



## Ethnic Markets Drive Sheep / Goat Prices



By Susan Schoenian

An ethnic market is a group of consumers linked by culture, religion, race, language and/or national origin. It usually refers to cultures other than the majority culture in a marketing area. Much lamb and most goat is consumed by ethnic markets.

With that said, there is no single ethnic market. The so-called ethnic market is composed of many different market segments, each having its own preferences for consuming lamb and goat. Sheep meat is usually favored for the major Christian, Jewish, and Muslim holidays. The demand for goat seems to be more cultural, with more of a year-round demand. Easter (Christian) and Eid (Muslim) are the most important holidays when considering when to market sheep and goats to a lesser extent.

There are two Easters: Western (or Roman) and Eastern Orthodox (or Greek). Their dates are calculated using different calendars: Gregorian vs. Julian. They may fall on the same day or be up to six weeks apart. In 2022, only a week will separate the two easters: Roman (April 17) and Orthodox (April 24).

At Easter, there is a demand for both big (commodity) lambs and smaller (35-50 lbs.), younger milk-fat ("hot house") lambs. The latter is usually preferred by Eastern Orthodox Christians (e.g., Greek, Eastern European, Ethiopian). Usually, the highest prices (per pound) of the year are recorded for these premium "hot house" lambs and sometimes kids.

Eid is the Arabic word for "festival." There are two Eids. The first one is called the Festival of Fast Breaking (Eid ul Fitr). It follows Ramadan, the month-long period of fasting observed by Muslims. The "bigger" Eid is the Festival of the Sacrifice (Eid ul Adha). It commemorates Abraham's willingness to sacrifice his son (to God). The preference for the latter is an unblemished lamb (sheep or goat) at least six months of age, with less fat than commodity-type lambs.

A lunar calendar (based on sighting of the moon) is used to determine the dates of the two Eids. For this reason, the Muslim holidays occur approximately 11 days earlier each year. Next year, the first Eid will be May 2-3. The Festival of the Sacrifice will be July 9-10. Prices for sheep/goats are usually highest in the weeks preceding the Festival of the Sacrifice.

### In This Issue

Ethnic markets

Latest Podcast From ASI

Wool Judging Resources

What Is The Secure Sheep & Wool Plan

Look What's New

What Is The Five Point Check©

Research Findings

Frost Can Cause Forage Hazards

Introductory Small Ruminant Webinar Series

Upcoming Events



## Latest Podcasts From ASI

The American Sheep Industry Association (ASI) started a monthly research and education podcast in 2020. Be sure to subscribe to the ASI channel and listen to their latest podcasts:

1. Seasonality of the US lamb supply (with Reid Redden, Texas A&M)
2. Copper boluses for parasite treatment (with Joan Burke, USDA ARS)
3. Body condition scoring (with Clay Elliott, Purina Animal Nutrition)

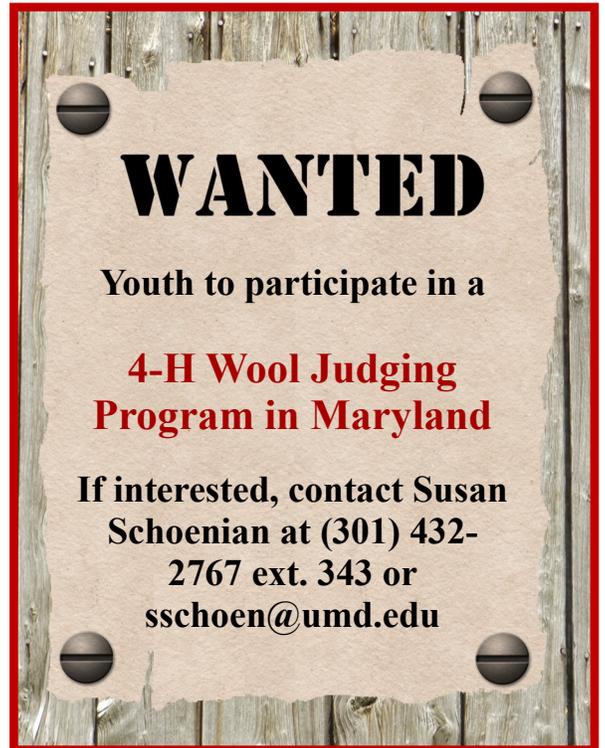
To find these podcasts, go to <https://soundcloud.com/user-637754734>.

## Wool Judging Resources

The University of Wyoming recently shared its wool judging resources. Links to the following YouTube videos were shared:

1) Introduction to wool judging; 2) Grading rail; 3) Placing classes; and 4) Reasons and questions. The videos are available on the University of Wyoming Extension YouTube channel. The easiest way to find them is to search for them by name in YouTube.

Wool judging (4-H and collegiate) consists of two parts: fleece evaluation (rail grading) and class placings and questions (and/or reasons). The National 4-H Wool Judging Contest is at the Texas 4-H Round-up. It also includes mohair judging. Mohair is the fiber produced by Angora goats. There are several other national contests in Denver and Wyoming.



## What Is The Secure Sheep & Wool Plan (SSWP)?

If foot and mouth disease (FMD) is found in United States livestock, regulatory officials will limit the movement of animals and animal products to try and control the spread of this very contagious animal disease.

The Secure Sheep & Wool Supply (SSWS) Plan for Continuity of Business provides opportunities to voluntarily prepare before an FMD outbreak. This will better position premises with sheep that have no evidence of infection to:

- Limit exposure of their animals through enhanced biosecurity,
- Move animals to processing or another premises under a movement permit issued by Regulatory Officials, and
- Maintain business continuity for the sheep industry, including producers, haulers, packers, and wool processors during an FMD outbreak.

The SSWS Plan is the result of a collaborative effort by industry, state, federal, and academic representatives. The SSWS Plan provides guidance only.

For more information, go to <https://seuresheepwool.org>.

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(continued from page 1)

In recent years, the ethnic markets have drastically changed the US lamb market. In the past, lambs fit into two broad categories: fats and feeders. Nowadays, lambs that used to be sold as feeders are now slaughtered by the ethnic markets. It's hard to find feeder lambs in our area, whereas feeders in the West have to pay more for feeder lambs to keep their feed lots full. The demand for light weight lambs has also had a positive influence on the price of bigger lambs, as processors need to secure their supplies.



With today's immigration patterns and changing demographics, a strong case can be made for increased demand and consumption of sheep and goat meat in the US. Many immigrants and refugees come from countries and cultures where sheep and goat meat are favored. The big question is who will fill the demand: US producers or imports, which already account for more than half of domestic lamb and goat consumption?

Download a copy of my ethnic holiday calendar at <https://www.sheepandgoat.com/ethniccalendar>.



## Look What's New!

### New Fact Sheet: Bottle Feeding Kids and Lambs

Maegan Perdue, the agricultural extension educator in Worcester County, has authored a new fact sheet on bottle feeding kids and lambs. The easiest way to find the fact sheet is to go to <https://extension.umd.edu>. Click on publications, then type "bottle feeding" in the search box.

### New InfoGraphics

An infographic is a visual image used to present information or data. Two new infographics pertaining to parasite control have been created: one on FAMACHA© and the other on the Five Point Check©. You can find the infographics here: <https://www.sheepandgoat.com/infographics>

### Translation into Spanish

The American Consortium for Small Ruminant Parasite Control has begun the process of translating some of its resources into Spanish. The University of Rhode Island is also finalizing its efforts to offer Spanish language online FAMACHA© certification.

### Updated Dewormer Charts

The American Consortium for Small Ruminant Parasite Control's Sheep, Goat, and Camelid Dewormer charts have been updated for 2021. Michael Pesato, a veterinarian from Mississippi State University has updated the charts, which give dewormer dosages for different sized sheep, goats, and camelids. Additionally, the charts provide withdrawal periods, including for when the drugs are used in an extra label manner, which is common with goats and camelids.

Sheep Deworming Chart: <https://go.umd.edu/sheepchart>

Goat Deworming Chart: <https://go.umd.edu/goatchart>

Camelid Deworming Chart: <https://go.umd.edu/camelidchart>

# What Is The Five Point Check© ?

By Susan Schoenian

The Five Point Check© is a chute-side, decision-making tool to help producers determine the need for deworming their small ruminants (sheep, goats, and camelids). It builds on the FAMACHA© system by adding additional criteria for the other parasites that commonly infect small ruminants, especially those that can cause digestive upset (scours) and snotty noses.

The five checkpoints are: 1) eye; 2) jaw; 3) back; 4) tail; and 5) nose. Because each criterion can be indicative of other diseases or conditions, it is important to consider ALL five checkpoints when making selective deworming decisions.

FAMACHA© score (eye) is determined by comparing the color of the membranes of the lower eyelid to the colors on the FAMACHA© card. Small ruminants with FAMACHA© scores of 1 or 2 do not usually need dewormed unless there are other signs of parasitism. Those with FAMACHA© scores of 4 or 5 need dewormed with effective drugs. Category 3's may or may not require deworming; other criteria should be considered.

Submandibular edema (jaw) more commonly called “bottle jaw” is another symptom of barber pole worm infection. It is a soft build-up of fluid directly under the jaw, not to be confused with “milk goiter, common to hair lambs. Small ruminants that have bottle jaw should always be dewormed. At the same time, it is important to note that most clinically-parasitized animals will not develop bottle jaw. It seems to be more common with sheep than goats.

Body condition score (back) is probably the next most useful tool for making deworming decisions, especially for adult animals. Periparturient females with body condition scores of 2 or less should be dewormed. Lambs/kids with body condition scores of 2 or less should be dewormed, especially if they have a FAMACHA© score of 3 or more and/or have lost weight. Body condition scores of 2 or less are also indicative of sub-par nutrition, which makes small ruminants more susceptible to worms. In this case, pastured animals may require supplementation.

The tail is examined to determine if the animal has or had scours (diarrhea). Many of the non-barber pole worms can cause scours. In affected animals, feces usually accumulate on the tail, legs, hocks, and scrotum. This is the main reason why woolly lambs are docked: to prevent dags from forming on their backsides.

A nasal discharge or “snotty nose” can be indicative of nasal bots. Nasal bots are caused by a fly that lays eggs in the animal’s nasal passages. Ivermectin is labeled for the removal of nasal bots in sheep.

The Five Point Check© assists producers in making selective deworming decisions, as it is no longer recommended that all animals in a management group be treated. Only those showing clinical signs as evidenced by FAMACHA© and the Five Point Check© should be given dewormers. Combination treatments (drugs from different classes) are now recommended for clinically-parasitized small ruminants. Selective deworming increases refugia and slows the development of resistant worms.

1



**1 - EYE**  
Anemia (blood loss)  
FAMACHA© score

2



**2 - JAW**  
Submandibular edema “bottle jaw”

3



**3 - BACK**  
Body condition score (1-5)

4



**4 - TAIL**  
Scours (diarrhea)  
Fecal soiling, dags

5



**5 - NOSE**  
Nasal discharge, snotty nose - Nasal bots

# Research Findings



- Two Saudi sheep breeds were compared for heat tolerance. Contrary to popular opinion, black coat colored sheep showed better heat tolerance than white coat colored ones.
- Brazilian researchers used salt to limit feed intake in pregnant and lactating ewes. The high levels of salt they fed did not cause detrimental effects. Milk production and lamb growth were not affected by the high levels of salt supplementation
- Ohio State University researchers determined delayed weaning (116 vs. 60 days) to improve weight gain in lambs grazing chicory pastures. However, no differences were observed in parasite parameters.
- Midwest researchers determined that up to 100 percent of soybean meal can be replaced with corn dried distiller's grains in the finishing diets of Boer-cross kids. There were no detectable differences in growth performance, carcass characteristics, or fatty acid profile. In another study, there were variable results when soybean meal was replaced with distiller's grains or corn gluten feed.
- Egyptian researchers found natural supplements (thyme and thyme-celery) to have similar effects as an ionophore (salinomycin) in lambs: increased feed intake, increased body weight, weight gain, and average daily gain.
- Researchers continue to evaluate sericea lespedeza as a natural control for internal parasites (worms + coccidia) in sheep/goats. High fertility sericea lespedeza improved animal performance (in goats) while maintaining its anti-parasitic activity. In other research, sericea lespedeza was able to reduce methane emissions in hair sheep.
- Hempseed meal is being investigated as a protein source for ruminant livestock. It is an especially good source of rumen bypass protein.
- Small ruminants aren't the only species that has problems with dewormer resistance. Dewormer resistance was detected on 8/11 beef farms in Maryland.

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## Frost Can Cause Forage Hazards

*By Amanda Grev*

With the first freeze of the fall just around the corner, remember that a frost can result in potential hazards for certain forages. When a plant freezes, changes occur in its metabolism and composition that can cause toxicity issues for livestock. A few issues to be on the lookout for are discussed below.

### **Prussic Acid Poisoning**

Sorghum species like sorghum, sudangrass, sorghum-sudangrass hybrids, and johnsongrass contain a cyanogenic compound called dhurrin within the plant. Under normal circumstances, the dhurrin is bound within plant tissues and remains non-toxic. However, if the plant tissue is injured by some sort of stressor such as a frost, the plant cell membranes can become damaged. This damage releases enzymes that can break down the dhurrin, resulting in the formation of a highly toxic hydrogen cyanide compound commonly referred to as prussic acid.



*Continued on page 6*

# Introductory Small Ruminant Webinar Series

An introductory small ruminant webinar series via Zoom will be presented this fall. The first two webinars (Small Ruminants 101) will cover the basics of sheep and goat production. The other four webinars (Small Ruminants 201) will cover management, health, nutrition, and marketing. The webinars are free and will be recorded for later viewing as YouTube videos.

November 1 – Sheep 101 (Susan Schoenian)  
November 8 – Goats 101 (Maegan Perdue)  
November 15 – Raising them (Charlie Sasscer)  
November 22 – Keeping them healthy (Susan Schoenian)  
November 29 – Feeding them (Jeff Semler)  
December 6 – Marketing them (Susan Schoenian)

All webinars will be held at 7:30 pm EST. They will last approximately 45 minutes, followed by Q & A via the chat box.

To register for the webinar series, go to <https://go.umd.edu/srseries>



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## Frost Can Cause Forage Hazards (continued from page 5)

Prussic acid hinders the animal's ability to transfer oxygen in the blood stream, resulting in asphyxiation. Ruminant animals are most susceptible, with a prussic acid concentration as small as 0.1% of dry tissue considered dangerous. Symptoms of prussic acid poisoning can appear within minutes following ingestion, with common symptoms including excessive salivation, difficulty breathing, staggering, convulsions, and collapsing. The greatest levels of prussic acid can be found in the

leafier parts of the plant, particularly in new growth, and young, growing plants contain more prussic acid than older plants. To prevent prussic acid poisoning, follow these recommendations for grazing or harvesting frosted forages.

### **Grazing:**

Do not graze sorghum species on nights when a frost is likely, as high levels of the toxic compounds are produced within hours following a frost. After a killing frost, wait at least 7 to 10 days before grazing or green chopping forage, as prussic acid levels are highest in plant leaves and do not begin to decline until after the leaves have dried. After a non-killing frost, do not allow livestock to graze until the regrowth has reached a minimum of 2 feet in height or 2 weeks have passed, as the regrowth will likely contain high levels of prussic acid. When returning to grazing, don't turn animals in hungry and use a heavier stocking rate and rotational grazing to reduce the risk of animals selectively grazing leaves or young growth that may still have higher concentrations of prussic acid present.

### **Harvesting:**

Proper field curing or ensiling can help reduce the potential for toxicity in harvested forages because prussic acid is volatile and some of the toxic components will dissipate as a gas during the drying or fermentation process. Forages should be ensiled for a minimum of 8 weeks if there was a risk of high prussic acid levels at the time of chopping. The prussic acid content in hay can be reduced by as much as 75% during the curing process, so hay is typically not hazardous when fed to livestock. Forages can also be analyzed prior to feeding to ensure the toxic compounds have been reduced to a safe level for consumption.

### **Nitrate Toxicity**

Sorghum species, along with several other species including millet, brassicas, oats, and other small grains, are susceptible to nitrate accumulation. Under normal growing conditions, nitrate from the soil is absorbed by the roots of forage plants and is

*Continued on page 7*

## Frost Can Cause Forage Hazards (continued from page 6)

supplied to the upper portions of the plant, where it is converted into plant protein. However, under adverse environmental conditions such as drought, frost, or sudden weather changes, plant growth ceases and metabolism slows but the plants continue to take up nitrogen from the soil, resulting in a buildup of nitrates within the plant. Nitrate levels will remain high until there is new leaf growth, which increases photosynthesis and provides energy to utilize the excess nitrate.



When livestock consume forages with normal nitrate levels, the nitrate is broken down by rumen microbes to nitrite and then further to ammonia, which is converted to protein. With high-nitrate forages, nitrites accumulate faster than they can be converted to ammonia, and the accumulated nitrite is absorbed into the bloodstream. Nitrite combines with hemoglobin to produce methemoglobin, which is incapable of transporting oxygen, ultimately leading to asphyxiation. Symptoms of nitrate toxicity are related to a lack of oxygen in the blood and include weakness, difficulty breathing, rapid heartbeat, staggering, muscle tremors, and inability to stand. Affected animals typically show signs of poisoning within a few hours after consumption, and ruminant animals are most susceptible due to the rapid conversion of nitrate to nitrite by rumen microorganisms.

Nitrate levels are typically measured as nitrate nitrogen ( $\text{NO}_3\text{-N}$ ) on a parts per million (ppm) basis. Levels under 550 ppm  $\text{NO}_3\text{-N}$  are typically considered safe to feed for all classes of livestock. Levels between 550 and 1100 ppm  $\text{NO}_3\text{-N}$  may cause problems in pregnant and young animals, and levels between 1100 and 2200 ppm  $\text{NO}_3\text{-N}$  are typically considered toxic and should be fed with caution. Levels above 2200 ppm  $\text{NO}_3\text{-N}$  are likely unsafe to feed. Unlike prussic acid, which accumulates in the leafiest portion of the plant, nitrates tend to accumulate in the lower portion of the stem and stalks. To prevent nitrate poisoning, follow these recommendations for grazing or harvesting frosted forages.

### **Grazing:**

Avoid grazing susceptible forages when growth ceases due to drought, frost damage, or other adverse conditions. When grazing forages with suspected nitrate accumulation, introduce and acclimate livestock gradually. Feeding a low-nitrate forage or hay prior to turning livestock out onto high-nitrate forages will reduce the amount of nitrate consumed; avoid turning hungry livestock out onto a high-nitrate field. Graze high-nitrate forages in the afternoon when nitrate levels tend to be the lowest, and stock lightly so animals can selectively graze the leaves which are lower in nitrate concentration.

### **Harvesting:**

Delaying harvest until stress conditions have passed will help to lower nitrate levels within the forage and prevent toxicity. Because nitrates accumulate in the base of the plant, risk can also be reduced by cutting higher and leaving more stubble. The ensiling process can reduce nitrate concentrations by 30 to 60% following complete fermentation due to microbial degradation. However, nitrate concentrations are stable in cured hay so use caution if the forage must be baled and leave at least 12 inches of stubble to avoid baling the most toxic part of the plant.

Like with prussic acid, forages can be analyzed for nitrate concentrations prior to feeding. If forages are known to have higher than ideal nitrate levels, diluting the forage by incorporating a low-nitrate forage into the diet will reduce the overall nitrate consumption by the animal. Introducing the toxic forage slowly will help animals adapt, as well as feeding small amounts frequently rather than one large feeding. Increasing the energy content in the ration by offering a grain or high-carbohydrate feed can also help by enhancing metabolism in the rumen and aiding in the conversion of nitrates to protein, helping livestock to better tolerate higher nitrate levels in their diet.

### **Bloat Potential:**

Frothy bloat is the most common type of pasture bloat and results from the formation of a stable foam in the rumen that minimizes the animal's ability to expel rumen gases. Consumption of forages containing high levels of soluble protein, such as alfalfa and clover, can contribute to stable foam production. Livestock suffering from bloat may indicate discomfort by stomping their feet or kicking at their belly. They will appear distended on the left side, and may die within hours.

Following a frost, plant cells rupture, producing small plant cell wall fragments and increasing the amount of K, Ca, and Mg present, all of which can increase the risk of bloat. Be aware that forage with bloat potential can be more likely to cause bloat for a few days following a frost event. If grazing pastures with high concentrations of bloat-inducing species like alfalfa or clover, waiting a few days to a week following a hard frost is a good management practice to reduce the risk of bloat.

# Upcoming Events



## **November 1-Dec 6**

Small Ruminant Webinar Series

Registration link: <https://go.umd.edu/smallruminantwebinars>

## **November 12-14**

Beginning Sheep Shearing Class

Shenandoah Valley Research & Extension Center

Steele's Tavern, Virginia

Info: Tom Stanley at (540) 588-0241 or [stanleyt@vt.edu](mailto:stanleyt@vt.edu).

## **January 13-15**

Future Harvest Conference

The Hotel at the University of Maryland College Park

Info: [www.futureharvestcasa.org/conference/2022-conference](http://www.futureharvestcasa.org/conference/2022-conference)

## **January 19-22, 2022**

American Sheep Industry Convention

San Diego, California

Info: [www.sheepusa.org/asi-annual-convention](http://www.sheepusa.org/asi-annual-convention)



**For more information about sheep and goats, go to:**

<https://www.sheepandgoat.com>

<https://www.acsrpc.org> or [wormx.info](http://wormx.info)

<http://wmrecresearch.blogspot.com>

<http://www.sheep101.info> and <http://www.sheep101.info/201>

<http://www.sheep101.info/QandA>

[https://www.facebook.com/MDSsmall Ruminant](https://www.facebook.com/MDSsmallRuminant)

<https://www.instagram.com/umesheepgoat/>

<https://www.youtube.com/c/MarylandExtensionSmallRuminantProgram>

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