NEBRASKA SHEEP & GOAT PRODUCERS Newsletter

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MISSION: "SUPPORTING, PROTECTING AND PROMOTING NEBRASKA'S SHEEP AND GOAT PRODUCERS"

Parasite Management in Sheep and Goats

SPECIAL POINTS OF INTEREST:

- **Parasite Management**
- **Lamb Quality**
- **Pneumonia in sheep and goats**
- **Fighting Antibiotic Resistance**

Spring and summer are coming and with it comes internal parasites. This article will discuss ways to help avoid losing animals to internal parasites. Internal parasitism is one of the biggest problems in the small ruminant industry. Internal parasite infestations of herds can cause major health issues, which have a major effect on the animal's performance and cause great economic loss to the producer. In fact, most of the economic losses caused by internal parasites are actually not due to mortality but production loss (Waller, 2004). The proper management of internal parasites is extremely important to the success of the goat producer. The ability to detect the clinical signs of a major infection, to properly treat the herd, and to effectively reduce the herds exposure to parasites are all very important aspects of internal parasite management. As the goat producer faces issues like the rise of anthelmintic resistance among parasites, the knowledge of how to properly manage internal parasites becomes necessary for the survival and the economic viability of his or her herd.

One of the first things that producers should realize, especially those in humid and wet environments, is that goats are naturally browsers in contrast to sheep and cattle, which are grazers. Additionally, goats have traditionally been raised in dry-arid climates in extensive production systems, and they simply have not had the opportunity to adapt to the warm-moist conditions of a humid climate. Most production systems require them to graze intensively on improved pasture lands. All of these factors in addition to the fact that many of the parasites that affect goats thrive in warm, moist conditions and live close to the ground, simply expose goats raised in humid wet environments to more parasites than they are naturally accustomed to, even though they are known to be highly adaptable (Waller, 2004). Since many goats would not naturally survive in wet humid and warm production systems, proper management is necessary for the success of a herd.

Barber pole worm

Although illness caused by internal parasitism usually results from infestations of multiple parasites, the most pathogenic in small ruminants is *Haemonchus contortus*, or the barber pole worm. *H. contortus* is extensively dispersed, and it tends to thrive especially well in the warm, moist conditions. *H. contortus* is haematophagous, which means that it feeds on the blood of its host. It lives in the abomasum, where it attaches with its mouth to feed, mature, and reproduce. *H. contortus* is a very fertile species. The female lays about 5000 eggs per day, which are expelled through the feces. After the eggs hatch, the larvae inhabit the water that develops on blades of grass from dew or rain. Then the host, such as a goat, ingests the larvae while grazing on the contaminated pastures continuing the cycle. It takes about 3 weeks to complete the life cycle of the worm, but if the worm enters the survival stage of arrested development, it could survive for months. Arrested development involves the larvae remaining in the abomasums of the animal without maturing until months afterwards. This allows the worm to survive the winter months when the egg and larvae do not thrive well on the ground. The survivability of the free-living stage of *H. contortus* is short; in fact, most infective larvae vanish from the pasture within 4-6 weeks in a wet tropical environment (Waller, 2004).

Coccidia

In Nebraska, coccidia and the barber pole worm can be the two major parasites that cause problems in goats. Many of the important coccidia, which are protozoan (single-celled organisms), belong to the genera Eimeria. In goats, coccidiosis tends to be a problem in the young because they have not had the opportunity to develop immunity to these parasites. Kids between 3 weeks and four months are the most susceptible to this disease. The parasite invades the cells in the lining of the intestine, reproduces and causes the cells to rupture and die. The scarring of the intestine caused by this disease usually means that recovery will be slow and may result in an animal that is permanently unthrifty. The disease normally takes about 3 weeks after the initial infection to develop and includes symptoms like soft stool, decreased appetite, and poor weight gains. When a farm has coccidia, the mature animals carry around the parasites and may not show signs because they have developed immunity. A more serious manifestation of the disease may develop in the young, animals that had not been exposed previously, or those with a poor immune system. These symptoms include bloody diarrhea, straining, dehydration and possibly death (Heath & Harris, 1991; Luginbuhl, 1998; Mowlen, 2000; Schoenian, 2003).

Continued on page 2

Upcoming Events:

Back this year—
State Fair Tasting
August 27th

Annual Conference and Meeting
September 9-10

4S Goat Expo Show & Sale
September 23 & 24

Parasite Management in Sheep and Goats

CLINICAL SIGNS OF INFECTION

In order to properly manage the herd, it is important to be able to recognize the signs of parasitism. Diagnosis is usually done by observing the clinical signs, performing a fecal egg count test, or using the FAMANCHA© system to determine the level of infection. It is also important to consult with a veterinarian in order to obtain an accurate diagnosis since some symptoms are similar for multiple diseases.

Observing the clinical signs

Observe the herd daily for signs of abnormality. Sick animals usually isolate themselves from the herd and do not eat normally. A good time to check your animals is during feeding times. A daily visual inspection is usually sufficient to monitor for parasite infestation. However, other diagnostic methods such as fecal egg counts must also be routinely done. since the biggest impact of internal parasites occur in the sub-clinical level (not easily detected by visual observation) (Waller & Thramsborg, 2004).

Many of the clinical signs for parasites were mentioned in the previous section. In this section, some general signs that normally point to internal parasite infection will be discussed. One should be able to recognize these signs in order to make a proper diagnosis and they will also be helpful when the problem is discussed with the veterinarian. Some of the observable clinical signs of a heavy internal parasite infection are anemia, bottle-jaw, and wasting away or poor weight gain. Anemia results from parasites sucking the blood. It can be observed in the mucous membranes, particularly those around the eyes and the gums.

Figure 1: pale membrane

The membranes appear white or pale in contrast to the normal bright pink color that should be observed. Bottle-jaw is swelling, or edema, in the lower jaw of a goat. A gastrointestinal parasite infection causes a deficiency of proteins in the blood due to an increase demand for proteins and a decrease in the nutrient supply because of a lack of appetite (Ashraf & Nepote, 1990; Min et al., 2005). When there is not a sufficient amount of proteins, which hold fluid in the blood, the fluids leak into areas like the lower jaw region and the lower area of the abdomen. In heavy infections and in young animals, a wasting away can be observed, in which the animal has a low body conditioning score, a dull coat, and appear unenergetic (Figure 2). Diarrhea, or scours, may also develop as a consequence of infestation (Eysker & Ploeger, 2000).

Figure 2: Unthrifty hair

Fecal analysis

Diagnosis of internal parasite infections is normally done by fecal analysis. The eggs of all of the parasites discussed above can be seen by microscope. The fecal analysis can be sent to a lab, performed at home, or by a veterinarian. Fecal egg counts can indicate the level of pasture contamination and the need to treat with anthelmintics.

Figure 3: Bottle Jaw

It is suggested that fecal samples be collected from 10% of the herd or at least five goats to obtain an adequate representation (Luginbuhl, 1998). Use a latex glove to collect the fecal samples. The fecal samples should be fresh and collected from the anus of the goat. A sample of about two to five grams is normally sufficient to do an accurate fecal analysis. The glove can be inverted to serve as a container for the sample or the sample can be placed in a plastic container or a small glass jar.

The FAMACHA© system

The FAMACHA© system involves checking the color of the mucous membrane of the eye in order to determine the extent of anemia (Figure 4); and thus, the level of infestation by internal parasites (Luginbuhl, 2002; Waller, 2004; Gaskin, 2006). The technique was developed in South Africa and validated by studies in the United States. The system categorizes animals on a scale of 1 to 5, with 5 being reserved for the most anemic animals. FAMACHA© is only effective for the diagnosis of *H. contortus*. One of the advantages of the FAMACHA© system is that it decreases the number of animals that are treated by targeting animals that show physical signs of infection. This system of diagnosis lowers production cost, identifies worm susceptible animals that should be culled, and slows the development of anthelmintic resistance. Although the procedure is simple, quick, and easy to do, it is important that the producer is trained by a veterinarian or other trained animal health professional to use the FAMACHA© system accurately (Waller, 1999; Eysker & Ploeger, 2000; Schoenian, 2003; Kaplan et al., 2004; Hale, 2006).

When conducting a FAMACHA test on an animal, remember to do it in an area with plenty of light and to always use the card.

We will conclude this article in the next issue with Treatment and Prevention.

For more information, contact Randy Saner, Nebraska Extension Educator at randy.saner@unl.edu or https://www.wormX.info Source: Practical Management of Internal Parasite In Goats, Florida A&M Univeristy

Essential Goat Hoof Trimming Tips

By Natasha Lovell – Typical goat hoof trimming should be completed every two to three months, and is a critical component of caring for goats. Usually, this is a routine task that involves little more than some quick cuts with the trimming tool to keep the hoof level and the goat walking comfortably. Occasionally though, more complicated hoof conditions will show up requiring more time, care and sometimes treatment.

For the purpose of this article, I will be instructing on the use of hoof trimmers, like the orange-handled one's Caprine Supply and Hoegger's sell in their catalogs. Other good goat supplies to have on hand for this task are hoof rasps (use gloves!) and hoof grinders. I generally don't use gloves with my hoof rasp, so I end up taking as much skin off my hands with a rasp as I do hoof, but rasps are useful on hard, dry hooves. I personally do not have experience with a grinder.

The most important thing to do when conducting goat hoof trimming is it to make sure they are secure and unable to move. Putting the goat on a milk stand or grooming stand is very helpful. If one of those is not an option, a snug collar, a strong lead rope or leash, and a solid structure to tie the animal to will work. I often use the T-posts of my fence or the slats of my wooden built-in feeder after I have fed hay. Bribery with a favorite food can help keep the goat calm and cooperative. Goats often kick when the rear legs are handled. Frequent handling can help, but some goats are naturally less cooperative than others.

Pictures of Goat Hoof Problems:

The parts of the hoof we will be dealing with are the hoof wall, sole and the heels (Picture 1).

Goat Hoof Trimming: Steps for the Overgrown Hoof

This is a simple job (Picture 2). I generally start by scraping out the sole area if it is filled with dirt, and then cutting off the excess hoof walls, starting with the outside wall on each toe, and then the inside wall (Picture 3). Occasionally it's more effective to use the trimmers to cut both of the walls at the end of the toe, and then cut the rest of each wall individually. Just don't trim too far down on the toe until you know how deep the sole is. This can result in making your sheep bleed.

When the walls are removed, it is easier to see what else needs to be done. I like to have the goat's toes just a little longer than the heels, as it seems to be gentler on the pasterns. So, I trim an appropriate amount off the heels (Picture 4), and then trim on the toes until the hoof is level across the sole. Set the foot down to see how she stands every now and then to make sure things look right, and to give the goat a break. When a pinkish tone (light colored hooves) or a very translucent look (dark hooves) becomes visible, that means the growing area is close, and bleeding will occur if cut deeper (Picture 5).

If bleeding happens, don't worry, many owners have done the same thing. I have trimmed many hooves and I still cut too deep sometimes. Unless it is bleeding excessively, I usually just set the hoof back on the ground or milk stand and let the weight of the goat staunch the bleeding. If it bleeds a lot, cayenne pepper, cornstarch or commercial livestock bloodstop powders applied to the area will help.

More Complicated Hooves: Hoof Wall Separation

Sometimes a hoof will have a gaping hole between the hoof wall and the sole (Pictures 6 & 7). This is a relatively common occurrence you will discover during goat hoof trimming if your goats are kept in wet climates and shows up during the wet, muddy season. Living in western Washington I am surprised when I do not see it on my goats in the spring. In my experience, it causes minimal, if any, discomfort to the animal.

I trim it as far up the hoof as I can, and clean it out (Picture 8). Often I do not treat it with anything at all, but wait for it to heal on its own when the dry season comes around. If I have one that is severe and not healing well, I may use a coconut oil-based comfrey salve in the space, after trimming and cleaning out the dirt. I have a friend who also had good results using the mastitis treatment ToDay in the crack.

Complicated Hooves: Founder/Laminitis

Sometimes during goat hoof trimming, you will notice odd characteristics that can be attributed to laminitis, or founder. When a goat has laminitis, a goat's hoof will be abnormally long, oddly shaped and either extremely soft, easy to cut hoof tissue, or rock hard, depending on the moisture content of the goat lot or pasture.

The first photo here is of an acute case of founder. Notice the odd lump on the center of the top toe (Picture 9) and the width of the toe. This is a common finding. The hoof is also . Often caused by overfeeding of grain, or the use of moldy or tainted grain, tabnormally long (Picture 10), even though the hoof walls do not look abnormally longhis can cause lameness, especially in the front hooves. Affected goats will walk less and may adopt standing on their knees in an attempt to move around without using the affected feet (Picture 11). Copper deficiency, in my experience, also appears to contribute to the likelihood of the animal developing founder. This is very treatable, and the affected goat can recover and remain a productive member of the herd.

The best initial treatment is to identify and remove the cause, followed by frequent hoof trimming sessions. For the first trim, take off as much as possible, and make sure to trim it so that the toe is a bit longer than the heel. This seems to give almost immediate relief, as most of the animals I've trimmed like this start using the foot better as soon as I set it back down. Sometimes the hoof is a much different consistency than a normal foot. If the goat is in a moist environment, the hoof will be an opaque dead-white color even when trimmed far enough down that she bleeds, and it will be extremely soft, unlike the rubbery sole of the healthy goat (Picture 12 – compare to Picture 5). Notice on this goat that the one toe/heel is also more swollen than the other (Picture 13). They should be about the same width.

After the first trim, it seems to work the best for the goat to trim every two weeks until the abnormal growth and swelling subside. Once the acute phase is over, monitor the goat to see how often trimming is needed to keep her healthy and walking. It might help to use a rasp as the hoof will become rock hard when it dries out.

Another odd characteristic I often find with founder are what I call "blood spots" (Pictures 14 & 15). Occasionally it occurs in a non-foundered goat, but the animal usually has a recent history of being stressed metabolically (i.e. exceptional milk producer who was pushed for volume). The spots look like a bruise, but do not seem to be exceptionally more sensitive than the surrounding hoof. They come in various shapes, sizes and severity, and most can be removed with proper goat hoof trimming.

Goat Hoof Trimming: Hoof Rot

The work of a pair of "anaerobic" bacteria (bacteria that must live in an environment without oxygen), foot rot can be a goatkeeper's nightmare. The bacteria begin eating away the hoof in between the heels (Pictures 16 & 17), sometimes up into the skin of the pastern. The photographed cases appear to be caused by a mild strain, as the owner manages rather than works to eradicate it, and it is not causing as much damage as I've seen in other goats.

Picture 18 shows the typical appearance of the inside surface of an infected hoof. It can be quite bloody and eaten down to the layer directly over the toe bone. When it is that aggressive it causes extreme pain, causing lameness even more pronounced than founder. One case I encountered was so bad I could smell it even as I entered the pen. I had to recommend they euthanize one of those animals as most of her hooves eaten away to the bone-covering layer with the exception of the hoof wall and a little of the very ends of her toes. An infection like that smells very putrid.

There are many treatments available, including oxytetracycline (LA-200), coppertox, tea tree oil, and others. Try some out and see what works best for the situation. Also make sure to keep the affected goat's hooves well-trimmed in order to allow air into the areas to naturally control the bacteria (remember, they don't like oxygen!).

When I had this bacteria in my herd a few years ago, the strain I had was apparently coppertox and LA-200 resistant, as those two treatments made no significant improvements. I found that tea tree oil was very effective, but expensive to use without diluting it. So I made up a garlic oil from crushed garlic cloves and cheap vegetable oil, and then added tea tree oil drops as I used it. I washed each infected hoof once a day, with hydrogen peroxide, and ensured goat hoof trimming was done regularly, sometimes every day to keep the indentations exposed. I would then pour the garlic/tea tree oil on the infected areas. Once the dry season started, I managed to completely eradicate the disease and have not seen a new case since the last goat was cured.

Welcome Anne Murer, Newest Board Member

Hi, my name is Anne Murer, your new Nebraska Sheep and Goat Association Western Director. I was born and raised here in Nebraska mostly in the Sandhills. We worked for Senator Bowring in Merriman, Charlie Gwynn in Cody, Kenny Simmons in Valentine and assorted other places all the way to Lincoln, all cattle of course.

I went in the Army after graduation, into Military Police. I came back home to Valentine in 2016 to be near my daughter and grandson.

In 2017 I met local cowboy Bill Williams formally of Hyannis. We lived in Cody and then we bought a little place right outside of Valentine.

Right away we knew we wanted to make it into a place to give back and help our community. In just a couple short months my 15 year old grandson moved in with us, who has been raised right here in Valentine, and wanted to learn 'the farming life'. They were only doing virtual school at the time, so Kyler got initiated quick.
We fixed fence and fixed fence, mowed, cleaned up old wood, the property hadn't been cleaned up in a long time.

Within about a month of moving we got our 1st Nigerian Dwarf goat - Mr. Pickles, and shortly after came Ms. Patches, a nigerian boer cross and then came Percy a pygmy buckling. We started with 3 chickens and 6 Guineas (chickens). Now we have 62 goats, 20 chickens, 4 dogs and 4 cats. O, and my little sister has moved in with us and is learning goat life.

One day Bill says to me, I think we should raise Angora goats, he didn't give me a time frame…1 week later we brought home our 1st six Angora goats, the rest is history. With this harsh winter we lost 15 of 68 goats. Bill doesn't know it yet but I have to make a road trip to pick up – 8 Angora does, 2 Nigora does, 2 Nigerian bucks and 3 Nigerian does, LOL.

I am also the CAGBA North Central Region Director, CAGBA new member welcome 'shepherdess', I write member directory for The American Nigora Goat Breeders Association (ANGBA). I like to serve as it affords me the ability to learn and teach.

I have noticed that there were very few sheep shown in our local county fair and I will do my best to encourage that change.

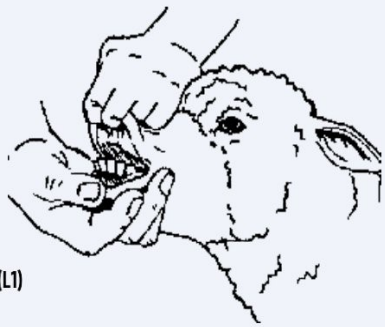
I look forward to serving.

I can be reached at – 402-389-1051 please text 1st as I won't answer unknown numbers.
3heartsacres.org@gmail.com and https://www.facebook.com/eam58.
I'm up early and stay up late.

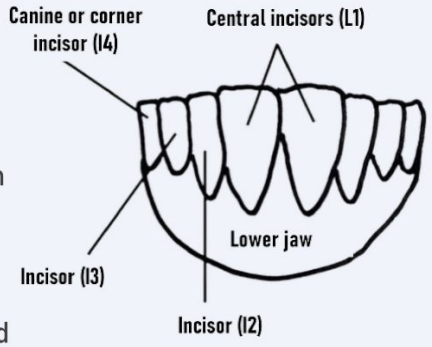
Thank you for this awesome opportunity, Anne.

Aging Sheep & Goats BY THEIR TEETH

The approximate age of sheep/goats can be determined by examining their front incisor teeth. Lambs/kids have 8 milk teeth or temporary incisors arranged in 4 pairs on their lower jaw. Ruminants don't have any teeth on their upper front jaw, only a dental pad. At approximately 1 year of age, the middle pair of incisors is shed and replaced by permanent teeth (incisors). Some breeds mature at a faster rate and their teeth will erupt at an earlier age. The condition of the teeth will also vary according to the type of feed and pasture grazed. At approximately 2 years of age, the 2nd pair of milk teeth is replaced by permanent incisor teeth. At 3 and 4 years of age, the 3rd and 4th pair of permanent teeth appear. At 4 years of age, the animal has a "full" or "solid" mouth. As the animal ages, the teeth become longer with wider spaces, eventually falling out or wearing down.



Birth to 12 months
Lamb/kid
8 milk or baby teeth



When an animal loses some of its teeth, it is called "broken" mouth. When it has no teeth (incisors) left; it is called a "gummer." These animals have a more difficult time grazing, especially short pasture.

Yearling - 2-toothed
2 central incisors
6 milk teeth

2 to 3 years - 4-toothed
2 central incisors
2 middle incisors
4 milk teeth

Solid mouth
7 to 8 years

3 to 4 years - 6-toothed
2 central incisors
2 middle incisors
2 lateral incisors
2 milk teeth

Broken mouth
10 years old

4 to 5 years
8-toothed or full mouth
2 central incisors
2 middle incisors
2 lateral incisors
2 corner incisors

"Gummer"
10 years old
No incisors left

By Susan Schoenian, Sheep & Goat Specialist Emeritus, University of Maryland Extension. 2023. To learn more, go to sheepandgoat.com or sheep101.info.

Pneumonia in Sheep and Goats

August142018
Dave Van Metre, DVM, DACVIM Professor / Extension Veterinarian, Colorado State University
Pneumonia is an infection of the lung tissue with multiple causes. It is an important medical problem of sheep and goats of all ages. In younger animals, various bacteria, viruses, and parasites of the upper and lower respiratory tract are often involved in the development of pneumonia. In adults, these same diseases – causing agents can create pneumonia.

In sheep, a systemic virus known as Ovine Progressive Pneumonia Virus (OPPV) can play an important role.
In goats, a similar systemic virus, the Caprine Arthritis and Encephalitis Virus (CAEV), can cause pneumonia.
The word "systemic" means that OPPV and CAEV are viruses that can affect multiple organs, including the lungs. These viruses can also affect the brain, udder and the joints. In certain climates, parasites (worms) can travel from the gastrointestinal tract to the lungs, causing pneumonia.

What conditions increase the risk of pneumonia?

- Animals of all ages:
- Overcrowded barns with poor ventilation
- Poor sanitation – urine and feces can release gases that harm the respiratory tract, and wet begging can cause the animals to become chilled.
- Excessive dust
- Wide variation in environmental temperature (for example, cold nights followed by warm days)
- High humidity
- Stress: Transport, birthing, heavy milk production, weaning, and fighting other diseases are examples of stresses that can make sheep and goats more susceptible to pneumonia.

Young animals:

- Failure to ingest adequate amounts of first milk (colostrum)
- Bottle feeding – if the nipple orifice on the bottle is cut too large, the milk in the bottle may flow into the lamb or kid's mouth too quickly, causing it to run down the windpipe into the lungs.

Adults:

- Infection with the OPP or CAE virus
- Is pneumonia contagious?
- Whether or not pneumonia is contagious – meaning capable of spreading from animal to animal – depends on the causative bacteria and / or viruses involved. Most viral diseases of the respiratory tract, including the OPP and CAE viruses, are contagious, and can spread among sheep and goats. Certain bacteria can be transmitted from animal to animal in respiratory secretions, but many of these bacteria reside in low numbers in the mouth and nose of normal, healthy animals. When one or more of the causative conditions listed above occur, these normal bacteria can increase in number rapidly and invade the lungs to cause pneumonia. Therefore, pneumonia can be viewed as both a contagious disease and a disease that can arise from the animal's own bacteria; the latter scenario is considered common when causative conditions are present.

What are the signs of pneumonia?

- The earliest sign of pneumonia is dullness – the affected animal is less active and alert than normal
- Fever – the rectal temperature is best measured early in the morning, when the animal's body temperature is least likely to be affected by daily activity and warm daytime temperatures. A rectal temperature that is greater than 103 – 103.5 degrees F (39.4 – 39.7 degrees C) may be indicative of pneumonia.
- Coughing
- Thick, white colored nasal discharge
- Rapid or labored breathing (note: it is normal for these animals to breath rapidly during warm weather)
- Falling behind from the flock or herd (decreased performance)

How is pneumonia treated, and can it be prevented?

- There are no medicines available for treatment of viral infections in sheep or goats. Your veterinarian may recommend that certain antibiotics be administered to the affected animal to either 1) treat an existing bacterial pneumonia, or 2) to prevent bacteria from causing pneumonia as a complication to a viral infection. Consult your veterinarian to discuss which antibiotic might best suit your animal's needs. Always read the label on these medications and follow the directions carefully.
- Prevention requires a clear understanding of the role of the causative conditions in development of this disease. Inspect the animal's environment for any of the conditions listed above that might cause pneumonia, and correct these. Make sure that the animal has dry bedding, good clean feed, clean water, and fresh air.
- Consult with your veterinarian to determine if parasites might be the cause of pneumonia in your animals. Pneumonia caused by parasites will not be completely cured by antibiotics, although some improvement might be seen with antibiotic treatment (because the bacteria may infect the tissues damaged by the parasites).
- Infection with the OPP or CAE viruses results in a life-long infection that the animal's immune system cannot cure. However, infected animals can survive if they are well cared for. Your veterinarian can test the blood of your animals to determine if they have been infected with these viruses, and can discuss the options for controlling these diseases.

Ranch Fencing S&B Fencing, LLC can work from Central Nebraska to the Panhandle of Nebraska. We will put p any ranch fencing including barbed wire electric fencing, high tensile wire, woven wire and cattle panels. We can tear out old fence or even repair your current fence. Recently began welding corrals, continuous panels, etc. Check us out on Facebook https://www.facebook.com/SBFencingLLC or call Brian at 308-458-8311 for more information.

Lamb Quality

Awareness of lamb live animal and carcass evaluation criteria can help producers make production decisions aimed at meeting lean meat yield and quality expectations.

"Live Lamb Evaluation" is the 3rd installment in a 5-part series sponsored by ALB and Premier 1 Supplies.

Using the theme of "Beginning with the End in Mind," the purpose of the series is to help the US lamb industry provide a consistently high-quality product to consumers.

Travis Hoffman, Ph.D., North Dakota State University (NDSU) and University of Minnesota Extension Sheep Specialist, is spearheading the project. NDSU Extension Service is producing the video series.

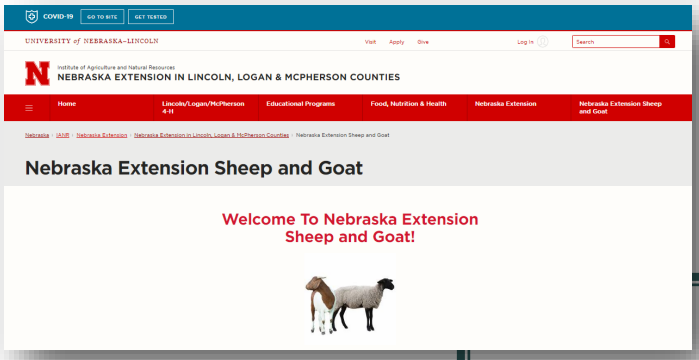
"As sheep producers we are tasked to provide enjoyable eating experiences and meet palatability expectations for the dinner plate of American Lamb consumers," says Peter Camino, ALB chair from Buffalo, WY.

A key part of raising sheep that meet yield and quality parameters for premium American Lamb is determining when the e animal is marketed. In "Live Lamb Evaluation" producers learn how harvesting at compositionally correct end points produces carcasses that grade USDA Choice or better and Yield Grade 1, 2, or 3.

Age, breed type, size and body composition all play a part in grading and carcass cutability. The video series takes into account the wide variety of production systems used by American Lamb producers, as each strives to work with their own production factors

"Different crosses such as Suffolk-Rambouillet lambs do well in our area of West Texas, mainly because of conversion, cost of gain, and the overall performance of the lambs; and then at harvest time, the yield that we see back from that animal," says David Quam, ALB representative from 2015 to 2021.

"Live Lamb Evaluation" is available at lambresourcecenter.com. Previous videos can be found there also.



All programs that are recorded posted to this page.

Nebraska Extension Sheep and Goat | Nebraska Extension (unl.edu)

You Need Good Fences to Deter Predators

U.S. Cooperative Extension

There is a lot of truth in the statement "good fences make good neighbors." This concept applies to predator control as well. The first thing you need to realize is that you cannot fence out all predators.

They will always find a way into your fields. Good fences make it more difficult for them, increasing the chances that they will look for food elsewhere. The most common fences for predator control involve good woven wire and electric trip and stand-off wires on the outside of the pasture. The normal use of this type of fencing is in the construction of a night penning area. This is a special area, generally around a shelter, where animals are penned each night and released during the day. Because most predation occurs at night, this provides protection without the very high price of changing your total farm fencing.

Most night penning areas will be constructed with a 6– to 8-foot fence that uses the 4-by-4 woven wire. Electric stand-off wire and trip wire are then placed around the outside of this pen to stop the predators from digging under the fence or trying to climb it.

The trip wire is generally place at 3 inches off the ground and 8 to 12 inches from the main fence. The stand-off wire is then place 3 to 6 inches from the main fence and 12 to 16 inches off the ground. The idea is that the animal will not be able to get between the two wires to dig without getting hit by the electric current.

In some situations, producers have buried woven wire up to 3 feet under the fence to prevent predators form digging through. Th gate becomes the weak place in these systems; be sure to continue the electric fencing or a woven wire, skirting galong the gate area, and make sure there are no gaps between the gate post or ground that a predator can get through.

If you wish to construct perimeter fencing that will reduce predators, the most economical method is with an 8– to 10– strand high-tensile electric fence. With the close spacing allowed by this high number of strands, predators must come in contact with the wire when going through the fence. If the fence is kept charged properly, they will often learn to avoid crossing it.

There have been reported cases of coyotes changing their normal travel routes du to well-constructed electric fences. If electric fencing is not an option then 8 to 10 strands of barbwire can also be used if space apart properly.

It is important to remember that night penning only offers protection when the animals are in the pen and predators my attack during the day. Birds of prey can be a significant problem during the day. Also, in some cases when pens are not built properly, predators can enter and there is no escaped for the goats.

Heavy losses can then result, especially in the case of domestic dog attacks. Someone also must pen the animals and release them each day for this to be an effective method of control.

Fighting Antibiotic Resistance

Rosie Busch, DVM
University of California-Davis

If you are an avid reader of the *Sheep Industry News* or had the opportunity to go to the ASI Annual Convention in 2022 or 2023, we've been talking about efforts to address antibiotic resistance. Chances are you already know that by this June—in about two months—antibiotics that we now get over the counter at your local feed store or in the farm supply catalogues will require a prescription from your veterinarian.

You might even know why this change is coming, but if not, reach out to me and we can talk about it. There are many different sides to this problem. Put simply, just as you are primarily responsible for the health and well-being of your sheep, the Food and Drug Administration has made veterinarians the primary stewards of these life-saving veterinary drugs. Transitioning to using a veterinarian as a partner in your flock health program- rather than only when things go wrong in emergency situations—might have benefits beyond keeping antibiotics working for many years to come.

I have not been to one farm or ranch that is identical to another. Not once. That is really the fun part of my job as a veterinarian. When it comes to addressing the health of your flock, there are many different ways we can adjust management to control or prevent diseases within an operation that limits the need for antibiotics. One size definitely does not fit all.

This is why it is so important that your vet becomes familiar with your operation in order to be able to give you the best advice for you and your animals. Additionally, establishing the veterinarian-client-patient relationship is required by state and federal law for your vet to provide a diagnosis and make treatment recommendations. Maintaining their veterinary practice license—aka their livelihood—depends on following this law.

DON'T HAVE A VET IN YOUR AREA

The American Association of Small Ruminant Practitioners has a directory of members that can help you find a vet who has experience working with sheep and goats. This is by no means a complete list. There might be vets in your area that work with your neighbors or other producers in the region. Start talking to fellow producers about how they work with their vet. I have several colleagues that have an extremely wide practice radius and drive many hours—or even fly—to farms and ranches that recognize the value of their services for annual flock health checks.

WHY PAY FOR A VET TO COME OUT WHEN YOU DON'T NEED THEM AT THE TIME?

Chances are, your vet is a busy person. While it might be difficult for you to find a vet in your area, this means vets that are working with livestock are booked and traveling that much further to serve clients. If you have a good relationship with your vet and they are familiar with your farm or ranch, they can usually get you the help you need faster than if you are a new client or haven't talked with your vet in several years.

WHERE DO YOU START IF YOU DON'T HAVE A PROBLEM?

Develop a flock health plan. Have the vet out for a routine service like scanning for pregnant ewes or evaluating breeding soundness of rams. Resources like ASI' *Sheep Care Guide* are available on the website, or herd health and treatment plan templates like the ones developed by the University of California-Davis School of Veterinary Medicine can help make sure you are prepared to discuss your operation with your veterinarian and the conditions that might affect your sheep and goats in the coming year. Revisit these plans with your vet annually. Most operations experience changes from year to year; be it weather, forage resources, animal numbers, etc. Describe what has worked and what hasn't and adjust your plans as necessary.

Being a livestock veterinarian is hard work and extremely fulfilling, especially since we get to work with great people. Remember, we are all people, working to provide a premium, safe, and wholesome product for our friends and families.

For more resources to help you prepare for this change, got to Sheepusa.org/fda-guidance-ending-over-the-counter-antibiotics.
Originally published in Sheep Industry New March 2023 issue

ASI Releases EID Project Video

The American Sheep Industry Association conducted a small pilot project at the Delta (Colo.) Sales Yard to evaluate the feasibility of integrating an electronic identification system for sheep in an auction market setting to determine the benefits it could provide to the auction market, federal and state animal health officials, and producers.

The objectives of this project were to 1. assess the technology with respect to current business practices and the speed of commerce, and 2. identify the needs and gaps in implementing an EID system for sheep at auction markets.

Auction markets differ across regions and species. Relatively few auction markets have the infrastructure or resources available for implementing an EID system. Examples of infrastructure deficits include but are not limited to facility design, outdated management software, technological advancements, business practices and cost. Many auction markets do not have the equipment for the proper handling of sheep.

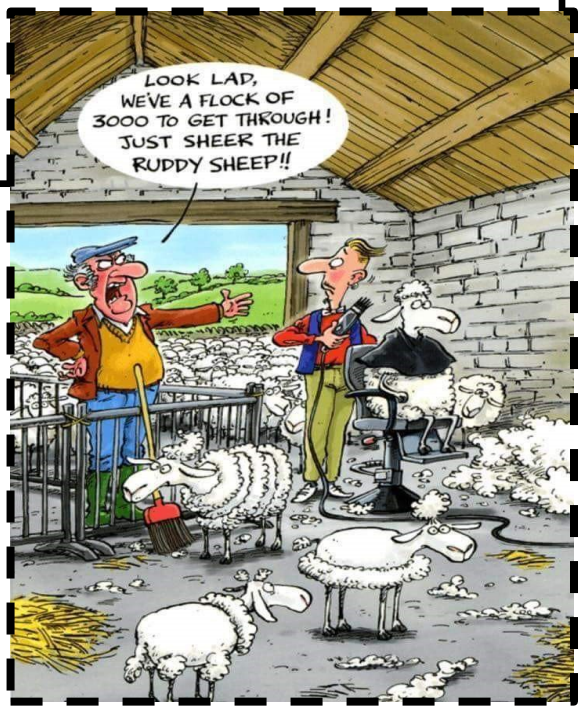
If EID becomes commonplace, the lack of infrastructure to support an EID system will be encountered at other auction markets and will require needed changes regarding software programs, business practices, facility design modifications and cost in transitioning from a visual to an EID system. Recognizing there are notable differences across auction markets is critical when transitioning to an EID system.

Many auction markets are hesitant to implement EID systems due to concerns on the potential impacts to the speed of commerce, business operations and the return on their investment for the additional infrastructure costs to accommodate the EID reader and management software.

ASI promotes the training of proper sheep handling and encourages auction markets to be uncompromising in their employees handling and welfare standards for sheep. Auction market employees might need to be trained in the proper handling of sheep as animal welfare is more than just an ethical decision; it is imperative to a successful business.

The ASI pilot project was helpful in gaining an understanding of the needs and challenges that markets have to converting to an EID system. It is clear that if an animal health emergency were to occur today, an EID only requirement would not be feasible because the infrastructure is not in place to effectively utilize the technology. Although not insurmountable, significant resources are needed to get to a place where EID could be utilized in an animal health emergency. If the U.S. Department of Agriculture wants to move in this direction, it will need to make such investments.

Click Here to watch a video about the project. ASI hopes the information in this video is useful and is appreciative of the assistance of USDA's Animal and Plant Health Inspection Service in carrying out the pilot project.



Upcoming Events for 2023

April 28-29 - Yellow Rose Fiber Fiesta - Seguin, Texas - www.yellowrosefiberfiesta.com
May 19-20 - Crazy Mountain Fiber Fest - Big Timber, Mont. - www.bigtimber.com/chamber-information/fiber-fest/
May 31—Showman's Best Camp (showmansbestcamp.com) Vermillion, SD
May 31-June 4 - Contemporary Handweavers of Texas - Sugar Land, Texas - www.weavetexas.org
June 2-3 - 73rd Annual West Virginia Purebred Sheep and Goat Show & Sale - Tri-County Faigrounds in Petersburg, W.V. - www.wvsheepandgoatsale.com
June 8-11 - Estes Park Wool Market (& Workshops) - Estes Park, Colo. - www.estesparkeventscomplex.com/wool-market.html
June 11 - New York State Fiber Conference - Butternut Hill Campground in Bouckville, N.Y. - caahp.ccext.net/civicrm/event/info?reset=1&id=170
June 14 - UI-USU-SDSU Extension Sheep and Goat Monthly Webinar - Online - https://uidaho.zoom.us
June 23-25 - Black Sheep Gathering - Albany, Ore. - www.blacksheepgathering.org.
June 23-25 - Houston Fiber Fest - Cypress, Texas - www.houstonfiberfest.com
June 24-25 - Beginning Shepherding and Pasture Management Workshop - Bellingham, Wash. - www.lydiasflock.com

August 27th—Nebraska Sheep & Goat Producers—Nebraska State Fair Tasting 2 pm CT—Grand Island, NE

September 9 & 10, 2023—NS&GPA—Annual Conference and Meeting—Broken Bow

September 23 & 24, 2023—4S Goat Expo and Sale—North Platte, NE—s4goatexpo@yahoo.com

Renew your membership today for 2023!!!

Online go to nebraskasheepandgoat.org

Or

Email ne.sheep.goat@gmail.com

LET'S GROW

Have you checked out the ASI Let's Grow Webinars? The webinars cover productions and management topics important to sheep producers. You can view all the webinars at sheepusa.org/growourflock-resources-educationalwebinars

These webinars help keep producers informed on industry technology , innovations and systems for improving production efficiencies to support sustainability. ASI hosts webinars at least three to four times a

NSGP Producers Directory

Do you have lambs/goats for sale? Do you sell breeding stock or have a service to provide to others? Do you sell directly to consumers? We want to get your name out there and promote your business. We are going to work hard this year to build a directory that will be posted on our website and in our newsletter that will provide buyers and consumers a list of where they can purchase local lamb/goat, sheep and goat services, and quality breeding stock. *Please remember, if you are selling lambs or goats as meat (not sold live prior to slaughter) they must be butchered at a state or federally inspected plant.

Name: _____

Operation Name: _____

Phone Number: _____

Email: _____

Location: _____

What do you sell?

- ☐ Whole lambs/goats
- ☐ Half lambs/goats
- ☐ Individual cuts
- ☐ Mutton
- ☐ Breeding stock Breed: _____
- ☐ Show lambs/goats
- ☐ Other Please explain: _____

Do you have any special statement with your lambs/goats?

- ☐ All natural
- ☐ Grass Fed
- ☐ Organic
- ☐ Other: _____

Please return to NSGP:
Melissa Nicholson
308-386-8378
Ne.sheep.goat@gmail.com
P.O. Box 1066—Chadron, NE 69337

This is a free service for all members. Non-member there will be a $25 annual listing fee.

NSGP Producers Directory

Goats

Wood Chuck Hills
Kevin & Kendell Brichacek
Linwood, NE
402-615-1290 or 402-750-1639
lvfd71@gmail.com
Boer Goats
Breeding & show stock

Heidi Cuny
Gordon, NE
415-279-0185
heidimd@yahoo.com
Lamb and goat meat
All Natural –Grass Fed
Regenerative Ag

Forty Creek Acres
Sara Nichols
Eddyville, NE
308-340-4880
fortycreekacres@gmail.com
Commercial & Registered Boer and Registered Alpine Goats
Breeding and show stock
Hoof Trimming Services

Sheep

Feldmann Farms
Bradley Feldmann
Meadow Grove, NE
402-750-1537
bdfeldmann@telebeep.com
SAMM & Ramouillet/G-link cross

Littlefield Family Farms
Michael & Bryan Littlefield
Surprise, NE
402-526-2240, 715-417-1525 or 402-270-2928
michaelrlittlefield@yahoo.com
Columbia
Breeding Stock
Sheep, Goat Llama & Alpaca Shearing

Circle M Targhees
Georg Mann
Hayes Center, NE
715-533-0249
gjmann47@gmail.com
Targhee
Great genetics and awesome Fleeces

Raising Targhee for 55 yrs
Lamb meat, breeding & show stock

Pigroco
Dan Stelik
Curtis and Dorchester, NE
785-275-1152
dstehlik2@unl.edu
Dorset, Dorset/Suffolk F1 Cross-bred
Individual cuts of lamb, Breeding stock, show lambs commercial market lambs—All natural/ antibiotic free
Accelerated Laming Program

Bluff Valley Farms
Kenneth & Mary Grace Thiltges
Rulo, NE
402-245-5460
bluffvalleyfarm@sentco.net
Polypay ewes—Xbred lambs
Individual cut of Lamb—USDA inspected.

Double M
Mike & Fran Wallace
Nelson, NE
402-984-4837
St. Dorpanov
Ewe Lambs available
Old Barn Farm

John Wagoner
Phillips, NE
308-379-4898
mobydick51@msn.com
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Both

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Connie Moore & Bronc & Melissa Nicholson
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970-629-2689 or 308-386-8378
crmoor4@gmail.com
Whole lamb/goat & Breeding stock—All natural Grass Feed
Rambouillet, Southdown, Boer, Spanish and Registered Alpine

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Columbus Sales Pavilion, Inc.
Tuesday's 4:00 PM
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Feeder Pig, Butcher Hog & Sows, Sheep & Goat Sale

May 9th & 23rd

June 6th & 20th

July 11th & 25th

August 8th & 22nd

September 5th & 19th

October 3rd, 17th & 31st

(subject to change due to Montana Sale)

November 14th & 28th

December 12th

Randy 402-276-2775

How you can stretch your forage resources?

Editor's note: This article is written for cattle producers but the advice works for goat raisers, also.

Between the widespread drought, increase need for hay resources and the lack of pastures, cattle producers across the country are looking for ways to cut their input costs. During a time when they should be turning cow out to pasture, those pastures aren't as nutrient dense as normal, and hay is at a premium, making the prices more challenging to pay right now.

There might not be a guaranteed solution for cattle producers looking to save money and get the most from their forages this summer. However, with the assistance of high-quality mineral powered by the prebiotic Amaferm, producers are able to stretch their forages and get more nutrients from what they are feeding.

"Every operation is different, and every management scenario is unique, so there isn't a one-size f it all solution. However, Amaferm can reduce the cost of digestible nutrients in hay by 18% when hay is $180 per ton. The higher hay costs get, the greater the savings that Amaferm creates," said Chris Cassady, Ph.D., BioZyme Inc. Technical Sales Field Manager.

Cassady offers multiple options for those looking to stretch their resources this summer. First, if running cows strictly on grass, supplement them with a mineral to ensure they are getting the nutrients they need. Also consider where they are in their reproductive cycle. Late gestation and early lactation are when cow's vitamin and mineral requirements are at their highest as they are impacted by fetal growth, milk production and breeding. Therefore most herds don't require excessive nutrients in the summer, unless they calve in late spring through early fall. Think a bout the types of grasses you are grazing your herd on. Remember, different grases on different soil types have varying nutrient contents.

If you are already feeding hay, make sure you have it tested to know it's nutrient content. Hay testing is actually a free service that BioZyme offers its customers to help them determine the nutritional components they are missing in their herds' diet. Once the hay analysis is received, the BioZyme nutritionists will recommend the vitamins and minerals to needed balance you cattle's diets.

Even if you aren't ready to start feeding hay, it is always a good idea to have it tested. This helps you know the best way to supplement your herd with grain or a complete mineral program.

If you know where your cow's nutritional needs are at, then you can match the proper hay quality with their nutritional needs. For example, dry cows in the late summer in mid gestation probably don't require a high-quality first cutting and can get by with something cheaper. The same could apply for the fall calving herds, at the current time point where they are dry and/or mid-gestation.

Another alternative that Cassady proposes is limiting the access to hay instead of offering free-choice hay. The benefits of limiting access include less waste, more efficient utilization of forage and overall higher gain conversion. Studies suggest that cows will eat all they want and need in six hours per day.

"Restricting access helps control waste from anywhere between 25 to 50%, which is a big expense of a valuable resource right now. Using a bale feeder that is only open to your cow 4 to 6 hours a day or actually feeding hay in a bunk line daily should prove to be a financial savings in wasted product," Cassady said.

NEBRASKA SHEEP & GOAT PRODUCERS

PO Box 1066
Chadron, NE 69337

NEBRASKA SHEEP & GOAT PRODUCERS
www.nebraskasheepandgoat.org
ne.sheep.goat@gmail.com

Tel: Daniel Stehlik, President - (785)-275-1152
Email: dstehlik2@unl.edu

Newsletter:
Melissa Nicholson Newsletter and Communications Secretary (Chadron)
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