February 2007

UW Cooperative Extension Service @ Profitable & Sustainable Agricultural Systems

University of Wyoming

Wayne Tatman

On behalf of the University of Wyoming Cooperative Extension Service and the Profitable and Sustainable Agricultural Systems (PSAS) Initiative Team, I welcome you to the third year of our efforts to provide you, the people of Wyoming, with a newspaper insert entitled *Barnyards and Backyards*. This is an outreach effort to share educational resources and information on a variety of topics of interest to you, our clientele.

Another insert similar to this will be distributed through a number of Wyoming newspapers in April. You can also catch our page titled "Barnyards and Backyards," in the *Wyoming Livestock Roundup* each month. The PSAS team hopes these inserts are beneficial, and we hope you enjoy reading them.

All articles are written by UW personnel and address a variety of topics. I hope you will take the opportunity to contact any of the authors for additional information, and contact me to suggest future topics. I can be reached at (307) 532-2436 or wtatman@uwyo.edu, or contact a local extension educator. A list of county educators is available at http://ces.uwyo.edu/Counties.asp.

LRP can help cattle producers mitigate risks

By James Sedman and John Hewlett

Wyoming's beef producers are no strangers to risk. Unstable cattle markets, drought and other weather-related disasters, and unstable input markets all pose risks to producer profitability.

Livestock risk protection (LRP), offered through the Federal Crop Insurance Corporation, can be an effective tool for cattle producers to mitigate price risk and help provide stable revenue when used as part of a comprehensive risk management plan. LRP is designed to protect producers against declining fed or feeder cattle prices at marketing time.

How LRP Works

LRP contracts are available for feeder cattle, fed cattle, and swine in Wyoming. The insurance price level is tied directly to the Chicago Mercantile Exchange (CME) index. A producer buys an LRP contract for a certain price level, weight, and number of head. The producer then determines the level of coverage desired – from 70 to 95 percent of expected ending value. For example, a producer has 75 head of steers, expected to weigh 650 pounds, to market in six months. The insurance contract price is $115 per hundredweight (cwt.) assuming 95 percent coverage. When marketing the steers in six months, the price (determined by the CME index) is $99 per cwt. This results in an indemnity payment of $16 cwt. Note that LRP does not guarantee the producer a cash price. The cash price a producer receives on the open market may be different than that determined by the CME index. It is important to market the cattle for the CME index price to take full advantage of an LRP contract.

LRP Requirements and Contracts

A producer must fill out an application with an insurance agent to determine if he or she is eligible for an LRP contract. To be eligible, a cattle producer must own or have a substantial interest in the cattle being insured. After determining eligibility, a producer then decides on the specific number of head to market in the future, their target weight, and the coverage rate for the contract. This is known as the specific coverage endorsement (SCE). It is important to note producers may have more than one SCE for the cattle they are marketing. For example, if a producer had 200 feeder steers to market and wished to sell them at different times and weights (100 steers at 600 pounds, and 100 at 750 pounds), two SCEs would be used. The length of the contract can be from 13 to 52 weeks.

The premium cost to the producer of an LRP contract is determined by the total insured value times the contract rate (determined by the U.S. Department of Agriculture's Risk Management Agency). There are also limits on the total number of head that can be insured under the LRP program – 2,000 feeder cattle in a crop year and 1,000 head per SCE, and 4,000 fed cattle per crop year and 2,000 per SCE.

Producers who purchase either LRP feeder cattle or fed cattle contracts may not take an offsetting position in the CME futures market. Feeder cattle may be marketed in two weight ranges: under 600 pounds or 600-900 pounds. Fed cattle may be marketed from 1,000-1,400 pounds.

For More Information

Find out more about LRP contracts by contacting an insurance agent authorized to write an LRP contract. For a listing of these insurance agents, contact a local crop insurance agent or visit the Risk Management Agency on the Web at www.rma.usda.gov.

For more information about this and other livestock risk management topics, consult the Western Risk Management Library at agecon.uwyo.edu/riskmgt.

James Sedman is a consultant to the University of Wyoming Department of Agricultural and Applied Economics, and John Hewlett is a farm and ranch management specialist in the department.

Base children's farm and ranch chores on capability

By Amanda O'Brien

Growing up on a ranch or a farm presents many opportunities and experiences for children and adolescents.

There are new things to explore, chores to be done, equipment and machinery to be moved or repaired, and other potentially hazardous jobs.

Many of us who have lived or worked in these situations know that sometimes whoever is available has to complete these tasks no matter how unsafe they may be.

The 1992 Census of Agriculture reported 923,000 children under the age of 15 and 346,000 children between 15-19 years of age lived on farms and ranches.

An estimated 20 percent of all farm deaths are children and adolescents. Approximately 27,000 children under the age of 20 are seriously injured on farms and ranches each year. Studies show one-third to one-half of the non-fatal childhood agricultural injuries are those of children who do not live on farms or ranches. Add the injuries of children living on farms and ranches and those visiting or working on non-family farms and the number of serious injuries nears 100,000

More than half of agriculture-related fatalities in children are results from tractor and other machine-related incidents. These startling numbers show the importance of early prevention and childhood safety education.

Parents should assess the developmental characteristics of children to help prevent injuries. Parents often overestimate a child's ability to participate in certain tasks. A 10- or 12-year-old child may be strong enough and responsible enough to drive a tractor, but they may not have the cognitive ability to act appropriately in an emergency.

The following preventative strategies offer guides to various age groups:

Up to 4 years:

- Never have the child as an extra rider
- Lock up chemicals, and use barriers such as fences around ponds or manure piles
- Store ladders appropriately and out of reach and securely fastened
- Provide safe play areas appealing to children such as swings, scale models of farm equipment, toys, sandboxes, or playhouses
- Provide maximum supervision at all times

Potentially age-appropriate tasks: None. Children at this age should not be exposed to work hazards.

5-9 years:

- Set and enforce rules
- Discuss safe behavior
- Assign and closely supervise age-appropriate chores
- Talk openly about injuries and consequences of actions
- Never assign intense chores that can lead to physical exhaustion – this could lead to inattention and other risky behaviors
- Play games that focus on farm safety issues

Potentially age-appropriate tasks: Short duration tasks requiring little to no hand-eye coordination; hand tool projects and NOT power tools, watering plants, feeding small animals, egg collection, etc.

10-13 years:

- VERY dangerous age – constant risk taking, easily distracted and clumsy
- Never assume a child's size means he or she is capable of certain tasks
- Enroll child in bike safety and require and enforce use of safety helmets
- Set and enforce clear rules
- Provide education on farm hazard prevention

- Plan increases in chores and responsibilities
- Start with low-risk tasks and gradually increase responsibility and decrease supervision

Potentially age-appropriate tasks: Hand raking; limited power tool use with supervision; lawn mower operation, handle and assist with animals.

13-16 years:

- Judge size, age, and maturity to measure ability to complete various tasks
- Be consistent with rules
- Provide education with peers on farm injuries
- Provide ATV training and protective gear
- Become involved in 4-H and FFA safety projects

Potentially age-appropriate tasks: Equipment operation and maintenance (with supervision), handling of feed and feeding animals.

16-18 years:

- Encourage open communication
- Rewards for accepting responsibility
- Serve as role model for younger children

Potentially age-appropriate tasks: May be ready to work with tractors, self-propelled machinery, etc. Should be trained, educated, and supervised regularly.

Conduct regular safety audits of the farm or ranch site and home. Children should be included to increase their knowledge and awareness of injury prevention. Practice good housekeeping by locking and safely storing items that could be hazardous such as guns, chemicals, and power tools and cords, etc. Secure large objects against walls or fences. When possible, these items (such as tractor tires) should be stored flat. Appropriate safety decals should be explained and kept where they can be seen. Children should be able to feed and water from outside animal pens.

These suggestions can help reduce certain risks to children on farms and ranches, but the best preventative measure is supervision. Children should have adequate training and supervision when given a task.

If you would like additional information from Wyoming AgrAbility, please e-mail AgrAbility@uwyo.edu, or call toll-free (866) 395-4986.

Amanda O'Brien is project coordinator for Wyoming AgrAbility.

Federal ag insurance options available

By James Sedman and John Hewlett

Today's production agriculture requires a comprehensive risk-management strategy to both grow and maintain profitability.

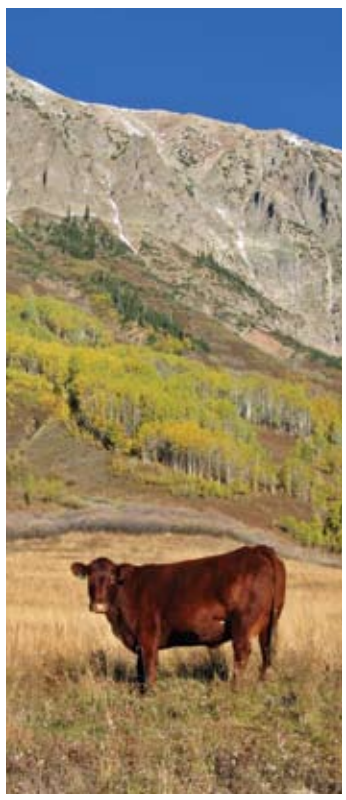
Wyoming livestock producers have several effective risk-management options available as part of the federal crop insurance program. These programs cover a wide range of options for insuring stable revenue for livestock producers. Crop insurance options are available in three main areas – forage and pasture insurance, livestock risk protection (LRP), and revenue insurance options. As with any type of insurance, premiums tend to increase with the level of coverage, and producers should discuss their insurance needs with a crop insurance agent to determine the right mix of insurance products for individual operations.

Forage/Pasture Insurance Options

In many Wyoming livestock operations, insuring a certain level of revenue relating to hay and forage production can mean the difference between success and failure. Hay and forages may be insured under several types of crop policies. The most common are Multi-Peril Crop Insurance (MPCI) policies that insure against yield loss. A producer selects a level of coverage and uses an actual production history (APH) yield to insure against yield loss.

Grains (wheat and corn) may also be insured under crop revenue coverage (CRC) policies that combine yield and price coverage to protect against losses due to both, not just yield losses.

Group insurance products (GRP) can also be used for



certain crops. GRP policies provide insurance coverage based on county yield data and are a cheaper, broader alternative.

Pastures may be insured as part of rangeland GRP policies. These policies allow a producer to enroll pasture acres and insure against yield loss on a group level. Wyoming GRP Rangeland products are tied to county non-irrigated hay yields. If these yields, which correlate directly with pasture yields, drop below a certain level, an indemnity is paid based on coverage level selected. This program is available in eastern counties in Wyoming, including Campbell, Converse, Crook, Goshen, Johnson, Laramie, Niobrara, Platte, Sheridan, and Weston. The non-insured crop disaster assistance program (NAP) available through the Farm Service Agency (FSA) can provide some coverage in counties not covered by GRP Rangeland.

Livestock Risk Protection (LRP)

Livestock producers have the ability to limit price risk through LRP, which covers feeder and fed cattle and swine. LRP coverage will be available for lambs beginning in the summer; however, policy details are not yet available. These products protect producers from declines in national livestock prices. A producer enrolls a number of feeder or fed cattle to be marketed at a certain date and weight and then selects a coverage level of 70 to 95 percent of the expected ending value (published daily by Risk Management Agency [RMA]). If the actual ending value (determined by the RMA) is lower than the insured value at the end of the insurance period, an indemnity is paid. Premiums vary with coverage level, so consult a crop insurance representative for more information.

Revenue Products

The federal crop insurance plan AGR-Lite – short for Adjusted Gross Revenue-Lite – was recently approved for Wyoming producers. This new product is a whole-farm revenue insurance program that combines all enterprises of a farm or ranch (crop or livestock) and insures against losses in total revenue. This insurance came about from the need to provide more effective insurance coverage for producers who may not qualify or were not previously well-covered under other existing programs. This product

John Hewlett

can protect against yield and price declines on a whole farm-level.

For more information or to utilize one or more of these crop insurance programs in your livestock operation, consult a local crop insurance agent. They can help tailor a plan to fit individual operations. For more details on these and other risk management topics on the Web, visit the Western Risk Management Library at agecon.uwyo.edu/riskmgt, or to locate a listing of crop insurance agents for Wyoming visit the RMA at www.rma.usda.gov.

James Sedman is a consultant to the University of Wyoming Department of Agricultural and Applied Economics, and John Hewlett is a farm and ranch management specialist in the department.

ANIMAL ID — management and marketing opportunities

By John Henn

Animal identification has attracted a lot of attention the last two years – good and bad.

Now that the U.S. Department of Agriculture has taken the stance that the national ID program be voluntary, cattle producers need to take a renewed look at animal ID for enhancing management and marketing opportunities.

The old adage of "you can't manage what you don't measure" is a good starting point for using identification in a cow herd.

Incorporating the latest ID technology can give producers insight into their herds and possibly managing animals on an individual or a several-group basis versus a single group. Information that can be gathered includes birth date, birth, weaning and yearling weights, pounds produced per cow exposed to the bull, cow calving history, feedlot performance, carcass characteristics, and, probably the most important, profitability at all stages of production.

Production cost and net profit information can help identify for culling non-profitable animals.

Identification and data management systems available can fit most any rancher's individual needs and requirements. Electronic identification and traceability through the use of Radio Frequency IDentification (RFID) ear tags allow different types of data to be "married" to a unique 15-digit, non-duplicated number.

Most herd management programs can incorporate and tie the RFID tag number to the ranch tag with the various data. The feeding and packing segments of the industry continue to evaluate and utilize RFID tags to get performance and economic data back to the producers who retain some level of ownership. Cow herd management programs put the data into usable information that can be used in helping producers make accurate management decisions.

Incorporating animal ID into the improvement and marketing of beef cattle is not new; however, the export and, in some cases, the domestic marketplace, have recently started to provide opportunities for producers to use ID to add and capture additional value from their cattle.

The past 10 years have seen an increasing number of producers retaining ownership in their calves and capturing the added value of the genetic improvements made in performance and carcass quality. By using feedlot and carcass data, these producers have made improvements to their bottom line.

The use of an RFID tag allows individual animals to be traced through the beef production chain even when there is co-mingling with non-tagged animals. The ability of the tags to be read electronically provides the opportunity to track an individual animal's performance through the feedlot and carcass data from the packing plant as it moves through the production chain. The data from each segment is attached to the RFID tag number and can be electronically sent to the producer. The data can be incorporated into cow herd management programs where it can provide the producer with invaluable information used in making management decisions.

Verifying the source and age of calves for export and domestic markets is the latest opportunity to add value. Such a program being offered to Wyoming producers is the Wyoming Verified program through the Wyoming Business Council's Agribusiness Division. Premiums have ranged from $3 to $10 per cwt. by some enrolled producers. The Wyoming Verified program recently added a natural verification marketing claim for animals raised for feeders looking for such animals. Further information is available at www.wyomingbusiness.org/ag/ag_wyverified.aspx.

Animal identification will continue to play a larger role in the marketing of livestock. Producers should consider the various ways ID can be a part of their management and marketing plans to improve production efficiency and profitability.

John Henn is the livestock and meat marketing program manager for the Wyoming Business Council. He can be reached at (307) 777-2847 or john.henn@wybusiness.org.

Reducing risk in retained ownership

By Bridger Feuz

Many strategies can reduce the additional risk faced when cattle are retained through the feedlot. Sorting the top end, shared ownership with the feedlot, and participating in a feedlot test can all be used to reduce risk.

Another strategy that can be used by commercial producers to sell cattle on a value-based grid is DNA sire identification. Identifying sires responsible for premium carcasses and discount carcasses can significantly affect profitability when selling on a grid.

Grid marketing is a pricing system that utilizes a matrix of yield grade and quality grade to determine the value of an animal. Animals that have favorable carcass traits receive premiums, and animals that have poor carcass traits receive discounts. Discounts are also applied to light weight carcasses as well as extremely heavy carcasses. Each animal receives a unique price, whereas conventional pricing is based on averages.

The Process

1. Collect a DNA sample from all of the potential sires and all calves, either on the ranch or at the feedlot. Preferred sampling methods differ between testing laboratories so contact a laboratory for preferred sampling method directions. The cost is approximately $1 per head or less. Either store the samples or send them to a laboratory for storage. For a list of laboratories that perform these services, go to www.uintacounty.com/index.asp?nid = 215
2. Market cattle through a pricing grid or marketing alliance that will provide individual carcass data. Obtain the data and sort off the top10 percent of the premiums and bottom 10 percent of the discounts.
3. Request the lab to analyze the corresponding samples from the top and bottom 10 percent and the potential sires. The cost of this analysis is approximately $15 to $25 per sample depending upon the number of sires, number of total samples, and the testing laboratory. The cost can be reduced if bull calves have already been DNA profiled by the original seedstock owner.
4. Cull the bulls responsible for the discount, and select new bulls with genetics similar to the bulls responsible for the premiums

The Results

Matching the top and bottom 10 percent of the carcasses to the responsible sire can be good, bad, or ugly but all useful.

The "Good"

One or two bulls are responsible for most of the discounts. Cull these bulls and significantly increase profitability on the grid.

The "Bad"

Several bulls contribute to the discounts, but there are one or two bulls producing premium carcasses. This is a more difficult fix in terms of culling bulls, but at least there is still a clear target for producing premium carcasses.

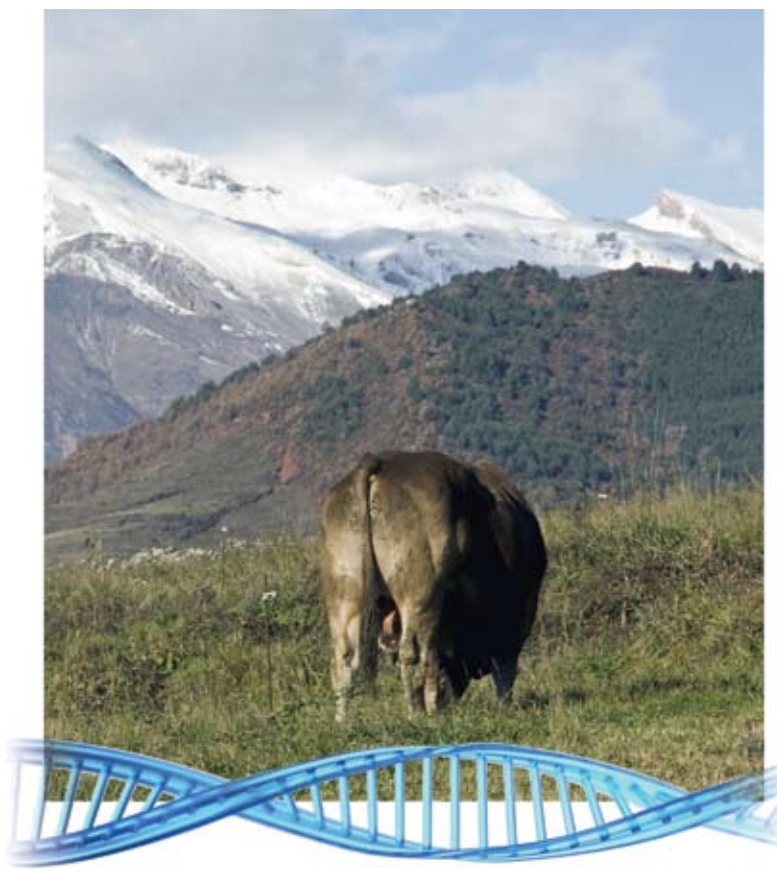
The "Ugly"

There are several bulls producing premium and discount cattle. This result requires the most work to change, as it may be difficult to change profitability in the short term. If the cattle were profitable overall on the grid, the advice may be to keep up the good work.

If the cattle are losing money overall on the grid, the advice may be that grid marketing is not appropriate for your herd.

Although the results are not always what a producer would like, DNA sire verification is one of the few tools available to allow commercial multi-sire producers to make genetic progress like a seedstock producer. This genetic progress can be key to making retained ownership profitable. A side benefit is that, once bulls have been DNA analyzed, a producer can use these profiles to identify other problems they may have. An example might be collecting samples on large birth weight calves and identifying them to the responsible sire.

Bridger Feuz is a University of Wyoming Cooperative Extension Service educator serving Sweetwater and Uinta counties and can be reached at (307) 783-0570 or brfeuz@uintacounty.com.



Products, suggestions can help those with mobility impairments continue farming, ranching

By Randy Weigel

The continual increase in the average age of ranchers and farmers, combined with ranchers and farmers with physical limitations working in dangerous environments, increases the probability of slips and falls. Falls – whether caused by a slip, loss of balance, or poor vision – are a leading cause of injury, disability, placement in nursing homes, and premature death in mature Americans.

Secondary injuries from slips and falls are common for ranchers and farmers affected by disabilities. Back injuries, strokes, leg amputations, neuromuscular impairments, and other mobility limitations can affect stability when walking on slippery or uneven surfaces.

Lack of sensation in a foot causing an inability to feel a shoe slipping, or inability to react quickly when a foot does slip, can increase the risk of slip or fall injuries. Stability and balance can also be affected by a mobility impairment, further increasing the risk of a fall; however, various assistive technology solutions are available that can reduce slips or falls that can cause secondary injuries.

Surfaces

In the home

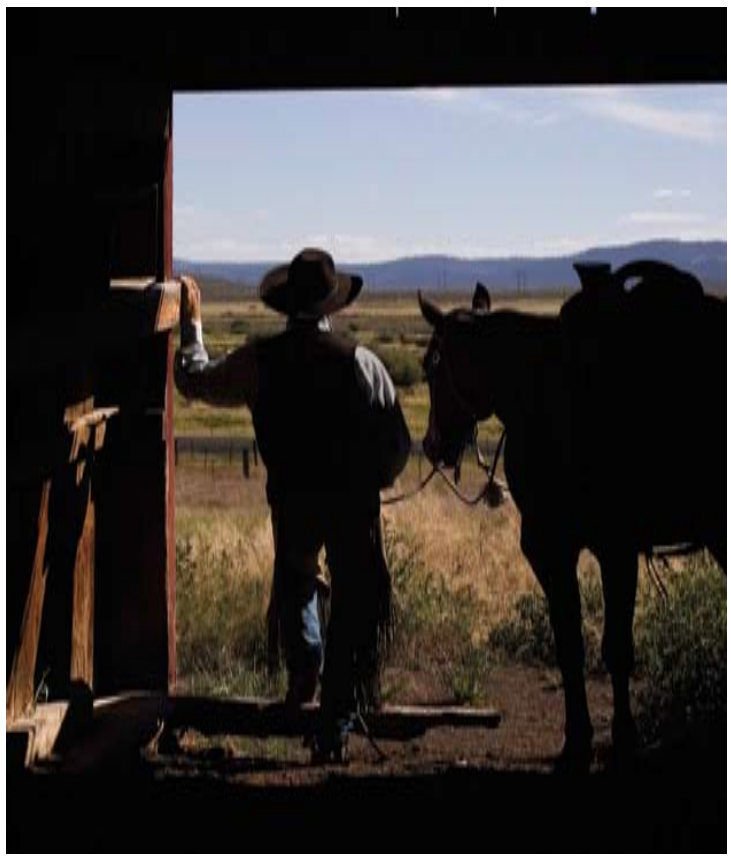
Walking indoors on a vinyl floor with wet shoes can be hazardous. A throw rug with an anti-slip backing should be used in high-traffic areas. Non-skid safety tape can prevent slips in a bathtub or on indoor stairways.

In the machine shed

Non-slip paint coatings can be applied to shop floors. It can be as inexpensive and easy as mixing silica sand with regular floor paints. Acid etching of concrete floors can also be applied to create non-slip surfaces. Note that anti-slip solutions, such as tread tapes and silica sand in paint, will not be effective in oily or icy conditions. For these solutions to work, all spilled oil should be cleaned immediately and icy surfaces frequently treated.

Outside

Uneven terrain surfaces should be well-drained and maintained. A gravel mix in high-traffic areas instead of typical clay soil reduces foot slippage. Make sure plenty of ice-melting material is at strategic locations.



Footwear and Mobility Aids

A good pair of boots can make a big difference in slip or fall prevention. Replace worn boots with those having a good anti-slip tread pattern. (Smooth-soled cowboy boots may not be the best choice.) Look for a tread pattern that provides good traction in wet, muddy conditions. Boots with a heel notch provide better grip when walking downhill. Many companies also make ice-gripper attachments for boots and shoes. A cane or walking stick can also provide stability when walking on uneven surfaces. Broader-based tips and ice-grip attachments can provide further stability on slippery surfaces.

Even with the best footwear and cane tips, slips and falls can still occur. Many agriculturists have reported using a variety of motorized vehicles to reduce the risk of falling and fatigue when walking long distances. Examples include a modified riding lawn mower, a golf cart, a powered scooter, and various all-terrain vehicles. A rancher or farmer with a mobility impairment should always carry a communication device such as a cell phone or two-way radio.

Steps and Handrails

Modified steps and handrails can help prevent falls. Steps on equipment or machinery should be constructed of a non-slip material, such as Grip Strut® safety grating material. This material has a high-load capacity and low-maintenance cost. These steps should be cleared of mud or snow, which will counteract the anti-slip properties of the step. Metal expansions can also be applied to existing steps to reduce foot slippage. Handrails alongside the steps should be installed and used to provide greater stability when mounting and dismounting from the tractor.

While anti-slip materials (tread tapes, Grip Strut®, ladder rung covers, non-skid mats) reduce potential slips and falls, these same materials can become a hazard and result in a fall for farmers and ranchers with mobility impairments who lack sensation in lower extremities.

Slips and falls will continue to be a number-one concern for ranchers and farmers with mobility impairments; however, the most valuable recommendation shared by many farmers and ranchers is "slow down." Moving too fast increases the risk of a slip or fall.

For more information about ranching and farming with mobility limitations, assistive technology devices to aid ranchers and farmers with mobility limitations, or to learn how Wyoming AgrAbility can help you or someone you know who is experiencing a disability, contact Wyoming AgrAbility toll-free at (866) 395-4986, agrability@uwyo.edu, or www.uwyo.edu/agrability.

Randy Weigel is a professor in the University of Wyoming Department of Family and Consumer Sciences in the College of Agriculture and is Wyoming AgrAbility director. He can be reached at (307) 766-4186 or weig@uwyo.edu.

Quality assurance practices, procedures, and facilities self-evaluation for all livestock

By Steve Paisley and Wayne Tatman

Beef Quality Assurance (BQA) is a national program started in the early 1980s by the National Cattlemen's Beef Association as a producer-led, proactive approach to ensure beef and dairy cattle are maintained in a manner that results in safe and wholesome products for the consumers.

From the beginning, Wyoming has played an important role in developing national BQA guidelines, and the Wyoming BQA program continues to be a strong, successful program. As management practices and industry issues evolve, state-led BQA programs have adapted to meet the needs of a wide range of production and marketing circumstances. Specifically, Wyoming BQA is designed to enhance carcass quality by preventing residues in meat, pathogen contamination meat, and carcass defects such as injection site blemishes and bruises.

Producers evaluating their management practices, handling procedures, and overall quality of livestock facilities is one of the most important steps in BQA. Although often overlooked, regular inspection and repair of calving and animal handling facilities are critical to reducing carcass defects. Loose boards, protruding nails, sagging gates, and broken posts can potentially contribute to both animal and human injury. To help prevent injury and reduce carcass blemishes, several state BQA coordinators (Wyoming included) developed a self-evaluation document to help producers evaluate the safety and quality of their facilities, animal handling procedures, as well as feed, health, and record-keeping practices. Below is an example of the facilities checklist.

This checklist is available by contacting the Wyoming Beef Council at (307) 777-7396 or wybc2@qwest.net, or Steve Paisley (see end of article for contact information).

Even though the above document was developed for the BQA program, it is applicable to all livestock species and applies equally to adult producers and youth producers (4-H and FFA exhibitors). No matter the age of the producers, they are producing products that will be a part of the food chain, and they have a responsibility to produce safe and wholesome products. Besides understanding and following guidelines for producing and marketing a quality product (from conception to consumption), producers of animals for meat purposes carry a responsibility to follow good animal husbandry practices.

Steve Paisley

If interested in becoming a BQA-certified producer, please contact a local veterinarian, University of Wyoming Cooperative Extension Service (UW CES) educator, me, or the Wyoming Beef Council. Extension educators are developing a meat quality assurance program that will be implemented next year for youths in several counties. Please contact one of the above for more information.

Self-Evaluation

Livestock Receiving Protocol	Yes	N/A	No
Obtain previous health history			
Source, date, and description recorded			
Inspect and record condition of incoming stock			
Handle cattle gently and humanely			
Livestock Processing			
All animals individually identified			
Trail of record and processing details			
Administer receiving health program upon receipt			
Record individual or group health treatment information			
Sick Animals			
Check for sick animals daily			
Treatment of animals when found			
Segregated from other animals			
All treatments recorded for individual animals			
Sale/Shipping of Animals			
Individual animal treatment records sent with animals for harvest			
Treatment withdrawal times known and met before harvest			
Records accompany cattle to next location			
Feed, processing records, other information offered to purchaser			
Record information on cattle sold/shipped			

Steve Paisley is the extension beef cattle specialist for the University of Wyoming and can be reached at (307) 766-5541 or spaisley@uwyo.edu. Wayne Tatman is a UW CES educator for Platte and Goshen counties and can be reached at (307) 532-2436 or wtatman@uwyo.edu.

Technology can help producers find that perfect bull

By Bridger Feuz

Many ranchers have a vision of what the ideal bull should look like, but how is that ideal bull found that fits specific environmental and genetic needs?

Although the perfect bull may be difficult to identify, tools can help find the best fit. Producers are able to use direct data, including ultrasound, from a bull's early performance record. Expected progeny differences (EPDs) can make future predictions. Finally, genetic tests offer additional information for selection decisions. Using all of these tools in combination can help remove some of the guesswork out of bull selection.

Direct performance data from potential bulls is very useful. Data such as birth weight, weaning weight, and scrotal circumference are available on most bulls. Additionally, some bulls participate in tests, such as the Midland Bull Test in Montana www.midlandbulltest.com and Wyoming Beef Cattle Improvement Association www.wbcia.org, that provide information on growth and efficiency. Ultrasound measurements are also available on some bulls, which allow carcass attribute predictions. This direct information helps evaluate the potential for a bull's progeny; however, it does not account for the likely genetics the progeny will inherit, which lowers the accuracy of predictions.

Bridger Feuz

Another drawback to direct data is that it is not possible to measure maternal traits – bulls have proven very difficult to milk!

EPDs provide information on a bull's potential and are published by major beef breed associations and many of the small breed associations. Additionally, individual EPDs are published in most bull sale literature. Beef breed associations have been expanding the number of measured traits to meet the needs of commercial cattlemen. Depending upon the breed, producers can not only learn about traits such as growth and carcass quality, but also maternal traits such as milking ability and stayability – the probability an animal's daughters will remain in production to at least 6 years of age when compared to the daughters of another animal.

Another useful tool available for many breeds is dollar value index EPDs. These value indexes predict differences in profitability for enterprises such as selling weaned calves, feedlot performance for selling fat cattle, and grid pricing performance when retaining ownership and marketing cattle on a grid.

Grid marketing is a pricing system that utilizes a matrix of yield grade and quality grade to determine the value of an animal. Animals that have favorable carcass traits receive premiums, and animals that have poor carcass traits receive discounts. Discounts are also applied to light weight carcasses as well as extremely heavy carcasses. Each animal receives a unique price, whereas conventional pricing is based on averages.

The low accuracy of predictions for young bulls is a limitation of EPD information for commercial bull buyers. One approach is to utilize artificial insemination and select high-accuracy, older bulls as semen providers. Another strategy is to use information from genetic tests to increase accuracy.

Young bulls, especially half and full siblings, oftentimes have similar or equal EPD information; however, as they begin to breed and information is collected, the actual performance differences can be large. DNA research has identified genes that contribute to carcass quality traits. Further research is needed to identify genes related to growth and maternal traits.

By utilizing genetic testing, choosing between bulls with similar EPDs is possible by determining which have known genes associated with traits such as marbling and tenderness. To find out more information on these tests, visit the National Beef Cattle Evaluation Consortium Web site at www.nbcec.org.

The tests available today are only able to account for a small proportion of the genetic variability. As research continues, more informative tests will become available to increase the accuracy of predicting animal performance.

All of these tools have strengths and weaknesses in predicting the performance of a bull's offspring. The key is to understand what traits are important to make a producer's operation most profitable, and then collect as much information as possible on those traits on each potential bull. Utilizing all of the information from these tools in combination will help reduce the risks of inaccuracy and improve the profit potential of an operation.

Bridger Feuz is a University of Wyoming Cooperative Extension Service educator serving Sweetwater and Uinta counties and can be reached at (307) 783-0570 or brfeuz@uintacounty.com.