following guidelines assist in determining the best buy. Don't get caught paying high prices for ingredients used as fillers.

First, determine the dry matter content of the feeds to be compared. Do this by multiplying 2,000 pounds by the percent of dry matter contained in the feed as determined by laboratory analysis. This will give you the total pounds of dry matter in one ton of feed. For example, if a hay sample is 87% dry matter, multiply 2,000 pounds of as-fed hay by 87% (0.87) dry matter content which results in 1,740 pounds of actual dry matter.

Next, determine the total pounds of a nutrient in those 1,740 pounds of dry matter. Do this by multiplying 1,740 pounds by the percent of the nutrient contained in that feed. For example, if the hay is analyzed at 19.55% crude protein on a dry matter basis, multiply 1,740 pounds of dry matter x .1955 (19.55% crude protein) = 340 pounds of crude protein. This leaves 1,660 pounds of water, other nutrients and filler contained in one ton of as-fed feed (2,000 pounds – 340 pounds of crude protein = 1,660 pounds).

Finally, determine the cost per pound of actual protein. Do this by dividing the ton price of as-fed feed (most feeds are priced as-fed and/or by the ton) by the pounds of actual protein contained in that ton of as-fed feed ( $\$250/\text{ton} \div 340$  pounds of crude protein = 73.5¢/lb).

In the example above, \$250/ton of as-fed hay with a protein content of 19.55% (dry matter basis) has a price comparison shopping value of 73.5¢/lb of crude protein. This same pricing method can be applied when shopping for energy by simply replacing the protein components of the above formula with the energy numbers.

Protein supplements are perhaps the most difficult to evaluate because they can differ in the amount of utilizable protein. Feed supplements such as tubs, liquid and block often contain non-protein nitrogen (NPN) sources such as urea, biuret and others. There is also bypass protein and rumen degradable protein. Non-protein nitrogen sources of protein do not equal natural protein yet many unsuspecting cattlemen purchase these products assuming they are. The extent to which NPN is utilized is dependent upon several factors including the energy content of the ration and the quality of the available forage. The general rule of thumb nutritionists follow for animals consuming a forage based diet is that no more than 1/3 of the total protein of the ration should be provided to the animal from non-protein nitrogen sources when adequate energy is contained in the total ration and/or supplement. It is for this reason when price comparing feeds to read the feed analysis label and remove the NPN portion of the protein for price comparison purposes. Recognize that if a supplement contains no more than 1/3 of the protein content as NPN, animals will utilize a portion of the NPN as protein.

Factors other than price should also be considered when shopping for feed ingredients. These include but are not limited to:

- Convenience/feed-ability; i.e. feeding blocks or tubs vs. hay or pellets
- Transportation costs of getting feed to the ranch. Keep in mind it will probably cost the same to transport a load of good hay as it will a load of junk hay.

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## Hypothermia and Thermogenesis

Ron Torell  
Long-Standing Educator and Advocate of Agriculture

Why do some calves survive being born on a cold, wet, blustery night while others under the same conditions die of hypothermia? Most will agree that these calves have a lot of heart with a strong will to live. When these nub-eared, bob-tailed survivors are brought to the branding fire cowboys generally compliment the cow as a good mother. Much of the credit, however, can be attributed to the fascinating process of body heat generation known as thermogenesis. There are two types of thermogenesis: shivering and non-shivering.

Shivering thermogenesis helps the body create heat. The skeletal muscles create the shivering. The shivering heats up the body through this muscle activity and the hair's insulation factor retains the heat.

Non-shivering thermogenesis is reliant upon energy. Energy, which is measured in calories, comes into the body as food. This energy, if not readily used, is stored in the body in the form of fat. Thermogenesis refers to the creation of heat from this fat. The ability of a newborn wet calf to dry off, warm up and bring its body core temperature to normal under adverse conditions is largely dependent on how much stored body fat is available.

There are both white and brown fat cells found in the body of both humans and animals. Much like money placed in a certificate of deposit in the bank, white fat cells are the primary long-term storage area of energy. The brown fat cells are the cells that compose adipose tissue specialized in storing readily available energy. They are like a furnace generating heat. These cells function just as split mahogany or crushed coal does in a wood stove. They burn faster and produce more heat providing immediate emergency access to the newborn calf.

Brown fat is extremely prevalent in healthy, newborn calves who exhibit tremendous amounts of non-shivering thermogenesis to regulate their body temperature. The brown fat is located around blood vessels and major organs insulating them. When triggered into activity it causes the blood to warm. The warm blood is then circulated throughout the body spreading the heat.

On a warm day without a challenge all may go

well for a calf born from a thin cow that did not have adequate pre-partum nutrition and/or body condition. On a cold, wet day with the wind blowing the chances of that same calf surviving are slim since it may lack an adequate amount of stored brown fat to warm itself.

If hypothermia in newborn calves is a consistent problem on your ranch perhaps it can be traced back to thin cows. Nutritional management of the beef herd might be to blame. A calf may have the heart and will to live but if it has no fat storage hypothermia may take its toll primarily due to a lack of brown fat deposition during gestation.

It's important to note that there are other factors that may contribute to hypothermia and impede thermogenesis. These may include an unusually long and difficult birth (dystocia), delayed delivery, oxygen deprivation at birth, calves born to first calf heifers, weak colostrums, or acidosis.

Should you find yourself in a situation of calving out very thin cows in inclement weather consider spending more time assisting those young calves at or immediately following delivery. Oftentimes a calf may not appear to be hypothermic. Upon taking its temperature you may find that the calf's body temperature is below normal. The use of a thermometer is essential to determine the degree of hypothermia.

Returning a calf's core body temperature to normal (100° F for newborn calves) is of immediate concern to ward off hypothermia. Place the cold calf in a heat box or under a heat lamp, submerge it in a warm bath, put it next to the heater in the house or place it on the floor board heater of a pickup truck. These are all effective methods that may be used to bring the calf's body temperature up to normal.

Feeding the hypothermic calf warm colostrum as soon as possible speeds recovery and increases the probability of full recuperation.

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# Intermountain Rangeland Livestock Symposium and Technical Training

January 10-11, 2013 – College of Southern Idaho – Twin Falls, Idaho

## Registration:

**Full:** \$80 (\$100 after Jan 1)

**Additional Person:** \$40

**Optional Supper:** \$15

**Student:** \$40

**Register online at**

<http://www.idrange.org>

Contact: (208) 398-7002

ghyde@idahorange.org

Continuing education credits will be available for veterinarians, professional animal scientists and rangeland professionals

## Lodging:

Rooms have been reserved at the following hotels.

Please reference "Rangeland Livestock Symposium" when you make your reservations

Hampton Inn

(208) 734-2233

Holiday Inn Express

(208) 732-6001

Red Lion Canyon Springs

(208) 734-5000

## Thursday, January 10

8:30 am Registration

Lunch included, Supper optional

### General Session

Get an overview of this summer in regard to fire, and what it means in the future, a fresh perspective on the new generation of ranchers, and a general overview of estate planning

### Concurrent Sessions

Topics will include:

- Range rehabilitation and restoration
  - Grazing before and after fires
  - Grazing and monitoring for sage grouse habitat
- Implications if sage grouse is listed
- Beef industry segment coordination
- Meeting beef marketing conditions

### For more information contact:

Benton Glaze

Extension Beef Cattle Specialist

208-736-3638

bglaze@uidaho.edu

## Friday, January 11

8:30 am to 3:30

Lunch included

### Keynote Topics

- National Beef Quality Audit results and implications
  - Equal Access to Justice Act impacts from litigation on ranchers
- CattleFax industry update and outlook

### Concurrent Mini-Workshops

Topics will include:

- Range monitoring by and for ranchers
  - Evaluation of beef quality
- Evaluation and options for pregnancy testing in livestock
  - Special issues in estate planning

Amanda Gearhart

Rangeland Extension Specialist

208-736-3610

amandag@uidaho.edu

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Extension

## Owyhee County

238 8<sup>th</sup> Ave. W., P.O. Box 400

Marsing, ID 83639

(208) 896-4104 FAX (208) 896-4105

Owyhee@uidaho.edu

<http://www.extension.uidaho.edu/owyhee>

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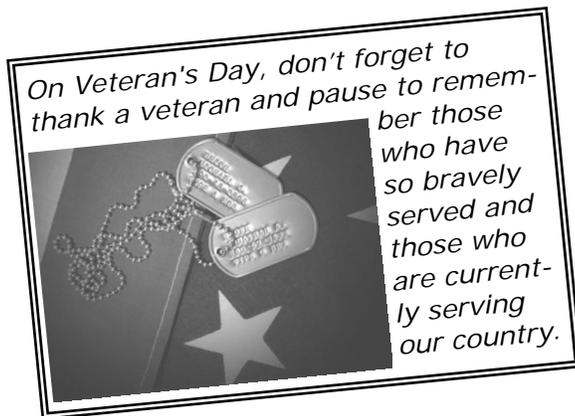
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## ADDRESS SERVICE REQUESTED



*Please join us for an Open House to meet and visit with Jim Fincher,  
new BLM Boise District Manager  
Thursday, November 15, 2012, 7:00-8:30 p.m., Extension Office in Marsing*

*Refreshments will be provided*

*OCA Board of Directors Meeting immediately following*



## Upcoming Events in 2013 . . .

January 10-11	Intermountain Range Livestock Symposium, CSI, Twin Falls (see page 5)
February 2	Beef School and Owyhee Cattlemen's Association Winter Meeting, Oreana
February 25-28	Artificial Insemination School, Marsing
June 11-14	Lost Rivers Grazing Academy, Salmon
September 9-12	Lost Rivers Grazing Academy, Salmon

Link to an excellent publication on NEPA (this link is also on our website).

<https://extension.arizona.edu/sites/extension.arizona.edu/files/resourcefile/resource/mblock/gila-nepa-for-ranchers.pdf>