Wild & Woolly

VOLUME XIII ☐ ISSUE IV FALL 2014

INSIDE THIS ISSUE:

UNIVERSITY OF MARYLAND EXTENSION

Solutions in your community

Recap of 2014 Western MD Pasture Based Meat Goat Performance Test

Top Maryland Buck - Waldo & Christy Nelson

2014 was the 9th year of the Western Maryland Pasture-Based Meat Goat Performance Test, which is conducted at he University of Maryland's Western Maryland Research & Education Center in Keedysville.

The purpose of the test is to evaluate the post-weaning performance of meat goat bucklings consuming a pasture diet, with natural exposure to internal parasites, primarily the barber pole worm.

One hundred and one (101) bucklings were consigned to this year's test. Consignments were cut to 79 to reduce stocking rates and lessen parasite burdens. Seventy-seven (77) bucks started the test on June 5. Seventy-one (71) finished the test on August 29.

Bucks were consigned by 23 breeders from 11 states, including Delaware, Illinois, Indiana, Kansas, Kentucky, Maryland, North Carolina, Pennsylvania, Texas, Virginia, and West Virginia. Almost all of the bucks in the test were Kiko: a mixture of purebred and New Zealand genetics. There were a few crosses and one Boer buck in the test.

The test spanned 84 days. While on test, the bucks were rotationally grazed among six ~2 acre paddocks, containing various cool and warm season forages. The first half of the test served as a "parasite challenge"; the second half served as a "growth challenge." Mid-way through the test, all the bucks were given a gel capsule containing ~0.5 g of copper oxide wire particles (COWPs).

(Continued on Page 11)

Performance-tested Katahdin Rams Sell Well

The twenty Katahdin rams that sold in Virginia Tech's Performance Tested Ram Lamb Sale on September 27 averaged $1048. Rams with EBVs (estimated breeding values) brought approximately $200 more per head.

Approximately half of the rams sold with NSIP data, including EBVs for parasite resistance (fecal egg counts). Rams were sold to 18 buyers from 9 states. The top-selling ram was consigned by David Copeland from Missouri. It brought $2850.

Initiated in 2012, the ram test is conducted at Virginia Tech's Southwest Research & Education Center in Glade Spring, Virginia. While on test, the rams are evaluated for growth performance and parasite resistance.

They have continuous access to high quality fescue-based pasture. They are supplemented with a ration (mostly soy hulls) at a rate of 3% of their body weight. At the start of the test, the rams are administered a controlled dose of parasites.

Anemia Can Still Kill Your Goat (and Sheep) Even After the Worms Are Gone

by Dr. Dave Sparks

You noticed your favorite doe lagging behind the herd or lying around breathing heavily, so you caught her and checked her over. Her eye color was as white as a ghost so you wormed her with a wormer that you know is effective on your farm. Thank goodness you caught her in time! Unfortunately you are not out of the woods yet.

You may have taken care of the cause of the problem but your goat is still suffering from the consequences, and will for some time. If she is stressed by physical exertion, high temperatures or other health problems, she may not be able to cope, resulting in death even after she has been successfully dewormed.

While most internal parasites feed on mucus and other free protein sources in the gut, the barber pole worm attaches to the lining of the stomach and feeds on whole goat blood. Each worm can consume 1-5 drops of blood per day. One thousand worms -- a medium infestation -- can consume up to a pint of blood per week. This is similar to the consequences you would encounter if you donated blood, every week, week after week. Eventually you would lack sufficient blood to sustain life.

Although the fluid portion of the blood can be replaced quickly, the loss of blood proteins results in edema, often called bottle jaw. The loss of red blood cells results in anemia and the inability to transport oxygen to the various parts of the body. Simply put, worms don't kill goats.

The resulting anemia kills goats. It takes several weeks for your goat to manufacture and mature new blood cells that are capable of distributing the oxygen needs, but there are some things you can do to help them through this critical period.

The first consideration in the convalescence of severely parasitized goats is to do all you can to eliminate additional stress from their life while they recover. Since not all goats are good neighbors and strong goats tend to pick on weak goats, isolation or grouping with other heavily parasitized goats is in order. A cool, dark, quiet place is helpful in any convalescence. When the temperature and/or humidity is high, a fan to circulate air will help keep the weak goats cool and help them breathe more easily.

Red blood cells are primarily constructed of protein, iron, and copper. If these are not present in the diet in sufficient quantities, it will take a lot longer to replace the missing red cells. If they are present in sufficient quantities, more will not make a difference, but in anemic goats it probably pays to supplement these ingredients to insure that they have all they need to build new red cells. B vitamins, principally B 12 or cyanocobalamine, are involved in. The enzymes that drive some of the chemical reaction involved in red cell formation.

Many of the nutritional supplements marketed to increase performance in horses are very good sources for the needed building blocks of red blood cells. These supplements are readily available at most farm stores and are easily administered orally, often added to a daily grain ration. One such supplement that works well and is prepared in an easily administered oral preparation is Red Cell®.

Convalescing anemic goats should have free choice access to high quality green legume forage such as alfalfa or peanut hay. It is also helpful to use an injectable multiple B vita-

(Continued on Page 8)

Summary: 2014 Pen vs. Pasture Study

2014 was the third and final year of the pen vs. pasture study at the University of Maryland's Western Maryland Research & Education Center. Thirty Kiko bucks were obtained from a farm in New Jersey. They were randomly allocated to two treatment groups: PEN vs. PASTURE.

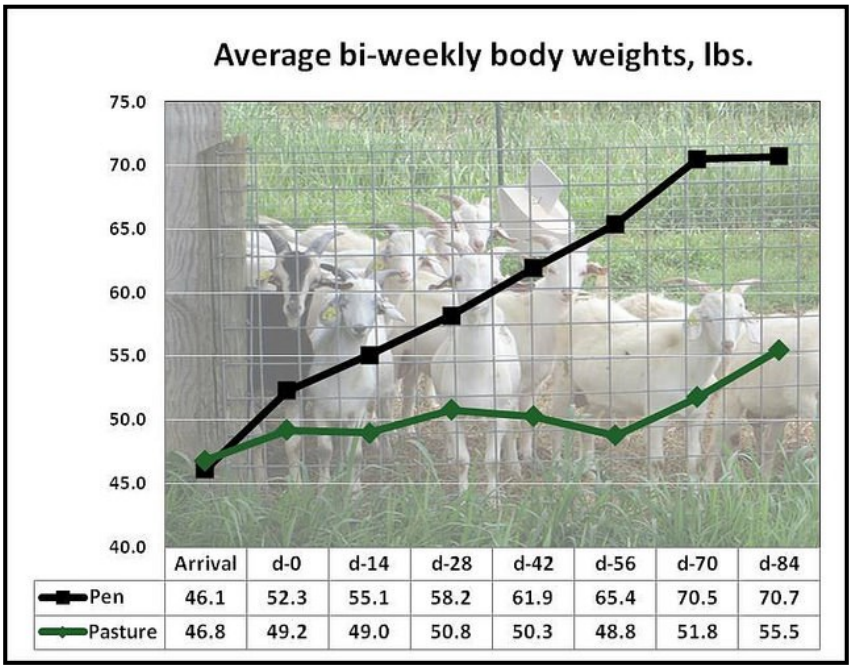
The PEN goats were limit-fed alfalfa-orchardgrass hay and whole barley. The PASTURE goats grazed alongside the bucks in the Western Maryland Pasture-Based Meat Goat Performance Test. They were supplemented with soybean hulls during the second half of the study.

The goats were handled every two weeks to determine body weights, FAMACHA©, body condition, coat condition, dag, and fecal consistency scores. An individual fecal sample was collected every 14 days.

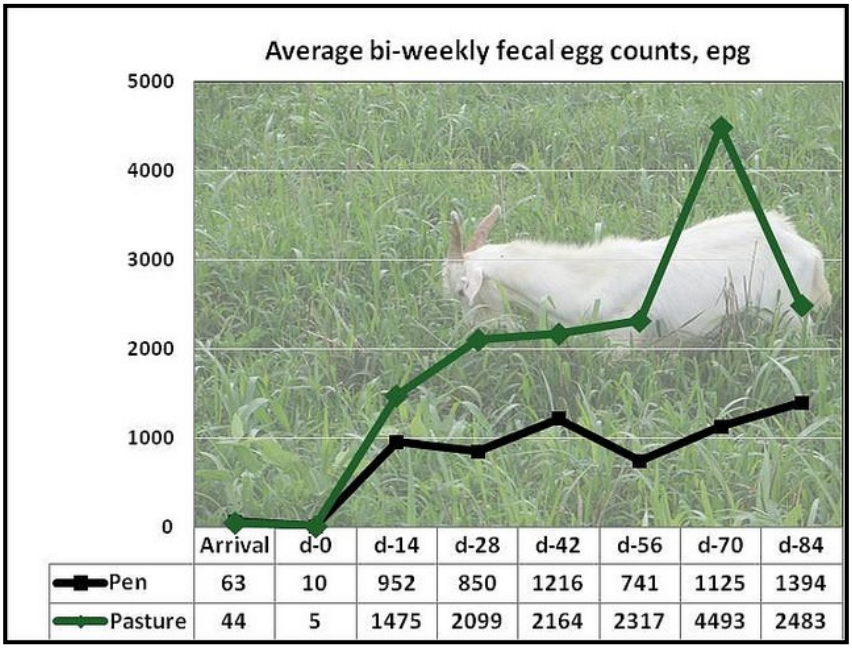
After a short adjustment period, the goats consumed their respective diet for 84 days. At the end of the study, all of the goats were ultrasounded and harvested to collect carcass data. The carcasses were deboned and separated into portions of fat, lean, and bone. A sample of the Longissimus dorsi muscle was removed for fatty acid analysis.

The results were similar to last year. The PEN goats had heavier body weights, lower fecal egg counts, and lower FAMACHA© scores. None of the PEN goats required deworming, whereas six treatments were administered to the PASTURE goats.

The PEN goats had heavier hot and cold carcass weights and higher dressing percentages. Their carcasses contained a high percentage of kidney and heart fat, fat, and lean, but a lower percentage of bone than the PASTURE goats. The yield of boneless, fat-free meat was 21.3 and 18.9 percent respectively for the PEN and PASTURE goats. All of the differences were statistically significant.



	Arrival	d-0	d-14	d-28	d-42	d-56	d-70	d-84
Pen	46.1	52.3	55.1	58.2	61.9	65.4	70.5	70.7
Pasture	46.8	49.2	49.0	50.8	50.3	48.8	51.8	55.5



	Arrival	d-0	d-14	d-28	d-42	d-56	d-70	d-84
Pen	63	10	952	850	1216	741	1125	1394
Pasture	44	5	1475	2099	2164	2317	4493	2483

While pen feeding improved the health, performance, and carcass characteristics of meat goats in this study, the economics of pen feeding will vary by farm and year. Feed costs and market prices will factor heavily into the calculations for profitability.

You can read the full article at http://www.sheepandgoat.com/programs/GoatTest/2014/2014PenPastureStudy.html.

Featured Breed: Dorper ahd White Dorper Sheep

The Dorper is a South African breed of hair sheep developed by crossing Dorset Horn and Blackhead Persian sheep. The breed was created by the South African Department of Agriculture which sought to breed a meat sheep that would be suitable to the more arid regions of the country. Nowadays, the Dorper is numerically the second most populous breed in South Africa.

Although the breed was developed in the 1930's, the first Dorpers were not imported into the United States until the mid 1990's. Because there was no protocol for importing sheep from South Africa, the Dorper breed entered the country as embryos, via Canada.

The American Dorper Sheep Breeders Society was formed in 1995. Dorpers made their debut at the Midwest Stud Ram Sale (in Sedalia, Missouri) in 2000. Since that time, the Dorper has become one of the most popular breeds in the US. In terms of purebred registrations and transfers, Dorpers rank 5th and 3rd, respectively, among US sheep breeds.

There are two types of Dorpers. The "traditional" Dorper has a white body and black head. White Dorpers are all white. In all other respects, the types of Dorpers are identical. The difference in color is primarily a matter of preference.

In the breed registry, Fullblood Dorpers trace their ancestry to the sheep originally imported from South Africa. Purebred Dorpers have been upgraded from American stock. They must be at least 93% or 15/16 Dorper. Upgrading is allowed. Fullbloods and Purebreds are not differentiated in the show ring.

Dorpers are a medium sized, early maturing breed. According to the breed association, mature Dorper rams usually average around 230 pounds (105 kg), while Dorper ewes range in weight from 180 to 210 pounds (82-95 kg). Both sexes are polled. Dorpers produce heavy muscled, fast-growing lambs. They are the heaviest-muscled hair-type breed.
In fact, it is common to cross them with other hair breeds to improve carcass muscling and growth. Dorper x Katahdin is a particularly popular cross.

Dorpers are considered to be a hardy, easy-care breed of sheep. While developed for an arid climate, they have proven to be adaptable to a variety of grazing and climatic conditions. Dorpers have an extended breeding season, which makes them suitable for out-of-season or accelerated lambing.

Dorpers generally do not require shearing. Their coat is a mixture of loose wool and hair fibers that usually sheds off in the spring. Sometimes, there is a row of heavier cover (wool) that is left along the top. At the same time, Dorpers do not usually shed as well as other hair sheep. For this reason, shedding ability should be emphasized in selection programs.

In the show ring, Dorpers are usually slick sheared, though this is not the case in South Africa, where 2 inches of wool cover is allowed.While it is generally not necessary to dock the tails of Dorper lambs, some breeders do. It is not necessary to crutch Dorper ewes. Crutching is when the wool is removed around the udder and vulva prior to lambing.

Unlike hair sheep with tropic origins (e.g. Katahdin, St. Croix), resistance to internal parasites is not an attribute of the Dorper; however, Dorpers may tolerate a parasite infection better than conventional wooled breeds.

The American Dorper Society recently endorsed the National Sheep Improvement Program (NSIP). Along with educational efforts, the ADSBS is working to develop financial incentives for its members to participate in the program. NSIP is a quantitative genetic evaluation program that calculates across-flock EBVs (estimated breeding values) for member flocks.

www.dorper.org

Improving Pasture Gains of Lambs and Kids

By Susan Schoenian

Most pastures in the Middle Atlantic are composed of cool season, perennial grasses such as fescue, orchardgrass, and bluegrass. These forages experience little growth in the summer and decline in quality, making it difficult to get acceptable gains from lambs and kids.

There are several options for improving the performance of lambs and kids grazing summer pastures. Including legumes (e.g. alfalfa or red clover) in pasture mixes will improve summer pasture productivity (quality and quantity). Numerous studies have documented the improved performance of lambs/kids grazing leguminous pastures. Legumes may also improve tolerance to internal parasites.

Sample Date	Pasture Composition	Protein	Energy	Ratio
June 19	Cool Season Grasses	16.7	46.9	2.8
June 29	Cool Season Grasses	19.0	50.0	2.6
July 3	Cool Season Grasses	21.2	50.1	2.4
August 7	Warm Season Grasses	21.5	47.4	2.2
August 14	Warm Season Grasses	21.8	44.0	2.0
August 29	Warm Season Grasses	18.4	38.3	2.1

Source: Grazingland Animal Nutrition Lab, 2014 Western MD Pasture Based Meat Goat Performance Test

Warm season annual grasses (e.g. pearl millet and forage sorghum) and legumes (e.g. cowpeas, soybeans, and Sunn hemp) are another option for improving the performance of grazing lambs and kids. Annual plantings provide clean pastures, free from infective worm larvae. Warm season plants do most of their growing in July and August, when cool season grasses are dormant. Their vegetative growth is more nutritious than the stale cool season grasses. Their height and morphology makes it less likely that grazers (especially goats) will ingest infective worm larvae.

Another way to improve pasture gains is with supplementation. The purpose of supplementation is to correct a nutritional deficiency (either quantity or quality of nutrients). While protein supplementation has been shown to improve utilization of poor quality forage and may be beneficial to parasite control, energy tends to be the most limiting nutrient in most pasture diets. Energy supplementation usually improves performance.

Energy supplementation may also be advisable in situations where the ratio of energy to protein is out-of-balance. For example, fecal samples collected from the bucks in the Western Maryland Pasture-Based Meat Goat Performance test suggest that the bucks would benefit from energy supplementation; the energy to protein ratio of their diet was less than 3. Acceptable ranges for cattle are 4 to 7, with 4 being optimal.

Grazing lambs/kids can be supplemented with many different feedstuffs, including dry forage (hay), grain, and fibrous by-product feeds. Hay feeding can extend the pasture resource. The extent to which livestock substitute hay for pasture will vary according to forage quality. Dry forage may be beneficial when livestock are consuming high-moisture forages, such as brassicas.

Grain (corn or barley) is usually the most economical form of supplementation, but the starches in grain require different rumen microbes and tend to reduce forage utilization. However, their lower cost may still justify their inclusion in pasture-based finishing systems.

Fibrous by-product feeds, such as soybean hulls, cottonseed hulls, and peanut hulls, are another supplementation option. The aforementioned feeds are low in starch but high in fermentable fiber. Various studies have shown that soybean hulls are comparable to corn as an energy source for beef cattle that are grazing low and moderate quality forage. An added advantage to fibrous feeds is that USDA's "grass-fed" marketing label permits their use.

An Ohio State study showed that supplementation with dried distiller's grains reduced the need for deworming (lambs). Cost and availability will determine the use of alternative or by-product feeds.

One of the dangers with supplementation is substitution. Sometimes, the livestock will substitute the supplement for the free-standing forage. This is okay if you are trying to extend your pasture resource, but is an unintended consequence if you're trying to maximize pasture utilization. For this reason, it is usually recommended that supplements be fed at less than one percent of body weight. Feeding them in the middle of the day is also recommended, as this is less likely to disrupt normal grazing patterns.

Eradicating Scrapie

The goal of the American Sheep Industry Association (ASI) and the U.S. sheep industry is to eradicate scrapie from US borders by 2017. In addition, it is the objective to have the United States recognized as scrapie-free in accordance with the World Organization for Animal Health (OIE).

The 2017 goal is still attainable, but "detecting the last cases of scrapie is always the most difficult and most costly," according to APHIS Veterinary Services. The agency is considering the proposition of a "negligible" scrapie-risk category which may be included in a future draft of the OIE scrapie chapter. A negligible risk category has opened up many markets for the beef industry.

For fiscal year 2013, 35,282 sheep were tested for scrapie. The prevalence of scrapie was determined to be less than 0.03 percent, a decline of 90 percent since slaughter surveillance began in 2003. In 2003, scrapie prevalence in sheep was 0.2 percent. Since April 2003, 425,890 samples have been collected, with 473 confirmed positives for scrapie. Most cases of scrapie have been found in black and mottled-faced sheep. The incidence of scrapie has been highest in the Midwestern states.

In fiscal year 2013, APHIS tested 7,563 goats. Since slaughter surveillance began in 2003, roughly 19,000 goats have been tested, without finding any positive animals. However a few positive goats have been found through testing clinical goats and in goats in infected sheep flocks. The prevalence of scrapie, while not zero, is likely lower than 0.02 percent in goats.

Producers can help to eradicate the final cases of scrapie by having mature animals (culls and deads) tested for the disease.APHIS provides shipping boxes and labels for the submission of mature heads for scrapie testing. There is no cost. Many veterinary diagnostic laboratories also accept heads for scrapie testing.

Source: Scrapie: Eradicate It. June 2014. ASI

Goat Twilight & Tasting Tour

Approximately 80 people attended the Goat Twilight Tour & Tasting, held July 31 at the University of Maryland's Western Maryland Research & Education Center (WMREC) in Keedysville.

The tour highlighted the center's pasture-based meat goat performance test and pen vs. pasture study. For the tasting part, a local chef (Todd Morren) prepared six dishes made from goat meat (chevon), including Birria Mexican Goat & Chili Stew, Citrus-Cured Goat Salad (Tai De) Jaffna Goat Curry (Sri Lankan) Pappardelle with Goat Ragu, and Roasted Goat for Tacos.

The Goat Twilight Tour & Tasting was sponsored by the Maryland Grain Producers Utilization Board, which has been funding the multi-year pen vs. pasture study.

You can download the recipes from this year's event at http://www.sheepandgoat.com/programs/GoatTest/2014/recipes.pdf.

More Information On Sheep & Goats Can Be Accessed At:

http://www.sheepandgoat.com/

http://www.sheep101.info/

http://mdsheepgoat.blogspot.com

http://www.acsrpc.org

http://mdgoattest.blogspot.com

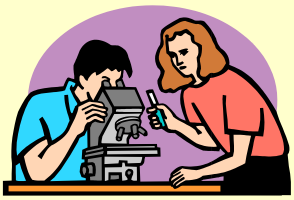
https://www.facebook.com/MDSmallRuminant

https://twitter.com/MDSheepGoat

https://issuu.com/mdsheepgoat

Research Updates

- Brazilian researchers found no differences in the performance and carcass characteristics of lambs fed a whole grain diet vs. a conventional "control" diet (with roughage). There were also no differences in the characteristics of the rumen papillae. [Small Rum Res. Aug 2014]
- At Lincoln University (Missouri), there were no short-term effects of divergent selection for parasite resistance in Kiko x Boer doe progeny. Selection resulted in minimal differences in parasitism, survival rate, and reproductive performance. The experiment is ongoing. [American Society of Anim Sci, July 2014].
- Researchers at Lincoln Universitiy concluded that by using footrot marker screening (in sheep), the potential to select a high resistant flock is possible within 3 to 5 breeding seasons. [American Society of Anim Sci, July 2014].
- Chinese researchers improved growth performance and forestomach development of artitifically-reared lambs by adding alfalfa forage to the milk replacer and starter pellet diet. [American Society of Anim Sci, July 2014].
- US and New Zealand researchers have identified a methane trait in sheep that will allow selection of sheep that emit less methane (a greenhouse gas), while still maintaining their ability to reproduce and retain or improve their meat and wool production. [The New Zealand Herald, Sept. 5, 2014]
- Field experiments conducted at Duke University and six other US and European universities have identified a low-cost alternative to controlling phragmites in marshlands: goats. In fenced-in plots at USDA Beltsville, pairs of goats reduced phragmites cover by 94 to 21 percent, on average, by the end of the study. [Phys.org, Sept. 25, 2014]



- UC Davis researchers have discovered how the bluetongue virus manages to survive through the cooler months. It reproduces in the insect that transmits it; it may have additional modes of overwintering in temperate climates. Bluetongue virus sickens mostly sheep, but also infects cattle, goats, and wild ruminants. (UC Davis, Oct 10, 2014].
- Animal scientists at UC Davis reviewed the scientific literature pertaining to the performance and health of animals consuming genetically-engineered (GE) crop biomas. They found no unfavorable or perturbed trends in livestock health and productivity. Nor could they cite studies that revealed any differences in the nutritional profile of animal products derived from GE animal feed. [J. Anim. Sci. Oct 2014].
- Australian scientists have developed a blood-based test to identify nemadode-resistant sheep. Their algorithms classified susceptible sheep with 100 percent accuracy and resistant sheep with 80 percent accuracy. [Small Rum Res, in press].
- Brazilian researchers evaluated the sensitivity and specificity of the FAMACHA© system in Suffolk sheep and crossbred Boer goats. In their study, sensititvity increased if F©3 animals were included as being anemic. Sensitivity was usually higher for sheep than goats except when F©3 animals were included as being anemic. In contrast, specificity was always lower for sheep. The researchers recommend that all small ruminants classified as F©3 be treated to increase the sensitivity of the system. [Small Rum Res, in press].

Wild & Woolly To Be Published on ISSUU

The Wild & Woolly newsletter will now be published at issuu.com/mdsheepgoat. ISSUU is a digital publishing platform for magazines, catalogs, newspapers, books, and more online. With over 15 million publications, Issuu is the fastest growing digital platform.

Issue is a user-friendly platform for reading online, especially on tablets. So far, all newsletters from 2013 and 2014 have been published to the site. **issuu.com/mdsheepgoat**

Grass-fed Program for Small & Very Small Producers

The Grass-fed Program for Small and Very Small Producers is designed as a verification tool for producers of 99 ewes or less to certify that their animals meet the requirements of USDA's grass-fed marketing claim standard. Certified producers will receive certificates that allow them to market their sheep as USDA-certified grass-fed.

The grass-fed marketing claim requires that ruminant animals only be fed grass and forage, with the exception of milk fed prior to weaning. Animals certified under this program cannot be fed grain or grain by-products and must have continuous access to pasture during the growing season.

AMS will review submitted documentation and the detailed farm or ranch plan submitted by the producer. If the plan is sufficient, AMS will approve the producer and the sheep at that location as meeting the requirements of the grass (forage) fed marketing claim. The cost of the program is $108. The duration of certification is two years. An additional requirement is that approved producers be listed on USDA's web site.

Roughage (e.g. cottonseed hulls, peanut hulls, or almond hulls), defined as any feed high in crude fiber and low in total digestible nutrients, can be supplemented in the grass-fed diet, because it is low and nutrients and its bulk stimulates peristalsis.

http://www.ams.usda.gov/AMSv1.0/GrassFedSVS

Escobar Appointed UMES Extension Leader

Dr. Enrique "Nelson" Escobar has been appointed the Interim Associate Administrator for the University of Maryland Extension Programs at the University of Maryland Eastern Shore (UMES).

A native of El Salvador, Dr. Escobar arrived at UMES in 2009. Since then, he has served as an assistant professor and small ruminant extension specialist. Prior to coming to Maryland, Dr. Escobar was the leader of the Extension Goat Program and Small Farm Program at Langston University (Oklahoma).

He was also the executive director of the USDA Advisory Committee on Small Farms, a consultant to the USDA Marketing Assistance Program in Armenia, and a research scientist at the International Dairy Goat Research Center at Prairie View A&M University (Texas).

Dr. Escobar holds Ph.D. and M.S. degrees in animal nutrition and management and animal science from the University of Maryland College Park. Dr. Escobar will balance his time between his new administrative responsibilities and his small ruminant research and education program.

Source: University of Maryland Extension Newsline, October 2014.

Anemia Can Still Kill Your goat (and sheep) Even After the Worms Are Gone *(Continued from page 2)*

min supplement. Administer B vitamin injectable daily for 1 week, and then follow up once a week for 3 weeks.

In my experience internal parasites, especially the barber pole worm, kill more goats than all other predators and health related problems combined. The best solutions for the problem include selecting breeding stock that has a natural high level of immunity to the parasites and closely monitoring your herd with eye scores on a frequent basis. Try to catch potential problems before they get severe.

If your goat does get in trouble, attention to minimizing stress and insuring that her nutritional needs are met will help her get back in the pink (pun intended).
Source: The Goat Rancher, August 2014. Reprinted with permission.

About the author: Dave Sparks is the Oklahoma State University, Oklahoma Cooperative Extension Service, Area Extension Food-Animal Quality and Health Specialist. He can be contacted at dave.sparks@okstate.edu.

Beginner Farmer Coordinator Has Sheep Interest

University of Maryland Extension is proud to provide the Beginning Farmer Success program across the state. The Beginning Farmer Success program is targeted towards those who have been involved in agriculture for ten years or less. Special focus is paid to helping potential and new farmers establish business plans, scaling up their operations, and making smart production decisions for both crops and livestock. These important topics are taught through workshops, conferences, and hands-on mentorships supported by the University of Maryland Extension, the Southern Maryland Agriculture Development Commission (SMADC), University of Maryland Eastern Shores (UMES), and Future Harvest.

In August, the Beginning Farmer Success Team welcomed Hannah Shear to the group to serve as program coordinator. Hannah was born and raised in Kentucky on a family farm that focused primarily on beef cattle and burley tobacco. Throughout her childhood she was surrounded by the rolling bluegrass pastures of central-eastern Kentucky. This access to plentiful pasture and a love for all things livestock led to Hannah's desire to raise sheep.

After attending several of the University of Kentucky's Sheep profit schools she decided to delve into the world of sheep. After several years (the first few were rocky as they are for most beginning shepherds), Hannah had established a nice flock of crossbred sheep (eventually moving into hair sheep) that were marketed towards the ethnic population in a nearby large city.

Raising sheep and understanding both the animal husbandry side as well as the business, led to her graduation from the University of Kentucky's College of Agriculture with a dual Bachelor of Science in Animal Sciences and Agricultural Economics. Following graduation from UK, Hannah decided to continue her education by attending the University of Arkansas. Part of the Master Program from Arkansas allowed Hannah to spend six months abroad and to earn a dual Master in Agricultural Economics and an International Master in Rural Development from Gent University in Belgium.

Hannah's educational background and personal experience led her to the Beginning Farmer Program in Maryland. She is excited to get to know the people of Maryland, especially those who raise sheep and goats! If you have been farming for ten years or less and are interested in being a part of the Beginning Farmer Success Program you should sign-up and check out their website: http://extension.umd.edu/newfarmer.

Recipe— Lamb Chops with Tomato and White Bean Provencal

Ingredients

4 Boneless Lamb Sirloin Chops, (4 – 6 oz each, 3/4-inch thick)

1 Tablespoon, plus 1/2 tsp finely chopped garlic, Divided

1-1/2 Teaspoons herbs de provence

2 Cups grape tomatoes, halved

1 Can (15 – 15.8 oz) great northern beans, drained and rinsed

2 Tablespoons chopped fresh basil

2 Tablespoons olive oil

Coarse salt and pepper, as desired

Directions

Combine 1 tablespoon garlic and herbs de provence; rub evenly onto all sides of lamb chops. Refrigerate 30 minutes.

Stir together tomatoes, beans, basil, olive oil and remaining 1/2 teaspoon garlic. Season with coarse salt and pepper; reserve.

Preheat grill or broiler. Cook lamb to medium rare doneness, 14 – 18 minutes (Rae please confirm cooking time.)

Serve chops with tomato and white bean salad.
Serving suggestions: serve with side green salad and crusty bread

Recipe courtesy of American Lamb Board
http://www.americanlamb.com/

Copper Oxide Wire Particles for Worm Control

Mid-way through this year's Western Maryland Pasture-Based Meat Goat Performance Test, all the bucklings were given a gel capsule containing ~0.5 g of copper oxide wire particles (COWPs). The gel caps were made by dividing a 12.5 g bolus of Copasure® (a copper supplement for cattle) into smaller doses.

On July 17, based on FAMACHA© scores and the Five Point Check©, nine goats required deworming; so, they were dewormed with a commercial dewormer (either levamisole or moxidectin). They also received a gel cap. The other 61 goats did not require deworming, but were given the gel cap containing the copper wire particles. Fifteen goats in another study were not given the COWP gel cap; so, they effectively served as controls in our experiment.

Fecal samples were collected from each goat on July 17. On the day the COWPs were given, fecal egg counts averaged 2768 epg. In the nine goats that required deworming, egg counts were much higher, averaging 8735 epg. In the 15 goats that were not given the gel cap, fecal egg counts averaged 2164 epg. Fecal egg counts above 2000 epg are considered to be of clinical significance for the barber pole worm (Haemonchus contortus).

Two weeks later (on July 31), another fecal sample was obtained from each goat. The effectiveness of treatments was determined by comparing before and after fecal egg counts. Treatment was quite effective in 8 of the goats that were administered a commercial dewormer. Egg counts were reduced an average of 98.6 percent, from 8735 to 103 epg. Anthelmintic treatment did not reduce the fecal egg count in one treated goat, but its egg count was only 500 epg on July 17.

Of the 61 goats that received the COWP gel cap, but not a commercial dewormer, fecal egg counts were reduced by an average of 81.7 percent, from 2768 to 288 epg. However, fecal egg counts increased in eight of the goats that were given the COWPs, from 723 to 2000 epg. It is possible that some of these goats spit the gel cap out, as it can be difficult to administer.

In contrast, fecal egg counts increased from 2164 to 2371 in the fifteen goats that were not given either the COWP gel cap or commercial dewormer. However, while the COWPs seemed to be effective at reducing egg counts, the effect was not long-lasting, as fecal egg counts on August 14 were back over 2000 epg and above 3000 epg two weeks later.

Copper oxide wire particles have been shown to reduce barber pole worm infections in sheep and goats. The American Consortium for Small Ruminant Parasite Control recommends a dosage of 0.5 to 1 g for kids and lambs and 1 to 2 g for mature animals. It should be noted that these dosages are considerably smaller than those contained in commercially-available Copasture® boluses for goats.

There is risk in using copper oxide wire particles as a deworming agent for goats and especially sheep. Sheep are very susceptible to copper toxicity; goats can also experience copper toxicity. While the copper in COWPs is poorly absorbed, usage will increase the concentration of copper in the liver. It is essential to know the copper status of animals before incorporating COWPs into a deworming program.

For more information about copper oxide wire particles (for deworming), visit the web page of the American Consortium for Small Ruminant Parasite Control at http://www.wormx.info/Resources/COWP.html.

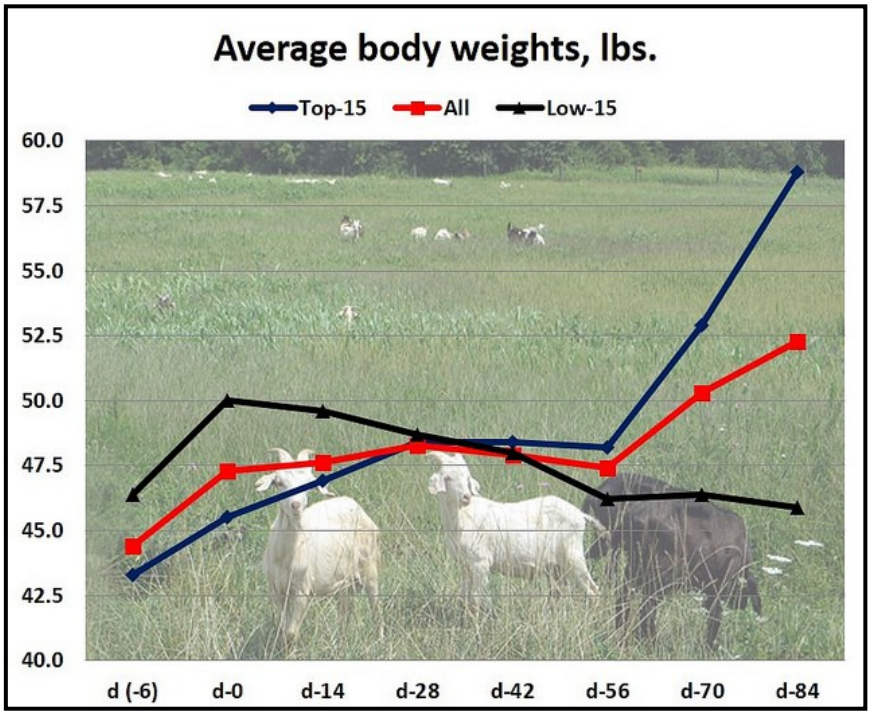
Treatment		# goats	July 17 Avg. FEC	July 31 Avg. FEC	Avg. FECR
Dewormer	Effective	8	8735	103	98.6
	Ineffective	1	500	275	45.0
COWP	Effective	53	2768	388	81.7
	Ineffective	8	723	2000	< 0
No treatment	Control	15	2164	2371	< 0

Recap of 2014 Western MD Pasture Based Meat Goat Performance Test (continued from page 1)

During the second half of the test, the bucks were supplemented with pelleted soybean hulls, 0.75 lbs. per head per day.

While on test, the bucks were evaluated for growth, parasite resistance, and parasite resilience. They were handled every two weeks to determine body weights, FAMACHA©, body condition, coat condition, dag, and fecal consistency scores. Every 14 days, a fecal sample was collected from each buck. Pooled fecal samples were collected to determine the species of worms infecting the goats and the nutritive quality of the diet the goats were consuming.

Towards the end of the test, carcass traits were measured using real-time ultrasound. The bucks were also evaluated for structural correctness and reproductive soundness.

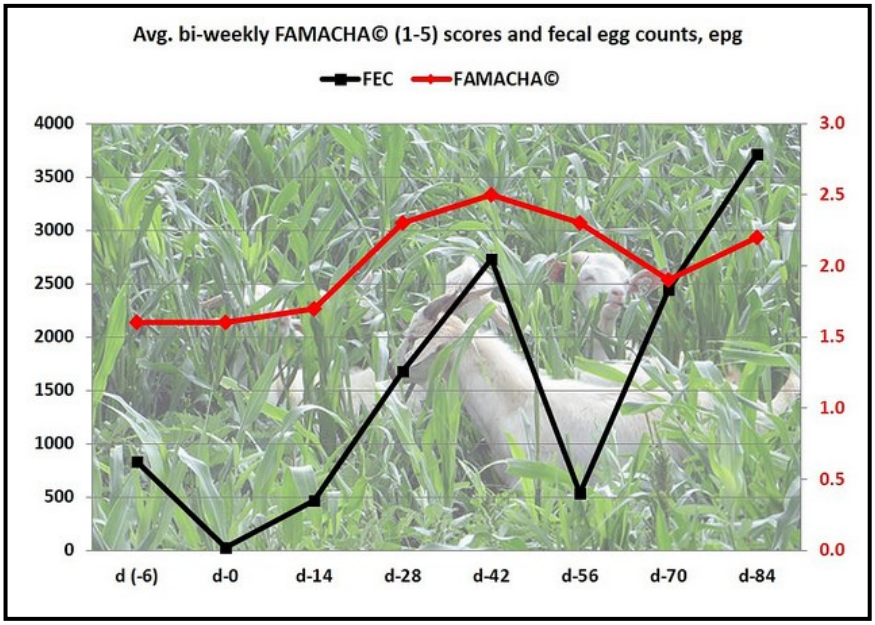


Top Performers

Jodie and Randy Majanscik from Kentucky had this year's top-performing buck. They shared the top-consignment award with Brent Ballinger. Ballinger, a first time consigner from Kentucky, had two of the ten top-performing bucks. Linda Heise, a new consigner from Pennsylvania also had two bucks in the top ten.

Craig Adams from Illinois had the most parasite-resistant buck in the test. The top Maryland buck was consigned by Waldo Nelson from Quantico. Craig Adams and Jarred Dennison from Kentucky received plaques for having consigned to the test for five years.

Three of the ten top-performing bucks were sired by top-performing bucks from previous tests. This year's top-performing bucks were sold at the Bluegrass Performance Invitational in Frankfort, Kentucky. The two top performing bucks were purchased by a farm in California.



You can read a full recap of this year's test at http://www.sheepandgoat.com/programs/GoatTest/2014/recap.html. To learn more about the test, visit the blog at http://mdgoattest.blogspot.com. Subscribe to the buck test listserv to receive blog entries via e-mail. To subscribe send an e-mail to listserv@listserv.umd.edu. In the body of the message, put subscribe meatgoattest.

Calendar Of Events

October 25
Maryland Sheep Breeders Association Annual Meeting & Banquet
Turf Valley Resort, Ellicott City, Maryland
Info: office@sheepandwool.org

November 7-8
11th UMES Small Farm Conference
University of Maryland Eastern Shore, Princess Anne, MD
Info: www.umes.edu/1890-mce

December 6
Virginia Sheep Producer's Association Fall Bred Ewe & Doe Sale
Rockingham County Fairgrounds, Harrisonburg, Virginia
Info: http://www.vasheepproducers.com

January 15-17
Future Harvest CASA Annual Conference
College Park, Marriott Hotel & Conference Center
Info: http://www.futureharvestcasa.org/conference

January 28-31
American Sheep Industry Convention
Reno, Nevada
Info: www.sheepusa.org

March 13-14
Appalachian Grazing Conference
Morgantown, West Virginia
Info: http://www.grazeappalachia.org/

UNIVERSITY OF MARYLAND EXTENSION
Solutions in your community

Wild & Woolly, is published quarterly by the University of Maryland Extension. It is written and edited by Susan Schoenian, Sheep and Goat Specialist, at the Western Maryland Research & Education Center (WMREC), 18330 Keedysville Road, Keedysville, MD, tel. (301) 432-2767 x343 or 315, fax (301) 432-4089; e-mail: sschoen@umd.edu or Pamela Thomas, Administrative Assistant, pthomas@umd.edu. The cost of receiving the newsletter by mail is $10 per year, payable to the University of Maryland. The newsletter can be accessed for free on the Internet at http://www.sheepandgoat.com/news/index.html. Subscribers to the newsletter listserv will receive an e-mail message when a new newsletter has been posted to the web. To subscribe, send an e-mail message to listserv@listserv.umd.edu. In the body of the message, type subscribe sheepgoatnews.

Comments and suggestions regarding the newsletter are always welcome. References to commercial products or trade names are made with the understanding that no discrimination is intended and no endorsement by University of Maryland Extension is implied.

University of Maryland Extension
Western Maryland Research & Education Center
18330 Keedysville Rd
Keedysville MD 21756