



This research has allowed producers to increase the profitability of sheep and goat farming by feeding or grazing the anti-parasitic plant sericea lespedeza as an alternative to expensive, ineffective anthelmintic drugs.

Use of sericea lespedeza (*Lespedeza cuneata*) for sustainable parasite control in small ruminants (sheep and goats)

Who cares and why?

Because of widespread prevalence of resistance of gastrointestinal nematodes (GIN) to commercially-available anthelmintics, exclusive use of these drugs for parasite control in small ruminants (sheep, goats, llamas and alpacas) is no longer sustainable long-term. Because of its high concentration of a unique type of condensed tannin, sericea lespedeza (*Lespedeza cuneata*), a low-input warm-season perennial legume well-adapted to the southern USA, has potential as a natural, non-synthetic alternative to anthelmintics for small ruminant parasite control. Whether fed in fresh (grazed) or dried (hay, leaf meal, pellets) forms, this plant has shown high activity against both GIN and coccidia in sheep and goats, greatly reducing the negative effects of these parasites in the animal. This research has generated greatly increased interest in expanded use of sericea lespedeza for natural parasite control in livestock by small ruminant producers, county agents, veterinarians, sheep and goat association leaders, animal and plant scientists and animal extension specialists throughout the U.S. and overseas.

What has the project done so far?

In a series of studies with goats and sheep of differing breeds, life stages (young, mature), and geographic regions of the southern and eastern U.S., including sericea lespedeza in the diet as fresh (grazed) or dried (hay, leaf meal, pellets) material has resulted in a reduction of GIN eggs and coccidial oocysts in feces (up to 97 percent), lower numbers of adult GIN in the animals' stomach and intestines (up to 70 percent), and reduced development of GIN eggs to infective larvae in simulated pasture conditions. In work with goats, gains in growing animals fed sericea hay or pellets were comparable or better than kids given grass hay or pellets. This work has resulted in the publication of more than 20 refereed journal articles, five proceedings papers and dozens of abstracts from presentations at regional, national and international scientific meetings. Through the activities of the American Consortium for Small Ruminant Parasite Control (ACSRPC), for which Fort Valley State University (FVSU) is the lead institution, the results of this project have been shared with thousands of small ruminant producers in hundreds of integrated parasite management (IPM) workshops nation-wide. In May, 2013, over 100 animal professionals and county agents from across the USA were certified as IPM trainers in an international conference at FVSU that included presentations from 20 IPM experts from 8 states in the southern and eastern US and 5 overseas countries. These Certified IPM Trainers are now expanding the footprint of the ACSRPC by holding producer workshops in previously underserved areas throughout the nation. This work has reached an even wider audience world-wide through producer-oriented publications and an FVSU-developed IPM Train-the-Trainer short course that are available on the ACSRPC web site (ACSRPC.org).

Impact Statement

By using sericea lespedeza as a low-input forage for small ruminants, farmers can reduce their drug costs for parasite control by approximately 50 percent.

Research has shown that sericea lespedeza can be a cost-effective natural dewormer and nutritional feed resource for sheep and goats whether grazed or fed as hay, leaf meal, or pellets.

What research is needed?

Additional research is needed on the long-term effects of feeding or grazing sericea lespedeza as a component of an integrated parasite control program for sheep and goats.

Additional information on the potential use of preserved (ensiled) sericea lespedeza as a natural anti-parasitic feed for small ruminants is needed.

Want to know more?

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[Additional Links: http://www.umes.edu/ard/Default.aspx?id=46285](http://www.umes.edu/ard/Default.aspx?id=46285)

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