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Antibiotic Overuse

Overuse or inappropriate use of antibiotics in agriculture is considered to be a contributing factor to the development of antibiotic resistant bacteria. This is a growing threat to public health.

Use of low dose, prophylactic antibiotics also contributes to the emerging crisis of antibiotic resistant bacteria.

Things to know before treating your sheep/goat:

1.) Environment matters! Dust, weather, overcrowding, travel, stress, nutrition, immunity, parasites.

2.) It's all about timing! Success is more about timing than the drug. Bacteria can double in number by every 15-30 minutes. A couple days in, there may be nothing we can do.

3.) Get in the habit of taking temperatures on ALL sick animals.

4.) Please do not give a bunch of drugs and then call the vet. It ties your vet's hands and can't be undone. The drug your vet would like to use may now be unavailable to be used.

5.) Antibiotic use is not straightforward. Giving multiple drugs at once can diminish effects. Antibiotics have effects everywhere in the body. Drugs take time to work.

6.) If you use a drug in a way that is not on the label, it legally has to be done under veterinary guidance and the label withdrawal time will not be correct.

7.) Coughing is unreliable—it doesn't necessarily mean pneumonia.

8.) Be careful with internet advice—consult your veterinarian first!

Source: Large Animal Consulting & Education

The Physical Exam

What is a physical exam (PE)?

It is the basic assessment performed on a patient, typically done by a veterinarian. The evaluation includes but is not limited to: general appearance, auscultation of the heart & lungs, body condition, body temperature, rumen contractions, and more. For the small ruminant, this includes FAMACHA scoring.

Why is it important?

A physical exam is a vital part of an animal's preventative care, and is used in the diagnosis of disease conditions.

How is the info gathered from a PE

used to diagnose and treat?

The findings determined from a PE allow the veterinarian to determine which body system(s) is affected, thus providing clues for diagnosis. A presumptive diagnosis is needed to initiate treatment.

Can the producer perform a PE?

In short, the answer is yes! A veterinarian is trained to perform a thorough physical exam. However, the producer can still begin to collect some of this information prior to the vet's visit or to consult with their vet over the phone to aid in diagnosis and treatment of the patient. For example, some of the basic components of the PE that the producer can easily obtain includes: rectal temperature, FAMACHA score and body condition score. The an-

swer to these 3 things will help tremendously to rule in or out several common disease processes. Other information that aids diagnosis is providing a thorough history about how the animal is acting and what you observed that is normal/ abnormal about them.

It is imperative that there is a presumptive diagnosis made, prior to initiating any treatment to a patient. For example, if an animal is parasitized, they do not need antibiotics, they need dewormer. A PE must be performed to determine that the animal has parasites and not a bacterial infection. Administration of incorrect treatments has consequences and should be avoided. Please consult your veterinarian prior to initiating treatments.



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His practice provides ambulatory livestock veterinary services in Leon, Jefferson, Gadsden, and Wakulla counties in north Florida.

Dr. Grau is an alumni of the University of Florida College of Veterinary Medicine (UFCVM) where he completed his DVM in 2021 and graduated with a Certificate in Food Animal Medicine.

He also completed a one-year specialty internship at UFCVM in Food Animal Reproduction and Medicine.

If you are in Dr. Grau's practice region, please reach out to him to schedule an appointment. He is accepting new clients and looks forward to an opportunity to work with producers.



Mineral Supplementation

Nutrition is one of the most complex aspects of ruminant husbandry, but often dismissed as simple. The goal of nutrition planning is providing animals with a complete and balanced diet. High quality forages and grain make up most of a small ruminant diet, but these are not complete or balanced. That is where mineral supplementation comes in.

Mineral supplementation is just that – added nutrients to balance diets for specific target groups of animals. So how do you choose what to give?

We'll cover the basics first: always provide loose mineral for the target species. **Sheep should only have sheep minerals, and goats should only have goat minerals.** It sounds redundant, but goat minerals can lead to severe toxicities in sheep, and sheep minerals can lead to deficiencies in goats. Furthermore, mineral blocks are meant for cattle, who with their large rough tongues can make use of the block. Lastly, mineral buffets are NOT recommended in any form. It has been demonstrated that sheep and goats will actively consume the minerals that they enjoy, as opposed to being intelligent enough to recognize and consume the minerals they require. This method of mineral supplementation is illegal in the UK and European Union.

The first step in determining your supplement requirements is to figure out what you are already providing. Forage testing and feed labels will tell you what you have and comparing that to available data for feed requirements in your target species can guide you into which supplement strategy best fits. Consider the concentrations of these minerals as they interact with one another, or their function as cofactors. Cobalt, for example, is required in cobalamin synthesis in the rumen by rumen microbes. Cobalamin is also known as vitamin B12, which we know is essential in the prevention of polioencephalomalacia. All this information helps us reach for mineral supplements that will complement our feed, which can be from commercially available sources, or custom made to order. In the Southeast, we always must make sure our mineral supplementation includes selenium as our soils do not provide enough for the grasses in our pastures to sustain a ruminant's selenium requirements.

As most of my clients are not large-scale producers, commercial diets commonly found at farm stores are often what we decide works best for their production and financial goals. Some big brands have grain feeds that are compatible with their mineral supplements, such as Purina's Wind and Rain line. This makes choosing your mineral supplements easy. For large producers, it may be financially viable to have custom minerals made based on specific farm needs. This is far more intensive management but allows more freedom to provide a balanced diet.

Always test your feed, and remember to make sure that your sheep and goats actively consume their minerals. It will not matter what it is if they don't!

Producer's Corner—Knowledge Exchange

Are you a producer? Have something to share?!

If you are a small ruminant producer and have a topic area of interest that you believe would be beneficial to share with other producers—please let us know! We are looking to feature one producer in each newsletter issue!

We believe knowledge exchanged between producers of their practical experiences is valuable and we want to provide a space to facilitate that. We would ask that you provide a few paragraphs to be shared in the newsletter on your chosen topic. The content and grammar will be reviewed by our UF Small Ruminant Extension team, and edits will be made as needed prior to publishing.

If you're interested, please contact us via email at bn.diehl@ufl.edu. We look forward to hearing from you!

Considerations for Sheep & Goat Nutrition During Winter

By: Nick Simmons

UF/IFAS Extension Escambia County

The winter season can present significant nutritional challenges for sheep and goats, as colder temperatures, shorter days, and reduced pasture availability require adjustments to their feeding programs. Proper nutrition during this time is critical for maintaining the health and overall well-being of these animals. During winter, sheep and goats experience increased energy requirements due to the cold weather. The body's energy needs are heightened as animals expend more energy to maintain body temperature. The lower the ambient temperature, the more energy is required for thermoregulation. A study from the University of Wisconsin indicates that for every 1°F decrease in ambient temperature below the animal's critical temperature threshold, energy intake must increase by approximately 1% to maintain body heat.

To meet these increased energy demands, the quality and quantity of forage or supplemental feed should be adjusted. Forages such as hay, silage, or baleage provide important sources of energy, but they may need to be supplemented with grains or specially formulated concentrates. Whole grains like barley, oats, or corn can help increase caloric intake.

Additionally, during the winter, pasture growth slows or ceases entirely, and animals must rely on stored forages such as hay or silage. The nutritional quality of these forages may decline over the course of the winter, particularly with hay harvested late in the season. According to the University of Nebraska-Lincoln, hay should be tested for its protein, fiber, and energy content to ensure it meets the nutritional needs of the flock or herd. High-fiber forages, like

mature grasses or legumes, are essential for ruminants like sheep and goats as they stimulate their rumen function. However, fiber content should be balanced with adequate protein levels, which might necessitate the addition of protein supplements like alfalfa pellets or soybean meal.

Protein plays a crucial role in the maintenance and growth of muscles, the development of the immune system, and reproduction functions. During the winter months, sheep and goats may experience reduced grazing time, so it's important to ensure that their diet provides sufficient protein. Studies suggest that a mature, non-lactating ewe or doe requires about 8-10% crude protein in their winter diet. However, lactating females, pregnant animals, and growing lambs or kids may require up to 16-18% crude protein. For supplementation, high-quality protein sources such as alfalfa hay, soybean meal, or other protein concentrates work well, particularly for those animals with higher protein intake needs.

Winter conditions can also affect the availability of certain vitamins and minerals, particularly if animals are not grazing. The need for essential vitamins like vitamin A and vitamin D may increase, especially since decreased daylight hours in winter affect vitamin D synthesis. Mineral supplementation, including calcium, phosphorus, magnesium, and salt, is essential for maintaining bone health and metabolic function during this time. A well-balanced mineral mix should be provided free-choice, especially for pregnant or lactating females, as these animals require more minerals to support the developing fetus or offspring.

During the winter months, it can be easy to overlook the importance of fresh water. Cold temperatures can freeze water sources, reducing animals' intake and possibly leading to dehydration. Research data emphasizes ensuring that sheep and goats always have access to clean, unfrozen water, as dehydration

can lead to health problems like reduced feed intake, constipation, and urinary system issues.

Understanding the increased energy and protein needs, ensuring quality forage and supplementation, and maintaining access to vital minerals, vitamins, and water, producers can help their flocks and herds thrive during the colder months. Regular monitoring and adjustments based on the condition of the animals and their environment will help optimize their nutritional intake and ensure they are adequately prepared for the winter season.

Market Report

The reported data below is compiled by the USDA—Livestock Auction.

Visit the website:

mymarketnews.ams.usda.gov/livestock_auction_dashboard

Market report dates:

01/06/2025 to 01/11/2025

Sheep Overview

Wtd Average Price (per cwt)

Feeder Sheep/lambs \$247.28

Slaughter Sheep/lambs \$221.55

Goat Overview

Wtd Average Price (per cwt)

Feeder Goats \$356.72

Slaughter Goats \$280.13

Local Price Trend Report— Ocala Livestock Market in Ocala, FL

Market report date: 01/03/2025

Sheep (low to high range)

Young ewes \$ —

Young rams \$ 150– 185.00

Old ewes \$170– 205.00

Mature rams \$200– 370.00

Goats (low to high range)

Small does \$80– 160.00

Small bucks \$120– 150.00

Medium does \$100– 130.00

Medium bucks \$160– 220.00

Large does \$140– 240.00

Large bucks \$275– 335.00

Boer –Type Goats

Does \$ 220– 310.00

Bucks \$ 400

Small Ruminant Winter Feeding—Understand What Your Animals Need & What Your Hay Can Provide

By: Mark Mauldin
 UF/IFAS Extension Washington County

It is important to recognize that the nutritional requirements of small ruminants change considerably throughout the production cycle. It is also important to recognize that your operation’s resources are being used the most efficiently when the nutrition made available to the flock or herd changes according to what is required at the time.

Failing to increase the plane of nutrition as requirements increase will ultimately lead to a loss of body condition and eventually a reduction in animal productivity. Conversely, providing excess nutrition can lead to overly conditioned animals and is a waste of money. For more information on body condition scoring of small ruminants check out UF/IFAS Extension Agent [Cassidy Dossin’s great fact sheet](https://animal.ifas.ufl.edu/smallruminant/resources/fact-sheets/) at <https://animal.ifas.ufl.edu/smallruminant/resources/fact-sheets/>

During the warm months, when green growing forage is readily available these nutritional adjustments may be very minor, or in some cases nonexistent. However, during the winter months when growing forage is limited, and more hay and supplement feeding takes place these adjustments are much more noticeable. In order to effectively match nutritional needs of the flock/herd to the nutrition you provide, you must first be able to quantify both what the flock/herd needs and nutrient content of the forage and/or feed you are providing.

Quantifying Nutritional Requirements

Fortunately, the nutritional requirements of small ruminants are well documented, and the data is fairly easy to access. That said, there is no magic book that tells you exactly what your animals need at a given point in time. Rather, you as a manager must be able to accurately classify your

animals and then find that classification and the corresponding nutritional requirements in the data. For mature females there is a maintenance requirement (based on weight, no gestation, no lactation) and then nutritional demands change as she moves through flushing, early gestation, late gestation, early lactation, and late lactation. During gestation and lactation there are further adjustments based on the number of lambs/kids. For young, growing, animals nutritional demands are based on maintenance and rate of growth.

Alabama Cooperative Extension has a very nice publication featuring the [nutritional requirement tables - https://www.aces.edu/wp-content/uploads/2018/11/ANR-0812.pdf](https://www.aces.edu/wp-content/uploads/2018/11/ANR-0812.pdf). The image below is an excerpt from that publication.

As you can see, nutritional demands are generally expressed in terms of pounds per day of a specific nutrient, not pounds per day of feed. The nutrients of greatest concern are energy (expressed as Total Digestible Nutrients or TDN) and protein, as they are needed in the largest amounts. For brevity’s sake I’ll focus only on those two nutrients, but there are others which are essential.

Quantifying Forage Nutrient Content

The following comments will be made with conserved forages, like hay, in mind but all the concepts can be applied to green/growing forages also.

You, nor I, or anybody else can look at (or smell) hay and accurately determine its nutrient content.

At best, visual appraisal can tell you something about weed content and drying/storage conditions of the hay – very little to nothing about nutrient content.

Forage nutritive value can only be accurately quantified through laboratory analysis. The sampling process is very simple and there are many laboratories available to do the analysis. Contact your county’s UF/IFAS Extension, Agriculture Agent for assistance collecting and submitting samples for analysis.

When you receive results back from the laboratory you will, at the very least, know how much TDN and protein are in your hay. Depending on the laboratory and test requested, you may also know much more. **This information can then be used to determine how much and what kind of supplementation is needed to accompany the hay.** In the event you have multiple cuttings of hay available you can use the information allocate the highest quality hay at the time or to the animals with the highest nutrient demands, thereby lessening the overall need for supplementation.

Good plans and sound management decisions require a firm foundation in data. If you are not already doing so, I highly encourage you to take the time to get the data you need. Use the available resources to better understand the changing nutritional demands of your animals and have your feedstuffs, particularly hay, analyzed so that you know empirically to what extent it can meet the nutritional needs of your flock/herd.

Table 1. Daily Nutrient Requirements of Sheep (Per Animal) (cont.)

Body Weight (lb.)	Avg. Daily Gain (lb.)	Dry Matter (lb./head ^a)	% Body Weight	Total Protein (lb.)	TDN ^b (lb.)	Calcium (lb.)	Phosphorous (lb.)	Vitamin A (IU)	Vitamin E (IU)
Last 4 Weeks of Gestation (130%–150% Lambing Rate Expected) (cont.)									
176	0.40	4.2	2.4	0.44	2.4	0.014	0.013	6800	28
198	0.40	4.4	2.2	0.47	2.5	0.014	0.014	7650	30
Last 4 Weeks of Gestation (180%–225% Lambing Rate Expected)									
110	0.50	3.7	3.4	0.43	2.4	0.014	0.007	4250	26
132	0.50	4.0	3.0	0.45	2.6	0.015	0.008	5100	27
154	0.50	4.2	2.7	0.47	2.8	0.017	0.010	5950	28
176	0.50	4.4	2.5	0.49	2.9	0.018	0.013	6800	30
198	0.50	4.6	2.3	0.51	3.0	0.020	0.014	7650	32
First 6–8 Weeks of Lactation, Suckling Singles									
110	-0.06	4.6	4.2	0.67	3.0	0.020	0.013	4250	32
132	-0.06	5.1	3.9	0.70	3.3	0.020	0.014	5100	34
154	-0.06	5.5	3.6	0.73	3.6	0.020	0.015	5950	38
176	-0.06	5.7	3.2	0.76	3.7	0.021	0.016	6800	39
198	-0.06	5.9	3.0	0.78	3.8	0.021	0.017	7650	40
First 6–8 Weeks of Lactation, Suckling Twins									
110	-0.13	5.3	4.8	0.86	3.4	0.023	0.016	5000	36
132	-0.13	5.7	4.3	0.89	3.7	0.023	0.017	6000	39
154	-0.13	6.2	4.0	0.92	4.0	0.024	0.018	7000	42
176	-0.13	6.6	3.8	0.96	4.3	0.025	0.019	8000	45
198	-0.13	7.0	3.6	0.99	4.6	0.025	0.020	9000	48



RECIPE CORNER

Easy Goat Enchiladas

- 12 tortillas
- 1 onion, chopped
- 3/4 lb grated cheddar cheese
- 2 cans cream of chicken soup
- 1 pint sour cream
- 3 jalapeno peppers
- 2 cups cooked goat meat

Directions: Mix sour cream and soup in a saucepan; add chopped peppers. Heat mixture until bubbling. Heat tortilla in hot oil one at a time. Add onions, cheese, goat meat, and a spoonful of soup mixture in the center of each tortilla; roll and place in a large baking dish. Pour the remaining soup mixture over the enchiladas; top with remaining grated cheese. Bake at 400 degrees until the cheese is melted. Enjoy!

Announcements

2nd annual UF Buck Test

Pre-registration opens (online): March 17, 2025

Pre-registration due: May 27, 2025

Drop-off date: June 9, 2025 @ **9AM – 3PM EST**

Visit our website: animal.ifas.ufl.edu/smallruminant/buck-test/

Contact Us:

Clay Whitehead, jacobcwhitehead@ufl.edu, (904) 796-0441

Dr. Brittany Diehl, bn.diehl@ufl.edu, (352) 294-4319

5th annual UF Ram Test

Pre-registration opens (online): March 17, 2025

Pre-registration due: May 27, 2025

Drop-off date: June 7, 2025 @ **7:30 - 10AM EST**

Visit our website: animal.ifas.ufl.edu/smallruminant/ramtest/

Contact Us:

Clay Whitehead, jacobcwhitehead@ufl.edu, (904) 796-0441

Dr. Brittany Diehl, bn.diehl@ufl.edu, (352) 294-4319

UF/IFAS Small Ruminant Short Course

Save the date: October 10-11, 2025

Come join us for our 4th annual conference and trade show in Gainesville, FL— a tremendous opportunity to be educated and to network with industry professionals and producers.

UF Ram & Buck Test Sales will also take place during this event!

Contact Us:

Dr. Brittany Diehl, bn.diehl@ufl.edu, (352) 294-4319

Matti Moyer, matti.moyer@ufl.edu, (352) 392-3889

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Around the State...



Check out our
newest IFAS EDIS
publication online!



Guide to Performing McMaster's Fecal Egg Count for Small Ruminants¹

Bridget Stice, Laura H. Bennett, Christa L. Kirby, Allison L. Williams, and Brittany N. Diehl²

Abstract

This article is meant to serve as a general guide to perform quantitative fecal egg counts on grazing small ruminants, specifically sheep and goats. This tool is utilized to estimate the extent of pasture parasite burden as well as individual animal parasite burden, and to determine the efficacy of dewormer or anthelmintic treatment. Producers should discuss interpretation of fecal egg counts and treatment decisions with their veterinarians, because a valid veterinarian-client-patient relationship (VCPR) is legally required to make such recommendations.



UF/IFAS EXTENSION VOLUSIA COUNTY ON-FARM SMALL RUMINANT (GOATS AND SHEEP) PASTURE HEALTH WORKSHOP



March 5th 2025
10:00am- 2:30pm

\$15 includes
Class Materials
and Lunch!

Register at:

<https://EventBriteOn-FarmSmallRuminantTickets>

Topics:

- Hoof Trimming
- Forage Management
- Parasite Management
- Equipment Calibration
- Toxic Weed Identification



Event Contact: Ashley at 386-822-5778

**Location: Innovation Arabians Farm
2552 Tomoka Farms Rd/ Port Orange, FL**

In accordance with the Americans with Disabilities Act and Section 296.26, F.S. persons needing accommodations or an interpreter to participate in the proceeding should notify University of Florida/IFAS Volusia County no later than 72 hours prior to the meeting at 386-822-5778

Equal Opportunity Institution



2025 University of Florida Buck Test & Sale

We invite you to participate in the **2025 University of Florida Buck Test and Sale**. We are very excited to continue this unique program and to work with goat producers to quantify the desirable qualities of their bucks. We hope that this program will provide value to your operation.

This program is designed to standardize environmental conditions in order to evaluate individual buck performance, provide a source of high-quality performance tested bucks to producers, offer educational opportunities for the improvement of the industry, and facilitate networking among producers.

Important dates:

- May 27 Pre-registration deadline
- June 9 Bucks arrive at UF Sheep Unit
- June 26 84-day gain test begins
- Sept 18 84-day gain test ends
- Oct 10-11 Small Ruminant Short Course & UF Buck Test Sale

We encourage you to consider consigning your bucks to the **2025 UF Buck Test and Sale**. Please contact us for further information or to consign animals to this program.

Registered and commercial bucks will be eligible for the test and sale. Eligible bucks must be born between 12/15/24 - 3/1/25 and weaned by 5/15/25.

For full program details and registration visit our website.
<https://animal.ifas.ufl.edu/smallruminant/buck-test/>

Program Coordinators

Clay Whitehead
(904) 796-0441
jacobcwhitehead@ufl.edu

Dr. Brittany Diehl
(352) 294-4319
bn.diehl@ufl.edu



2025 University of Florida Ram Test & Sale

We invite you to participate in the **2025 University of Florida Ram Test and Sale**. We are very excited to continue this unique program and to work with sheep producers to quantify the desirable qualities of their rams. We hope that this program will provide value to your operation.

This program is designed to standardize environmental conditions in order to evaluate individual ram performance, provide a source of high-quality performance tested rams to producers, offer educational opportunities for the improvement of the industry, and facilitate networking among producers.

Important dates:

- May 27 Pre-registration deadline
- June 7 Rams arrive at UF Sheep Unit
- June 19 84-day gain test begins
- Sept 11 84-day gain test ends
- Oct 10-11 Small Ruminant Short Course & UF Ram Test Sale

We encourage you to consider consigning your rams to the **2025 UF Ram Test and Sale**. Please contact us for further information or to consign animals to this program.

Registered and commercial rams will be eligible for the test and sale. Eligible rams must be born between 12/1/24 - 2/15/25 and weaned by 5/15/25.

For full program details and registration visit our website.

<https://animal.ifas.ufl.edu/smallruminant/ramtest/>

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