

# THE BLEAT

*A UGA Extension Newsletter for Middle Georgia Sheep and Goat Producers*



## Small Ruminants are taking off in Georgia

*UGA Extension  
Animal and Dairy Science*

Both goats and sheep are found all over the world, and were among the first animals domesticated by humans. They are social animals that like to graze and eat grass, but farmers may also give them hay and grain to eat. It is very important that they have lots of water to drink and shelter when weather is extremely hot or cold.

Though goat consumption in the U.S. is just beginning to take off, more people eat goat meat and dairy products than the meat and dairy products of any other animal worldwide. Georgia has the fourth-largest goat population east of the Mississippi River, and UGA Extension is here to serve this growing agricultural segment in our state.

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# EWV... E. COLI

by Brooklyn Wassel | ANR Agent | Pike County

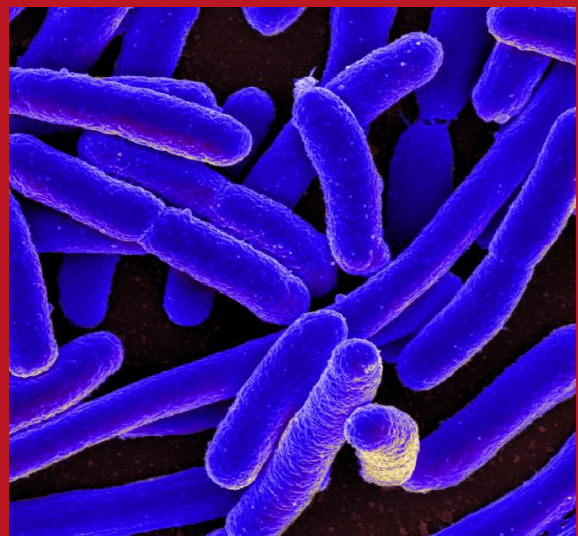
It seems to be common sense that water is essential and therefore required in order to have healthy, productive livestock, but is all water created equal? What happens if the tanks run low or cleaning falls to the bottom of the farm to-do list? It may seem like a tempting chore to put off, but in reality, it may be causing more than simply an aesthetic issue. Research conducted at Cornell University found water troughs to be a source of E. coli contamination when researching cattle in feedlots. While this is not comparing apples to apples, it does raise the question, is E. coli lurking in my water troughs?

We are used to talking about E. coli in the realm of human health, as it causes thousands of illnesses each year within the US, but what does it mean for our livestock? E. coli concerns typically cause an array of concerns for sheep and goat health from scours to septicemia, and to make matters worse, they can transform into human health concerns when E. coli is spread. Livestock naturally pick up E. coli from their environment and spread it largely through manure. When their environment has increased concentrations of this bacteria, animals continue to build up and deposit E. coli throughout the pasture system. These increases in the overall system can increase the risk of environmental E. coli concerns for the animals as well as the likelihood of it becoming a human health pathogen when working livestock or consuming undercooked meat.

Let's be honest, there isn't enough time in the day to clean water troughs around the clock or put them in front of life-threatening items on the to-do list. Thankfully, researchers found an inverse relationship between amount of water in the trough and amount of E. coli transmission between animals. More water meant less prevalent E. coli, so keeping tanks full and clean may be a sound, easy to accomplish, mechanism of decreasing E. coli in your system. This is just one more easy step that producers can take to have a healthy herd or flock in the pasture and healthy meat on the plate.



**"KEEPING TANKS  
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## NAVIGATING HIGH FERTILIZER PRICES

*Written by Shanna Reynolds | ANR Agent | Oglethorpe County*

For months, farming conversations have focused on skyrocketing fertilizer prices. A variety of factors have caused prices to more than double since last spring. Now Russia, which accounts for around 14% of global fertilizer exports, has suspended outgoing trade.

I wish this article was going to give farmers a magic bullet or say the end is in sight for these record-breaking costs. Unfortunately, I don't have that kind of news. The purpose of this article is to discuss some tried and true management practices that will help you make the most of your resources and address the use of poultry litter as a replacement for synthetic fertilizer. Consider these 5 recommendations when making difficult fertility choices this season.

1. Take soil tests and follow the recommendations. The purpose of a soil test is to find the most limiting nutrients to a plant's productive growth. Hay and crop fields should be tested annually and pastures every three years.

2. Lime! Soil pH affects the availability of nutrients in your soil. Without pH in an acceptable range, added fertilizers can be essentially worthless. Lime prices have not increased at the same level that we've seen in fertilizer and additional savings can come if you buy lime during the "off season."

It will generally take 6-12 months to see a substantial change in your pH, so timing of lime is flexible.

3. Match your fertilizer to your soil needs. Although it may be tempting to just add Nitrogen to a hay crop for example, your overall plant health and stand longevity is dependent on a balanced fertilizer application. When practical, splitting fertilizer applications throughout a growing season can help avoid nutrient losses.

4. Use precision agriculture technologies. Technology doesn't always have to be scary or expensive. Something as simple as adding a GPS "light bar" to your tractor can help you avoid overlap in the field, decreasing fertilizer and fuel costs. Improve fertilizer placement through variable rate applications and please calibrate your equipment! Your local Extension office can provide help calibrating sprayers and spreading equipment.

5. Lastly, consider alternative nutrient sources. Planting a legume to fixate nitrogen into the soil is a common practice used by livestock producers across the state. To no one's surprise in a state where commercial poultry operations make up the largest segment of agribusiness, poultry litter is another go-to alternative nutrient source.

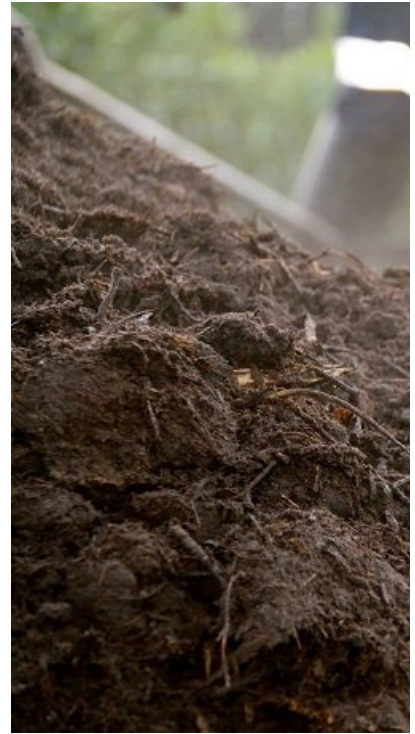
Poultry Litter is a combination of manure and bedding such as pine shavings that is scooped out when houses are cleaned. The nutrient content of litter can vary greatly depending on the clean-out technique, storage method and other factors. Litter can have its advantages at times, as long as you are getting what you pay for. The average nutrient composition of broiler litter is 3-3-2, meaning there is 60 pounds of nitrogen, 60 pounds of phosphate, and 40 pounds of potash in each ton. Due to the lack of consistency, we recommend testing the litter's nutrition content before use. You can have a sample of litter tested through your local Extension office often at little to no cost.

When looking at animal manure use, always consider previous application. Many hay and crop fields have high levels of phosphorous and potassium because of animal waste application in past years. Because of growing awareness of water quality problems in relation to phosphorous levels, it is recommended to only apply fertilizer sources that meet the needs of the plant.

Producers using poultry litter must practice sound soil fertility management to prevent nutrient imbalances as well as surface water and groundwater contamination.

Is poultry litter right for you? That depends on the price of litter in your area and your soil test results. If your soil is elevated in P and K, poultry litter will probably not be economical since you do not need those nutrients and they make up a large portion of the product. Soil testing, litter analysis, and proper estimation of yield goals are essential to calculate proper application rates.

Work with your fertilizer dealer and your Extension agent to navigate this difficult situation. Reach out to your local Extension office for help with soil testing, litter testing, or determining agronomic rates for specific crops.



"Soil testing, litter analysis, and proper estimation of yield goals are essential to calculate proper application rates."



# WHY SOIL SAMPLE?

by Hailey Partain | ANR Agent | Upson/Lamar Counties

To many, the extension office may seem like a broken record. Always saying “have you soil tested?” “You should soil test!” So why do we always say that?

Well, a soil test is the best tool for assessing soil fertility. “Soil testing is a chemical analysis that reveals any soil fertility issues that may be limiting production. The soil sample analysis provides a guideline for the amount of lime or fertilizer needed to correct deficiencies or imbalances in soil pH or available nutrients. These amounts are determined by the specific needs of the crop being grown. Furthermore, soil test recommendations from the Extension office are based on decades of scientific studies. Thus, by regularly testing the soil and following the recommendations, soil fertility can be maintained at levels that result in optimum productivity of the pasture or hayfield.”

Forages differ in the amount of nutrients required and the time of year in which the nutrients are needed. Your soil test will have the crop specific recommendations printed, based on the results of your test. The recommendations will tell you what to fertilize with, the amount to use, and suggested time of application.

For example, let’s say you have a common bermudagrass pasture or a bahiagrass pasture. The recommended pH is 6.0, anything below will require the field to be limed. The recommended nitrogen is 75-125 pounds per acre.

For pastures not intensively grazed the recommendation will be to apply that 75-125 pounds but for intensively grazed pastures that recommendation will increase to 125-175 pounds. If excess forage is common under grazing conditions, the recommendation will be to split the pasture in half and apply nitrogen to only one section in early April, and to the remaining apply nitrogen in July or August, dependent upon the amount of forage that will be utilized.

Soil sampling test results will give you the base line of what you are currently working with, and they will give you the recommendations to improve the fertility.

So, just like in most educational presentations, the more someone says something, the more important that statement is. “Soil test! Soil test! Soil Test!”



**"HAVE YOU SOIL TESTED?"**

**"YOU SHOULD SOIL TEST!"**

**"SOIL TEST! SOIL TEST!  
SOIL TEST!"**



# SMALL RUMINANTS AT FORT VALLEY STATE UNIVERSITY

*Fort Valley State University | Agriculture Research Program*

Since 1986, GSRREC scientists have studied reproductive performance, embryo transfer technology, forage utilization and nutritive efficiency, lactation physiology, and gastrointestinal parasitology in goats. Small ruminant scientists, producers, and individuals interested in goat production from all over the world visit GSRREC to learn about our research programs.

Current programs include biological control of internal parasites, evaluation of basic roughages and dietary supplements for dairy and meat goats, development of year-round grazing systems, genetic-marker assisted selection for internal parasite control in sheep, invasive vegetation management with sheep and goats, breed characterization and genotype x environment interaction studies with meat goats and sheep, improving meat goat management methods, improving meat quality using pre- and post-slaughter methodologies, developing value-added meat and dairy products, and food safety.

One of the most important findings in dairy technology research at FVSU is that goat milk cheeses can be frozen-stored and then can be marketed later during the off-season. The traditional belief is that goat cheeses cannot be frozen because of quality deterioration, but our research has proven that it can be done if parameters are tightly controlled. This finding is very important because the seasonality of goat milk production has limited dairy goat farmers' ability to produce a year-round supply of goat products, which is needed for consistent marketing and the survival and profitability of their businesses. This can help sustain the struggling dairy goat industry, as well as food scientists and processors, and consumers. Future dairy technology research will focus on developing goat milk infant formulas, which will be important not only for patients and infants allergic to cow milk, but also for continued development of a sustainable and profitable dairy goat industry.

## Students enrolled in meat science and product technology courses receive hands-on training in:

- Preharvest Handling of Animals
- Stunning
- Slaughter
- Fabrication
- Meat Quality Assessment
- Product Development Procedures

## Students enrolled also learn the principles of Food Safety.

A state-of-the-art meat technology facility was built on the FVSU campus in 1998 to assist in animal science undergraduate and graduate instruction, to establish and maintain an internationally recognized chevon (goat meat) technology research program, and to provide service to the community. Students enrolled in meat science and product technology courses receive hands-on training on preharvest handling of animals, stunning, slaughter, fabrication, meat quality assessment, and product development procedures. Students also learn the principles of food safety. Current meat research projects focus on evaluating pre- and post-slaughter methodologies that improve chevon quality and food safety. A major thrust is on the development of value-added products using chevon to improve public perception and expand the existing market for goat meat. The chevon technology program at GSRREC is now regarded as one of the leading goat meat research programs in the nation.

FVSU is the lead institution for the American Consortium for Small Ruminant Parasite Control (ACSRPC), an international research group dedicated to finding non-chemical methods of controlling gastrointestinal nematodes in sheep and goats.

Parasitology research at GSRREC and the 25 other institutions of the ACSRPC have greatly impacted small ruminant producers in the US and overseas by reducing dependence on expensive, ineffective anthelmintic drugs.

In addition to research, the Center's ongoing demonstrations, seminars and workshops provide producers and county agents across the country with the latest information on goats and other small ruminants, while its expanding library features slide and video presentations and numerous books, journals and articles. The facility's popular GSRREC Newsletter reaches over 3,000 people in the Americas, the Caribbean Basin, Europe and Asia. Outreach activities at the Meat Technology Center include providing custom slaughter services to farmers in the community, training very small producers and processors on food safety principles, and advising goat producers on pre-harvest management and post-harvest methodologies to improve chevon quality, marketability, and food safety.

The Center features a main building with offices and conference room, milking parlor with Grade-A creamery, photoperiod rooms, four

barns, loafing pens, kid nursery, surgical suite, grazing pastures, feed mill, storage facilities, and laboratories. The Meat Technology facility has a state-of-the-art sensory laboratory in addition to food science and chemistry laboratories. The laboratories are equipped with near-infrared reflectance spectroscopy (NIRS), high performance liquid chromatography (HPLC), texture analysis, and gas chromatography-mass spectrometry (GC-MS) units, a VarioMax mineral analyzer, and spectrophotometer, among others. Additional laboratories are in the Stallworth Research Complex, including muscle biochemistry, reproductive physiology and cell biology, nutrition and lactation physiology, parasitology, and forage quality laboratories, as well as a computer laboratory.

Currently, Center personnel maintain a goat herd of 400 animals, mainly Alpine, Saanen, Spanish, Boer, and Kiko breeds. Breeding bucks and does are used for both dairy and meat production research and management demonstrations, including performance evaluations designed to provide breeders with information on genetic potentials. The Center also houses flocks of sheep as a part of a project to improve production systems.





# **SOMEONE CALL A BARBER; IT'S TIME FOR A CUT**

**BY HAILEY PARTAIN | ANR AGENT | UPSON/LAMAR COUNTIES**

## **Shearing**

What does it mean to shear a sheep? Shearing means to cut or clip the hair or wool from a small ruminant animal. It does not usually hurt the animal, when done in a proper fashion. It really is just like getting a hair cut!

Is it easy to do? Not necessarily, it takes some skills and practice to insure that the animal is shorn quickly and efficiently. Some farms may shear their own herd, but many bring in professional sheep shearers to get the job done. Now, there is a dwindling number of qualified sheep shearers, so many states offer annual sheep shearing schools.

How often do sheep typically get sheared? Usually they will shear a heard once a year. That can be before lambing (depending on the season) or in the spring before the heat of the summer is upon the herd. Now there are some breeds that may get sheared multiple times a year, those are typically ones with longer fleece lengths.

## **Skirting**

What is skirting? It is when the undesirable parts of the fleece are removed for the bulk of the fleece to allow for a cleaner product. Some of those undesirable parts could be tags, lower leg wool, and the groin and belly wool. Tags are pieces of wool that have mud, dirt, or fecal matter attached to it. Skirting can be done before shearing, to start the fleece off cleaned, during shearing, while the fleece is still partly attached to the animal, or after the fleece has been completely removed. Ever shearer has their own method of what works best for them.

## **Protection**

Freshly shorn sheep need protection from the elements. It can take up to six months to grow to an appropriate length for proper insulation. So, if sheep are shorn and the temperatures drop, increased feed and shelter could be a necessity. Sheep should not be shorn in the winter, if proper accommodations are not available.

## **Hair Sheep and Goats**

Hair sheep and goats do not typically require shearing, but the need can arise depending on circumstances. Many may shear them in preparation for sales, and if they are utilized as a 4-H or FFA livestock project.



# WHAT ARE GCLA & GCGPA

Sarah Dyer | ANR Agent | Dade County

Being a small ruminant producer might be something you do for fun, for the love of livestock, as a side hustle, or for some, even to make a living. Regardless of the reason you raise sheep or goats, you probably think about how to market your lambs or kids each year. There are various ways to market your sheep or goats, depending on what your end goal is. Some folks raise small ruminants to market for meat consumption, some raise them as pets, and some raise lambs & goats for youth show projects. This article is geared towards those raising lambs and goats for the youth livestock show world.

There are two great organizations in the state of Georgia for producers of show-quality Georgia born and bred lambs and goats, the Georgia Club Lamb Association and the Georgia Club Goat Producers Association, respectively. Both organizations aim to recognize breeders of Georgia born and bred livestock, and to highlight and give back to exhibitors who show Georgia born and bred livestock from those breeders.

The Georgia Club Lamb Association (GCLA) has been established for many years. GCLA's mission is to "provide special award programs, educational services, and scholarship opportunities to 4-H and FFA youth who exhibit GCLA sheep and assist the breeder membership in the production and marketing of superior sheep." The GCLA hosts various shows each year, including the Heartbeat of the South in Perry, GA each July, and the Final Showdown each October. At these shows, GCLA recognizes breeders who are members of the association, and awards exhibitors showing lambs from these breeders. Exhibitors can accumulate points throughout the season by attending GCLA Sanctioned Shows. A major benefit of being a breeder member of the GCLA is the marketing support. If you are a breeder member of GCLA and you have lambs for sale, GCLA will share on its Facebook page when your barn is open for viewing or when your sale date is. Additionally, the value in showing a Georgia born and bred lamb from a GCLA breeder is advantageous to exhibitors, and is a factor when purchasing lambs for their show string each year.

The Georgia Club Goat Producers Association (GCGPA) is a fairly new organization. The association kicked off its first season in summer of 2021. The GCGPA strives to recognize breeders of Georgia born and bred goats, and the exhibitors across the state who show goats from those breeders. In October 2021, GCGPA incorporated the inaugural GCGPA Georgia Born & Bred (GBB) show into the State Market Goat Show, and again in February 2022 within the State Breeding Doe Show. They were able to give back to the exhibitors showing GCGPA GBB goats by awarding substantial prize money and show supplies to the Top 5 Overall at each show. The association is continuously improving and working towards more ways to recognize Georgia goat breeders and exhibitors. Being a breeder member of GCGPA will gain you marketability of your kid-crop. Exhibitors who show GCGPA enrolled goats bred by GCGPA breeders will have the opportunity to show goats in the additional division at the state shows and win awards for accumulating points throughout the seasons. Knowing this, many exhibitors across the state are eager to ensure they have a GCGPA GBB goat on their show string this upcoming year.

To find out more information about the GCLA or the GCGPA, check out each association's Facebook pages and websites. The GCLA website is [www.gaclublamb.com](http://www.gaclublamb.com) and on there you can easily find all of the necessary information and forms to become a breeder member and begin reaping the benefits of being a part of the organization. The GCGPA website will be launched soon, but for now, follow GCGPA on Facebook at [www.facebook.com/georgiaclubgoatproducersassociation](https://www.facebook.com/georgiaclubgoatproducersassociation) and stay tuned for the association to announce the launch of their website where you will be able to find the forms and guidelines to becoming a breeder member.

I hope everyone's kidding and lambing season has been going great, and I wish all of you the best of luck as you prepare to market your livestock through whichever avenue you choose.





## HEARTY GOAT MILK QUICHE

Source: [www.meyenberg.com](http://www.meyenberg.com)

### Ingredients

- 1 9 inch unbaked pie shell
- 1/2 cup diced Swiss cheese
- 1/4 pound sliced bacon
- 2 cups Meyenberg Evaporated Goat Milk, or fluid goat milk of choice
- 3 eggs
- 1/4 teaspoon salt
- 1/8 teaspoon white pepper
- Sprinkle of nutmeg
- 1 teaspoon chopped chive

### Directions

Brush pie shell with white of one egg and prick well. Chop bacon into 1-inch lengths. Cook in heavy skillet, stirring constantly, until fat is almost rendered out, but bacon is not yet crisp. Drain on paper towel. Scald milk. Cool slightly, then beat together with remaining ingredients. Sprinkle bacon and cheese in bottom of pie shell. Pour the custard mixture over it. Bake for 35 to 40 minutes until top is golden brown. To test for doneness: insert knife in the center. If blade comes out clean, quiche will be firm all the way through when cooled.

Early recipes for quiche called for bacon and cream. Later cheese was added. When sautéed onions were included the dish became Alsacienne. Cool onions before adding. Other ingredients have gradually found their way into this dish such as tomatoes, nuts and braised endive. Serve lukewarm.



## HONEY GRILLED SHOULDER OF CABRITO

Source: *American Goat Federation*

### Ingredients

- 1 shoulder off goat - boned, rolled, and tied (3 ½ to 4 pounds)
- 1/3 cup honey
- ½ cup dry white wine
- ½ cup finely chopped onions
- 2 tablespoons grated lemon peel
- 2 tablespoons lemon juice
- 1 teaspoon salt
- ¼ teaspoon ground pepper
- ½ cup finely chopped fresh mint or
- 1 tablespoon dried mint

### Directions

1. Place goat meat in glass dish.
2. Combine remaining ingredients and pour over cabrito.
3. Cover and refrigerate several hours or overnight.
4. Place goat on pit over hot coals and grill 1 to 1 ½ hours.
5. Brush occasionally with marinade.
6. Any leftover marinade may be heated and served over sliced goat.
7. Makes 4-16 (3 oz) servings. serving.



# LEMON ORZO BOWLS WITH LAMB & TZATZIKI

## Ingredients

- Tzatziki Sauce
- ½ cup grated cucumber
- 1 teaspoon kosher salt
- 2 cloves fresh garlic, minced or grated
- ¼ cup fresh mint and dill leaves, chopped
- 1 cup full-fat Greek yogurt
- 1 Tablespoon lemon juice
- Orzo
- 1/2 pound orzo, uncooked
- 1 Tablespoon extra-virgin olive oil
- 1 large lemon, zested
- Lamb
- 1 Tablespoon extra virgin olive oil
- ½ medium onion, diced
- 2 cloves garlic, minced or grated
- 1 pound ground American lamb
- 2 teaspoons cumin
- 1 teaspoon dried oregano
- To Garnish
- 8 ounces feta cheese, cubed or crumbled
- Fresh dill
- Fresh mint
- Cucumbers, sliced
- Red onions, minced
- Cherry tomatoes, halved
- Lemon wedges

## Directions

1. Bring a large pot of salted water to a boil. Meanwhile, make the tzatziki sauce.
2. Place cucumber in a strainer and salt it with 1 tsp kosher salt. Let it drain for 20 minutes, then press out all of the excess liquids with the back of a spoon. Combine the cucumber with the remaining ingredients and refrigerate until ready to serve.
3. Add the orzo to the boiling water and cook for about 10 minutes, until al dente. Drain and drizzle with olive oil. Add lemon zest and season with salt and pepper, to taste.
4. While the orzo is cooking, heat 1 TBSP olive oil in a large cast iron skillet over medium-high heat. Add onion and cook until translucent, 2-3 minutes. Add garlic and cook 30 seconds longer, until fragrant.
5. Add lamb, cumin and oregano and season with a pinch of salt and pepper. Cook, breaking up with a spoon until fully cooked, about 8-10 minutes.
6. Serve over the orzo. Garnish with tzatziki, feta, fresh mint & dill, cucumbers, red onions, and tomatoes, as desired. Serve with lemon wedges on the side. Enjoy!





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