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Maryland's Sheep & Goat Producer Newsletter

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Coronavirus Food Assistance Program (CFAP): What sheep and goat producers need to know

USDA's Coronavirus Food Assistance Program (CFAP) has allocated $16 billion in funds for direct payments to farmers to help with the fallout from Covid 19. There are two sources of funds: Coronavirus Aid Relief and Economic Security (CARES) Act and the Commodity Credit Corporation (CCC) Charter Act. Both are meant to help farmers cope with market disruptions. To be eligible for direct payments, farmers have to have incurred a 5% or greater reduction in commodity prices due to Covid 19. Sheep and wool producers qualify. Goat producers do not.

The American Sheep Industry (ASI) Association predicted a direct farm loss of $125 million due to reduced consumer demand and a decline in slaughter lamb prices. Covid 19 has had a significant effect on lamb prices (especially heavy lambs), since approximately 50 percent of lamb is sold into food service, and restaurants were closed for several months and are still not operating at full capacity. Covid 19 also first hit at the peak demand period for lamb (Easter and Passover). It is not known what effect Covid 19 will have on lamb prices during the second peak demand period: the Muslim Festival of the Sacrifice (Eid ul Adha) at the end of this month (July). Global wool prices are 25% below year-ago levels. Pelt prices have been in the tank for over a year. China is the main buyer of both and is not buying.

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In This Issue

Urinary Calculi: a Common Problem in Males

By Susan Schoenian

Urinary calculi (UC; also called “water belly” or stones) is a common problem in small ruminants, especially pet or show wethers and dwarf goats, It involves the formation of calculi or stones (usually comprised of phosphate salts) in the urinary tract, which prevent the flow of urine. Left untreated, these blockages can cause the bladder to burst, resulting in death.

Water consumption is important.

Urinary calculi affects mostly wethers (castrates), sometimes intact males, rarely females. Males have a longer, curvier urethra that makes it more difficult to pass calculi. Wethers are considered to be at higher risk than intact males because their urethras are smaller in diameter. Some believe that early castration (less than 3 months) further increases the risk in wethers because their urethras are even narrower. However, there is no proof that this is true, as almost all cases of UC can be traced to improper nutrition.

Urinary calculi is a metabolic disease caused by improper diet formation, It is most common in small ruminants that are fed high concentrate-low roughage diets. These diets often contain too much phosphorus and/or an imbalance of phosphorus and calcium. Phosphorus is normally recycled through saliva and excreted via the feces. Low roughage diets decrease the formation of saliva which increases the amount of phosphorus excreted in the urine. Inadequate water intake is another contributing factor because it results in more concentrated urine and a greater likelihood of stone formation.

Signs of urinary calculi include anxiety, discomfort, and pain, as animals struggle to pass urine. Affected animals may stand hunched-up or kick at their bellies. Treatment depends upon the location of the stones and the extent of the blockage. If the animal is not completely blocked, drenching with ammonium chloride can help to acidify the urine and dissolve the stones. Tranquilizers and antispasmodics may also help to dislodge stones. Sometimes, the blockage is located at the tip of the penis and snipping off the urethral process may solve the problem. In more advanced cases and for blockages further up the urinary tract, surgery is usually necessary. All but simple blockages usually require veterinary intervention and outcomes are not always positive.

Urinary calculi is almost always preventable with proper diet formation. The ratio of calcium to phosphorus in the whole diet should be at least 2:1. Care should be taken when adding phosphorus to the diet and feeding forages that have been fertilized with high-phosphorus sources. All ruminants should have a source of roughage (hay or pasture) in their diets. Anything that increases water consumption will help to prevent urinary calculi. Animals should always have a constant supply of fresh, clean water. Water troughs should be cleaned frequently and prevented from freezing. Shading water in the summer will increase water consumption.

All ruminants need roughage in their diets.

Salt intake will increase water intake and frequency of urination. It is better to “force-feed” salt (include it in the ration) than to offer it free choice. When it is fed free choice, it should be a loose form, not a block, to get better consumption. Ammonium chloride is commonly added to small ruminant rations to help prevent urinary calculi. Late castration is not necessary to prevent urinary calculi, but for those who opt for it (for pet and show wethers and dwarf goats), be sure to have the procedure done by a veterinarian.

This article was originally published in the Delmarva Farmer and Lancaster Farming.

Missed A Webinar? Watch It On YouTube!

Due to Covid 19 and social distancing requirements, a lot of webinars are being held. Webinars are usually recorded and uploaded to YouTube for later viewing.

Small Ruminant Extension Specialists in Maryland, Delaware, Virginia, and Georgia collaborated to hold weekly worm webinars from April 24 until June 9. Each webinar covered a different topic pertaining to internal parasite control in small ruminants. A webinar on BioWorma® was also held. All of the webinars were recorded, and the videos have been uploaded to YouTube. The PowerPoint presentations were uploaded to SlideShare.

Weekly Worm Webinars
https://www.wormx.info/webinar-videos

From 2011-2016, University of Maryland Extension held many webinar short courses, covering all aspects of sheep and goat production and marketing. These webinars were recorded and converted to YouTube videos. The PowerPoint presentations were uploaded to SlideShare.

All Webinars
https://www.sheepandgoat.com/webinars

Wool Producers Eligible For LDPs

The worldwide pandemic has had an adverse effect on wool prices. As a result, for the first time in many years, loan deficiency payments (LDPs) are available for wool and unshorn lamb pelts. At the time this newsletter was published, the LDP for ungraded wool was $0.30 per lb. The payment for an unshorn lamb pelt was $2.06.

The Wool Marketing Assistance Loan Deficiency Program was authorized in the 2002 Farm Bill and each farm bill since. A decade ago, the wool market strengthened worldwide, and the program was no longer needed. However, Covid 19 has changed that.

To apply for wool and pelt LDPs, producers need to contact their local Farm Service Agency. Eligibility requirements include beneficial interest in wool and unshorn lambs.

For more information, go to https://sheepusa.org/issues-governmentprograms-woolldp.

4-H Small Ruminant Programs Convert to Virtual Platforms

By Ashley Travis

Ashley Travis (L) and Jesse Ketterman (R) lead the 4-H Entrepreneurship program

The first half of 2020 is certainly not as anyone ever expected. As we live through unprecedented times, the Washington County 4-H Youth Development program has remained committed to educating the youth of our community. Although our two newer programs, the 4-H Entrepreneurship Program and the 4-H Small Ruminant Research Academy are hands-on, experiential learning programs for youth, the Extension teams that facilitate these programs have become innovative and converted both programs to virtual platforms.

4-H Small Ruminant Research Academy

This year, just as the past two years, Washington County 4-H Youth Development Educator, Ashley Travis, and Maryland 4-H Animal Science Specialist, Chris Anderson are working with the Maryland Small Ruminant Team to host the 4-H Small Ruminant Research Academy. Due to COVID-19, this program has been converted to an entirely online platform.

Youth are meeting via virtual connection every few weeks and are monitoring the lamb study at the Western Maryland Research and Education Center via email and blog posts. This year the program has attracted youth from several Maryland counties, and even youth from out of state that in a “normal” year would not have been able to participate due to driving distance. Program participation has increased by four times the numbers in previous years!

Just as in past years, youth apply to participate in the program. Youth then follow the small ruminant research that is being conducted at the Western Maryland Research and Education Center by the Maryland Small Ruminant Research Team. Youth do their own literature review related to the experiment, formulate their own hypothesis, witness data collection, analyze data with the Small Ruminant Team, and draw their own conclusions related to the study. In past years the youth have created a scientific research poster that is exhibited at the Maryland State Fair. This year youth have been given the opportunity to either create a research poster or to present a research presentation.

This program exposes youth to applied research and gives them an opportunity for research experience before entering college. This program also exposes youth to potential careers that they might not have known about or considered prior to participation in the program.

4-H Entrepreneurship

The 4-H Entrepreneurship Program which you may remember seeing information about last year when the youth tanned and sold sheep pelts, has also gone 100 percent virtual this year. Just as with the Research Academy participation has increased. Youth enrolled in the program represent six Maryland counties, and four states!

This year youth will be building a business around marketing and selling wool products, which include: wool blankets manufactured specifically for the program at a wool mill, wool dryer balls, and other felted wool products. The youth will be hand-making the wool dryer balls and felted wool products themselves.

In the 4-H Entrepreneurship Program youth participated in bi-weekly lessons from June until August that taught them entrepreneurship skills and assisted them in building their very own small business focused on marketing the sheep pelts from the lambs used in the research study. Youth learned how to write and implement a business plan, keep diligent records of income, expenses, and inventory, how to understand loans, write and implement a marketing plan, and strategically market products to customers.

Although 2020 looks much different, the 4-H Small Ruminant Programs are better than ever!

Corona Virus Assistance Program

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Unlike cattle and swine producers, sheep producers are only eligible to receive payments for animals under 2 years of age (lambs and yearlings). For lambs and yearlings sold between January 15 and April 15, producers can receive a payment of $33 per head. For lambs and yearlings in inventory between April 16 and May 14, 2020, producers can receive a payment of $7 per head. Payment is based on the highest inventory during this period. Wool payments are more confusing. The most producers can get paid on is 50 percent of their 2019 production that has not been sold or priced and is still in inventory. Payment rates vary (clean/raw, graded/ ungraded).

At this time, goat producers are not eligible for any direct payments from CFAP because (according to USDA) goat prices did not declined 5% or more due to Covid 19. This is good news. Thus far, the market has held strong, as very little goat meat is sold into food service and a lot is processed “off the grid,” Of the federally inspected goat slaughter, most of it occurs in smaller plants and almost all the meat is sold into ethnic markets, which are less affected by Covid 19. If there is another round of direct payments and it is determined that the goat market has been adversely affected by Covid 19, goat producers should be eligible to receive payments. Meanwhile, they should enjoy the good prices they have been receiving for their animals. Some people have challenged USDA, claiming there was a >5% decline in the goat market.

Eligible sheep and wool producers are encouraged to apply for these direct payments from USDA. Applications for payments can be submitted to local FSA (Farm Service Agency) offices by phone, mail, or online. Additional information and applications are available at farmers.gov/CFAP. The application period is May 26 to August 28, 2020. As of July 15, sheep and wool producers have received over $27 million in direct payments.

Online FAMACHA© Certification

https://www.sheepandgoat.com/online-famacha-certification

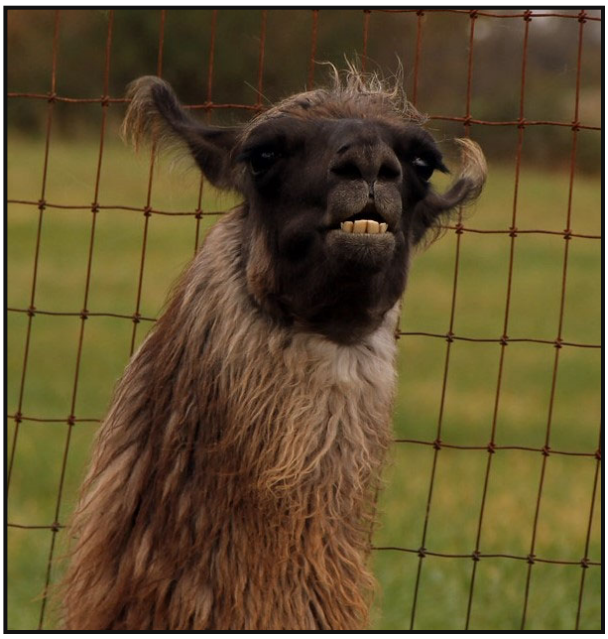
The FAMACHA© eye anemia system uses a color eye chart to determine the level of anemia in a sheep, goat, or camelid. The color of the bed of membranes of the lower eyelid is compared to the colors on the FAMACHA© chart. There are five treatment categories. Anemia is the primary symptom of barber pole worm (*Haemonchus contortus*) infection. Haemonchosis is the primary cause of anemia. Other causes of anemia include liver fluke, coccidiosis, trauma, chronic disease and malnutrition.

In order to purchase a FAMACHA© card, training is required. University of Maryland FAMACHA© workshops typically consist of two hours of lecture/discussion, combined with two hours of hands-on instruction: FAMACHA© scoring and fecal egg counting. Class size is usually limited to less than 25’;

Due to the restrictions imposed by Covid-19, University of Maryland Extension is now offering online FAMACHA© certification. Online certification consists of three parts: 1) watching a video (2 hours); 2) taking and passing a quiz (70%); and 3) making and sending a video of proper FAMACHA© technique: COVER-PUSH-PULL-POP. Once the requirements have been met, a Certificate of Competence is issued and a FAMACHA© card can be purchased from the University of Maryland. The cards are $13 (payable to the University of Maryland). There is an online payment option via EventBrite. You must be at least 13 years old in order to become certified and purchase a card.

The University of Rhode Island also offers online FAMACHA© certification at https://www.sheepandgoat.com/online-famacha-certification.

Could a Llama Hold The Key To Beating The Coronavirus?



An antibody engineered from a llama's immune system was found to neutralize the virus that causes Covid-19. More studies and clinical trials are needed to see if it can be used in humans to treat Covid-19. American and Belgium scientists who engineered the antibody are encouraged by their preliminary findings, which were published in the journal *Cell*.

The smaller type of antibodies produced by llamas, called single-domain antibodies or nanobodies, could be used in an inhaler, which would deliver them right to the site of infection. Winter is the name of the llama that produced the antibodies. In 2016, Winter was injected with SARS and MERS, in hopes of developing treatments for these diseases.

Source: South China Morning Post, May 2, 2020

Flushing: Yes or No?

By Susan Schoenian

Flushing is a term known to most sheep/goat producers. It is the practice of providing extra nutrition (feed; mostly energy) to the ewe/doe prior to and during the early part of the breeding season. Nutrition has long been linked to reproductive performance in animals.

Flushing increases weight gain and body condition of ewes/does, which may result in the birth of more offspring; i.e. more twins and triplets. Although results vary, prior research has shown that flushing can boost lambing percentages by 10 to 20 percent. Flushing should work similarly in goats, though there are fewer studies documenting its impact.

Flushing improves lambing/kidding percentages primarily by increasing the number of eggs (ova) that the female releases (ovulates) from her ovaries. Since there are few monozygote (identical) twins in sheep/goats, the number of eggs ovulated usually determines the maximum number of offspring that can be born. There is also evidence that flushing may improve conception rates and early embryo survival.

Responses to Flushing
Responses to flushing are variable. There are many factors which influence the response. In fact, flushing is not always cost-effective. Flushing is most effective in females that have not recovered sufficiently from their last lactation. Ewes/does with sub-optimal body condition scores (2 to 2.5) will respond more to flushing than those already in good body condition (3 or better). At the same time, overly thin females (1.5) may not respond

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Silvopasture: Livestock + Trees

Silvopasture is not the same as woodland grazing or simply allowing livestock to have open access to the woods. The National AgroForestry Center calls silvopasture“the deliberate integration of trees and grazing livestock operations on the same land.” These systems are intensively managed for both forest products and forage, providing both short- and long-term income sources.

Silvopasture is good for the environment. According to Steve Gabriel, an agroforestry specialist at Cornell University. “Trees absorb and sequester large amounts of carbon over time; they’re rendered even more powerful when they’re used in concert with grazing and planted on “marginal” land that isn’t great for growing crops.”

Silvopastures can increase wildlife diversity and improve water quality. The forage protects the soil from water and wind erosion, while adding organic matter to improve soil properties. One of the main advantages of silvopasture systems is reducing heat stress in livestock, which improves animal performance and well-being.

There are no good estimates of how much land in the U.S. is currently devoted to silvopasture. The amount, though, is small, which means there’s potential for the practice to play much a larger role.

For more information about silvopasture, go to https://www.fs.usda.gov/nac/practices/silvopasture.php.

Editor’s note: The lambs at WMREC grazed a silvopasture area during their acclimation period. Unfortunately, the silvopasture couldn’t be incorporated into the study.

Flushing (continued from page 6)

to flushing unless the flushing period is started early enough. Well-conditioned females (3.5 or above) do not usually respond to flushing. They can be conditioned for flushing and breeding by increasing exercise and reducing feed intake until they are in an appropriate breeding condition.

Flushing ewes/does during the height of the breeding season, when they are naturally more fertile, may not be cost-effective. Flushing will be more advantageous during the early or late part of the breeding season. Mature

females tend to respond more to flushing than younger females. It is usually not necessary to flush ewe lambs or doelings as they should already be on a good plane of nutrition, gaining weight steadily from birth to their first breeding. The same principle should apply to yearlings that have not yet lambed/kidded.

Flushing should be more beneficial for ewes/does in accelerated breeding programs, as these females are expected to re-breed after a short recovery period. Having ewes/does in good body condition is essential for out-of-season breeding; flushing is recommended. Improved breeds (e.g. Boer) have higher nutritional requirements and may respond more to flushing than landrace breeds (e.g. Spanish). Flushing will not increase lambing/kidding rates above the genetic potential of the flock/herd. Prolific breeds usually respond less to flushing.

How to Flush

Flushing is usually accomplished by feeding a better-quality harvested forage, by moving ewes/does to a lusher pasture, or by supplementing the forage diet with grain (usually corn, barley, oats, etc.). Grain feeding is the most common method of flushing. The amount of supplemental feed is dependent on the size of the female and the quantity and quality of the forage in the diet.

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Research Underway at WMREC

On June 15, seventy-nine (79) Katahdin ram lambs were delivered to the University of Maryland's Western Maryland Research & Education Center in Keedysville, MD. The lambs were provided by Ewe Lamb Right farm (Dan & Jan Turner) of Shippensburg, PA. The Turners have a pasture-based farm with approximately 250 Katahdin ewes. Their flock is enrolled in NSIP (National Sheep Improvement Program). They are active in Katahdin Hair Sheep International (KHSI).

Half the lambs are being supplemented with whole grain (barley).

The title of this year's research project is "Using grain to improve the profitability of pasture-raised lamb." The project is funded by the Maryland Grain Producers Utilization Board. After an acclimation period (11 days), the lambs were divided into two groups. One group is grazing only, while the other group grazes, plus receives a daily energy supplement (of whole barley). Each group will be rotationally grazed among four equal sized paddocks that contain a mixture of various clovers, grasses, and forbs. Both groups have access to the central laneway that contains a roofed structure for shade and covers the handling system. Free choice minerals are available to each group via two mineral feeders. Each group has a water trough with shaded water. After the first week, lambs in the pasture only group were given some access to grass hay, due to the high clover content of the pasture.

Both groups are rotationally grazing similar pastures.

The lambs will be handled every 2 weeks for weighing and health assessment. They will be dewormed according to the criteria of FAMACHA© and the Five Point Check©. Fecal samples will be collected several times during the study period. At the end of the study, at least 15 lambs from each group will be harvested to collect carcass data, including fatty acid profile. Forage samples will be collected to determine forage quality. Pasture yield will also be estimated. Fecal samples will be submitted to determine diet quality.

Treatment Group	Number of lambs	Age (days)	Weight (lbs.)	FAMACHA© (1-5)	BCS (1-5)	FEC (EPG)
Pasture only	40	106.7	66.7	1.6	3.0	200
Supplemented	39	109.6	66.6	1.7	2.9	200

To learn more about this year's research project, visit the blog at https://wmrecresearch.blgospot.com.

To learn more about Ewe Lamb Right Farm, visit their web page at http://ewelambright.com/ or follow them on Facebook at https://www.facebook.com/EweLambRight/.

BioWorma®: Worm-Killing Fungus

BioWorma® is a relatively new feed product that contains a worm-killing fungus: *Duddingtonia flagrans*. When fed to livestock, the fungus passes through the animal's digestive system and ends up in the feces, where it traps and kills roundworm larvae. By targeting worm larvae, BioWorma® reduces pasture infectivity. It is effective against various roundworm species and works in any grazing animal. It is a biological method of worm control, with no known adverse effects in the animal or environment.

To get the desired results, it is recommended that BioWorma® be fed daily to livestock when the environmental conditions are conducive to larvae development, e.g. over 40°F. The most susceptible livestock should be targeted for feeding. In small ruminants, these include young animals (3 to 24 months) and periparturient females (last month of pregnancy and while producing milk).

Two BioWorma® products are available for purchase: 1) BioWorma® and 2) Livamol® with BioWorma®. BioWorma® is a feed additive that contains 34 percent fungus. It is meant to be mixed into large batches of feed, as its dosage is only 0.1 ounces per hundred weight of animal. Livamol® with BioWorma® is a feed supplement that contains 2.2 percent fungus. It is meant to be mixed into other feeds or supplements. The dosage is 1.6 ounces per hundred weight of animal.

For small producers, the Livamol® product is probably the better option, as it is a ready-to-use product, whereas BioWorma® needs to be blended into a feed. In addition, Livamol® is the only product that producers can directly purchase. The EPA limits the purchase of BioWorma® to veterinarians and feed manufacturers (with EPA certification). Premier 1 Supplies (of Iowa) is one of the major suppliers of BioWorma© to the US market. Since Premier has veterinarians on staff, it is now able to sell BioWorma®.

Many years of research went into the development of BioWorma® and similar fungi. BioWorma® products are marketed by an Australian company (International Animal Health) and became available to US producers last spring (2019). US research (with BioWorma©) is just beginning. The research isn't aimed at proving the efficacy of BioWorma® so much as determining if BioWorma® can produce similar results if it is fed less often, e.g. every other day or for two weeks every month. There is also interest in incorporating BioWorma® into a mineral product, so that animals could self-feed. The goal of proposed research is to reduce the cost and labor associated with feeding BioWorma®. Research is needed before any of these practices can be recommended.

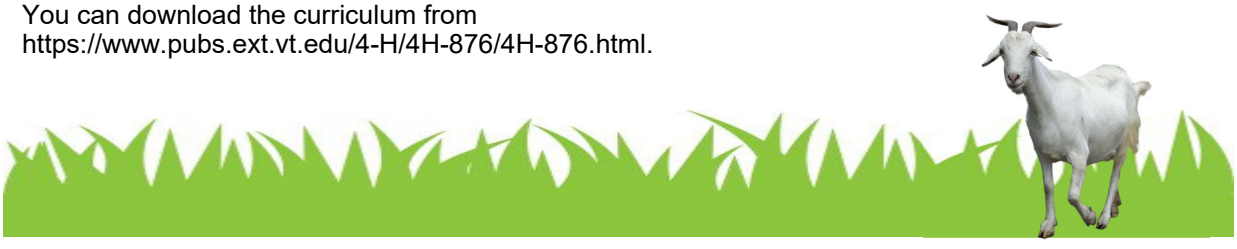
Watch a webinar (YouTube video) on BioWorma® at https://youtu.be/i-JmxoytzDc.

Grass, Goats, and Uninvited Guests

Grass, Goats, and Uninvited Guests is the name of a new curriculum for teaching youth about internal parasites in small ruminants. The innovative, hands-on curriculum utilizes stuffed animals, group learning, and edible treats to teach participants about the FAMACHA© system, body condition scoring, fecal soiling, and fecal egg counting.

The curriculum is adaptable for different age levels and includes an optional project component in which youth are given the chance to conduct their own research and create their own model to teach others about a disease or parasite occurring in their favorite animal. The curriculum was developed by Dr. Chantel Wilson, 4-H STEAM Specialist from Virginia State University. Contact Dr. Wilson at cwilson@vsu.edu for more information.

You can download the curriculum from https://www.pubs.ext.vt.edu/4-H/4H-876/4H-876.html.



Flushing *(continued from page 7)*

The most recently published Nutrient Requirements for Small Ruminants (National Research Council, 2007) do not give nutrient requirements for flushing. They simply recommend a 10% increase in energy intake (compared to maintenance requirements) during the breeding season. This is the amount of additional energy required to retain embryos in early pregnancy, not to flush.

The 1985 NRC requirements (for sheep) recommend a more than 50% increase (above maintenance) in energy intake for flushing. One half to 1 lb. of grain per head per day is usually sufficient for most ewes/does. Ewes in an accelerated lambing program may require an even bigger boost in energy intake (e.g. 200% of maintenance requirements), according to unpublished research conducted at Michigan State University.

Different feedstuffs can be used for flushing, so long as they provide the necessary energy boost and are cost-effective. In some areas of the US, whole cottonseed (not hulls) is fed as a high-energy supplement. It is also high in protein, though protein supplementation is not usually necessary unless the forage diet is deficient in protein. When using grain (starch) for flushing, it is important to add it to the diet gradually to give the rumen time to adjust. Never start out feeding a pound of grain per head per day.

Pasture can be used for flushing so long as the nutrients are there, and the stocking rate is low enough to allow sufficient intake. In fact, pasture is usually a more economical method of flushing and is recommended (over concentrate feeding) when animals are less likely to respond to flushing for the aforementioned reasons.

Specialty crops (e.g. brassicas) are sometimes planted for flushing. In the past, legume pastures were problematic for breeding due to their high estrogen content, but newer cultivars have been selected for lower estrogen and are considered safe for flushing and breeding. Endophyte-infected fescue pastures are not known to have an effect on fertility in sheep/goats, especially if ewes/does are mated in the spring or fall, but it might be wise to avoid (infected) fescue pastures for summer breeding.

Most of the literature suggests beginning flushing two to three weeks before the onset of breeding and continuing it for two to four weeks after. Earlier flushing may be advisable if animals are in poorer body condition. According to a Canadian fact sheet, it takes six weeks of grazing a good quality pasture to increase the body condition of a ewe by one condition score; 3 weeks for a half score. Body score changes will be more rapid with higher energy flushing diets.

Flushing should not be continued for too long into the breeding season, as the extra feed is costly and will not result in further improvements in reproduction. It may also cause some ewes/does to get overly fat. At the same time, there should not be a significant loss in body condition during the rest of the breeding season. The first two to three weeks after breeding are the most critical, as this is when the embryos implant. Flushing is believed to improve the success rate of fertilized eggs attaching to the uterine wall.

After the first month of gestation, the plane of nutrition can return to maintenance levels until the last six weeks of gestation when fetal growth begins to place significant demands on the ewe/doe. Nutrient requirements, especially energy, increase substantially in late pregnancy. Better quality forage and some grain is usually advocated.

Don’t forget about the boys!

While we don’t usually think about flushing rams and bucks, it is important that they be in peak condition at the time of breeding. Sperm production takes 7 to 8 weeks, so it’s a good idea to begin supplementing males about 8 weeks before the onset of the breeding season. A 10 to 11 % increase in energy intake is recommended by NRC. Intake of energy would need to be

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Flushing *(continued from page 10)*

increased if the ram/buck was in sub-optimal body condition (below 2.5). Aim for rams and bucks to have a body condition score of 3 to 3.5 at the time of breeding. Less condition (2.5) is usually acceptable for range rams. Be sure not to get males too fat (above 3.5) or they may lack the vigor necessary to breed females.

[Make this a pullout quote instead of putting at end of article] Reproductive efficiency is the primary factor determining profitability of a sheep/goat enterprise. Flushing may be a cost-effective means to improve the reproductive output on some small ruminant farms.

Body condition scoring sheep and goats
Sheep and goats are usually body condition scored using a scale of 1 to 5, with half scores used. 1 is emaciated (very thin); 2 is lean (thin); 3 is average (nice shape)); 4 is fleshy (fat); and 5 is obese (very fat). It is usually necessary to touch animals to determine their body condition score (BCS). Visual assessment of body condition can be misleading because fleece (or coat) and even pregnancy can hide the true status of an animal.

Body condition score is assessed by feeling for fat and muscle over the backbone, ribs, and loin. Bones are sharp and the loin is shallow in animals with low body condition scores (2 or less), whereas animals in good body condition (3 or above) should feel smoother (rounder) and have fuller loins. It is difficult to detect the bones in an obese animal (5).

Body condition scoring is different in goats (and most hair sheep breeds), as they deposit more fat in their abdomens and less over their skeletons. For this reason, it is normal for goats to carry less condition than sheep and hair sheep to have less external fat than conventional wooled breeds. There are numerous fact sheets and videos that can serve as guidelines for body condition scoring sheep/goats. Body condition scoring is an essential skill for sheep/goat producers.

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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

http://issuu.com/mdsheepgoat

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

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

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