



Virtual Sheep & Goat Skillathon:



You're Invited to Participate

A skillathon tests a youth's cumulative knowledge of a particular subject. The Junior Sheep & Goat Skillathon tests youth's knowledge of sheep and goats and the products they produce: meat, fiber, and dairy. The Junior Sheep & Goat Skillathon has been a part of the Maryland Sheep & Wool Festival since 2006. Because the festival was not held last year, the skillathon was not held. This year's festival will be virtual, so the 2021 Junior Sheep & Goat Skillathon will also be virtual (online).

The skillathon is open to any youth between the ages of 8 and 18. Youth will compete according to their age as of January 1, 2021 (4-H age): junior, 8-10; intermediate, 11-13; and senior, 14-18. Clovers (under 8) and adults (over 18) may participate but will not be eligible for awards. The festival committee of the Maryland Sheep Breeders Association will provide premiums, ribbons, and t-shirts to the top-placing youth competitors.

This year's online contest will consist of five sections: 1) Feeding & Nutrition; 2) Breeds; 3) Equipment and Management; 4) Meat and Marketing; and 5) Fiber. Each section will have several quizzes and/or exercises. The quizzes and exercises will be weighted differently, according to difficulty. There will be different quizzes and exercises for juniors, intermediates, and seniors.



Equipment



Breeds



Feed/forage



Meat



Fiber

Continued on page 5

In This Issue

Virtual Sheep & Goat Skillathon

Natural And Home Remedies for Sheep/Goats

Small Ruminant Q&A

Five Freedoms of Animal Welfare

New Fact Sheet: Worm Killing Fungus

40-cent Wool LDPs

Biosecurity Signs

Disbudding Practices On US Goat Farms

Should You Castrate Ram Lambs and Bucks?

US Sheep and Goat Industry Continues to Decline

2021 Research Update



Natural and Home Remedies For Sheep/Goats

By Susan Schoenian



There are numerous natural and home remedies -- things on your kitchen shelf or readily available at Walmart -- that are commonly used to treat disease conditions or provide supportive therapy to sheep/goats. While benefits may be largely anecdotal, and research is often lacking, they are frequently used and might actually work.

Baking Soda

Baking soda (sodium bicarbonate) helps to neutralize acid in the gut. As such, it is a common treatment for bloat, acidosis, and other digestive upsets. It is the recommended treatment for floppy kid syndrome and “big and dumb” syndrome, both of which are characterized by a build-up of lactic acid. Some producers offer baking soda free choice to their sheep/goats as a preventative for acidosis and/or bloat. In fact, free choice baking soda is a good idea for any sheep/ goat that is fed a lot of grain. It can also be incorporated into the ration as a rumen buffer. Feed grade sodium bicarbonate is available from most feed stores.

Beer

Beer has a long history of being used for livestock. It is usually given to animals that are off-feed. It is a source of fluids, energy, vitamins, and minerals. The yeast in beer may help to restart the rumen. Beer is sometimes given to a sow after she's finished birthing her pigs. Supposably, the beer helps the sow relax and let her milk down.

Essential Oils

Essential oils are compounds extracted from plants. They have many potential benefits. Peppermint oil is recommended for mastitis therapy. Tea tree oil has been used to treat hoof disease. Oregano oil is being evaluated for its potential to prevent coccidiosis. Some essential oils are “hot” and need to be diluted (with carrier oils or water) before they can be used. Be sure to do research before using essential oils. An increasing number of commercial products contain essential oils. Research is currently underway to determine the benefits of different essential oils or mixtures on livestock health and productivity.

Gatorade®

Gatorade® is an electrolyte-restoring liquid (a “sports drink”). It can be used to rehydrate sheep/goats. It is commonly given to stressed animals. In fact, Penn State research showed that offering livestock Gatorade® helped to reduce weight loss during transportation. Gatorade® is an option when commercial electrolyte solutions are not on-hand.

Jello

Jello (gelatin) is a sometimes treatment for diarrhea (scours). It can also make bitter-tasting medicines more palatable. For example, Jello is often mixed with ammonium chloride (to treat urinary calculi) and DiMethox® (to treat coccidiosis).

Molasses

Molasses is a common feed ingredient (wet or dry). It is usually added to rations to increase palatability and remove dust. Molasses is an energy source that can be given to animals that are off-feed or in need of an energy boost. It can be used to treat early stage pregnancy toxemia (ketosis). Molasses can improve the palatability of other over-the-counter remedies. It is often included in recipes for homemade nutri-drench. Larger quantities of molasses can be purchased from farm or feed stores or stores that supply hunters.

Continued on page 9

Small Ruminant Q&A

Q. What should I vaccinate my sheep/goats for?

A. The only universally-recommended vaccine for sheep/goats is clostridial diseases, either the popular, three-way vaccine (CDT) or 7 or 8-way vaccines such as Covexin®-8.

CDT is sufficient for most farms. It protects sheep/goats against enterotoxemia caused by *clostridium perfringens* type C and D and also tetanus, caused by *clostridium tetani*. Covexin®-8 provides protection for additional clostridium, including malignant edema and black leg. Producers should discuss the need for Covexin®-8 with their veterinarians. Both vaccines are inexpensive and very effective at preventing the consequences that can result from deadly clostridial infections.

According to the most recently published NAHMS studies, a majority of US sheep farms indicated they vaccinated for clostridial diseases. A much higher percentage of US goat farms vaccinate for clostridial diseases.

There are other diseases for which sheep/goats can be vaccinated, including some causes of abortion, caseous lymphadenitis, pneumonia, soremouth, footrot (limited availability), scours, and rabies. These vaccines should be used on an as-needed basis, based on risk and cost-benefit. Not all vaccines are approved for sheep and/or goats. Nor should all of them be given to sheep and/or goats unless certain conditions are present.



The only universally recommended vaccines.

Q. When should I give clostridial vaccinations?

A. It depends. Recommendations vary. Other management practices may factor into timing. Some flocks/herds are at greater risk for clostridial diseases.

The most widely-accepted protocol is to vaccinate ewes/does in the last month of pregnancy so that they pass antibodies to their offspring via the colostrum. The immunity acquired through colostrum is temporary and lasts about 6-10 weeks, after which time lambs/kids should be vaccinated twice with CDT or Covexin®-8. Rams, bucks, and mature wethers should also be given an annual booster. Ewes that were vaccinated as lambs, but not vaccinated in late pregnancy may still pass some immunity onto their offspring, but immunity will be maximized if ewes receive a booster prior to lambing/kidding. There is evidence that vaccines are less effective in young lambs due to their immature immune systems. Response to the vaccine improves with age.



It is common to vaccinate ewes/does in late pregnancy for clostridial diseases.

Clostridial vaccines may be less effective in goats. Their immune response to vaccination doesn't seem to be as long lasting as it is in sheep. As a result, some goat producers vaccinate more often to achieve adequate protection. According to the most recently published NAHMS study, 31% of goat owners vaccinate twice yearly (4.4% vaccinated 3-4 times yearly).

Lambs/kids that are artificially-reared are at higher risk for clostridial diseases. They often consume insufficient colostrum or colostrum that is deficient in antibodies. Pipestone Veterinary Services recommends vaccinating these lambs/kids every 1-2 weeks.

There is a 21-day withdrawal period for CDT and Covexin®-8.

Editor's note: The Small Ruminant Q&A is featured on the University of Maryland Small Ruminant Facebook page @MDSmallRuminant.

The Five Freedoms of Animal Welfare

There is a set of animal welfare standards known as the five freedoms. They outline what animal owners must give their animals. Are you meeting these standards on your farm?

- ◆ Freedom from thirst, hunger and malnutrition-by ready access to fresh water and a diet to maintain full health and vigor.
- ◆ Freedom from discomfort-by providing a suitable environment including shelter and a comfortable resting area.
- ◆ Freedom from pain, injury and disease-by prevention or rapid diagnosis and treatment.
- ◆ Freedom to express normal behavior-by providing sufficient space, proper facilities, and company of the animals own kind.
- ◆ Freedom from fear and distress-by ensuring conditions that avoid mental suffering

These five freedoms originated from a report written in 1965 in the United Kingdom. Despite being written more than 50 years ago, they are still the universally-accepted cornerstone for assessing and ensuring animal well-being.



New Fact Sheet: Worm Killing Fungus

Worm-Killing Fungus is the title of the latest fact sheet in the “Best Management Practices to Control Internal Parasites in Small Ruminants” series from the American Consortium for Small Ruminant Parasite Control (ACSRPC).

The fact sheet was written by Drs. Jim Miller and Joan Burke, from Louisiana State University (retired) and USDA ARS (Booneville, Arkansas), respectively. It discusses BioWorma®, the first and only commercially-available product to target worms on pasture (where most of them are).

This is the final fact sheet in the series. There are fourteen in total. They cover a wide range of topics pertaining to internal parasite control, including pasture management, targeted selective treatment, copper oxide wire particles, and sericea lespedeza.

Each was written and reviewed by members of the American Consortium for Small Ruminant Parasite Control. Each review team included a veterinarian. The fact sheets can be downloaded as PDF files from the wormx.info web site.

To view the list, go to <https://www.wormx.info/bmps>.



Virtual Sheep & Goat Skillathon (continued from page 1)

Since the skillathon is part of the Maryland Sheep & Wool Festival, it must be completed during the days of this year's virtual festival, May 1-2. Even though the skillathon is virtual, each participant is expected to do their own work, without outside assistance. The exception is those requiring reading assistance.

Register online for the skillathon by April 20. The registration link is <https://go.umd.edu/2021Skillathon>. More than one person can register using the same email address, but instructions will be sent to the email used for registration. Upon registration, each registrant will receive a unique number (ID). The ID will be required to complete the skillathon.

For more information, contact Susan Schoenian at sschoen@umd.edu or (301) 432-2767 x343.

Register at <https://go.umd.edu/2021Skillathon>

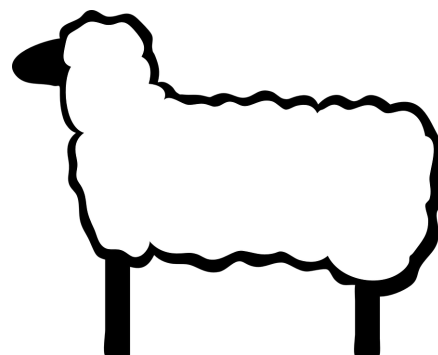
40-cent Wool LDP Currently Available

For the first time in several years, wool LDPs are available to eligible wool producers. The current loan deficiency payment (LDP) for raw wool is 40 cents per pound. There is also an unshorn pelt LDP payment ($6.6865 \times \text{LDP rate}$).

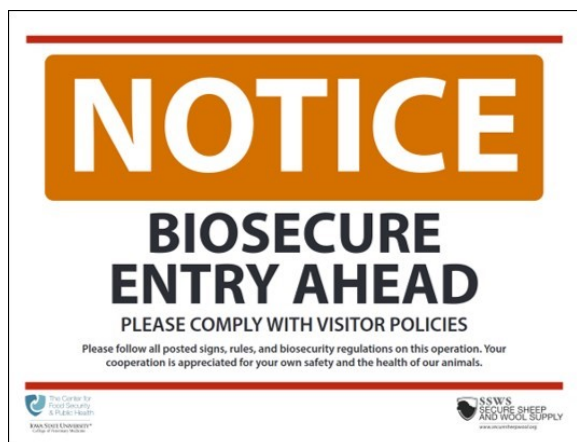
Loan deficiency payments are payments made to producers who forgo a marketing assistance loan in return for payment on an eligible commodity. LDP payments kick in when local prices are below the loan rate. Essentially, LDPs set floor prices for certain agricultural commodities, including wool. Producers must have beneficial interest in the commodity to be eligible to receive an LDP payment.

Current LDP rates are posted on the ASI web site each Tuesday afternoon. Check local Farm Service Agency (FSA) offices to learn more.

<https://www.sheepusa.org/issues-governmentprograms-woolldp>



Biosecurity Signs Available for Download



As part of the American Sheep Industry Association's Secure Sheep and Wool Supply Plan, biosecurity signs are now available for producers to download and print for posting around their operations.

The 8.5 by 11 inch, full-color signs are available for download in both English and Spanish.

<https://securesheepwool.org/producers/signs-and-posters/>

The American Sheep Industry Association developed the Secure Sheep and Wool Supply Plan for Business Continuity in the event of a Foreign Animal Disease Outbreak, such as foot and mouth disease (FMD).

Disbudding Practices on US Goat Farms

As part of the 2019 NAHMS goat survey, USDA recently published a brief about disbudding on US goat operations. According to the survey, 29.2 percent of goat farms disbudded or planned to disbud their kids in 2019: 64.4% of dairy operations and 16.5% of meat operations. Overall, 29.2% of kids were disbudded: 67.3% of dairy kids and 9.1% of meat kids.

According to the survey, the average age of “disbudding” in meat kids was 20.2 days: 14.6 days in dairy kids. Seventy-five percent of surveyed producers did their own disbudding. Veterinarians did the disbudding on 16.5% of goat farms. Analgesics or anesthetics were used routinely on 30.4 percent of goat farms.



Two-thirds of US dairy goats are disbudded.

Disbudding is a procedure performed on kid goats to ensure horns will not develop. Disbudding kids after 14 days is technically classified as dehorning, not disbudding.

Information for the NAHMS study was collected from 24 of the nation’s largest goat producing states. No Maryland producers were surveyed.

Source: Disbudding on US Goat Operations, Management Practices Brief, November 2020

Should You Castrate Ram Lambs and Buck Kids?

By Susan Schoenian

In the last NAHMS study, 68.5 percent of US sheep farms indicated they castrated their ram lambs. The percentage was less in the Eastern US. It is not known what percent of goat farms castrate, but it is probably less than sheep.

There are good reasons to castrate males. Castrating prevents unwanted pregnancies. It eliminates undesirable male behaviors and odors (in goats). It allows males and females to be reared together. This is particularly advantageous for pasture-based operations. It is recommended that males sold as pets or used as pack animals or for targeted grazing be castrated. Males must be castrated in order to be exhibited as market animals in youth shows.

There are also good reasons not to castrate. All methods of castration cause some level of pain and pose some degree of risk. Intact males grow faster and produce leaner carcasses than wethers. Many ethnic buyers prefer intact males. Some animal welfare certification bodies do not allow castration, or they put limitations on its practice.

For commercial production: if ram lambs and buck kids can be sold before their behaviors become problematic, it should not be necessary to castrate them. If males can be managed separately from females, it should not be necessary to castrate them. There is no significant difference in the meat from young, intact males and wethers.

Castration is removal or destruction of the testes. There are three primary methods of castration: banding, crushing, and cutting. The most common method of castration is to use an elastrator (ring extender) to apply a rubber ring around the neck of the scrotum, above the testicles. The band disrupts the supply of blood to the scrotum causing it to die and eventually fall off. Castration with rubber bands should be done when lambs/kids are between 1 and 7 days of age.

Should You Castrate Ram Lambs and Buck Kids?

(continued from page 6)

Older lambs/kids (1-6 weeks of age) can be castrated with an emasculator (clamp). A (baby) Burdizzo is a brand of emasculator. It is used to crush the spermatic cords, which damages the blood vessels supplying blood to the scrotum. The testicles atrophy, but a small sack remains. Each cord should be crushed separately. A more humane, less painful method of castration is to use both an elastrator and emasculator.

Surgical castration is a traditional method of castration. It involves using a knife or scalpel to cut the bottom third of the scrotum off. The testicles are pulled out and the wound is allowed to drain naturally. Surgical castration has the greatest risk for infection and should not be done during fly season. Research has determined it to be the most painful method of castration, as evidenced by higher levels of cortisol in the blood. Pain relief is advised.

Late castration

There is some concern that early castration (less than 3 months) causes urinary calculi (bladder stones) in pet and show wethers. Research does not support this claim. Urinary calculi is a nutritional problem. It can be prevented with proper diet: a proper ratio of calcium to phosphorus (at least 2:1), sufficient intake of long stem roughage, and adequate water intake. Salt will encourage water consumption. Ammonium chloride can be added to the ration as a further preventative.

If late castration is done, it should be done by a veterinarian. Minimally, pain relief should be provided. Research has shown that aspirin does not provide sufficient pain relief from castration.

Callicrate banders have been advocated as a “humane” option for late castration. I am not aware of any research (with sheep/goats) that supports this claim. In fact, an Australian study determined that the Callicrate WEE bander did not reduce the pain associated with ring castration in 10-11 week old lambs.

Ideally, castration should be performed as early as management allows. Regardless of method or age of castration, it is important that lambs/kids be protected against tetanus. The best protection comes from the colostrum of vaccinated dams. If the dam was not vaccinated during pregnancy, lambs/kids should be vaccinated prior to or at the time of castration.

While castration is a routine management practice on many US sheep and goat farms, it is being increasingly scrutinized by animal welfare and consumer groups. It is important that castration be carried out in as humane a way as possible, and that consideration be given to not doing it at all (if that is feasible or advisable).



There are pros and cons to castration.

Short-scrotum: an alternative to castration

An alternative to castration is the short-scrotum procedure. The short-scrotum procedure is when you push the testicles up into the body cavity and band the empty scrotum. Since the lamb will still have a source of testosterone (his testicles), he will still be a male physiologically. He will grow and act like a male. But since his testicles will be in his body instead of scrotum where they would be several degrees cooler, his fertility will be altered.

A two year study (2018-2019) was conducted at the University of Maryland’s Western Maryland Research & Education Center (WMREC) to compare the growth, carcass, and reproductive characteristics of ram (intact), wether (castrated), and short-scrotum rams. In both years, the intact and short-scrotum rams grew faster and produced leaner carcasses.

U.S. Sheep & Goat Industries Continue to Decline

The Annual Sheep & Goat Inventory Report was released by USDA NASS on January 29. Both industries declined in size.

On January 1, 2021, there were 5.17 million head of sheep and lambs in the US. This is down 1 percent from 2020. The breeding sheep inventory was 3.78 million head, also down 1 percent. The 2020 lamb crop was 3.21 million lambs, down 1 percent from 2019. The 2020 lambing rate was 108 lambs per 100 ewes.

2020 wool production was 23.1 million pounds, down 4 percent from 2019. The number of sheep shorn was 3.28 million head, down 1 percent from 2019. The average price paid for wool in 2020 was \$1.66 per pound for a total of \$38.4 million, down 15 percent from 2019. The average fleece weight was 7.1 pounds.

On January 1, 2021, there were 2.58 million head of goats in the US. This is down 3 percent from 2020. The breeding goat inventory totaled 2.12 million head, down 3 percent from 2020. The 2020 kid crop was 1.66 million head, up 1 percent from 2019.

The meat (and other) goat inventory totaled 2.05 million head on January 1, 2021, down 2 percent from 2020. The milk goat inventory was 420,000 head, down 3 percent from 2020. Angora goats were down 10 percent. There are 117,000 Angora goats in the US. Mohair production totaled 589,000 pounds. The average price paid for mohair was \$5.07 per pound. The average fleece weight was 5.2 pounds.

Source: USDA NASS, January 29, 2021



2021 Research Update

Research will get underway at the University of Maryland's Western Maryland Research & Education Center in Keedysville in mid-June. Ewe Lamb Right Farm (Dan & Jan Turner) from Chambersburg, PA, will again be providing Katahdin ram lambs (up to 100) for a pasture supplementation study.

Half of the lambs will rotationally graze high quality mixed pastures. The other half will graze similar pastures and receive a daily supplement of energy (whole grain; 1 lb. per head per day). Growth, health, and carcass characteristics of the lambs will be compared. Lambs will be weighed bi-weekly and assessed for health. Individual fecal samples will be collected to determine fecal egg counts (EPG). The lambs will be ultrasound scanned to determine fat and loin depth. Plans are to harvest fifteen lambs from each group to get actual carcass data and perform fatty acid analysis.



This is a repeat of last year's study. It is funded by the Maryland Grain Producers Utilization Board (<http://marylandgrain.org>). You can follow the progress of the research program at <https://wmresearch.blogspot.com>.

Continued on page 9

2021 Research Update (continued from page 8)



Rams for sale

Katahdin ram lambs from the study will be available for purchase as breeding rams. In addition to the data collected during the study, each ram will have estimated breeding values (EBVs). An EBV is a numeric measure of an animal's genetic worth. Ewe Lamb Right Farm submits data (including fecal egg counts) to the National Sheep Improvement Program (NSIP; nsip.org) for determination of EBVs.

To learn more about Ewe Lamb Right Farm and their breeding program, go to <http://ewelambright.com>. Visit their farm on Facebook @EweLambRight.

Should You Castrate Ram Lambs and Buck Kids?

(continued from page 7)

The short-scrotum rams demonstrated similar mating behavior as the intact rams, but only one of the short-scrotum rams (n=13) evaluated had viable sperm in his ejaculate. Thus, the short-scrotum procedure reduced fertility, but it did not cease reproductivity activity in all of the short-scrotum rams.

The short-scrotum procedure is a viable option for producers who want to comingle animals on pasture. However, it's important to understand that it is still possible for a short-scrotum ram to get a female pregnant. To reduce the probability of breeding, it is recommended that the short-scrotum procedure be done early in life (1-7 days) and that short-scrotum males not be kept around too long.

To learn more about the research with short scrotum rams, go to <https://www.sheepandgoat.com/shortscrotum>.

Natural and Home Remedies For Sheep/Goats

(continued from page 2)

Yogurt

Yogurt is a food produced by the bacterial fermentation of milk. It is a source of probiotics. Yogurt (plain) is commonly given to stressed animals. It helps to stimulate appetite and restore gut health. Many producers give it to animals with diarrhea (scours). Yogurt is oftentimes added to milk replacers to reduce the risk of abomasal bloat. When adding yogurt to milk, it is important not to feed the milk right away, as the bacteria need time to multiply. In addition to store-bought yogurt, you can make your own yogurt from cow, goat, or sheep milk. Commercial probiotics are available from livestock supply companies and feed stores. It is likely that future research will determine more precisely the role of probiotics (including yogurt and Kefir) in animal health and nutrition, as animal industries look for "replacements" for antibiotics.



Any questions regarding these various natural and home remedies and their use should be directed towards veterinarians.

To learn more, read the full article at <https://go.umd.edu/homemaderemedies>



4-H Small Ruminant Research Academy & Entrepreneurship Program

Research Academy

Are you interested in research or pursuing research in college?

- ♦ Youth ages **15-18** are invited to apply
- ♦ Youth will work with extension faculty and staff from across the tri-state area in conjunction with the University of Maryland Small Ruminant Program .
- ♦ Research is being conducted with sheep this summer at the Western Maryland Research and Education Center (small ruminant experience is not necessary).
- ♦ Youth will experience the scientific process from beginning to end as they work to explore sheep growth and reproduction.
- ♦ Program will start in June 2021.

Entrepreneurship Program

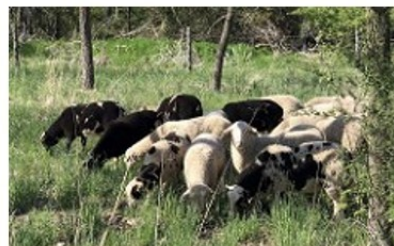
Are you interested in creating and sustaining a business?

- ♦ Youth ages **13-18** are invited to apply
- ♦ Youth will work with extension faculty to write a business plan, manage finances, and market products.
- ♦ Youth will develop their own marketable product of their choice.
- ♦ There will be the potential within the project to earn profits upon completion.
- ♦ Program will start in late June 2021.

Program enrollment is limited and will be through a hybrid format.

Interested youth should contact Ashley Travis for more information and to apply: ashley90@umd.edu

Application Deadline May 21, 2021



The University of Maryland Extension programs are open to all and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, or natural origin, marital status, genetic information, political affiliation, or gender identity and expression.

For more information about sheep and goats, go to:

<http://www.sheepandgoat.com>

<http://www.acsrpc.org> or wormx.info

<http://wmrecresearch.blogspot.com>

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

[https://www.facebook.com/MDSmall Ruminant](https://www.facebook.com/MDSmallRuminant)

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

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

<https://www.youtube.com/channel/UC1xCeZE0xn4I3l98mkmdFHg>

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