News from Northern New York Agricultural Development Program

PRESS RELEASE: May 30, 2014

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Sheep at Downing Acres, Burke, NY. Photo: Beth Downing

NNYADP Renews Funding for Parasite Control Project, Releases 1st-Year Results

The Northern New York Agricultural Development Program (NNYADP) has released early recommendations from a Cornell University team evaluating a parasite control strategy for barber pole worm, a major cause of death in sheep and goats.

Haemonchus contortus - the stomach parasite commonly known as barber pole worm - is a major cause of death in small livestock and has become increasingly resistant to traditional anthelmintic – deworming – treatments.

“Many North Country sheep and goat farmers already report barber pole parasite resistance to multiple conventional deworming medications,” says Betsy Hodge, livestock educator with Cornell Cooperative Extension of St. Lawrence County.

With funding from the farmer-driven NNYADP, Drs. Michael L. Thonney and tatiana Stanton with the Cornell Sheep and Goat Program and Dr. Dwight Bowman and Janice Liotta of the Cornell School of Medicine Department of Microbiology and Immunology worked with North Country livestock producers and Hodge to test the use of copper oxide wire particles, or COWP, as a deworming method for sheep and goats.

Copper oxide wire particles are a slow-dissolving form of copper. The research team tested different dosage levels of COWP in pastured lambs and kids on two sheep farms and one goat dairy farm in NNY to study their effect on fecal egg counts for barber pole worm. The dosage for using COWP is particularly important with sheep which are susceptible to copper toxicity.

“The early results suggest that 0.5 grams of COWP per animal can be effective at controlling barber pole worm in growing lambs and that 2 grams per doe is as effective as higher levels of COWP to reduce worm loads by 50 percent in lactating does,” Thonney says, “however, we would like to replicate the success on more farms statewide, including in Northern New York, to provide definitive recommendations.”

Stanton stresses producer education to learn how to avoid the expense of unnecessary overdosing.

“Treatment with copper oxide wire particles appears to offer livestock producers another tool for coping with barber pole worm in pastured animals, however, it is important for producers to learn how to properly develop dosing strategies and to understand that COWP is not effective against all types of worms.”

Field trials with 45 dairy goat does at Asgaard Farm and Dairy, a diversified livestock farm in AuSable Forks, evaluated three dosage levels.

“The treatment appears to be effective at well-targeted, cost-effective doses and provides us another way to maintain our animals’ health by reducing their exposure to parasites,” says Asgaard Farm and Dairy owner Rhonda Butler.

Butler actively uses rotational grazing to keep the goats on fresh pasture and uses multi-species grazing by the goats and cows to also control the parasite load on her grazing land.

Hodge says a number of factors may have kept the worm load low in the trial with sheep at Downing Acres, a 200-acre, 200-ewe sheep farm in Burke, NY, while the COWP treatment helped reduce loads in the sheep at the St. Lawrence County Cornell Cooperative Extension Learning Farm in Canton, NY.

“Worm infection was low in the majority of lambs at Downing Acres and actually decreased in all groups over the 28 days of the study. This may have been because of flock genetics for worm resistance, low animal density on pastures, or the large amount of creep feed the lambs were consuming. With fecal egg counts so low, there was no effect of the level of COWP in the Downing flock,” Hodge says.

“In contrast, the worm challenge at the Extension Learning Farm was high and lambs receiving .5/head or 1 gram/head of COWP two weeks prior to weaning had substantially lower levels of worm eggs than did control lambs over the 42 days they were studied,” Hodge notes.

Beth Downing says, “Sheep farming is our livelihood and parasites can take a heavy toll on breeding ewes and on weight gain in lambs. We use a combination of strategies to keep our sheep healthy and control parasites, including rotational grazing, deworming, keeping good records, and participating in research to learn new ways.”

Downing Acres is also participating in a USDA study evaluating if some animals, particularly the Katahdin breed of sheep, are naturally more parasite-resistant.

The Parasite Management Innovations for NNY Sheep and Goat Producers Project will continue with NNYADP funding in 2014.

Learn more about small livestock and other agricultural sectors in Northern New York at www.nnyagdev.org or contact Cornell Cooperation Extension in Clinton, Essex, Franklin, Jefferson, Lewis or St. Lawrence County.