



Blaine County Agricultural Newsletter

December 2007 Blaine County OSU Extension Service, 212 N. Weigle, Watonga, OK 73772 580-623-5195
Email: blaineco@watonga.com

Feeding Moldy Hay

Feeding moldy hay to livestock is a tough decision. All hay contains some mold, but when mold becomes noticeable the decisions become important. Usually, mold makes hay less palatable, which can result in lower intake or in animals refusing to eat the hay. Poor weight gains or loss in body condition may result from the lack of nutrient intake. Many other problems from mold occur because of mycotoxins produced by certain mold fungi. This also is part of the decision problem since not all molds produce mycotoxins and the amount produced by those that do is unpredictable.

Direct negative affects of moldy hay are difficult to document. Horses may be more sensitive to mold than other livestock. For instance, mold spores often contribute to respiratory and digestive problems like colic or heaves in horses. Cattle apparently are less affected by mold, but certain molds can cause mycotic abortions or aspergillosis. Aspergillosis is an infection caused by the fungus *Aspergillus* that usually affects the lungs.

People, too, can be affected by mold spores which cause a condition called "farmer's lung" where the fungus actually grows in lung tissue. So try to avoid breathing in many of these spores.

The best course of action often is to minimize feeding moldy hay to more sensitive animals, like horses or pregnant cows. This may require a keen eye or sensitive nose when selecting hay to feed each day. Mixing moldy hay with other feedstuffs can dilute problems sometimes, but be careful that you don't make your animals sick by tricking them into eating bad hay that they normally would refuse.

Mold is a difficult problem to deal with. Common sense and good observation often are your best decision aids. Source: Dr. Rick Rasby, Extension Beef Specialist, University of Nebraska-Lincoln; Beef Cattle Production Timely Topic <http://beef.unl.edu/stories/200212100.shtml>

NW Oklahoma Beef Cattle Conference

"How Corn Prices Have Changed Everything"

December 11, 2007

Daytime Meeting

9:30 a.m. to 2:00 p.m.

Major County Fairgrounds – Fairview, OK
RSVP – 580.227.3786

Evening Meeting

4:00 pm to 8:30 p.m.

Woods County Fairgrounds – Alva, OK
RSVP – 580.327.2786

December 13, 2007

Daytime Meeting

9:30 a.m. to 2:00 p.m.

Garfield County OSU Extension Center
316 E. Oxford – Enid, OK
RSVP – 580.237.1228

Evening Meeting

4:00 p.m. to 8:30 p.m.

Pioneer Technology Center
2101 N. Ash – Ponca City, OK
RSVP – 580.362-3194

OSU-USDA Cooperative. The Oklahoma Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, national origin, religion, sex, age, disability, or status as a veteran, and is an equal opportunity employer. This information was produced at a cost of 1 cent per page for a total of \$10.00.

Beef Quality Assurance for Cow Operators

by Dave Sparks, DVM

Much has been said about Beef Quality Assurance in recent years, but how many of us really know what it is and why it is important to all beef producers? Simply put, BQA is the effort to instruct beef producers, and their workers, as to ways that they can produce a high quality and wholesome product that keeps the consumer coming back for more.

While great strides have been made with fed cattle, cow operators have a ways to go. In feedlots a few people are handling large numbers of cattle, and feedback from the processor is fairly simple. In cow country, many more people are handling smaller numbers of cattle, and the feedback, while real, is not so obvious. Injection site lesions in the sirloin are one measure of the care with which cattle are processed and medicated. From 1995 to 1999 the feedlot industry reduced these lesions from 12% of fed carcasses to less than 2%. In 1999 however, over 40% of all cow and bull carcasses had lesions in the sirloin. Too often cow operators see the cow as a calf production unit rather than a part of the food chain. The fact is, about ¼ of the beef consumed in our country comes from cull cows and bulls and it is not all hamburger. Today, the better cuts such as the round, sirloin, loin, and ribeye allow the packers to pay better cow prices than we have seen in years past. Culls represent about ¼ of the gross income for most cow operators. If we, as an industry, could reduce the annual carcass losses due to bruising, injection lesions, excess fat trim, and condemnation due to drug residues, what would be your part of the extra ½ billion dollars on the table? Cow buyers are aware of what this waste costs, and they know what herds, areas, and sales most of the problems come from. When your culls come through the ring you need as many hands in the air as possible.

Proper techniques when handling and processing cattle can go a long way. Use the smallest needle that will do the job and change it at least every 10 head. Dull needles cause more lesions, and a needle that fatigues and breaks off is a serious problem. While injection site lesions are trimmed away when found, they make the whole cut of meat tougher due to extra connective tissue deposited in the muscle. Be sure to give all

injections in front of the shoulder, and when you have a choice, give injections subcutaneously. Reduce bruising by eliminating overcrowding and make sure loading facilities are safe and cattle flow through them easily. Market culls before lameness and eye problems get severe, or barren cows get overly fat. Proper drug and vaccine usage can be summed up with 5 words, "Read the label," and "Keep records." Drug residue problems result when dosage, course of treatment, or route of administration are not according to the label, or withdrawal time before slaughter are not adhered to. According to law, all violations are the responsibility of the producer, so if you have a problem not only are the future prices you receive affected, but you will be subject to possible fines and/or quarantine. If you do have a violation, if you can produce proper treatment records officials are likely to work with you to help identify and solve the problem. Without records, they may well resort to sterner measures.

As Americans we have the safest and most wholesome meat in the world, but we need to constantly work to keep it that way. Beef is still "What's for Dinner" today, but we need to make sure it's on the menu tomorrow too.

No-Till Oklahoma Conference

A statewide No-till conference will be held February 11-12, 2008, in Oklahoma City at the Clarion Hotel. The conference is designed to bring the latest developments in No-till cropping systems to interested farmers and ranchers from Oklahoma and surrounding states. Registration fee to attend the conference is \$75 by January 21, 2008 and \$100 after January 21. Registration forms are available from your Blaine County OSU Extension Office.

This newsletter is one way of communicating educational information to the citizens of Blaine County in the area of Agriculture & Rural Development. For free subscriptions, contact the Extension Office. The information given is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Oklahoma Cooperative Extension Service is implied.

Editor – Alvin Woodruff, Extension Ed-Ag/

Storing Colostrum for Optimum Passive Immunity

By Glenn Selk, OSU Extension Cattle Reproduction Specialist

Cow calf producers are aware that natural colostrum (first milk) must be ingested by baby calves within 6 hours of birth to acquire satisfactory passive immunity. However some calves do not have ample opportunity to receive colostrum. Perhaps the mother is a thin two-year-old that does not give enough milk or the baby calf was stressed by a long delivery process and is too sluggish to get up and nurse in time to get adequate colostrum. These calves need to be hand fed stored colostrum in order to have the best opportunity to survive scours infections and/or respiratory diseases. Therefore stored frozen colostrum from a dairy or from other beef cows that lost calves at calving should be on hand to meet these needs. If colostrum is obtained from another farm, try to find out the health status of the cows from whom the colostrum is taken. If "Johne's Disease" has been identified on that dairy or farm, avoid colostrum from that operation. "Johne's Disease" can be transported in colostrum from one location to another.

Colostrum can be refrigerated for only about 1 week before quality (immunoglobulin or antibody concentration) declines. If you store colostrum, unfrozen be sure that the refrigerator is cold (33-35°F, 1-2°C) to reduce the onset of bacterial growth. If the colostrum begins to show signs of souring, the quality of the colostrum is reduced. The immunoglobulin (very large protein) molecules in colostrum that bring passive immunity to the calf will be broken down by the bacteria, reducing the amount of immunity that the colostrum can provide. Thus, it is important that colostrum be stored (unfrozen) in the refrigerator for only a week or less.

How long can the frozen colostrum be stored? We often answer this question flippantly by saying, "just as long as you would store frozen fish to eat!" Colostrum may be frozen for up to a year without significant breakdown of the immunoglobulins. However this is one example where improved technology is not in our favor. Frost-free freezers are not the best for long-term colostrum storage. They go through cycles of freezing and thawing that can allow the colostrum

to partially thaw. This can greatly shorten colostrum storage life. Freezing colostrum in 1 or 2 quart bottles or 1 quart in 1 or 2 gallon zip-closure storage bags is an excellent method of storing colostrum. Many producers have had great success using the zip-closure bags. Use two bags to minimize the chance of leaking, and lay them flat in the freezer. By laying the bags flat, the rate of thawing can be increased, thereby reducing the delay between time of calving and feeding. The freezer should be cold (-20°C, -5°F) - it's a good idea to check your freezer occasionally. Much more information about colostrum use and transfer of passive immunity is available from the [OSU Fact Sheet F-3358 "Disease Protection in Baby Calves"](http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1937/ANSI-3358web.pdf)



Annie's Project to be Presented in Blaine & Major County

Annie was a woman who grew up in a small farm community with a goal to marry a farmer and she did. Annie spent her lifetime learning how to be an involved business partner with her farm husband. Together they did great things, but it wasn't easy. This is Annie's project – to take her life's experiences and share it with farmwomen living and working in a complex, dynamic, evolving business environment. Annie's project is designed to empower farmwomen to manage information systems used in critical decision making processes and to build local networks throughout the state. The target audience is farmwomen with a passion for business and involvement.

Farmwomen will receive training for managing information in the areas of: (1) Financial Records; (2) Production Records; (3) Marketing Plans and Risk Management; (4) Legal/Regulation Records and Documentation; and (5) Human Resources and Time Management. This women's empowerment program will be offered in five sessions beginning on Monday, January 7, 2008 and continuing each Monday through February 4, 2008. Afternoon session from 12 – 4 p.m. offered. The cost of the program: \$50 per person. Class size is limited. Participants should contact Alvin Woodruff at the Blaine County Extension Office, 580.623.5195 by January 2, 2008 to enroll. The initial meeting will be held at the Major County Fairgrounds. Sessions will rotate between Blaine and Major County locations with a noon meal provided.

The Disease Triangle

Roger Don Gribble
OCES NW Area Agronomist

How many of you remember your high school biology teacher providing you with a discussion of the disease triangle? You remember that in order for a disease to develop, you have to have a susceptible host, a pathogen and a favorable environment for development of the disease. To this day, I can still remember my sophomore Biology class being instructed by Paul Southwick, who is in the Garber area, pounding home the fact that you have to have these 3 combinations to have a disease.

How often does it happen when the 3 conditions come together to cause wide spread problems in agriculture? In corn for example, epidemics of southern corn blight swept across the corn belt in the 1970s when corn hybrids were planted that all contained the same male-sterile trait that was linked to a susceptibility to the disease. Closer to Oklahoma is the 6 million acre wheat crop in 2005 - 2006 that had about 55% of the crop planted in two popular varieties, Jagger and Jagalene. Just by looking at the names you can just about guess that their genetics are very, very similar. With the lack of genetic variability in the wheat varieties, we built one leg of the disease triangle.

Now we need the pathogen to come along. Pathogens can be fungi, bacteria, viruses or nematodes. The relationships between these pathogens and their host are very complex and for wheat rust, it has evolved over thousands of years. Some of the pathogens have a very narrow host range and are able to overcome genetic resistance incorporated into plants. Wheat for example uses a wide range of genetic materials to overcome the current rust races that exist, but the rust fungi are always able to overcome the genetic resistance that our wheat breeders are working with. Thus we have an evolving pathogen like leaf rust that forms the second leg of the disease triangle.

The third leg of the triangle will be the environmental conditions for growth and development of the disease. While the fall of 2005 was extremely dry, 2006 will come close to being one of the highest rainfall years in history. Fungi like leaf rust spores need free moisture on a leaf

surface to spread and develop. From March to May, free moisture on the leaf surface of wheat was just about every day. With those weather patterns moving from south to north, Texas provided Oklahoma with an ample supply of rust spores to devastate susceptible wheat varieties planted in our state. Coupled with cool temperatures and high humidity, leaf rust had the proper environment to develop and spread unchecked!

Does the chance to devastate the next wheat crop exist? You bet! Can a wheat producer do anything about it? Well, you cannot do anything about the pathogen or the environment, but you can help yourself by selecting a wheat variety that has some resistance to the pathogens that cause crop failures. Since wheat is the major crop in northwest Oklahoma, a producer should try to select wheat varieties with resistance to leaf rust. You should consult with the OCES Ag Educator with the latest variety comparison chart to determine if the producer's variety has any resistance to diseases of concern. The Ag Educator has the resources the help determine a course of actions if there is a major outbreak like the one in 2005-2006.

Master Cattlemen Program Offered

A Master Cattlemen Program enrollment and classes will start in January, 2008. If interested in attending, please contact the Extension Office (580.623.5195) by January 5, 2008.

