



Ranch Roundup

C O O P E R A T I V E E X T E N S I O N

REDUCTION OF HAY LOSSES

Storage and feeding losses can occur for almost any type of stockpiled feed under best conditions this may be reduced to 5 % of the dry matter nutrients; however large round bales tend to lead to the greatest and most consistent losses. Most of these losses are attributed to the traditional method of storage: outside, on the ground and uncovered. This method may result in the loss of 25-35 % of the dry matter nutrients, the majority of which is the bottom bales, stored on wet soil.

There are several alternative methods to storing bales with a higher initial cost but, save money if considered a long term investment. A gravel pad 3-4 inches deep mitigate much of the damage done from storing bales on soil, decreasing the amount of dry matter nutrients lost to 15-20%. In addition, if bales are covered with a tarp this loss is dropped to 10%. The gravel and tarps may not have a useful lifespan, approximately 10-12 years, as long as a building (estimated at 25 years) but do allow for more mobility.

The gain by packaging and storing of bales may be lost during feeding especially if bales are spread or unrolled across a pasture. Loose hay may result in high trampling and soiling losses up to 40 % can be expected when feeding multiple day supplies. Feeding hay in small amounts, enough for only one day at a time, reduces waste to 12 % although the feeding takes place across the pastures. It also allows the hay feeding areas and consequent manure and nutrients to be distributed more evenly across the pasture.

Hay rings or other similar feeders concentrate animals but do reduce loss of hay to trampling and bedding. If feeders are used a good base such as crushed stone or concrete will minimize issues with mud; providing footing and drainage.

Poorer quality hay should be fed earlier in the season to decrease animal refusals from lower palatability. This also allows the use of higher quality forages when the weather is more dramatic and physiologically, due to milking and re-breeding, animals are in need of more concentrated feed sources.

H O R S E H I N T S – V A C C I N A T I O N S

Horses need to be vaccinated yearly for many of the diseases present in Modoc County. This is especially true for Tetanus, Encephalomyelitis, and West Nile Virus. Peak seasonal exposure to West Nile Virus is in summer and fall, animals should be vaccinated before exposure to mosquitoes for best results. Mosquito control is important for effective prevention in both horses and humans. Animals who have not been vaccinated yearly or foals and weanlings may require the initial injection followed by a booster shot.

Broodmares should be vaccinated 4 to 8 weeks before foaling for all the above mentioned diseases in addition to a series of Rhinopneumonitis during the 5th, 7th, and 9th month of gestation.

Performance horses and other horses experiencing contact at shows, events, competitions, or at stables may need annual shots including: Influenza, strangles, and Rhinopneumonitis.

Additionally, horses should be placed on a deworming schedule. It is suggested horses be dewormed every 8 weeks. Twice during the year an ivermectin wormer should be used; during the early spring April or May when bot larvae leave the stomach and again in the fall after a killing frost after all the bot eggs have been removed from the coat. During the summer treat horses for tapeworms. The other three times deworming is recommended you may check with your veterinarian

Cow Camp Chatter- Energy

Ron Torell

Long-Standing Educator and Advocate of Agriculture -
retired University of Nevada Extension

Historically man was known to spend much of his summer preparing and storing food and firewood for the long winter ahead. Today many in the livestock industry essentially do the same thing. They spend a good deal of the summer harvesting hay and then pitching it off during the winter. The late Ferris Brough of Clover Valley, Nevada, once explained: "After the severe winters of 1889 - 90 and 1948 - 49, many ranchers began putting up hay. We would count the hay stacks in late fall and divide them by the number of days we anticipated the winter feeding period being. This is how we balanced the ration for our cows. Our objectives were to keep animals alive." Now, due to a differing economic climate, we need more than survival of our livestock through the winter. We need production in the form of a live calf plus breed back the following spring.

During the extreme cold days of winter when you find yourself making extra trips to the wood pile, consider your livestock. Both you and your cattle need additional energy to overcome the elements. Just as wood storage is important to man for easy energy access throughout the winter, energy storage for your livestock in the form of fat reserves or body condition is equally important. Think about body condition on a cow as a savings account. Added body condition is stored energy available to animals to draw from in time of need and also serves as insulation. The bigger the savings account, i.e. subcutaneous fat, the greater the ability to withstand colder temperatures. Thin cows require more winter feed energy for maintenance due to the lack of banked fat reserves. Adding body condition on thin cows during the second trimester of pregnancy before winter weather hits is much more economical and obtainable than trying to play catch-up during the last trimester of pregnancy and the coldest portion of the winter.

Dry matter intake increases as much as 30% with cold, windy and wet weather. Cattle handle one or two days of cold weather rather well. Cold stress occurs when animals are exposed to extreme weather conditions which put them below their lower critical temperature. For cattle with a dry winter coat, the lower critical temperature is 32° F. If the coat is extra heavy, that number drops to 18° F. If the normal coat is wet, however, the lower critical temperature may become 60° F. A gen-

eral rule of thumb is that for every 1° (F) the temperature drops below 32° degrees F, increase the ration energy by 1%. Keep in mind that sustained periods of cold may warrant a ration modification and increased quantity of feed delivered to the feed ground. Heat generated during the digestive process (fermentation in the rumen) helps maintain core body temperatures. By increasing feed intake we are aiding this digestive and heat generating process.

There are several different terminologies for discussing energy. For the purpose of developing livestock rations we often refer to energy content of feed as total digestible nutrients (TDN) as a percentage of dry matter. The higher the TDN content, the more energy availability to the animal. When referring to the energy content of wood, the basic measure of thermal (heat) energy is known as a BTU, short for British Thermal Unit. Very soft woods like poplar and spruce have about half the BTU's per cord compared to hardwoods such as white oak or mahogany. In respect to energy content, feeds such as meadow hay and straw could be considered softwoods while feeds such as corn and barley could be regarded as the hardwoods of feed selection. Based on energy content, softwoods should cost about half as much per cord as hardwoods. However, processing, transportation and storage costs are the same regardless of species, so while the price of softwoods may be lower, the value is considerably more than half the value of hardwoods. Basically the same can be said about pricing of feeds. Nevertheless, the value of softwoods to help cattle deal with extreme cold weather should not be discounted because of something called the heat of fermentation. Generally speaking, those softwoods (forages) do a better job of keeping the fire burning in the rumen than the hardwood (grains), which in turn helps keep your cattle warm during the colder evening hours after feeding. The hardwoods will do a much better job long-term of providing the energy to help lay down fat reserves.

Body condition, a good healthy hair coat, dry ground and/or bedding, windbreaks such as willows and trees, and a full rumen are all important in assisting our livestock with their energy needs during inclement weather. For these reasons, it's important to sort animals by age, body condition, and feed requirements based on their

stage of production. In essence we are sorting the higher nutrient demanding animals into the hardwood feeding group and the lower nutrient demanding cattle into the lower cost softwood ration group.

It is not the intent of this article to suggest energy is the only nutrient that should be considered in the ration formulation for our livestock. Quantitatively energy is often the most important item in an animal's diet during the cold conditions found during the winter months. Ration formulations are based on energy as well as protein, vitamins and minerals. Water also needs to be monitored since water regulates feed intake and often times an adequate supply of water is restricted during freezing temperatures. All these elements should be considered when developing a ration for your livestock.

This winter as you add another log to the fire or go for that second bowl of chili, remember how those same energy needs apply to your four-legged friends as well.

ADDED by Dr. David Bohnert OSU Beef Extension Specialist: When we know that it is going to be extremely cold overnight consider feeding hay to cattle later in the afternoon or early evening. If we feed early in the morning, as most of us are apt to do, the greatest heat of fermentation (within the rumen) will actually occur during mid-day or early afternoon which is normally the warmest period of the day. If we feed later in the day the maximum heat of fermentation will occur during the evening and early morning hours when they need the most "help" to keep warm. The heat of fermentation that occurs within the rumen is an important mechanism for cattle to combat the frigid temperatures common during winter here in the Northwest. A little alteration in the feeding schedule can help your cow herd better deal with cold nights.

SPEAKER BIOGRAPHIES

Dr. David Patterson: David Patterson is a Beef Extension Specialist for the University of Missouri. He developed a progressive state-wide educational program in cow-calf production with emphasis on reproduction and management of the beef cow. This includes the training of regional extension livestock specialists, and interaction with cattle producers and agribusiness firms. The program focuses on improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, with the resulting delivery of healthy vigorous calves and successful rebreeding of heifers during the subsequent breeding season.

Dr. Jeremy James: Jeremy James is a Rangeland Extension Specialist with the University of California and Director of the Sierra Foothill Research and Extension Center in Browns Valley, CA. He started this position in August 2012. Prior to this position he worked with the Agricultural Research Service in Eastern Oregon where he focused on understanding how intermountain rangelands recover following fire, how science can be used to accelerate this recovery process, and how public land management policies and practices can be refined to enhance recovery and decrease the effects of wildfire on ranching enterprises. He has spent time conducting research in a number of intermountain systems and currently has a multi-state project examining how to overcome limitations to rehabilitating cheatgrass infested rangeland.

Dr. Ron Hathaway: Ron Hathaway, Retired with thirty-five years in Cooperative Extension, currently a practicing grandparent. Formerly: Klamath Basin Research and Extension Center (KBREC) Director, Livestock, Range, Pasture and Natural Resources Extension Agent. Department of Animal Sciences Cooperative Extension Service, Oregon State University - Klamath County, Klamath Falls, Oregon

Areas of Interest

Provide leadership in identifying educational needs and creating, delivering and evaluating educational programs and materials in agricultural production and related natural resources, with specific emphasis on livestock, agriculture production and farm business management, range management, and water issues.

Agricultural Production and Management – enterprise selection, production practices, crop selection, variety selection partial budgeting, budgeting, farm and family business goals.

Marketing – market cycles and timing, pooling, storage, processing, retained ownership, risk management.

Water Quality – nutrient loading from agriculture, water quantity and quality issues, water allocation issues,

Public policy - public policy involvement and experience in water allocation affects resulting from 2001 non-delivery of irrigation water to agriculture. Building collaborative community based census to resolve natural resource issues.

Range management – grazing policy, public lands management, grazing systems, watershed function.

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Missy Merrill-Davies: Livestock and Natural
Resources Advisor

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4TH ANNUAL UCCE-MODOC WINTER AG MEETING- FEB 20TH CAL PINES

Agenda

- 11:30 AM- Joe Moreo: Modoc/Lassen County Agricultural Commissioner- Hazardous Materials Permit Process
- 11:45 AM- Jolene Moxon: Agriculture in the Internet Age
- 12:00 PM- Dr. David Patterson: University of Missouri- Selection, Development and Breeding of Replacement Heifers and LUNCH- Sponsored by McArthur Farm Supply
- 1:00 PM- Dr. Jeremy James: University of California Cooperative Extension- Rehabilitating public grazing land after fire: Gaps between science, practice and policy
- 2:00 PM- Dr. Ron Hathaway: Emeritus Oregon State University Cooperative Extension- Whose going to do the haying next year?
- 3:00 PM- Neil Gilton: Diamond K Gyp- Solution Grade Gypsum for Pivots and Water Quality

See page 3 for more information on speakers.

Please RSVP to the Farm Advisor's Office by Feb 15th by calling Cheryl 233-6400! We look forward to seeing you there. Make sure to thank our sponsor McArthur Farm Supply for Lunch!

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