

BEEF Q & A

BEEF QUESTIONS AND ANSWERS

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Beef Checkoff Partners with Quiznos to add New Prime Rib Sandwich to Menu

by Charlene Schuster, Executive Director



Promotion of a new and unique Prime Rib Sub sandwich is the focus of a joint effort between the Beef Checkoff Program and Quiznos Sub®. The sandwich is now available in thousands of Quiznos outlets nationwide and in nine outlets in Montana.

The cooperative promotion, funded partly through the \$1-per-head checkoff, includes point of purchase materials, such as table tents and posters, and national television ads. The Beef Check Logo appears on materials that include checkoff funding.

The Quiznos Prime Rib Sub is a double portion of tender prime rib, piled high with melted mozzarella cheese and sautéed onions, and then topped with a mild peppercorn sauce. The Prime Rib Sub is the only sandwich offering from a national quick-service restaurant chain to feature prime rib.

A successful cooperative promotion between Quiznos and the Beef Checkoff Program in 2004 encouraged Quiznos and beef checkoff to conduct the current promotion. That promotion,



Continued on back page

Beef: Questions & Answers is a joint project between MSU Extension and the Montana Beef Council. This column informs producers about current consumer education, promotion and research projects funded through the \$1 per head checkoff. For more information, contact the Montana Beef Council at (406) 442-5111 or at beefcncl@mt.net



Grazing Management for Winter Calving Pastures

by Dr. Tracy Brewer, Assistant Research Professor of Range Science, Joe Skeen Institute for Rangeland Restoration; and Dr. Jeff Mosley, Extension Range Management Specialist, Department of Animal and Range Sciences, Montana State University



Have your winter calving pastures been showing increasing signs of stress over the past few years? Do plants seem smaller and more widely spaced now than in the past? Is there more bare ground now than you remember being present before? If so, you are not alone. Winter calving pastures in Montana have taken a hit in recent years from the combined effects of several years with warm spring temperatures, with less rainfall in May-June, and without much snow cover, which exposes plants to winter grazing. By itself, one of these stressors would not normally have much effect, but the three-punch combination has knocked the health out of many winter-spring calving pastures.

Open Winters, Warm Spring Temperatures, and Extended Drought

Limited snow cover enables cattle to graze plants closer to the ground in winter and remove more of the residual stubble that protects the grass plants' buds, the buds needed to produce new grass shoots in spring and summer. Grass plants initiate growth in the spring from buds that are housed in plant crowns, at ground level. Each dormant bud in the plant crown has the potential to produce a new tiller during the growing season if soil moisture and temperature conditions are suitable. Suitable environmental conditions foster growth of abundant tillers from grass plant crowns, promote larger plant size, and enhance plant productivity. When environmental conditions are not ideal, such as during extended drought when soil

moisture levels are minimal, a larger number of buds in the plant crown may remain dormant for that growing season. In winter, exposed buds are more vulnerable to freezing temperatures and to trampling damage by cattle. Reduced bud survival in winter limits the potential for grass growth in spring and summer.

Mild temperatures during winter and early spring cause soils to thaw earlier in the year, increasing the possibility of soil compaction from cattle trampling. Compaction limits the amount of moisture that can penetrate the soil surface to aid plant growth, and compacted soils make root growth more difficult.

Extended drought intensifies the negative effects caused by winter grazing. Low soil moisture levels in spring when plant growth begins increase the proportion of buds that remain dormant, which reduces tillering, plant size, and plant yield and creates bare ground where plants used to be. Inadequate green leaf material during the growing season prevents grass plants from manufacturing and storing sufficient energy to produce healthy, vigorous buds that will survive the winter. Extended drought in spring and summer also weakens the root systems of grass plants, reduces their stored energy reserves, and reduces the production of mulch, leaving grass buds less insulated in winter and soils less protected. The cumulative effects of winter grazing and drought are first seen when fewer tillers are produced per plant each year and ultimately when plant size decreases because of reduced root growth.

Adequate Stubble Is Key

The most effective way to protect plant health in calving pastures is to leave sufficient residual stubble on plants. Have you ever noticed two pastures across the fence from one another where one pasture has ample residual stubble and retains snow cover longer and the other has little to no residual stubble and very little snow cover? Residual stubble creates a mild microsite

for buds to reside in over the winter, protecting them from harsh winds, freezing temperatures, and ice. In addition, stubble traps moisture that aids plant growth when spring arrives. At least two inches of residual stubble should remain on grass plants in winter calving pastures.

In next month's issue, we'll talk about grazing management practices to maintain healthy and vigorous plants in spring pastures.



Cows in a long term experiment to compare retention and readability of three electronic ear tags (RFID) and to develop a cow management data base.

Browsing the Literature

By John Paterson

“Flushing” Heifers

Developing heifers to breed at 13 to 15 months can be costly. Oklahoma researchers wondered if heifers could be developed slowly after weaning and then fed at a high rate just before breeding. They also wanted to look at different energy sources for this purpose. Heifers used were Hereford or Angus X Hereford. In Trial I, treatments were: 42 percent CP soybean meal (control, C); high starch (high in corn) for 60 day days before breeding (HS-60); high starch for 30 days before breeding (HS-30); and low starch (less corn, more corn distillers dried grains) for 30 days before breeding (LS-30). HS-60 and LS-30 were heavier at breeding. More HS-60 reached puberty before breeding. HS-60 were 24 and 22 days younger at puberty than LS-30 and C. In Trial II, treatments were: C as above; HS-60 as above; LS-60 (high in distillers grains and soybean hulls). At puberty, weight did not differ among the three groups, but HS-60 and LS-60 were younger than C. Incidence of puberty during breeding was higher for HS-60 than LS-60. The authors concluded that **high concentrate feeding before breeding may stimulate puberty**, especially by using high-starch feeds, but that a minimum of 60 days feeding may be needed. (J. Animal Sci. 83:2653)

Case Study: Preconditioning Beef Calves: Are Expected Premiums Sufficient To Justify The Practice?

Kansas State University researchers reported that even though the concept of preconditioning calves has been around for a long time adoption of the practice has been slow. Current trends in the beef industry are consistent with management requirements and benefits of preconditioning, which likely will increase interest in the practice. This research estimated premiums received for preconditioned calves and the expected returns from a preconditioning program. Preconditioned calves sold in the fall received a premium compared to non-preconditioned calves. Premiums were less when calves were sold in the winter,

were less for heavier calves, and were less when cattle markets were strong. Based on a 45-d post weaning preconditioning program, cow-calf producers can increase returns about \$14 per head when compared with the sale of calves at weaning with no preconditioning program. Returns associated with preconditioned calves in the feedlot are in the \$40 to \$60 range (per head), indicating that **premiums paid for preconditioned calves will likely increase** as the quality and integrity of the preconditioning programs can be documented. (The Professional Animal Scientist 21 (2005): 502–514)

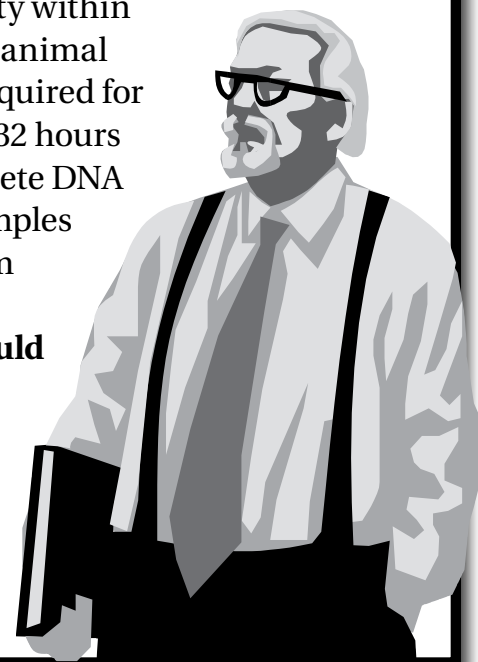
Do “Value-added” Health Programs Really Add Value?

A recent collaborative report by Colorado State University and Pfizer Animal Health of Superior Livestock video auctions sheds some light on this question. Data were summarized from 1995 through 2003, involving 78 sales with almost 20,000 lots and almost 2.4 million head. Highest premiums were paid for VAC-45 lots. (VAC-45 protocol includes vaccination at branding, pre-weaning, or weaning followed by re-vaccination, and a post-weaning period of at least 45 days before sale.) In 1995, VAC-45 lots brought a premium of \$2.47/cwt

over unvaccinated, non-backgrounded lots. This premium increased steadily every year, and was \$6.69/cwt in 2003. For VAC-34 lots (same protocol as VAC-45 but no backgrounding period), premiums were \$1.35/cwt in 1995 and \$3.39/cwt in 2003. Also, in 1995, 45 percent of lots were unvaccinated, but this declined to only 6 percent in 2003. In 1995, only 3 percent of lots were VAC-45 and 12 percent were VAC-34. By 2003, 22 percent were VAC-45 and 51 percent were VAC-34. (Pfizer Animal Health Tech. Bul. SV-2004-02, June 2004)

Case Study: Use Of DNA Fingerprinting For Verifying Identity Of Individual Cattle Within A Forty-eight Hour Response Period

This study evaluated the efficacy of using DNA fingerprinting to re-establish and verify identity of individual cattle within 48-h. Samples of blood, collected during a scheduled processing event in October 2004, and hair, which had been collected 1 year earlier in October 2003, were obtained from crossbred cows located at the Colorado State University- Eastern Colorado Research Center. A timed, rapid-response test, involving 85 blood samples and 31 hair samples, was simulated to measure the capabilities of DNA analysis for recovery and verification of individual identity within a 48-h period. Blind tests conducted to re-establish individual animal identity were 100 percent successful, and the response time required for verification of individual identity, based on DNA profiles, was 32 hours and 14 minutes. Additional analyses demonstrated that complete DNA marker profiles could be successfully obtained from blood samples that had been visibly contaminated with foreign material, from blood cards that contained only a small amount of sample, or both. Results of this study suggest that **DNA fingerprinting could enhance the effectiveness of animal traceability** systems by establishing and confirming individual identity of animals within the 48-h period specified by U.S. Department of Agriculture, Animal and Plant Health Inspection Service. (The Professional Animal Scientist 22 (2006): 139–143).





ASK JOHN A NUTRITION QUESTION:

This month's question: What are some general guidelines for evaluating livestock water?

Michael J. Mehren, Livestock Nutritionist from Northwest Research & Nutrition, Hermiston, Oregon wrote a summary of recommendations ranchers might use in evaluating water quality.

Although water is not often considered a nutrient, it is more essential to life than any other single nutrient. Feed intake is directly related to water intake. In other words, if cattle are prevented from drinking water, they will stop eating within several days. Many times water testing may be necessary or even required by a government agency to confirm the cleanliness of a water source. A new source of water may be considered for the herd, or continuing health or performance problems may point to water as a possible cause of a problem. If water testing is required, you should contact the water testing laboratory to determine how large a sample is required, what type of container should be used for sampling and how and where the sample should be taken.

Water Analysis Requirements

Proper sampling technique is quite important in order to obtain an accurate water analysis. A water analysis report will contain the following information:

Bacteriological

This test is used to determine the number and kind of bacteria present. A group of bacteria, known as coliform, are specifically identified. These bacteria inhabit the manure of all warm-blooded animals. They are dangerous to the health of animals that consume them. To be safe for livestock, the sample should contain less than 5,000 coliforms/100 milliliters of water.

Total Dissolved Solids (TDS)

This measures the total organic and inorganic matter in the sample. Organic matter might be bacteria, leaves, or algae, while inorganic matter would be salts of calcium, magnesium, sulfate, iron, and copper. The total concentration of all these solids is an indication of overall quality of the water. These substances make up the scale that forms in pipes.

A TDS level of less than 3,000 milligrams/liter is considered safe; levels between 3,000 and 4,999 mg/liter may reduce performance; levels of 5,000 to 6,999 are not recommended for pregnant or lactating females; and levels above 7,000 mg/l are not recommended for any animals.

Water Hardness

This measures the tendency for water to form a soap or scale on the surface of a container or pipe. It is expressed as the total of calcium and magnesium. This is not the same as saline or salty water. Water hardness does not present a problem to livestock.

Salinity

For general purposes, salinity is the amount of dissolved salts. The salts are sodium, magnesium, and calcium. Most commonly, they are combined with chloride, bicarbonate, or sulfate. Saline water can affect livestock performance and health. Guidelines for salinity safety follow:

Nitrates and Nitrites

These compounds are both forms of nitrogen. The nitrate form is not toxic to cattle, however, microbes in the rumen convert it to the nitrite form, which is absorbed into the blood stream and is quite toxic. It is important to recognize the nitrates in the feed combine with nitrates in the water, so that either alone may be safe, but when combined can result in toxic levels. The maximum safe limit for nitrates in water is 100 milligrams/liter and for nitrites 33 milligrams/liter. Different laboratories report nitrates in different terms. If the report does not specify nitrate or nitrite, check with the lab for a conversion from the form they use (e.g., nitrate-nitrogen) to the term for which you have safe use figures.

Salinity (milligrams/liter) Recommendation

Salinity (milligrams/liter)	Recommendation
Less than 1,000	Safe.
1,000 to 2,999	Safe.
3,000 to 4,999	Safe. May cause diarrhea when stock first drink.
5,000 to 6,999	Safe. May cause problems with pregnant or lactating females.
7,000 to 10,000	Dangerous. Especially for pregnant or lactating females.
Over 10,000	Toxic. Risk for use too great to consider as a source of livestock water.

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Toxic Elements

Many elements normally found in a safe water supply can be toxic if present in enough quantity. The table on the next page shows the maximum safe concentration. Any water having greater than the amount listed should not be used for livestock without further investigation to determine the consequences on water intake, health or performance of the livestock.

Foreign Chemicals

Chemicals from farming, mining, industrial plants and the general population may be present in water under certain circumstances. This situation is not addressed during routine water testing. Each type of chemical requires a specific test.

Trey Patterson and others from South Dakota State University demonstrated how increasing levels of sulfate in drinking water can negatively influence calf gains, feed and water intakes. If in doubt, test your livestock water. Your local county agent, feed company nutritionist or I can help you.

Intake and performance of growing steers supplied water from various sulfate levels in western South Dakota in 2001 (Patterson et al., 2002)

	Water Sulfate Level, ppm		
Item	400	3100	3900
Initial weight, lb	701	695	699
Daily gain, lbs	1.39 ^b	1.01 ^c	1.01 ^c
Feed intake, lbs	17.6 ^e	16.5 ^e	16.8 ^e
Water intake, gal/day	12.5 ^d	10.9 ^e	11.1 ^e

^{b c} Within a row, means without a common superscript differ, P<.05

^{d e} Within a row, means without a common superscript differ, P<.05

Maximum safe concentration of mineral elements in livestock water.

Element	Maximum safe level in parts per million (ppm)
Aluminum	5
Arsenic	0.2
Boron	5
Cadmium	0.005
Chromium	1
Cobalt	1
Copper	0.5
Fluoride	2
Lead	0.1
Magnesium	250
Manganese	0.05
Mercury	0.01
Selenium	0.05
Sulfates*	
Calves	500
Mature cattle	1,000
Vanadium	0.1
Zinc	25

*Because of interactions between sulfur, copper, iron, and molybdenum, high sulfate levels should be investigated thoroughly to determine if problems may be encountered.

Producer Profile: Cross Four Ranch—Miles City

by Kent Williams, Extension Agent for Custer County

Fred and Gwen Wacker moved to Miles City in 1974 with a milk cow, her calf, a saddle horse and a crate of chickens. This start led to a ranching and backgrounding operation in Custer and Rosebud Counties that keeps them and their family very busy. They are both third generation ranchers from the Roundup country. When Fred was a kid, he started with 4-H animals and during high school he began buying light calves and backgrounding them.

The home ranch consists of about 42,000 acres and they have long-term leases on two other ranches. They also run on BLM and state leases. The cow herd consists of home raised one iron cows that are roughly one-quarter Limousin and three-quarter Black Angus. The cows are fed 1,000 pounds of hay and 400 pounds of cake in the average winter with the remaining feed coming from grass. Fred feeds free-choice mineral at all times and believes this is critical to good breed up for his cows and good health for his calves as they enter the lot. Calving is done in April. All raised calves are sent to the backgrounding lot on the ranch and the lighter ones are kept over and run as yearlings the following summer. Fred believes this gives him great flexibility dealing with drought, as he can send yearlings early in a dry year and not have to cull very deep into the cows. All livestock work on the ranch is done horseback.

The ranch has a backgrounding lot with most of the hay and silage produced on the place and grains purchased. All of the ranch raised and purchased calves are source and process verified with an EID tag in their ear. The feedyard is



not operated year round with the heavy calves going to a finishing lot and the lighter ones going back to grass the beginning of May. The people that work in the lot during the winter help with the farming and ranching enterprises during the summer. The ranch and lot are now producing natural beef having received no antibiotics, implants, ionophers or animal by-product feeds. Any cattle that do not fit this system are fed in a different pen and marketed separately. Over the years, the ranch has been a major supplier of Ranch Fresh cattle to the ConAgra feedlots and now is one of the largest suppliers of cattle to the Coleman Natural Beef program.

Fred is proud of the fact that the ranch and business are able to give his family the opportunity to work and be a part of the operation. Fred manages the cow side of the ranch and his wife Gwen is the bookkeeper and, according to Fred, the overall boss of the outfit. Son Mike and his wife Nicole are in charge of growing the corn silage for the feedyard

and also operate a string of trucks to haul the cattle to the finishing yards. Daughter Sara is in charge of budgeting and records and her husband Shane Rehm operates the feedyard and grows the irrigated hay. Daughter Julie is in charge of human resources and employee benefits and her husband Brian Nowicki is in charge of marketing and risk management.

Opportunities in the Beef Industry

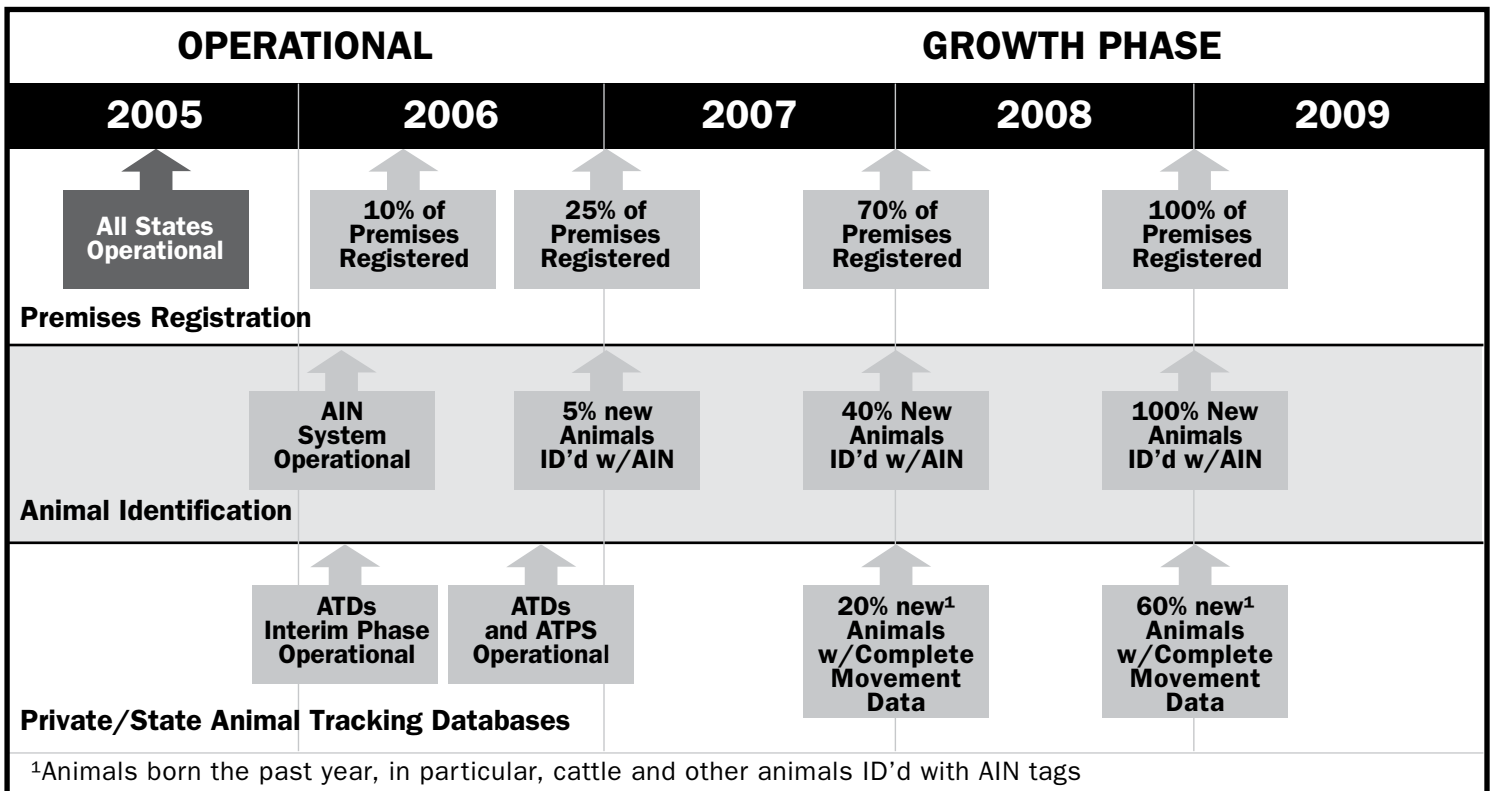
Fred believes the industry needs to move forward at all times and to continue to work on healthiness, taste and quality for the consumer. He also believes that we need to maintain the highest quality and safest product or we will not be able to trade and that producers need to be proactive instead of reactive to future problems. Along these lines, Fred supports being proud of

your cattle and individually identifying them. Fred also believes that Country of Origin Labeling is needed and it is the number one issue facing the industry today. He feels that Montana beef is the highest quality beef in the nation and we need to market them as such – they should not be commodity beef.

Challenges in the Beef Industry

Fred’s biggest issue of concern is that it seems to him that agriculture is usually used as the first trade concession to allow more imports into the country. Fred also believes that, in many cases, we fail to produce what the consumer wants. For example, we would be trading with Europe today if we would simply listen to what they want and produce cattle for their market raised without implants.

Animal ID Implementation Timelines Proposed by the Secretary of Agriculture



Welcome to the Age of Ranch Biosecurity

By Lisa Duffey, Montana Beef Network Coordinator with Clint Peck, Senior editor, BEEF Magazine.



“The beef and dairy industries suffer enormous loss due to effects of bovine viral diarrhea virus (BVDV) infection. The highly mutable nature of BVDV and the emergence of highly virulent strains of BVDV contribute to limited success of present control programs. Also, persistently infected (PI) cattle are the primary source of infection and effective testing procedures are available to identify those infected carriers.

Therefore, it is the resolve of the Academy of Veterinary Consultants that the beef and dairy industries adopt measures to control and target eventual eradication of BVDV from North America. - Position statement on Bovine Viral Diarrhea Virus, Academy of Veterinary Consultants, approved by majority vote of membership, November 2001”.

The Montana BVD-PI Herd Screening Project is sponsored by Montana State University and the Montana Stockgrowers Association. The project’s goal is to investigate the role of BVD PI screening in improving the overall health of Montana’s cow herd and adding value to the state’s calf crop. The voluntary project is providing technical assistance and limited financial support to Montana ranchers who want to screen their herds for BVD PI status.

BVD PI screening should be part of a program involving vaccination, biosecurity and overall herd health management. The screening protocol assists the producer in finding all PI animals in the herd and also assures that new arrivals are BVD PI free.

BVD PI Herd Screening Project Recommendations

- Test animals before bull turn out to avoid exposure of a PI during breeding.
- Sampling is based on a small ear notch placed in a dry tube kept cool or frozen.
- The same tissue sample used for initial pooled reverse transcriptase polymerase chain reaction (PCR) screening is the source sample for re-testing to identify individual “reactors” in the pool.
- Cows do not need to be sampled and tested unless they have a positive PI calf.
- Individual animal identification is critical to match all samples with the animal tested and match the calf with its dam.
- A plan should be developed to eliminate PI animals from the herd.
- If an animal tests negative for BVD PI status, there’s no need to retest that animal.
- PI surveillance should include the necropsy examination of as many aborted fetuses, still-borns and pre-weaning deaths as possible.
- PIs that live to be breeding females can horizontally transfer of the virus to other animals in the herd – and they will always produce a PI calf.

Test new entries into the herd:

- 1. Home-raised yearling heifers**—heifers should be tested prior to breeding for BVD PI status. If the heifer was tested as a calf and found to be negative there is no need to retest.

2. **Purchased open heifers**—All heifers should be tested before purchasing or before commingling with herd and the start of breeding season.
3. **Purchased bred heifers or cows**—All heifers or cows with an unknown BVD PI status should be kept separate from the home herd. Calves from these animals must be tested prior to commingling.
4. **Bulls**—Should be purchased as BVD PI tested free. If not, bulls should be tested prior to breeding season. A good time to take an ear notch is when doing breeding soundness exams.

Calves

1. All calves born alive should have an ear notch sample taken prior to bull turn-out. Ear notches can be frozen for up to 30 days, facilitating sampling over an extended period of time.
2. All calves aborted, stillborn or that died before normal sampling time should have an ear notch sample taken.
3. All grafted calves purchased should have an ear notch sample taken.

Cows

1. All open cows should be sampled if not sold before breeding.
2. Cows that have not calved at the time of sampling calves should be separated. Samples should be taken from their calves.
3. All cows that lose a calf and a sample was not obtained from the calf should be tested.

Montana Agroterrorism Briefing

A study by RAND Corporation researcher Peter Chalk focuses attention on the issue of agroterrorism – the deliberate introduction of a disease agent, either against livestock or into the food chain, to undermine socioeconomic stability and/or generate fear.

Chalk says the capabilities of foreign or domestic threat elements to exploit vulnerabilities in agriculture are not considerable. Despite the ease and implications of a successful attack, agroterrorism is unlikely to constitute a primary form of terrorist aggression because it lacks a single, highly visible point of focus for the media (a primary consideration in any terrorist attack).

However, disrupting the food sector could well emerge as a viable secondary modus operandi to further destabilize an already disoriented society after a conventional terrorist campaign. Being able to use cheap and unsophisticated means to undermine a state's economic base gives this form of aggression a high cost/benefit payoff that would be very useful to groups faced with overcoming significant power asymmetries.

But, he says, terrorists can choose from a large menu of bio-agents, most of which are environmentally hardy, are not the focus of concerted livestock vaccination programs, and can be easily smuggled into the country. The food chain offers a low-tech mechanism for achieving human deaths. Many animal pathogens cannot be transmitted to humans, which makes them easier for terrorists to work with. Finally, because livestock are the primary vector for pathogenic transmission, there is no weaponization obstacle to overcome.

Continued on next page

Chalk's Recommendations

Short-to medium-term recommendations include the following:

1. Conducting a comprehensive needs analysis to determine appropriate investment requirements for the federal emergency management infrastructure.
2. Increasing the number of state and local personnel with the skills to identify and treat exotic foreign animal diseases.
3. Assessing how to foster more coordinated and standardized links between the U.S. agricultural and intelligence communities.
4. Focusing attention on issues of law enforcement and the use of forensic investigations to determine whether disease outbreaks are deliberate or naturally occurring.
5. Revisiting the effectiveness of the passive (voluntary) disease reporting system, especially in providing more consistency with indemnity payments to compensate farmers for destroyed livestock.
6. Evaluating surveillance, internal quality control, and emergency response at food processing and packing plants to weigh the immediate costs of improving biosecurity against the long-term benefits of instituting those upgrades.

Over the longer term, additional effort should be directed toward standardizing and streamlining food-supply and agricultural safety measures within the framework of a single, integrated strategy that cuts across the missions and capabilities of federal, state, and local agencies.

Bovine Viral Diarrhea BVD Update (April 2006)

Montana's Beef Quality Assurance Program started a statewide screening project to determine incidence of persistently infected (PI) BVD cattle. To date, 50 ranches have enrolled and this involves 28,276 calves, replacement heifers and bulls in the program.

For more information about this program, call John Paterson, Extension Beef Specialist at 994-5562

Winners and judges of the graduate student poster competition at the Montana Livestock Forum and Nutrition Conference.



Beef Experts: Producers Can Thrive Despite Big Changes in Industry

By Evelyn Boswell, MSU News Service

The beef industry is changing dramatically, but producers with small to medium-sized operations have options that can help them compete in this era of consolidation and concentration, speakers said at this year's Montana Livestock Forum and Nutrition Conference in Bozeman.

Smaller producers can join partnerships and marketing alliances, for example, said Gary Smith of Colorado State University. They can raise beef for niche markets or brands. They can own their own packing plants.

The largest nine percent of U.S. cow/calf producers and the largest two percent of feedlot operators produce most of the beef in this country, Smith said. At the same time, the top seven supermarket chains sell two-thirds of the food in the United States and want to deal with as few suppliers as possible.

Bill Mies, vice president of eMerge Interactive, said smaller producers can cope by analyzing their operations and finding all the markets their animals fit. Some buyers prefer animals that have been raised humanely, for example. Others want animals that eat only grass and not meat by-products. Some favor ranchers who care about the environment. Others like to advertise by linking animals with a particular ranch or person.

"Producers will have to understand the requirements and specifications for different programs," Mies said. "They are not secret."

Smith said USDA grades of beef have served the consumer and industry well, but that brand programs have opened up new opportunities. Brand programs not only link consumers to retailers, but they connect them to suppliers.

Quality, value and price together produce a brand image.

"Producers shouldn't be willing to settle for leftovers," Smith said.

Mies said the beef industry is undergoing big changes because of technology like electronic ear tags, computers and trolley tracking in packing houses, too. Buyers have traditionally marketed cattle according to appearance, he said. They considered color, frame size, finish and perception and said things like, "They have a lot of growth in them" or "You can lay a level across their backs."

"Were we playing a game? Absolutely," Mies said. "Why? That's all we had to run on and that's what we did."

Technology and a new willingness to share information will allow cattle in the future to be marketed on facts instead of perception, Mies said. Collecting and sharing that data will take more work and investment, but it will pay for itself and produce a profit, he predicted.

"Facts and data will cause the truly great cattle to bring large premiums," he said.

Mies added that the days of selling generic beef are gone. Brands, involving both raw and precooked meat, dominate the meat cases, he said.

The Montana Livestock Forum and Nutrition Conference was held April 11 and 12. Among the many sponsors were the Montana Beef Network based at Montana State University and the Montana Feed Association.



Dr. Bill Mies VP of eMerge talking about how the markets could change in the future.

Effect of Feeder Steer Quality Attributes on Price (Cattle Business, 2005)

Physical characteristic	Avg. discount, \$ per cwt
Light muscling	-15.30
Small frame	-8.93
Dead hair/mud	-1.11
Sick	-17.95
Bad eye	-2.83
Lame	-14.00

Partners with Quiznos, continued from page 1

for the Steakhouse Beef Dip Sub, shattered projections for sales. As a result of its success, the company added the sandwich as a permanent menu item.

Over the past five years, for every checkoff dollar spent on these kinds of partnerships, foodservice partners have put up about \$56, on average. The Beef Checkoff Program will spend \$700,000 on foodservice partnerships in its 2006 fiscal year.



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