NDSU EXTENSION SERVICE

North Dakota Lamb & Wool Producers Association

The North Dakota Sheep Industry Newsletter

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Reid's Remarks

Reid Redden, Newsletter Editor

During my college days, I was a bit of a music junky. One of my favorite songs had the following lyric: "everything changes … ain't nothing in this whole world that ever stays the same." Last year, the North Dakota sheep industry was blessed with record high prices for lamb, wool and pelts, along with greater-than-normal rainfall to produce an excess amount of resources for the flock. As the lyric stated, everything changes! The sheep market and rainfall patterns have completely reversed in 2012, compared with 2011.

It is said that tough times reveal character. With that said, I see a great deal of character in this industry. I am amazed at the resilience and optimism that most all sheep producers have for the future of the industry during this down market. Good-quality yearling ewes and ewe lambs have been selling for a premium. Almost everyone I have talked to in the past two months is not looking for an exit plan but rather commenting that this may be the best opportunity to expand.

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With that kind of resolve, it is my pleasure to work for this industry.

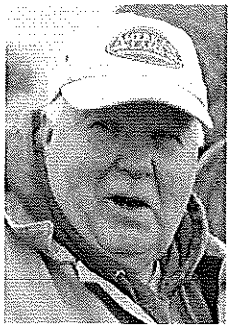
We at NDSU are doing our best, as well, to provide educational support and information to keep this industry moving forward. Two things in particular that we have done this past year at the Sheep Unit were enrolling registered flocks into the NSIP (National Sheep Improvement Program) and testing breeding stock for OPP (ovine progressive pneumonia) genetic resistance. Based on sound research, these programs show considerable promise to help shepherds improve their flock health and productivity. Although, these technologies have been added only recently to our flock management protocol, they appear to be consistent with the literature. I will be presenting more on this at the North Dakota Lamb and Wool Producers Association (NDLWPA) annual convention.

The Starter Flock Program recipients attended the New Shepherd Clinic and picked up their sheep on Sept. 22, 2012. It was a very good class of recipients, and we look forward to their involvement and enthusiasm in the sheep industry. It takes a community to develop a successful shepherd, just as it takes a community to raise a child. Provide support and mentorship for these starter flocks as you are able. Wyman Scheetz is going to serve as the lead support person for these starter flocks, so please contact him with your interest in assisting the youth.

This edition of the *North Dakota Sheep Industry Newsletter* is packed full of useful information about the industry. We also have done some slight redesigning and hope you like it. Comments are always appreciated at (701) 231-5597.

Fall 2012 Issue

Message from the Association



Lyle Warner, NDLWPA Board Member

I will be going off the board of directors of the NDLWPA at the upcoming convention. The past years serving as an officer have been very rewarding and at times challenging. I see the sheep industry in the same light. Over the past years, we have been very well rewarded for our efforts (who can forget last year and lambs at $2.30+) and very challenging (currently lambs are hovering around $.80).

As in life, we must take the good with the bad and look at the bad times as an opportunity to refocus our goals and objectives so that we can come out of this a stronger, more vibrant industry than we were before. At the price of lambs and the price of inputs, I think we will all be forced to become better managers if we are going to survive and prosper in the future.

As an organization, I am encouraged to see that we are able to sponsor the perpetual flock program. Seeing up to 10 young people receive 10 yearling ewes each year and begin their venture into self-employment in animal agriculture is very rewarding to me. We have added a ram and ewe lamb sale in Jamestown to provide breeding animals to producers in that region of the state. Last year, NDLWPA was recognized as one of several state organizations for the greatest increase in membership. We are one of the few states in the country that has been able to keep specialists for all major livestock species.

These activities and others were made possible due to the hard work and dedication of a lot of people involved in the sheep industry. We must keep in mind that the association represents all of us in the industry, and we must do all we can to support the efforts they are doing in our behalf. Together we will be much stronger.

We had some things that didn't work out so well: the Fargo Ram Sale and Bowman Ewe Sale, just to mention a few. However the board tried some new things and learned, hopefully, from some of our mistakes. If we quit trying new things, we are dead in the water.

I would like to thank everyone for their support of time, knowledge and energy over the years. If an industry is to survive, we must have an association to lead and provide direction in the future. I hope everyone will find a new member and get more involved so we can provide more opportunities for youth and individuals in the industry in the future.

NDSU Schedules Tri-state Sheep Tour

Reid Redden
NDSU Extension Sheep Specialist

A tour of research and private sheep operations in South Dakota, Nebraska and Iowa on Nov. 1-2 will expose sheep producers and the Extension agents who assist them to the commercial sheep industry.

The American sheep industry lacks commercialized products, such as buildings, feeding systems, equipment, and handling facilities to which most other livestock industries have access. This tour will provide insight into management practices, such as development of novel facilities, feeding strategies, and breeding systems, that individuals and research centers have developed to improve the efficiency of lamb and wool production.

Tour participants will visit state-of-the-art sheep facilities and meet sheep industry leaders.

The tour stops and topics are:

- **Buskohl Lamb Feedlot, Wyndmere, N.D.** – David Buskohl will provide a tour of the large commercial lamb finishing system and discuss method of optimizing lamb health and productivity.
- **South Dakota State University Sheep Unit, Brookings** – Jeff Held will provide a tour of the sheep barn and discuss research topics at SDSU.
- **Dakota Lamb, Hurley, S.D.** – Bill Aeschilmann will provide a tour of his custom lamb feed yard and discuss his lamb marketing business.
- **U.S. Meat Animal Research Center, Clay Center, Neb.** – Kreg Leymaster will provide an educational seminar on commercial sheep breeding systems and lead a tour of the research center.
- **Iron Horse Farms, Harlan, Iowa** – Tom Schechinger will provide a tour of his 100 percent confinement sheep operation.

The registration fee is $25 to help cover the transportation costs. The registration deadline is Oct. 24.

For more information or to register,s contact Redden at (701) 231-5597 or reid.redden@ndsu.edu.

The NDSU Extension Service, North Dakota Lamb and Wool Producers Association and Equity Livestock Cooperative Association are sponsoring the tour.

Marketing Matters

Lamb Prices: What Happened?

Tim Petry, Livestock Marketing Economist, NDSU Extension Service

Both feeder lamb and market lamb prices are about 50 percent lower than last year's record prices. Feeder lamb prices in 2012 were about equal to last year through April but have plummeted since then. Market lamb prices were steady through June but below last year's record high prices and about equal to 2011 year-end prices. However, market lamb prices also have plummeted since June.

During the past decade, the lamb market has become very sensitive to abnormal (and sometimes relatively small) changes in supply and demand fundamentals.

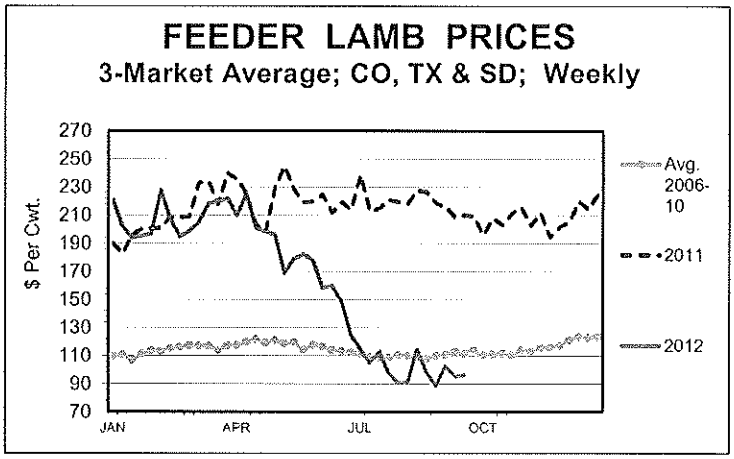
The 2011 lamb market was impacted by shorter domestic supplies, declining lamb imports and improving demand. U.S. commercial lamb production in 2011 was down about 9 percent from 2010. 2011 lamb imports at 129.3 million pounds were down about 4 percent from 2010 and 19 percent lower than the peak in 2007.

On the demand side, the ethnic market for lamb has been growing and the traditional lamb market showed signs of improvement. The shorter supplies and improving demand caused record high prices. Market lamb prices actually peaked in early July 2011 and gradually declined the rest of the year. Feeder lamb prices held relatively steady throughout 2011.

A recent national survey of consumers by consulting firm Consumer Edge Insight found that an increasing number of consumers are substituting fast-casual restaurants for fine dining. Keep in mind that lamb sales at the restaurant level are mainly at higher-priced, white tablecloth restaurants, compared with beef, which relies heavily on low-priced fast-food and casual, family dining restaurants.

A lag time always occurs from when higher prices at the farm level due to reduced supplies are reflected at the retail level. Lamb prices can change daily, while restaurants are reluctant to change menu prices even on a monthly basis. So, record high lamb prices in the first half of 2011 were not realized until later in the year at restaurants and retail supermarkets. When retailers finally raised prices to record levels, consumers reacted with fewer purchases. Retailers reduced purchase volumes, but menu prices were not adjusted downward as quickly or as much as lamb prices, so demand continued to be sluggish.

Of course, another abnormal event that affected lamb prices was the severe drought in the southern Plains during the summer of 2011. Lambs were forced off pastures and ranges



and entered feedlots early. In turn, lambs reached market weight earlier than packers are accustomed to and a backlog of lambs developed.

By the first quarter of 2012, average dressed weights were 4.5 pounds heavier than the previous year, and commercial lamb production increased 6.6 percent, which further pressured prices. Excellent feeding weather in the northern feeding region also was a contributing factor to heavier-weight lambs. Third quarter 2012 estimates are for dressed weights to be up 4.6 percent and lamb production to be up 4.5 percent over last year.

Another contributing factor to lower market lamb prices has been declining pelt prices. Pelt prices are about $6 per pelt (37 percent) lower than last year as foreign demand, especially in Southeast Asia, has waned.

Feeder lamb prices have been hit with a double whammy of declining market lamb prices and skyrocketing corn prices due to a severe drought in the Corn Belt and much of the U.S. Between July 15 and Aug. 15, corn prices climbed $3 per bushel, which adversely affected all feeder livestock prices. Feeder lamb prices fell 40 percent, feeder pig prices dropped 30 percent and beef calf prices declined 25 percent.

Low market and feeder lamb prices likely will persist for the rest of 2012. We hope the industry can work through the burdensome supplies of overfinished lambs.

The Livestock Marketing Information Center is predicting a return to more average weights and a decline in lamb production during the first quarter of 2013. Wholesale lamb prices have declined, which should spur more consumer interest for the 2013 spring holiday season. For example, wholesale racks are 30 percent below prices last spring.

Improving market lamb prices in 2013 would be supportive to feeder lamb prices. But recovery in feeder lamb prices will be dependent on a much improved corn crop and forage conditions. So, 2013 weather remains a big wild card for all livestock prices.

Flock Health

Histophilosis in Sheep

Collin Galbreath, D.V.M., Oakes Veterinary Clinic

Histophilosis, caused by the bacteria *Histophilus*, has been widely recognized as a major pathogen responsible for primarily feedlot losses in cattle for more than 40 years. The disease is more widely seen in the northern tier of the U.S. and Canada.

Histophilosis can present in solitary body systems or as a multisystemic disease. The most common forms include respiratory syndrome and neurologic disease.

Histophilus is considered a ubiquitous bacterium that is present at some level in nearly all cattle and it is presumed in most sheep. The bacterium has been cultured from the upper respiratory and urogenital tracts of clinically healthy animals.

Clinical signs of acute death, respiratory disease or neurologic signs are most commonly observed in sheep with histophilosis; however, many times, these animals are not necropsied and no definitive diagnosis is reached.

Typically, the disease affects mid- to upper-weight feeder and finishing lambs that are performing well. Many lambs that exhibit neurologic signs at this stage are presumptively diagnosed with polioencephalomalacia and treated accordingly or euthanized. Lambs may appear clinically normal the night before and be found dead in the lot the following morning. Because these lambs are typically on a high-concentrate diet, clostridial infection ("overeating") is assumed to be the blame.

In addition, lambs with respiratory signs may be treated with antibiotics initially and later succumb to the disease, but no necropsy is performed, or if necropsy is performed, *histophilus* is not cultured because of prior antimicrobial administration.

The best candidates for identifying the disease are those found dead in the pen with no prior antibiotic administration. Although metabolic diseases, parasitic and protozoal (coccidia) infections, and clostridial disease make up the majority of mortalities in a lamb feed yard, histophilosis can have a major impact on mortality in heavy lambs.

Stress, as with other diseases, is a major factor contributing to histophilosis presenting in a group of lambs. Transport, weather and feed changes are the top three stressors in weaned lambs that suppress the lambs' immune system to allow bacterial and other pathogens to cause disease. In the case of histophilus, stress reduces the local immunity on mucosal surfaces that line the respiratory and gastrointestinal tracts.

Once the bacteria colonize those surfaces, they produce endotoxins and other virulence factors that result in damage to the lining of blood vessels, which impairs the body's defense mechanisms. Once sufficient damage occurs to those vessels, the bacteria can enter the bloodstream and cause septicemia.

In acute infections, the most likely cause of death is overwhelming endotoxin release, which causes the animal to go into shock, and death follows rapidly. If the animal can withstand the endotoxin release, then bacteremia and septicemia can occur, which often results in the neurologic form of disease known as thromboembolic meningioencepahlitis (TEME), or often referred to as "sleepers" or "brainers." This form often is diagnosed presumptively as "polio;" however, it actually is TEME.

The multisystemic form of the disease can have a wide variety of clinical signs, including arthritis, respiratory disease, otitis, poor performance, epidydimitis in rams and vulvovaginitis in ewes, as well as metritis and mastitis. In both sheep and cattle, males appear to be more often affected than females, which simply may be due to the fact that more males generally are in a feedlot setting than females. Some genetic component also may make males more susceptible to infection.

Prevention of this disease is the only feasible control measure because treatment with antimicrobials has not been very effective. In addition, sheep in particular are excellent at hiding clinical signs and often are severely compromised by the time they show symptoms.

Vaccination with *histophilus somni* bacterin may provide a level of protection, particularly to the effects of endotoxin release by the bacteria. Much like clostridial vaccines, *histophilus somni* bacterin provide protection not against the organism primarily, but the toxins they produce that cause disease.

No *histophilus* vaccines are approved for use in sheep, but field studies that would involve the use of a commercially available vaccine are under review. Anecdotal evidence of vaccine efficacy in lambs would suggest that mortality associated with histophilosis can be diminished when the vaccine is used in combination with other management strategies to reduce stress.

Adverse effects of the vaccine are minimal and primarily have been injection site swelling, stiffness and reduced feed consumption for a short period following vaccination. Having a necropsy performed on heavy lambs found dead may be a sound management decision to at least determine the prevalence of the disease in your flock.

Newer Knowledge

Pregnancy Detection Via Pregnancy-specific Protein B

Reid Redden, NDSU Extension Sheep Specialist

Targeting feed resources to meet the nutrient requirements of the ewes has been clearly defined as a method to maximize feed resources and animal productivity. One method of pregnancy detection is to test for the presence of pregnancy-specific protein B (PSPB) in the blood of livestock. BioTracking LLC is a company that provides a service called the BioPRYN (Pregnancy Ruminant Yes or No) test. This pregnancy test is available for cattle, goats, sheep, equine and various wildlife species.

Our objective for this research project was to test the efficacy of the PSPB blood test as a tool to identify early pregnancy and pregnancy rate. We collected blood samples at various times during pregnancy from Columbia, Dorset, Hampshire and Katahdin ewes. These blood samples then were sent to BioTracking for analysis.

The recommendation from BioTracking suggests that a ewe can be tested for pregnancy at 30 days or later post-breeding or ram removal. Samples that are submitted to the laboratory are reported as OPEN (less than 15 ng/mL), RETEST (15 to 30 ng/mL) or PREGNANT (greater than 30 ng/mL).

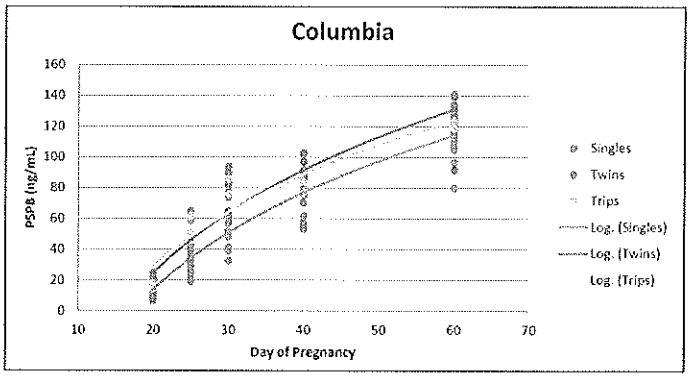
Summary of the research:

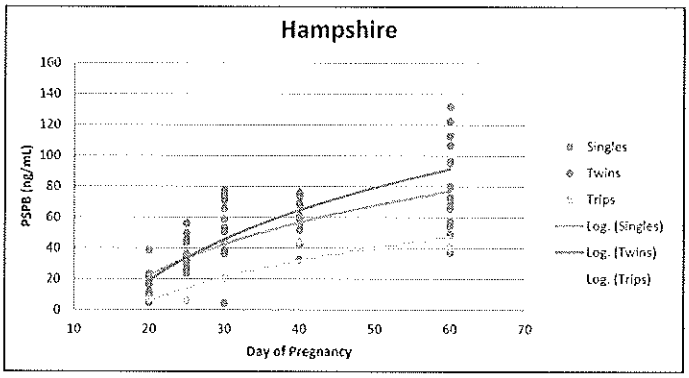
- This test is very effective at detecting pregnancy in ewes greater than 30 days of gestation.
- Pregnancy could be detected as early as day 20; however, this increased the likelihood of false negatives.
- False positives were recorded; however, in each case, embryonic or fetal loss occurred.
- In general, PSPB concentrations increased throughout pregnancy.
- PSPB concentrations differed among breeds. Twin and triplet pregnancies tended to be higher than singles; however, variation in individual animals, breed differences and changes through time were too great to predict number of lambs per pregnancies accurately.

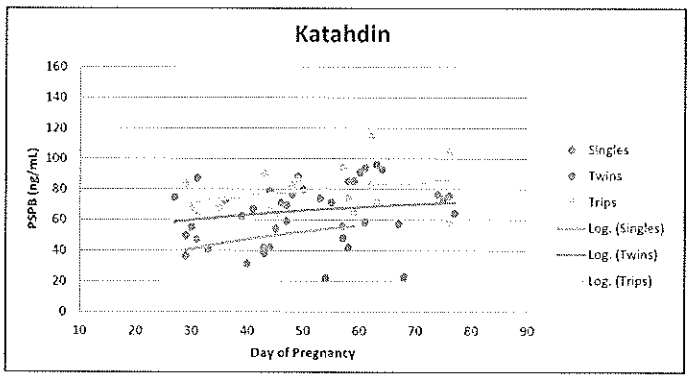
Table 1. Number of ewes classified as pregnant, recheck or open when tested at different stages of pregnancy.

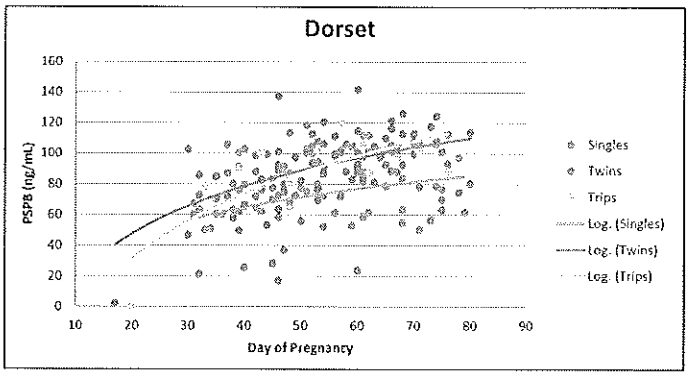
	Day of Test		
Status	< 25 days	25 to 30 days	> 30 days
Pregnant, %	1 (2%)	34 (81%)	337 (98%)
Recheck, %	12 (29%)	12 (14%)	2 (7%)
Open, %	39 (69%)	2 (5%)	1 (0.2%)

Figures below contain all the data points and a fitted line for singles, twins and triplets that depict the rise in PSPB during the pregnancy.









Starter Flock Profile:

Madeline Solemsaas, Sherwood, N.D.

1) **What sparked your interest in this program?**

When I was 8 years old, my parents got me a bottle lamb from the neighbors for a 4-H project. My lamb, Freddie, was so much fun! My sister and I would take our lambs everywhere. We took them on walks all the time, and Mom even let us take them into the entryway of our house. I have shown lambs ever since. A few years ago, I decided to start raising my own show lambs. I had one lamb crop and loved it. I heard about the Starter Flock Program through Brad Gilbertson, and I thought it was a great opportunity to grow my flock.

2) **What do you enjoy most about your flock?**

Lambing is my favorite part, even though you have to get up during the middle of the night to check on them. The lambs are so cute, and watching them chase each other around or jump off the manure pile is so much fun. I wish I could take a couple months off of school so I could be in the barn all day every day instead of just after school.

3) **What is the most exciting event that occurred with your flock?**

This summer my dad, grandpa, sister and I put up a four-wire, high-tensile, permanent electric fence. We were putting it up where an old fence had been so there were many days spent ripping the old wire out of the grass. Then we had to pound in all the corner posts, put in the kiwi braces and string a wire so we could pound in all the T-posts. Then we had to put on the rest of the wire and all the hundreds of insulators. It was a lot of work, but it was a good learning experience and should last for years.

4) **What would you tell a friend interested in the sheep business?**

Sheep are wonderful animals. They are easy to handle but a lot of work. Raising sheep isn't all fun and games. You have chores every day and many late nights during lambing. But it is all worth it!

The Sheep Bleat

Feeding Alternatives

Reid Redden, NDSU Extension Sheep Specialist
J.W. Schroeder, NDSU Extension Dairy Specialist

To say "feed costs have risen" is a gross understatement. Many shepherds will be dealing with feed costs that have doubled in the past two years. This is a very difficult issue to deal with because feed costs typically constitute around 85 percent of gross production inputs. To further complicate the issue, the lamb and wool market has dropped substantially.

The price of traditional livestock supplemental feedstuffs, such as corn and soybeans, has been increasing for many years. Many factors, such as ethanol production and a growing world population, stimulated this rise in grain prices.

North Dakota has continued to have low-cost forages available to sheep producers. However, the recent droughts in Texas and the Midwest during the past two years substantially accelerated the cost of hay due to export demands. Prices are not likely to return to their previous levels without a drastic change in rainfall patterns across the entire U.S. So how do sheep producers adapt to continue to grow lamb and wool? The answer: Find ways to reduce feed costs!

First of all, we must remember that sheep require a few essential nutritional needs: water, energy, protein, vitamins and minerals. If we can supply these nutrients in the proper amounts, then we can feed just about any feed that delivers these nutrients.

The only concern for feeding nontraditional feedstuffs is that some may contain toxic levels of a variety of compounds. Each feed ingredient must be researched to identify if it has any known compounds that could affect sheep production. Sheep require amounts of nutrients from feeds, not feeds with percents of nutrients.

For example, lambs do not require a feed that is 20 percent protein; they require 0.5 pound of protein. If they consume 2.5 pounds of feed, then the feeds needs to be 20 percent protein (0.5 ÷ 2.5); however, if they consume 3 pounds of feed, then the feeds needs to be 16 percent protein (0.5 ÷ 3).

Ewe feed costs are the largest inputs for most sheep producers. Therefore, it is the area that improvements in efficiency of nutrient delivery most impact flock profitability.

Figure 1 illustrates the energy and protein requirements of a ewe rearing twins. The figure depicts changes in requirements throughout a year's production cycle. The fact that nutrient requirements are quite high from month four (start of late gestation) to month seven (weaning) is apparent.

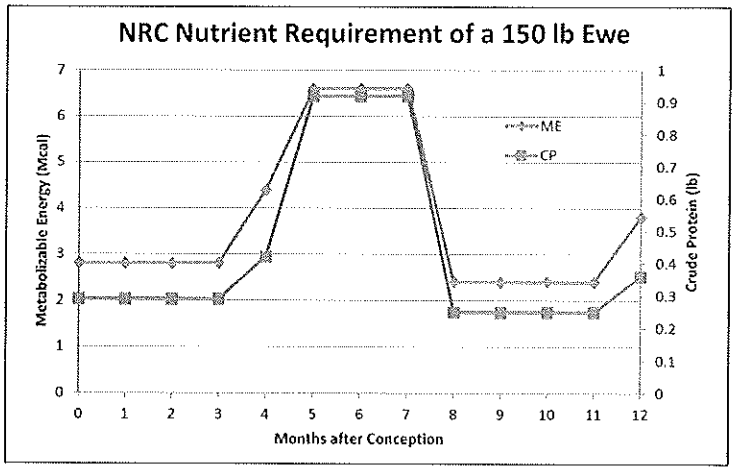


Figure 1. Ewe (150pound) requirements for energy and protein to produce twins.

This time period is not a time to cut ewes short on nutrients because lamb performance will suffer greatly. However, sheep can be maintained on limited feed resources from weaning until late gestation, which is approximately three-fourths of the year. The only exception is during the pre-breeding period (month 11 to 12), when the ewes need to be flushed with additional feed to achieve an optimal ovulation rate.

Low-cost feeds will vary widely, depending on the area that the sheep are managed. These feedstuffs may be byproducts of other industries (sugar beet pulp), rejected products that did not meet human consumption specifications (cull potatoes), traditional feedstuffs (slough hay) or feedstuffs that are not commonly available (Conservation Reserve Program hay). Grazing of crop aftermath is also an underutilized feed resource that livestock producers could employ to reduce feed costs.

"Alternative Feeds for Ruminants" is a publication that was produced by NDSU Extension and is a great resource for livestock producers to read. Contact your local county agent to get a printed copy of this publication. In addition, a list of North Dakota coproducts and recent prices for these products is available at *www.ag.ndsu.nodak.edu/aginfo/dairy/dairyext/CoProduct.pdf*.

Improving the value of existing low-quality feeds is becoming more economically feasible. Feedstuffs that are slowly digestible due to a high concentration of fiber can be processed to improve their feed value. Ammoniation can double or triple crude protein levels in crop residues such as straw and corn stalks and increase digestibility 10 to 30 percent, making them equivalent to prairie hay in feed value.

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The Sheep Bleat

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For more information on the ammoniation process, visit the NDSU Extension website at *www.ag.ndsu.edu/drought/feeds-and-feeding/ammoniation-of-low-quality-roughages* or view Kansas State University's how-to video at *www.youtube.com/watch?v=-JtjJb-umpk.*

Another alternative for salvaging harvest residue and fortifying low-quality forage for livestock feed is adding hydrated lime. Hydrated lime is quicklime (calcium oxide) with water added to make it calcium hydroxide. A 1,200-pound stover bale can be treated with approximately 50 pounds of calcium hydroxide. The solution loosens the chemical bonds between the stover's less-digestible lignins and its more digestible components. Relaxing these bonds allows natural enzymes to digest the stover.

While research on hydrated lime was done with corn, the same treatment process should make wheat straw and late-harvested Conservation Reserve Program hays more digestible to ruminants as well.

The final component to maximize efficiency in a sheep operation is to improve the efficiency of lamb growth. Most lambs are finished on a corn-based diet. However, lambs can be finished on most any grain or high-quality forage produced in the state.

The first step is to price all grains based on their weight ($/pound). Then assess them based on their energy and protein content. Barley typically contains 5 percent less energy than corn, which will slow the growth of the lamb; however, the higher protein content of barley, compared with corn, will reduce the cost of the feed by reducing, if not eliminating, the need for a protein supplement.

Barley does ferment faster than corn; therefore, lamb feeders need to be more careful with acidosis of lambs. The addition of an ionophore to barley-based diets has improved the consistency of intake patterns.

Oats are typically 15 percent lower in energy content than corn, but they also have high protein concentrations. Oats also have the highest fiber content among all grains, and they are the safest grain to feed lambs because they are less likely to overeat on oats.

Distillers grains commonly are included in beef feedlot diets; however, they are used much less in the sheep industry. The last North Dakota Sheep Industry Newsletter had an article on feeding lambs distillers grains, if you missed it.

Lambs also can be finished or developed on forage-based diets. We highly recommend that the forage be of the highest quality, especially for lambs that are genetically selected for rapid growth potential. Lamb requirements are rarely met if the forage they are grazing is not highly digestible.

Fall alfalfa grazing, row crop aftermath and fall range regrowth are options for lambs. In some cases, these options may need supplementation to achieve desired lamb growth; however, they can be considerably more efficient than dry-lot finishing.

The sheep industry must become more efficient at reducing feed costs to remain sustainable. We encourage you to evaluate your production costs related to ewe and lamb nutrition. Contact your local county Extension agent, nutritionist or state Extension specialist to find alternative feeding strategies that are right for your sheep operation.

Sugar Beet Byproducts: An Alternative Feedstuff for Your Sheep Operation

Alison Crane, Graduate Research Assistant, NDSU Animal Sciences Department

In this time of drought and increasing prices of livestock feeds, sheep producers find themselves searching for alternative feedstuffs. Sugar beet byproducts could be a viable option to provide a high-quality forage in sheep operations in the upper Midwest region. Minnesota, North Dakota, Idaho and Montana together generate about 74 percent of the country's sugar beets.

Whole sugar beets can be attained occasionally from processors due to spoilage or large crops. However, if fed whole, sugar beets could pose a choking hazard to livestock. Mixer wagons, tub grinders or forage harvesters could be used to break up whole beets.

If the wet byproducts cannot be fed in a timely manner, they can be ensiled. To maintain optimum moisture for

ensiling, adding a dry ingredient is encouraged. This is true for most beet byproducts.

Beet pulp, which commonly is fed in beef cattle diets as a supplement or roughage replacement in finishing diets, is the actual beet shreds left over from processing. This feed is high in energy and fiber and can be purchased in pelleted or dried flake form. According to research conducted at NDSU, beet pulp, if used as a roughage replacement, has an energy value greater than that of corn silage, and due to the amount of digestible fiber, acidosis is not normally a factor. Rations, as always, need to be formulated accordingly to meet the need of whichever group is being fed in your flock.

No nutritional restrictions are placed on beet pulp in diets; however; research has shown that if fed at greater than 80 percent in a beef cattle ration (as-fed basis), reduced intake could occur. Other possible restrictions could include the bulkiness or high moisture content of the feed.

When considering beet pulp as an alternative feedstuff, transportation must be considered as a limiting factor if purchasing wet beet pulp. However, dried shreds or pellets are also available, as well as the wet beet pulp.

Storage bins or commodity sheds are ideal for storage to avoid contamination from moisture or rodents. Wet beet pulp most commonly is stored in silage bags or trench/bunker silos.

The third most commonly fed beet byproduct is beet tailings. Once again, this consists of small beets, broken or damaged beets, soil and any other foreign materials. Tailings are about 80 percent moisture and can vary dramatically in content. If low levels of soil contamination can be attained, the feed value can surpass that of corn silage; however, if high levels of soil contamination occur, the value can be reduced greatly.

When stored, tailings can be ensiled, but as with the other beet byproducts, they need to be mixed with a dry feedstuff due to their high moisture content.

All of these byproducts are readily available from sugar beet processing. Sheep producers who operate in proximity to sugar-processing plants have the greatest opportunity to make use of these products because the wet byproducts are normally quite inexpensive.

More byproducts are made from the processing of sugar beets, but these are the three most commonly fed to livestock in the Midwest region.

Sugar beets are processed beginning in early fall, around September, and processing continues through the late spring, to around May. This is a great fit with most sheep operations that need the majority of harvested feeds from January to May. Sugar beet pulp and other byproducts decline in availability during summer months as the accumulated stores at the processing plants are sold.

Most importantly, producers should work with a commodity broker to ensure an adequate supply is available for winter feeding of their operation.

Sugar beet byproduct composition

Feedstuff	DM	CP_1	TDN_1	NEm_1	NEg_1	ADF_1	Ca_1	P_1
Sugar Beet Tops	17.0	15.1	58.0	0.59	0.27	14.0	1.01	0.22
Sugar Beet Top Silage	21.0	12.7	53.0	0.55	0.20	18.0	1.56	0.20
Sugar Beet Tailings	18.4	8.9	65.0	0.67	0.40	34.0	2.35	0.27
Sugar Beet Tailing Silage	20.0	10.0	65.0	0.66	0.40	NG	2.5	0.20
Sugar Beet Pulp, Dried	90.0	9.1	72.0	0.77	0.49	31.0	0.72	0.20
Sugar Beet Pulp, Wet	25.1	9.1	72.0	0.77	0.49	31.0	0.72	0.20
Sugar Beets (Whole)	20.1	6.8	81.0	0.90	0.60	NG	0.24	0.24

[1] All values listed on a dry-matter basis

Abbreviations:

DM = dry matter; CP = crude protein, TDN = total digestible nutrients; NEm = Net energy for maintenance; NEg = net energy for gain; ADF = acid detergent fiber; Ca = calcium; P = phosphorus; NG = not given

North Dakota Lamb and Wool Producers Meeting Minutes

August 16, 2012, Minutes

The North Dakota Lamb and Wool Producers Board of Directors held the August meeting at the NCI Feed Mill in Fargo. Board members present were Wyman Scheetz, Nathan Robbins, Julie Mangnall, Terry Mangnall, Dean Swenson, Luke Lillehaugen, Brad Gilbertson, and Josh Sanders along with guests Paula Swenson, Greg Lardy, Reid Redden, Chris Schauer and Skip Anderson.

Wyman called the meeting to order. Luke read the minutes of the April meeting in Rick's absence. Terry made a motion to approve the minutes as read, Josh seconded, motion carried.

Julie gave the treasurers report with some of the totals of the Jamestown Ram Sale, noting she still has a couple of bills outstanding from the sale. Julie also reported a problem with getting the association checking account moved to a different bank. Wyman will look for the proper paperwork and try to get it moved. Terry made a motion to approve the report, Nathan second, motion carried.

Recap of the Jamestown ram sale showed 112 head sold for a total of $32,975. There was discussion about next year's sale order.

Reid gave a report on the BBQ Boot Camps he attended. He said each event had about 150 people and the lamb was well received. He also stated the American Lamb Board grant was funded and $1,000 had been received and an additional $1,000 was would be received after a report of the event had been completed.

Julie gave a report on the Make It With Wool contest held August 11 at the Fiber Arts Festival in Fargo. She said interest in the event was high and thought around 500 people attended. The event will be held in Fargo again next year. Terry made a motion to reimburse up to $1,200 total for travel expenses to the national show for the winners of the Junior and Senior division. Brad second, motion carried. Also the association will send a thank you to the state director for their work and also for donating some personal money to get the state contest going again.

Starter flock report was given with 3 bills not paid from 2009. Directors will follow up on getting those paid. There was discussion about starting a separate account for the starter flock funds; most seemed in favor of doing so but agreed it shouldn't fall on the treasurer to take it on. We will look for somebody interested in doing that account.

New business

Hettinger ram sale catalogs will be going to press. The meal needs to be finalized yet, but other than that, all is taken care of. Chris informed the board of a local producer who is going out of business and would like to sell some sheep equipment at auction after the Hettinger sale. Terry motioned to allow the sale, Josh second, motion carried.

Chris talked about getting a system installed to measure feed efficiency for ram tests and other research. Further discussion will be needed at the convention and start the process if there is enough interest.

Brad approached the board for a group of producers who will be having an online production sale next spring; he will have more information closer to the sale.

The 2012 convention will be December 7 and 8 at the Seven Seas in Mandan. We will start looking for topics and finalize more details at the October meeting.

Shearing school: Julie made a motion to give up to $250 to a North Dakota resident 16 years of age or older for registration of the shearing school instead of sponsoring the meal. Brad second, motion carried.

Codi Gilbertson is looking for some adult supervision to direct the youth group activities with her at the convention and other functions. After some discussion, Skip volunteered to take on the role.

The starter flock applications were evaluated with 9 flocks being awarded this year.

Meeting was adjourned

Submitted by Luke Lillehaugen

Calendar of Events

- **Sheep Nutrition and Ultrasound School**
  Oct. 20, 2012
- **NDSU Tri-state Sheep Tour**
  Nov. 1-2, 2012
- **Shearing and Wool Classing School**
  Nov. 17-19, 2012
- **Lamb Cookoff**
  Dec. 7, 2012
- **Annual Convention**
  Dec. 7-8, 2012

NDLWPA Membership Form

This form is a membership application for the North Dakota Lamb and Wool Producers Association (NDLWPA) and American Sheep Industry (ASI) Association.

Please print clearly

Name _____

Street address _____

City _____ State _____ ZIP _____

Phone ( ) _____ Fax ( ) _____

Email _____

Number of sheep/goats _____

Please check all that apply: ❑ Commercial ❑ Purebred ❑ Club lamb ❑ Dairy ❑ Lamb feeder ❑ Shearer ❑ Allied industry ❑ Business

Please check membership type:

❑ NDLWPA annual membership – $20
❑ NDLWPA annual junior membership (under 18 years of age) – $5
❑ ASI annual membership – $.04/head or $25 minimum (whichever is greater)
❑ Joint NDLWPA/ASI annual membership – $40
❑ Printed copy of the ASI Weekly Newsletter – $10

Note: ASI annual membership will entitle you to an email copy of the ASI Weekly Newsletter.

Total $_____ Please make checks payable to **NDLWPA**

Send this application and your payment to: NDLWPA
9463 86th St. S.E.
Fullerton, ND 58441

Thank you for taking an active interest in your industry!

For more information, call (701) 375-6971 or visit www.ndlwpa.com.

NAPA VALLEY LEG OF LAMB

Sheila Lukins, The U.S.A. Cookbook

Ingredients

- 1 leg of lamb (6.5 to 7 pounds)
- 4 large garlic cloves, thinly slivered
- 3 Tablespoons extra virgin olive oil
- 1 Tablespoon cracked black pepper
- 2 teaspoons dried oregano
- 2 teaspoons dried tarragon
- 2 teaspoons dried thyme
- 2 teaspoons dried rosemary
- 2 bunches fresh rosemary, for garnish

6 x 4" clip-and-save recipe card.
Cooking directions on following page.

North Dakota State University
Agriculture Communication
NDSU Dept. 7070
P.O. Box 6050
Fargo, ND 58108-6050

NAPA VALLEY LEG OF LAMB Directions

1. Preheat oven to 400 F.
2. Cut small slits all over the lamb with the tip of a small paring knife and insert the garlic slivers into them.
3. Place the lamb in a shallow roasting pan and brush it all over with the olive oil. Place the pepper and all of the dried herbs in a small bowl and pat the mixture all over the lamb. Place the lamb in the oven and immediately reduce the temperature to 350F. Allow to cook about 1½ hours, or until the temperature register 135 F for rare meat or 140 F for medium rare when an instant-reading thermometer is inserted in the thickest part of the leg. Let the lamb rest for 10 minutes before carving. The internal temperature will rise slightly as the lamb rests. If you prefer the lamb more well-done, roast it for another 10 minutes.
4. Place the lamb on a serving platter and garnish with the rosemary sprigs. Cut into thin slices to serve.

Congratulations to the 2012 Starter Flock participants!

Back Row: Sabrina Petersen, Grace Solemsaas, Jake Sanders, Chance Porsborg, Traci Lagein

Front Row: Hannah Bohl, Alison Voigt, Connor Helmers

Timely Tips

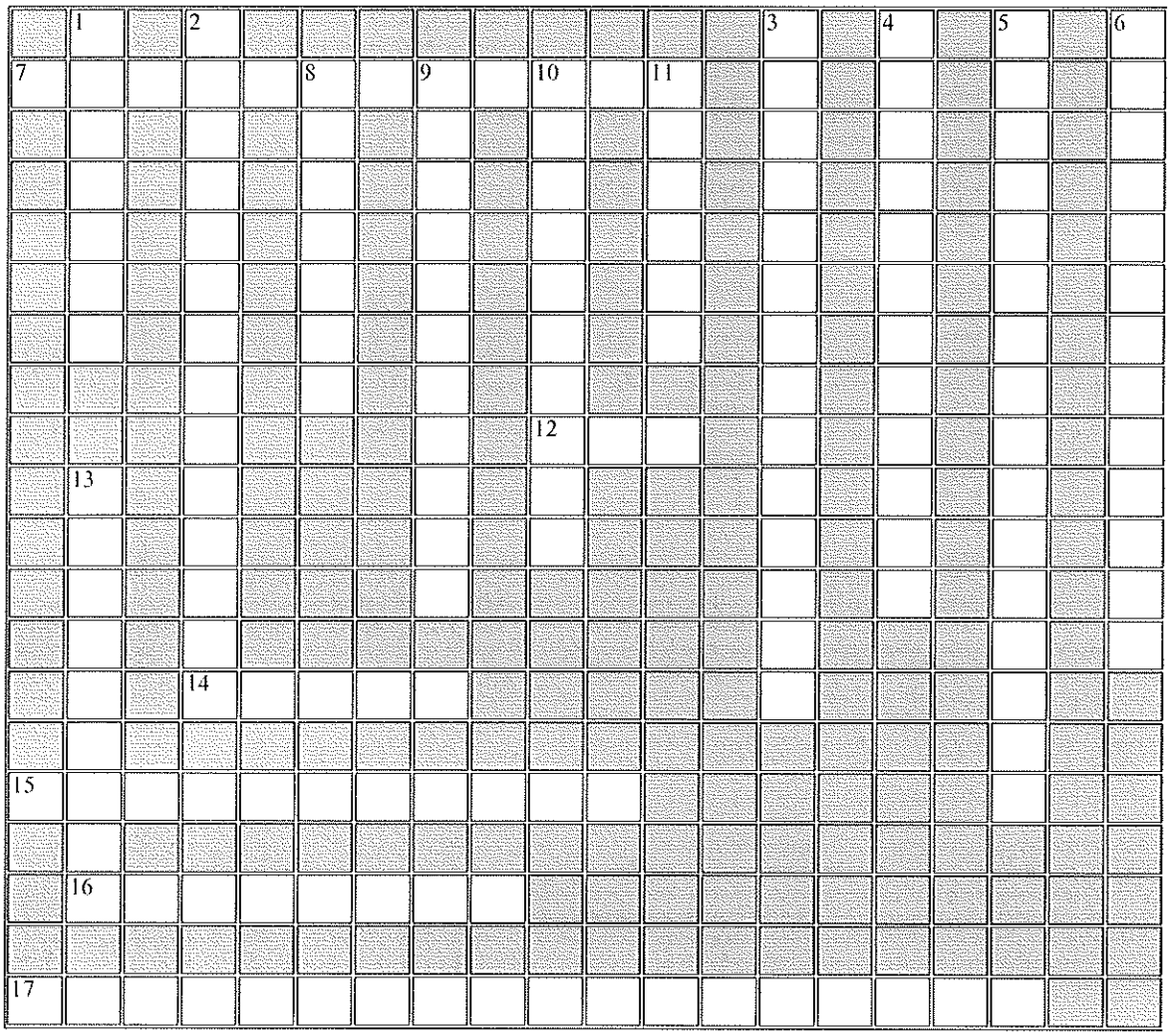
1. Plan to detect pregnancy status and/or pregnancy rate 30 days after ram removal.
2. Target feed resources during pregnancy to avoid under- and overfeeding ewes during pregnancy.
3. Estimate feed resources needed during winter and secure those feedstuffs.
4. Plan any modification or new construction needed to improve lambing facilities, winter feedlots and handling facilities.
5. Vaccinate for aborting agents that have been diagnosed previously, especially first-time lambers.

Youth Master Sheep Producer

Application for youth master sheep producer (starter flock recipients) will be accepted until Nov. 1.

Applications forms should be requested via email (reid.redden@ndsu.edu).

Test Your Sheep Knowledge



www.crosswordpuzzlegames.com/cgi-crosswordpuzzlegames/create

ACROSS

7. Sheep were _____ around 10,000 B.C.
12. Sheep can remember up to 50 human/sheep faces for up to _____ years
14. In the 18th century, exporting sheep from this country was a crime, punishable by death
15. _____ hold the world record for hand shearing sheep
16. In this country, stealing sheep is still a hangable offense
17. This famous explorer's funds came from Spain's thriving wool industry

DOWN

1. Most wool breeds were developed from this wild breed of sheep
2. Sheep gut is used to make the strings of
3. This U.S. president allowed sheep to graze the White House lawn during WWI
4. Lucky, the world's oldest sheep, died at the age of
5. This breed of sheep was used in the hit movie "Babe"
6. This former U.S. president had his inaugural jacket woven from the wool of sheep raised at his home in Virginia
8. The act of breeding sheep is called
9. Sheep have 54 _____
10. At maturity, sheep have this many teeth
11. Dolly, the first mammal to be cloned, was of this well-known breed
13. The ancient _____ mummified sheep when they died, just as they did humans