



Owyhee County

Cattlemen's Corner Beef Newsletter

University of Idaho
Extension

September, 2014

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Thank you to all who supported the 2014 Owyhee County Fair 4-H & FFA Junior Livestock Sale! This year a record 218 animals were sold for another record breaking sale of \$263,375!

Still Something to Learn?

K. Scott Jensen, UI Extension Educator, Owyhee County

This past April, I had the opportunity to do some consulting work in Central Europe. In a very hectic two week period we did a series of seminars and meetings in Latvia, Lithuania, Poland, Bulgaria, and Romania. My assigned topics to speak on were the structure of the beef industry in the United States and recommended practices for cow/calf producers.

In each country we held a one-day seminar for producers, University faculty, livestock breed association representatives, and government officials. Interest was high as attendance ranged from 90-170 people. The day following each seminar we held a much smaller meeting with government (ag ministry officials), University deans, and some breed association representatives. The purpose of this meeting was to identify livestock industry issues in each country and discuss ideas of how our countries could work together to resolve those issues.



Speaking at the symposium in Bucharest, Romania. Translator seated in the foreground.

It was interesting to observe the attitudes of the people in general and especially the attitudes of the government officials. Oftentimes, those attitudes mirrored each other quite closely. Most of the countries were very interested in the progress of their livestock industries. One country in particular though had

the attitude more consistent of a “know it all” or “why are you bothering me”? It was obvious that they weren’t too interested.

To bring this idea a little closer to home, what do you do to stay current on the practices and issues affecting your industry? Do you “know it all” already or do you make a concerted effort to read, study, watch, and learn? I realize that time is always factor but staying current is definitely time well spent!

Read: What publications do you subscribe to? There are many out there. I often receive more than I get time to read. However, there are a few publications that I think are key (at least for me) and they are the first that I pick up. I try to take an issue or two along anytime I might have a chance to do some reading. Long plane flights, waiting while your spouse is shopping, doctor’s office, etc. are all good times to bring along your own reading.

Watch: Much time is wasted watching “garbage” on TV. While I support down time, sometimes we park ourselves in front of the TV or computer and idle away hours

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Proper Injection of Estrus Synchronization Products

J. Benton Glaze, Jr., Ph.D., Extension Beef Specialist, UI Animal & Veterinary Science Department

Estrous synchronization and artificial insemination (AI) are reproductive management tools that have been available to beef cattle producers for a number of years. The objective of estrus synchronization is to allow the breeding of a high percentage of cows and heifers in a relatively short period of time. Properly implemented estrus synchronization protocols allow for the concentration of the breeding and calving seasons, production of a more uniform calf crop, and facilitation of the use of AI. Artificial insemination has many benefits to beef producers (use sires with superior genetics, mate sires with specific females, reduce number of herd sires, produce progeny for specific markets, etc.) but has not been widely adopted in the beef industry.

One of the factors that often deter producers from implementing an AI program is the time and labor required to accurately detect heat (estrus). As mentioned previously, estrus synchronization can facilitate the use of AI by concentrating heat detection needs over a shorter period of time. Most of the estrus synchronization protocols require the injection of reproductive hormones. Several of the protocols require the injection of prostaglandins.

Medications (vaccines, antibiotics) are commonly given to beef cattle as a part of regular husbandry practices or part of a herd health plan and hormones are used as part of a reproductive management plan. These products may be given by mouth, topically, or by injection. Injections are commonly given in the muscle (intramuscular – IM), under the skin (subcutaneous – SubQ), or in the bloodstream (intravenous – IV). Intramuscular injections of almost any medication, or product, results in some form of injection site lesion or blemish. The severity and economic loss of the resulting lesion can be reduced through the use of beef quality assurance (BQA) approved injection techniques and proper injection hygiene.

For a number of years, the beef industry has made an effort to reduce the economic loss from injection site lesions. This effort included educating beef cattle producers and beef industry workers to administer all intramuscular and subcutaneous injections to cattle in front of their shoulders in an area known as the injection site triangle. This BQA recommendation has proved beneficial to the beef industry, as the number of injection site blemishes found in higher priced cuts of meat has greatly been reduced.

However, some questions and misconceptions have arisen with regard to the administration of reproductive hormones and drugs. Examples include: (1) If prostaglandins are given in the neck region, will reproductive performance be reduced? (2) Drugs administered in the rump might be more effective since they are given in closer proximity to the reproductive tract. In 2012, a study was conducted to answer and address these types of questions.

Ohio State University and North Carolina State University researchers separated a herd of beef cows into two groups, and as part of an estrus synchronization protocol intramuscularly injected prostaglandin either in the rump or in the neck. Females in the groups were synchronized using a combination of a 7-day intravaginal progesterone implant (CIDR) and prostaglandin injection followed by estrus detection. Cows and heifers were bred on observed heats or timed inseminations. Pregnancy was determined by a veterinarian using ultrasonography about 70 days following insemination. Site of the prostaglandin injection (rump or neck) did not affect overall conception rates or whether the females were bred based on estrus detection or timed insemination. The results of this study show that administering prostaglandins in the neck does not negatively affect the conception rates or the effectiveness of estrus synchronization protocols.

Beef cattle producers should follow BQA recommendations when administering intramuscular injections during estrus synchronization. Table 1 provides general BQA guidelines for injecting animal health products which include estrus synchronization drugs, hormones and products.

1.	Follow label directions.
2.	Give all injections in front of an animal's shoulder (in the injection site triangle).
3.	Choose route of administration that minimizes risk of tissue damage. (i.e. subcutaneous vs. intramuscular)
4.	Select sharp, sanitary needles of correct length and gauge.
5.	Do not use bent, burred, or broken needles.
6.	Do not inject more than 10cc of product in one injection site.
7.	Keep injection sites at least 4 inches apart.
8.	Adhere to withdrawal periods.
9.	Keep accurate records.



Rain Damaged Grain May Offer Feeding Opportunity for Beef Producers

John B. Hall, Ph.D., PAS, UI Extension Beef Specialist

August rains may have helped out range and pastures, but they left behind damaged hay and grain fields. Barley that sprouted in the head and rain damaged wheat may be an opportunity for feeding beef cattle. This may partially offset losses that grain growers have incurred. Even grain that has low levels of mold and mycotoxin may be fed to beef cattle without any negative effects. However, beef producers and nutritionist need to know the mycotoxin content of feeds before purchase.

Performance of cattle fed damaged cereal grains

Several university studies have demonstrated that cattle perform well on rain damaged grains. In general, performance is not compromised when sprouted grains are incorporated into the diet on a dry weight basis (Tables 1, 2 & 4).

Table 1. Weight gain and efficiency of yearling steers fed normal or sprouted wheat.

Proportion of Sprouted Wheat	Sprouted Wheat Kernels in Ration	ADG, lb.	Feed Efficiency
0%	0%	2.28	8.94
20%	12%	2.30	8.56
40%	24%	2.41	8.46
60%	36%	2.34	8.89

Murray and Huber, 1968.

Table 2. Effect of level of sprouted wheat on performance feedlot cattle.

	ADG, lb/day	Feed intake, lb/day	Feed efficiency
Barley control	2.90	20.8	7.15
25% undamaged wheat	2.97	20.9	7.03
50% undamaged wheat	2.86	20.2	7.06
25% low-sprouted wheat	2.81	19.7	6.96
50% low-sprouted wheat	2.73	19.9	7.27
25% high-sprouted wheat	2.99	20.9	6.99
50% high-sprouted wheat	2.84	20.0	7.05

Washington State University, 1986.

Low-sprouted wheat = 9% sprouted kernels.

High-sprouted wheat = 58% sprouted kernels.



Grain sprouted in the head

Processing and Purchasing

Beef producers should be aware that test weights per bushel may be lighter for sprouted grains; therefore, grains should be purchased by the ton rather than by the bushel (Table 3).

Processing of cereal grains, especially barley, increases animal performance by enhancing average daily gain and reducing the feed to gain ratio. Work from North Dakota State University indicated that not only is processing of sprouted grains important, but the coarseness of the rolling also impacts performance. Finer rolling of sprouted barley or wheat will improve animal performance (Table 4).

Body Condition Scoring

Tyanne Freeburg, Extension Educator, Adams County

Body condition scoring is a way to categorize breeding cows based on their physical appearance of muscling and body fat. In the United States we use a score of 1-9. A condition score of 1 indicates an animal that is extremely emaciated and physically weak. A condition score of 9 indicates an animal that is very obese. For medium-framed cows, there is approximately 75-100 pounds of bodyweight difference between each numerical score.

When studying a cow to give a score, you will want to observe and physically palpate the back, tail head, pins, hooks, ribs, and brisket (Eversole, Browne, Hall, & Dietz, 2009). By palpating the ribs, back and the edge of the loin, there will be a much sharper more pronounced feel to the bones in a lower scoring cow. The cow will also have no visible fat in the brisket, or the tail head. A cow on the higher side of the scoring numbers (8-9) will have bone structure that is hidden from both palpation and visual glance and may also have large fat deposits around her tail and pin bones (Eversole et al., 2009). An ideal score of 5-7 will have no more than the last two ribs noticeable and/or fat filling the brisket and tail head (Momont & Pruitt).

Body condition scores should be measured at weaning, 2-3 months before calving, and at calving. As weaning approaches keep in mind that the ideal score is 5-7 at calving. To achieve this efficiently you may want to consider grouping cows by score and feed accordingly to achieve that body score during the weaning time evaluation. By reevaluating a few months before calving you will have the opportunity to alter rations as needed. By grouping cows that only need extra feed, producers are able to maximize efficiency and reduce costs as compared to feeding the herd a higher energy ration. A non-lactating cow will respond well to supplemental feeding if needed to increase body condition before calving. It is much more difficult to increase body condition between calving and breeding seasons as most of the energy intake of the cow goes towards producing milk for the calf. If a cow is in an optimal score of 5 or 6, she will have a 90% chance of returning to estrus for rebreeding within 60 days postpartum (Stewart & Dyer).

If you use your smart phone on the ranch, there is a 99 cent app available from Google Play and Apple App iStore. Search for "NUBeef-BCS". The app will let you hone your skills by scoring cows in the apps herd and comparing your score to the experts. It will also let you take a picture of your cow, record a score, and add the date. If you want to see what this app has to offer before paying, watch a video at: <http://beef.unl.edu/cattleproduction/nubeef-bcs-app> (Extension).

[Eversole, D. E., Browne, M. F., Hall, J. B., & Dietz, R. E. \(2009\). Body Condition Scoring Beef Cows: Virginia Cooperative Extension. Extension, U. o. N. L. \(Writer\). Beef Body Condition Score Mobile App. YouTube.com.](#)

[Momont, P. A., & Pruitt, R. J. Condition Scoring of Beef Cattle. Cattle Producer's Handbook.](#)

[Stewart, L., & Dyer, T. Body Condition Scoring Beef Cows. Retrieved from: http://www.caes.uga.edu/commodities/fieldcrops/forages/events/GS11/13/BCS_Update.pdf](#)

Still Something to Learn? . . . continued from page 1

at a time. There are some good, industry related programs on TV. A quick search on the internet will turn up numerous industry related videos and recorded symposiums. I've even watched some important testimony given before the US House of Representatives Natural Resources Committee. Talk about an education!

Learn: While you can learn from reading and watching, I also recommend attending educational programs offered by your local/regional Extension office, state and local cattle associations, drug companies, and others. These programs are often timely and of considerable worth. While most of the time there will not be ground-breaking new knowledge presented, oftentimes presenters can help you identify areas that will improve some aspect of your operation. When we go with the right attitude, we can always go home with something of value.

One additional recommendation is to visit other ranches in other areas of the state and country. Visit with the owners and managers about their important issues and how they do things. It is amazing what we can learn from each other. I attend our Extension Annual Conference each year. I seldom get much out of the conference itself (don't tell my boss!). I do usually come home with some program or research ideas from visiting with my Extension colleagues at the conference.

The opportunity to visit Central Europe as a great one. I went as a presenter but also learned (or was reminded of) some important things. We are very fortunate to live in this country and more specifically in this part of the country. We are fortunate for the industry structure that we have. We are blessed to enjoy access to many things (animal health products, quality veterinary service, modern equipment, and modern technology... just to name a few) that others around the world do not. May we take advantage and learn and apply those things as we raise the best quality beef in the world. ♦

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

Rangeland Monitoring Workshop

Learn the basics of photo monitoring

Classroom and field sessions will cover:

- Permittee and allotment photo monitoring
- Curriculum supported by BLM, ISDA, IDL, IRRC and U-Idaho
- Monitoring kits available for purchase
- Information on monitoring certification program

Thursday, Sept. 18th

9am – 4pm (lunch provided)

Indian Valley

Community Hall

Who should attend?

- Ranchers
- Agency Resource Managers
- Conservation and non-profit organizations
- Interested public
- FFA & 4-H kids

RSVP* by Sept. 10th:

Tyanne Freeburg, Adams County
Extension Office, 253-4279

adams@uidaho.edu

University of Idaho

Rangeland Center

Extension | College of Agricultural & Life
Sciences | College of Natural Resources

Reasonable accommodations will be made for persons with disabilities and special needs who contact Tyanne Freeburg at P.O. Box 43, 203 S. Galena Council, Idaho 83612, 208-252-4279, tfreeburg@uidaho.edu at least ten days prior to the event.



**IDAHO RANGELAND
RESOURCE COMMISSION**

Meals and refreshments provided by the Idaho Rangeland Resource Commission

Rain Damaged Grain . . . continued from page 3

Table 3. Relative feed values of damaged cereal grains.

Crop	Type of Damage	Weight Pounds/ Bushel	Composition				Ash %	Feed Value Relative to Barley (100) For Cattle
			Protein%	Fat %	Fiber%			
Wheat	Not Damaged	62	14.8	1.8	2.6	1.5	105	
Wheat	Slightly frozen	56	14.3	1.9	3.5	1.7	102	
Wheat	Frozen or sprouted	50	14.7	2.1	4.0	1.9	100	
Wheat	Frozen or sprouted	40	14.9	2.6	4.6	2.0	90	
Wheat	Burnt (20% charred)	54	12.1	1.9	4.5	2.1	94	
Barley	No Damage	50	11.9	2.1	6.0	2.6	100	
Barley	Frozen or sprouted	44	11.8	2.1	6.6	2.5	95	
Barley	Frozen or sprouted	36	11.8	1.9	7.8	3.0	90	

Adapted from Agriculture and Agri-food Canada publication #1277 "Problem Feeds".

Table 4. Effect of grain source and processing method on intake and performance in growing beef steers.

	Rolled Corn	Rolled, Sprouted Barley		Rolled, Sprouted Durum	
		Coarse	Fine	Coarse	Fine
Intake, lbs/day	20.9	20.7	20.9	21.4	20.8
ADG	2.95	3.08	3.32	3.08	3.32
Feed/gain	7.09	6.71	6.29	6.94	6.25

Reed et al., 2002

Molds and Mycotoxins

Feeding of sprouted or damaged grains is not without risk as these feeds are more likely to contain molds and mycotoxins (mold toxins). Beef cattle have greater tolerances for mycotoxins than dairy or swine. The rumen detoxifies some of the mycotoxins and, unlike milk, mycotoxins are not passed along in meat.

All sprouted or damaged grains should be tested for mycotoxins before purchase. Table 5. lists the common mycotoxins and the FDA acceptable levels in beef cattle feed. These levels are the levels of mycotoxins contained in the finished feed product.

Table 5. FDA established guidance levels for mycotoxins in beef cattle diets.

Mycotoxin	Cattle Type		
	Breeding	Young (< 4 mo)	Growing/Finishing
Aflatoxin	100 ppb	20 ppb	300 ppb
Fumonisin	< 30 ppm	< 10 ppm	50 ppm
Vomitoxin (DON)	10 ppm	5 ppm	10 ppm
Zearalenone*	< 10 ppm (< 5 ppm heifers)	-----	-----

*No FDA guidance levels established
Adapted from Parrish (2008)

Rain Damaged Grain... continued from page 6

Links are provided below for feed testing laboratories. The Idaho Department of Agriculture plant testing laboratory can test for aflatoxin, fusmonisin, and/or vomitoxin. Contact information for other laboratories can be found in the Michigan link below.

http://www.agri.state.id.us/Categories/PlantsInsects/Documents/FormsPublicationsReports/2012_Mycotoxinpamphlet_Final.pdf

http://www.michigan.gov/mdard/0,4610,7-125-1569_16979_21266-8145--,00.html



Growing/Finishing cattle can handle greater levels of mycotoxin than other cattle types.

When feeding grains that contain mycotoxins, recommended procedures include:

- Test grains before diet formulation AND re-test finished feed.
- It is safer to feed diets made from mycotoxin containing grains to finishing cattle than breeding cattle.
- Mycotoxin containing grains should usually be limited to 50% of the feedstuff.
- Total mixed rations are safer than supplemental feeding because amount of mycotoxin in the total diet can be more closely controlled.
- Proper cleanout procedures must be followed on all equipment before mixing or delivering feed to another class of cattle.
- Horses are more sensitive to mycotoxins than cattle, so ranchers should be careful to prevent horses from eating mycotoxin containing feeds.

Using sprouted or rain damaged grains to feed cattle this fall is an opportunity to reduce feed costs while helping out our grain producing neighbors. The use of sprouted grain entails proper diet development and feed testing.

References

Lardy, G. 2013. Feeding value of sprouted grains. NDSU Extension pub. AS-647

Marston, T. 2004. Feeding low-test-weight and sprouted wheat. KSU Extension pub. MF-2659.

Parrish, J. 2008. Mycotoxins and their effects on beef cattle. Cattle business in Mississippi – Feb. 2008.

Reed, J. J., M. L. Bauer, G. P. Lardy, and E. R. Loe. 2002. Feeding sprouted durum and barley in growing rations. 2002 NDSU Beef Report.



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To enrich education through diversity the University of Idaho is an equal opportunity/affirmative action employer and educational institution.

September 25

9 a.m. - 4 p.m.

Beef Reproductive Management Short Course **Unit 2: Pregnancy Detection** **and Fall Working**

Cambridge:
Fairgrounds
Exhibit Hall
and a local
ranch



Please RSVP (if not previously registered for the series of classes) Cost is \$40 and includes a binder of resources and lunch.

208-253-4279 or

adams@uidaho.edu or

Facebook at:

www.facebook.com/Universityofidahoextensionadamscounty/

Topics

- Bovine anatomy
- Hands-on instruction with pregnant and open reproductive tracts
- Pregnancy detection options
- Body condition scoring
- Planning winter feeding program
- Palpate and ultrasound cows
- Cow culling
- Winter bull management