

## LEARN MORE ABOUT

- Gastrointestinal nematode parasites and their life cycle.
- Smart dewormer use.
- Integrated parasite control practices including:
  - Pasture and grazing management
  - The FAMACHA® System
  - Fecal Egg Counting
  - Selective breeding for resistance to GIN parasites
- Use of estimated breeding values (EBV) for genetic improvement through participation in the National Sheep Improvement Program (NSIP).
- Research on efficacy of a cranberry vine feed supplement as an alternative method for parasite control during the periparturient period.



Photo courtesy of Dr. Katherine Petersson

For More Information:  
<http://web.uri.edu/sheepngoat>

View our online videos & other resources

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## *Building on success:*

*Expanding opportunities for sustainable management of small ruminant gastrointestinal parasites*



Photo courtesy of Randell Stevenson, University of Rhode Island

**A Northeast SARE Research and Education Project**  
**LNE19-381**

March 2021

## Project Background

Gastrointestinal nematodes (GIN), especially the barber pole worm (*Haemonchus contortus*), are one of the top health concerns of sheep and goat producers in the northeast. GIN parasites are a primary concern when raising sheep and goats on pasture and can cause poor growth, anemia, and death in severe infections.



Heavy infection with Barber pole worm (*H. contortus*) in the abomasum of a sheep. Photo courtesy of Dr. Anne Zajac, Virginia Tech

Gastrointestinal nematodes (GIN) are associated with increased mortality and reduced performance of small ruminants (SR) in pasture-based operations. In addition, females are more susceptible to GIN during the periparturient period (late gestation to early lactation) because of immune suppression.

Producers struggle to control GIN in lambs and periparturient ewes because of increasing parasite resistance to commercial dewormers, a lack of effective alternatives to anthelmintics, and, in most cases, an inability to accurately identify individuals that are genetically less susceptible to infection. Effective tools for parasite control exist; the challenge is making these techniques widely available.

<http://web.uri.edu/sheepngoat>  
Project updates and events

## Project Components

This three year project will continue a successful Online FAMACHA® Certification program with updated and condensed informational videos, and a Spanish language version. A facilitated group class format is also available to further assist under-served audiences.

Workshops will be offered with a focus on selective breeding through the use of the estimated breeding values (EBV) for parasite resistance. Producers will be introduced to the benefits of enrolling in the National Sheep Improvement Program (NSIP) and supported with fecal egg count (FEC) analyses. Ultimately, a multiple-trait selection index that includes multiple GIN resistance traits as well as other economically important traits will be developed for pasture-based sheep operations enabling NSIP producers to select replacement animals that excel in traits affecting health and production simultaneously.

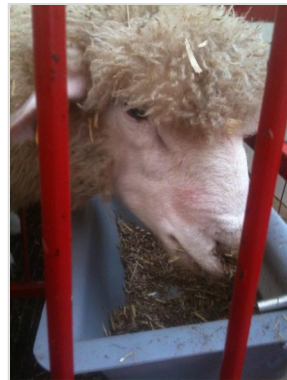


Photo courtesy of Carly Barone, University of Rhode Island

Research investigating the anti-parasitic effects of cranberry vine (CV) on GIN infection in ewes during late gestation through early lactation will be conducted as part of this project. CV has demonstrated anti-parasitic efficacy in previous Northeast SARE Projects (LNE10-300 & LNE15-342) and this research will include the continued development of a pelleted feed supplement.

Project Duration: May 2019—October 2022

## How to Participate

### Online Training Resources

- Visit our website, <http://web.uri.edu/sheepngoat> to view resources including [videos & factsheets](#) on Integrated Parasite Control, FAMACHA® Scoring, and Fecal Egg Counts. A Spanish language version will be available in 2021!
- Online FAMACHA® certification can be obtained through a 4-step process.
  1. View 2 required informational videos on Integrated Parasite Control & FAMACHA® scoring and complete an online post-video summary.
  2. Practice the Cover, Push, Pull, POP! technique.
  3. Record and send a video performing the FAMACHA® scoring technique.
  4. Follow up with project staff through email to ensure learning and proper technique.  
*Facilitated group classes available upon request.*
- Regional, in-person, workshops on integrated parasite control/FAMACHA® training available upon request.

### Selective breeding for resistance to GIN

Northeast sheep and goat producers; NSIP members selling animals to the Northeast:

- Attend an NSIP workshop and learn more about the benefits of enrolling in NSIP and estimated breeding values (EBV).
- Seedstock producers: Receive assistance in identifying the most parasite resistant sheep and goats in your flock/herd.
- New and current NSIP members: Generate FEC, FAMACHA® and other economically important EBVs for superior production traits.  
Project supported FEC analysis is available!

### Program Evaluation

- Take an anonymous online survey of existing parasite control practices for continued needs assessment. Visit our website for the link.
- Complete annual follow-up surveys to provide feedback on knowledge gained and practices adopted or improved as a result of this project.