

UGA Extension Meriwether County ANR E-Newsletter

September 16, 2017

SMALL RUMINANTS

Using *Sericea lespedeza* as an Anthelmintic for Small Ruminants

If you raise sheep or goats you have no doubt heard of the use of *sericea lespedeza*, *Lespedeza cuneata*, as a forage for its anthelmintic quality. Researchers at Fort Valley State University (FVSU) and other universities, have worked to substantiate its impact on gastrointestinal nematodes, especially barberpole worm, *Haemonchus contortus*, the nematode of most concern in our area. This nematode is prevalent during warm and humid conditions, which makes it a problem for southeastern farmers for much of the year. Concerns regarding the well documented incidence of barberpole resistance to synthetic anthelmintics in Georgia sheep and goat herds, including some in Meriwether County, has led to the possible use of this forage as an alternative anthelmintic. *Sericea lespedeza* (SL) is just one of many plants that contain high amounts of the tannins that have shown results in reducing the numbers of parasitic nematode eggs and/or adults, including barberpole worms, in sheep and goats.

FVSU's work has focused on goat consumption of *sericea lespedeza* using both hay and a pelletized leaf meal. Terrill et al. 2004 looked at the use of *sericea lespedeza* hay as a feed for goats compared to a diet of bermudagrass hay. Goats that had acquired natural gastrointestinal nematodes were fed either a 0%, 25%, 50% or 75% *sericea lespedeza* hay diet. The 75% diet reduced the number of adult barberpole worms by approximately 75% which reflects the results of other studies.

In another study by Gujja et al. 2013 goats on a bermudagrass/bahagrass mix pasture were fed a supplement of either a 75% or 95% SL leaf meal pellet for 77 days. The pellets varied slightly in the ingredients in addition to SL but both showed a reduction in fecal egg counts (FEC). The reduction of FEC was 95% for the 95% pellet versus 84% for the 75% pellet. The 95% pellet also significantly reduced the number of adult barberpole worms.

At Louisiana State University Lange et al. 2006 fed SL hay to lambs that had either natural or induced populations of barberpole worms. Overall reduction in FEC for lambs fed SL hay was 77% to 86%. When SL hay was removed from the diet in this group FEC increased but still remained lower than the group fed bermudagrass hay.

Goats are more likely to graze SL in a pasture than other animals but the palatability of SL to other ruminants is increased by cutting it for hay. Using a pelletized form of SL as a supplement is an alternative option but may be more costly. The benefit from the tannins is not lost in either the hay or the pellets. Kansas State University found that the highest levels of tannins were in plants as they began to form flower buds so then may be the best time for cutting. Producers should always be aware of the nutritional value of their forages and hay. Below is a table that compares the nutritional composition of

sericea lespedeza (SL), bermudagrass (BG) and alfalfa (ALF) hay. In general, SL is a higher quality hay than bermudagrass but bear in mind that the level of tannins influences the palatability for different ruminants which will influence intake.

Hay Type	DM %	CP %	TDN %	CF %	NEm Mcal/kg	Vit A RE/kg
SL	92	14	54	30	1.2	8,000
BG	89	10	53	30	1.3	11,600
ALF	90	19	59	28	1.3	28,000

Dry Matter (DM) Crude Protein (CP) Total Digestible Nutrients (TDN) Crude Fiber (CF)
Nutritional Energy for Maintenance (NEm) Vitamin A (Vit A)

SL is a well-adapted crop for many areas of the country. In fact in some states it is considered a noxious weed. Below is what The UGA Center for Invasive Species and Ecosystem Health has to say about its pest status:

L. cuneata is considered an invasive weed in rangelands and grasslands of the Midwest and eastern United States, and is listed as a noxious weed in Kansas and Colorado. It is also listed on the Southeast Exotic Pest Plant Council's List as a Category 1 species, indicating that is known to be invasive and persistent throughout all or most of their range within the Southern Region.

https://wiki.bugwood.org/Lespedeza_cuneata

So SL will grow well in the southeast even on marginal land including acidic, infertile and eroded land. It is also drought tolerant. It will respond favorably though to management practices such as soil testing and soil preparation including liming to pH 6.0-6.5. So if you are interested in trying SL as a forage or for hay follow the recommendations below on establishment of SL from Georgia Forages:

Sericea lespedeza can be seeded on a prepared seedbed in the spring as soon as the last spring frost has passed. A cultipacker-seeder should be used to seed 15 – 20 lbs. of inoculated, hulled, scarified seed per acre. Sericea stands are slow to establish, so it is essential to apply a pre-plant incorporated herbicide. Do not cover the seed with more than ¼ in. of soil. Generally, sericea should not be grazed or cut for hay in the establishment year unless weather conditions have been excellent, resulting in rapid growth.

<http://georgiaforages.caes.uga.edu/species/SericeaLespedeza.html>

Another good source of cultural information for SL is NRCS:

https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/wvpmcpg7034.pdf

Using sericea lespedeza as a dewormer alternative is just one tool that small ruminant producers can use to manage gastrointestinal nematodes on their farms. Dealing successfully with the issue of dewormer resistance in barberpole worm populations will need the use of multiple strategies. In future issues other important and valuable practices for managing these pest will be covered.

References

Gujja, S, Terrill, T H, Mosjidis, J A, Miller, J E, Mechineni, J, Kommuru, D S, Shaik, S A, Lambert, B D and Burke, J M. 2013. Effect of supplemental sericea lespedeza meal pellets on gastrointestinal nematode infection in grazing goats. *Veterinary Parasitology* 191: 51-58.

Lange, K C, Olcott, D D, Miller, J E, Mosjidis, J A, Terrill, T H, Burke, J M and Kearney, M T. 2006. Effect of sericea lespedeza (*Lespedeza cuneata*) fed as hay, on natural and experimental *Haemonchus contortus* infections in lambs. *Veterinary Parasitology* 141: 273-278.

Terrill, T H, Dykes, G S, Shaik, S A, Miller, J E, Kouakou, B, Kannan, G, Burke, J M and Mosjidis, J A. 2009. Efficacy of sericea lespedeza hay as a natural dewormer in goats: Dose titration study. *Veterinary Parasitology* 163: 52-56.

UPCOMING LOCAL UGA PROGRAMS

Sheep and Goat Scrapie

Dr. Stan Crane of the Georgia Department of Agriculture will be here on September 19 at 6:00 PM to talk about scrapie disease, the national eradication program, how to get ear tags, and other topics. We will meet at County Line Café in Luthersville. For more information or to pre-register please contact Susan James at 706-672-4235 or scj24262@uga.edu

Managing Nuisance Wildlife

With Dr. Mike Mengak, Wildlife Outreach Specialist with the UGA Warnell School of Forestry and Natural Resources
Tuesday, October 3rd from 7:00-8:00 PM
Troup County Ag Center located at 21 Vulcan Materials Road in LaGrange, GA
Presented by Troup, Harris and Meriwether counties
For more information or to pre-register please contact Susan James at 706-672-4235 or scj24262@uga.edu

Hunting Lease Workshop: What's a Good One?

With Dr. Mark McConnell, Wildlife Outreach Specialist with the UGA Warnell School of Forestry and Natural Resources
Tuesday, November 14th from 7:00-8:00 PM
Troup County Ag Center located at 21 Vulcan Materials Road in LaGrange, GA
Presented by Troup, Harris and Meriwether counties
For more information or to pre-register please contact Susan James at 706-672-4235 or scj24262@uga.edu

Get Creative Series:

For more information or to pre-register for any of the Creative Series classes please contact Susan James at 706-672-4235 or scj24262@uga.edu

1. Creating Your Own Hand Crafted Artisan Soaps

Rena Abernathy of Thalia Farms and Apiary and maker of artisan soaps for over 16 years will demonstrate the process. Preregistration and payment is required along with safety glasses and long sleeves. Participants limited to 15. Cost is \$10.00.

Saturday, November 4th from 9:30 am-12:00 pm. The location is Thalia Farms and Apiary at 3005 County Line Church Road, Warm Springs GA.

2. Making Holiday Wreaths for Thanksgiving and Beyond

Susan James, ANR Agent for Meriwether County, will help participants create wreaths with natural materials collected from the garden and woods. Participants limited to 15. Cost is \$10.00. All materials will be provided except ribbon so participants are encouraged to bring any that they would like to use.

Saturday, November 11th from 9:30 am-12:00 pm.

3. Holiday Swags of Native Greenery

Susan James, ANR Agent for Meriwether County, will demonstrate how to create swags with natural materials collected from the garden and woods that can be used to decorate mantles, porches, doorways, etc. Participants limited to 15. Cost is \$10.00.

Saturday, December 2nd from 9:30 am-12:00 pm.

The classes for Holiday Wreaths and Swags will be held at the Meriwether County Extension office. We will be either at our present location down the hall from the Tax and Tag office on the Square in Greenville or we will be in our new location in the old Greenville Middle School building at 2100 Gaston Street in Greenville.

Managing Insect Pests of Forages with Pesticides

The class, taught by Susan James ANR Agent, will go over the various insect pests of annual and perennial forages grown for pasture and hay, including alfalfa, grasses and small grains. The different chemical modes of action (MOA) of recommended pesticides and their precautionary statements and personal protection equipment requirements will be discussed.

1 hour of recertification credit is offered for Georgia Private Pesticide Applicators, Commercial Pesticide Applicators in Categories 21 (Plant Agriculture) and 24 (Turf and Ornamentals).

For more information or to pre-register please contact Susan James at 706-672-4235 or scj24262@uga.edu

A BeeKeeper's class on a **"Year in the Life of a Honey Bee"** is in the works with Jim Quick, Master Beekeeper. Will keep you posted.