

December 2011



Dear Farmers & Ranchers,

**Wibaux County
Extension Office**

Please mark the date of **January 18th** on your calendar. This is the date for the 18th Annual Extension Winter Series. Enclosed please find a schedule and information on the topics to be covered. This year we still start the programming at 3:00 p.m., have a supper at 6:00 p.m., and conclude at about 8:00 p.m. We think we have some timely topics and good speakers lined up and hope everyone who is interested will be able to attend. Individuals with a private pesticide applicator's license will receive three (3) recertification credits for attending. Commercial applicator credits are pending. If you will be able to attend, we do ask that you **RSVP by Monday, January 16th**, so we have some idea how many to plan on for supper.

In this newsletter you will also find information on the Off-Station Spring Wheat & Durum Nurseries, Age & Source Verification, Culling Cows, Reducing Feed Waste, and When to Take Soil Samples.

If you have questions or would like additional information on these or other topics, please let us know.

From the Wibaux County Extension Office,
Patti and I do wish you and your family a very
Joyous Holiday Season.

Sincerely,

David L. Bertelsen
County Extension Agent



*Montana State University,
U.S. Department of
Agriculture and Montana
Counties Cooperating.
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SOUTHEASTERN MONTANA EXTENSION WINTER SERIES
Wednesday, January 18th

The 18th Annual Extension Winter Series will be held in Wibaux on Wednesday, January 18th, with a series of programming beginning at 3:00 p.m. in the Wibaux County Courtroom. The program will run from 3:00-8:00 p.m. Topics this year will include: Water Quality, Healthy Grasslands Deter Weed Invasion, Crop Rotation, and Beef Quality Assurance and Animal Welfare.

The schedule will include the following:

3:00-4:00 p.m. “Water Quality”- Adam Sigler, MSU Extension Associate Specialist

Adam Sigler will discuss the importance of testing your private well water and maintenance of a septic system for human health concerns. He will also talk about the importance of testing your well water for the health/benefit of livestock, and how pesticides can contaminate groundwater. Adam can also provide on the spot screening for those who bring in water samples.

4:00-5:00 p.m. “Healthy Grasslands Deter Weed Invasion”- Dr. Lee Manske, NDSU Range Scientist

Dr. Manske, Range Scientist at the Dickinson Research Extension Center, will discuss competition between healthy grasslands and weeds. Healthy grasslands that are producing 100 lb of mineral Nitrogen/acre can compete with leafy spurge. However, most rangeland does not have those levels Nitrogen. Dr. Manske will talk about how soil organisms can be manipulated to produce Nitrogen needed to compete with leafy spurge.

5:00-6:00 p.m. “Crop Rotation”- Roger Ashley, NDSU Area Extension Agronomist

Crop Rotations are a must if you're going to make continuous cropping work in arid regions such as southwest ND and eastern MT. In this presentation, Roger Ashley will discuss proper intensity and diversity in a rotation using research from western ND and other regions with similar growing conditions. Ashley will also cover pesticide use, rates, and timing for crop rotations.

6:00-7:00 p.m. Supper

7:00-8:00 p.m. “Beef Quality Assurance and Animal Welfare”- Dr. John Paterson, MSU Extension Beef Cattle Specialist

Beef Quality Assurance is much more than ensuring injections are administered properly and in the right location. In the cow-calf industry, producers must first design the genetics with both the final consumer as well as the rest of the industry in mind. This means that implants, injections, brands and body composition are all keys to producing a high quality product. *Those attending can become BQA certified or recertified.*

All interested persons are encouraged to attend. We are asking those planning to participate to **RSVP by Monday, January 16th** so we know how many to plan on for supper. The phone number for the Wibaux County Extension Office is (406) 796-2486. The Extension Winter Series is being sponsored by the Wibaux County Extension Office.

**Registration fee is
\$5.00 (supper
included).**

Individuals with a private pesticide applicator's license will receive three (3) recertification credits for attending. Commercial credits are pending.

The programs of MSU Extension are available to all people regardless of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. To request disability accommodation or inform us of special dietary or other needs, please contact the Wibaux County Extension Office at (406) 796-2486.

Develop Strategies to Reduce Feed Waste

Hay loss and feed waste are inevitable components of most beef production systems.

"However, understanding the sources of hay loss from storage and feeding, as well as the impacts of restricting access to hay, can allow producers to develop strategies to optimize feed utilization on their operations," says Carl Dahlen, North Dakota State University Extension Service beef cattle specialist.

The location of hay and whether it is covered during storage greatly affect the loss potential. For example, research evaluating hay loss found an average dry-matter loss of 28 percent, with a range of 5 to 61 percent, for hay stored outside without a cover.

Potential hay loss is reduced as the climate dries because precipitation, contact with wet ground and moisture from other bales are reduced. Dahlen recommends placing uncovered bales stored outside on a hard surface, in single rows, with bales stacked face to face. This eliminates moisture accumulation on the faces of bales and points where bales touch when stacked in a pyramid.

The hay loss evaluation showed that when hay was stored outside and covered, the loss fell to 13 percent, and bringing the hay into a building reduced the loss to about 5 percent. However, producers need to consider the economic merit of building a structure to store hay or purchasing tarps and covering haystacks before beginning construction or making purchases, Dahlen cautions.

A hay storage cost comparison tool is available at <http://www.extension.iastate.edu/agdm/crops/xls/a1-15haystoragecost.xls> to help producers explore the economic implications of different storage techniques.

Hay waste studies at NDSU, the University of Minnesota and Michigan State University discovered that cows fed processed and windrowed bales consumed more hay and had a 16-pound weight gain advantage during a 60-day feeding period compared with cows fed rolled-out bales. In addition, the amount of wasted hay was slightly greater for rolled-out bales than processed bales. However, an economic analysis showed the cost of feeding was greater when using a bale processor compared with rolling bales out for feeding.

"Producers evaluating the two scenarios need to consider whether additional pounds gained when feeding processed hay are worth the added expense," Dahlen says. "In cases where greater intake is desired - for example, thin cows that need to put on weight - the added expense may be worthwhile."

Feeding bales in a hay ring resulted in less waste compared with rolling bales out on the ground, according to the research. In addition, feeding processed hay in a bunk resulted in less waste than feeding processed hay on the ground.

In all cases, the hay intake was similar (about 26 pounds of hay, dry-matter basis), the research showed. The average waste for either of the ground feeding methods was about 18 percent, whereas the average waste from feeding in some type of structure was about 5 percent.

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Develop Strategies to Reduce Feed Waste Continued...

Feeding large round bales into a tapered-cone hay ring resulted in more weight gain compared with rolling bales out on the ground. It also resulted in less expensive overall feed costs compared with rolling hay on the ground and processing bales.

Tapered-cone hay rings also have shown promise when compared with other types of hay feeders, Dahlen says. Based on the research, cows eating from a tapered-cone ring wasted fewer pounds of hay but had similar hay intake compared with those eating from traditional hay rings, hay trailers or hay cradles. Authors of one report recommend that bales fed through a tapered-cone hay ring must be wrapped tightly and twine must not be removed to realize the waste-saving benefit from this type of feeder.

Reducing the amount of time cows have access to hay also may be an effective strategy to reduce hay waste. The research indicated that when cows were given access to hay for six, 14 or 24 hours per day, cows with hay access for six hours wasted the least amount of hay compared with the other groups.

The studies also found that body weight gain was impacted by restricting the cows' access to hay. Cows with unlimited access to hay gained 20 pounds more than cows with restricted access to hay (six or 14 hours).

"While this method of managing cows could reduce overall feed consumption and hay waste, the long-term implications of such a management strategy are unknown," Dahlen says. "Producers who decide to limit-feed cows in some fashion need to ensure that the feeding area is large enough so all cows can have access to the feed when it is delivered. The combination of limiting access to feed and restricting the time cattle have access to feed may leave cows on the lower end of the social hierarchy without a meal."



BeefTalk: Culling Rate Is Not Just for Cows

By Kris Ringwall, NDSU Extension Service Beef Specialist

There are two very noticeable expenses in the beef business. The most obvious is feed and the one most often forgotten is animal replacement. Replacing cows, even if the cost is not added up, just happens, and the same is true for bulls. However, the bill is huge.

A producer once called and was concerned that the banker was critical of the age of the cows in the herd. The producer was very successful in keeping older cows productive, but the banker felt the cows were too old. In reality, the banker needed to rethink what he felt because producers should be commended and not reprimanded for increasing the longevity of the herd.

If we were to review the cow herd appraisal of performance software benchmarks, producers are culling at about 14 percent of the cows exposed and replacing those cows at a rate of approximately 15 percent. The resulting average age of the cows in the herd is 5.7 years. The average age has increased slightly during the last decade, which is good.

Some active herd improvers will cringe because increasing age certainly raises generational intervals and slows genetic change. However, a little more change in the form of coins in the pocket is not all bad, so the banker should have appreciated the producer's efforts at maintaining productive longevity in the cow herd.

Likewise, the issue of bull longevity often is overlooked, but the reality of culling bulls is a given and a crisp walk in the bull pen is needed. Given all the data, rankings and re-sorting of the bulls, one overwhelming trait trumps all other traits. Bulls need to be sound, both structurally and mentally.

Perhaps the goal of most bulls is to be dominant someday and oversee the all the cows in the pasture. However, the reality of being the dominant bull in a multiple-bull pasture can be physically traumatic.

As winter settles in, the time is right to recheck the bull pen in preparation for upcoming bull sales. Last fall, those bulls that suffered permanent wear and tear during the breeding season were let go. The bulls with obviously displaced joints or broken penises or those that were seriously injured were shipped away. Several bulls were given a chance to mend from an active breeding season and then rest to get ready for another season.

With the escalating price of bulls, producers do not want to part ways too soon with expensive bulls. Those bulls with a slight limp or that simply are out of condition need a second evaluation. The walk through the pen was good. Jotting some numbers down with a frozen pen proved to be the usual challenge. Writing seems like a simple task, but the 9 that becomes a 0 or the 0 that becomes a 6 can be life-threatening to a bull that gets his number wrongfully placed on the cull list.

There are a few strategies that can be used to keep the pen warm and good ink flowing, although a nice set of high-frequency electronic identification tags, appropriate reader and data pad would be super (nice Christmas present).

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BeefTalk Continued...

The 24 bulls were evaluated visually, but not all passed. Bull V162 was obvious. The fall limp on his left front foot had gotten worse, so there was no hope. Two coming 4-year-old bulls, V005 and V146, were simply going down in condition and ease of travel was not returning. Their gait was stiff and muscle mass was going. Although one does not generally have a large number of bulls to condition score, these two would be a 4. All three bulls did three years of service for the Dickinson Research Extension Center, but the time had come for us to part ways.

In reviewing the younger bulls, two of the coming 2-year-old bulls, 11R3 and 29S3, were growing massive frames. They were not bad bulls, but their frames were going up, so the decision was made to look for replacements.

The last bull was 709X. He is a yearling bull that was set aside this spring because of hip issues. Those issues still were present and there was no evidence that structural soundness was returning, so 709X was added to the cull list.

So we ended up with six bulls on the trailer and 18 bulls returned to the pens. Five bulls still are in question. Two are older bulls that still are very active and physically strong. Three coming 2-year-old bulls could use some better performance numbers.

As we all know, our wants are generally bigger than our pocketbooks. We can't always afford the bull we want. A few bull sales and the pen will be filled full of optimism for the 2013 calf crop. However, for now, let's get the 2012 calf crop delivered.



BeefTalk: Prepare to Age and Source Your Calves Correctly

By Kris Ringwall, NDSU Extension Service Beef Specialist

Another glaring example of an almost missed opportunity arrived the other day. Sixty-seven head of cattle were sent to harvest. During the process, the cattle numbers were read and verified. However, the alarms sounded and people jumped when the numbers that were in the harvest process did not match the shipping manifest.

Eleven of the 67 steers were not on the manifest. This scenario is not a happy one. At a minimum, the 11 head would lose any added value when it comes to age and source verified beef and associated beef products. The 11 head put at risk all 67 steers because, in some situations, the cattle in the lot are set aside and processed as nonaged or sourced cattle.

Therefore, the added value could be lost for the entire lot. In the worst-case scenario, the cattle harvest was initiated prior to the confirmation of the manifest, so any potential increase in value is lost on all plant products that were comingled with harvested products from the nonverified cattle. These are tragic results from a simple mistake.

The average beef producer does not always associate the failure to adequately document and verify cattle that are moving through the marketing channels with the paperwork that substantiates who the cattle are and what criteria they are trying to meet. To make matters even worse, who suffers the loss of value from a product that was comingled with a nonverified product?

These are nagging thoughts that occur when those involved in a very dynamic industry have not done their homework. Fortunately, the mistake was simple for these 11 head of calves that were age and source verified through the North Dakota Beef Cattle Improvement Association. The 11 head were listed on another shipping manifest, so they were eligible for verification as age and sourced cattle.

Get the numbers right is the lesson to be learned. This is not the first time producers and those working within the industry have had to take on additional stress through the marketing channels.

Mistakes such as this can occur. However, producers cannot afford the lost value, and having marketing opportunities smashed should not happen.

Some of the issue lies in the fact that the beef industry is cost-sensitive. Cost control or, in the best sense of the word, cost reduction, is very positive. All cattle operations must have control of their costs and apply pressure constantly to reduce costs. However, care must be taken not to turn away income for the sake of cost control.

The most striking example is the price of an ear tag or radio frequency identification button. The cost of an identification mechanism that would open additional markets is minimal. Granted, the tag is not the only cost because the application and tracking of the data bears its own cost. However, there are several opportunities for the tag to be applied and the data collected while the cattle are being handled. Even under very difficult circumstances, cattle producers have been known to apply a tag to the calf.

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BeefTalk Continued...

A tag means nothing unless the calf identification number is transferred to a database that will allow the calf to be age and source verified. Yes, the tag can be utilized for many ranch needs, such as monitoring cows and calves, sorting calves in the fall and other logistical operations.

To take the tag off the net expense side of the equation and move it to the net income side of the equation requires a producer to enter the data into one or more of the many age and source verification programs that are available in the U.S.

Now is the time, before the calves leave home, to make sure they are not limited in marketing possibilities. Every opportunity should be utilized to keep all markets open and available to increase net profit.

If an operation has not changed or modified the basic fundamental production and management plan for the enterprise to expand marketing opportunities, now is the time to do so. Make sure that all the calves are properly identified prior to leaving the ranch and that all calves meet the requirements of the selected verification program.

In addition, make sure that all the individual calf numbers are correct and match the marketing and shipping manifests that indicate which calves went where. As the new owner of high-value calves, verify that the numbers are correct prior to the final harvest.

There is no room for error.



Overwinter Loss of Soil Nitrate

By Clain Jones & Kathrin Olson-Rutz

Dept. Of Land Resources & Environmental Sciences, Montana State University

In some regions of the western U.S., soil sampling is conducted from late summer to late fall because of better soil sampling conditions than in winter or spring and because it provides more time for growers to make fertilizer decisions prior to application. However, fertilizer guidelines are often based on spring nitrate levels because they are more indicative of growing season available nitrogen (N) than fall nitrate levels. If soil nitrate levels are substantially different between fall and spring, then a producer would either over- or under- apply N fertilizer. Over-application is an economic loss and excess nitrate may contaminate groundwater. Under-application may cause sub-optimal yields and grain protein. Based on our study in Bozeman, Montana and at each of the seven Montana State University Agricultural Research Centers, N fertilizer would be over-applied by an average of 18 lb N/acre if August samples were used to make spring N recommendations. But, one in three times, it would be under-applied, and sometimes by a lot.

We measured soil nitrate levels in the upper two feet (if rocks allowed) in late summer, mid fall, and early spring at eight locations throughout Montana over three years. Soil samples were collected following four previous crop types (annual legume, fallow, oilseed and small grain). Several soil characteristics were measured at each site, such as pH, soil organic matter and texture. Unfortunately, fall to spring nitrate changes are highly variable and hard to predict, as we found very little correlation between soil characteristics and nitrate changes.

Many soils gained nitrate from late summer to spring, with most of those gains occurring from August to November. Fresh residues and warm soils in late summer and fall would encourage plant decomposition leading to increased available N. Generally there was less nitrate gained from November to April, especially in soils less than 24-inches deep. Shallow soils may have gained less nitrate either because there was less organic N to become available over a smaller depth or these soils were more prone to leaching. Soils with higher initial nitrate levels also tended to have lower overall nitrate gains from August to April, likely because more nitrate was available to be lost (to leaching, atmospheric losses, or microbial tie-up). In other words, high residual nitrate in late summer does not necessarily carry over to the following spring. If nitrate isn't used by plants in a growing season, it may be lost from the system over winter. On average, there were gains on deeper soils with less initial nitrate and better chance for losses on shallow ground with high initial nitrate.

We found prior crop influenced late summer to early spring nitrate changes. Nitrate levels increased more from August to April following broadleaf crops (annual legume and oilseed) than following small grains or fallow. Many, but not all, fields should be given higher overwinter N credits after broadleaf crops than small grain or fallow fields. On average, November samples more closely represented April nitrate levels regardless of the prior crop.

August to April differences in soil nitrate levels ranged from losses of 55 to gains of 64 lb N/acre. The large range suggests that late summer or early fall soil samples may not accurately determine spring fertilization rates. August and April soil nitrate levels were within 20 lb N/acre of each other 46% of the time, but 54% of the time they were off by more than 20 lb N/ acre. This leads to spring fertilizer wasted or yield and grain protein compromised. Sampling in late fall or later is recommended to best capture growing season N availability. If fall nitrate levels are very high (e.g. greater than about 60 lb N/acre) and soil depth is less than two feet, a second sampling in spring is strongly suggested because there is a higher likelihood of overwinter nitrate losses.

Clain Jones's Web site (<http://landresources.montana.edu/soilfertility/>) has more information on soil sampling and determining fertilizer rates (under 'Fertilizer Information') and on this study (under 'Reports'). You can contact Clain at 406-994-6076, or at clainj@montana.edu.