Animal

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1. Accession	Agency Identification No.	5. Work Unit/Project No.	6. Status
0224778	2. NIFA 3. LA.B	**LAB94083**	**Annual Report**

7. Title

A Systems Approach to Control Gastrointestinal Nematodes in Organic Small Ruminant Production

12. Investigator Name(s) (Last Name and Initials)

Miller, J. E.; Burke, J. M.; Terrill, T. H.

20. Termination Date 09/30/2015

40. Period Covered (mo/da/year): 01/01/2011 TO 12/31/2011

Outputs:

A station report was presented at the annual meeting of USDA SCC-81, Corpus Christi, TX and annual meeting of USDA NCERA-214, Spearfish, SD.

Outcomes/Impacts:

Ewes on the control farmlet continuously grazed grass pastures and were supplemented. Ewes lambed in March and lambs were weaned in June. Lambs were supplemented during summer months. Ewes and lambs were selectively dewormed with anthelmintics based on FAMACHA. The treatment farmlet used sericea lespedeza (SL) supplement feeding and selective deworming with copper oxide wire particles (COWP). Random grass samples were clipped and washed. Larvae were collected, counted and speciated. Fecal egg count (FEC) was similar between control and treatment ewes for the first 4 weeks of lactation; subsequently, control FEC increased significantly. This difference remained consistent throughout lactation, indicating that SL effectively reduced FEC. At weaning, when SL supplementation stopped, treatment FEC increased indicating that control of FEC was abrogated. Subsequently, throughout summer/fall grazing, FEC was relatively low and remained similar between groups. Blood packed cell volume (PCV) was similar between groups at all times. At weaning, 7 control and 3 treatment lambs were dewormed; subsequently, FEC remained similar between groups through week 5, at which time the treatment FEC decreased and remained significantly lower than the control FEC for the duration of the summer grazing period. There were a total of 50 and 20 dewormings for control and treatment lambs, respectively. PCV was similar between groups through week 5; subsequently, control group PCV decreased and remained significantly lower than the treatment group. This indicated that SL grazing and supplement effectively reduced FEC and infection was less severe in the treatment group. Grass larvae have been recovered and preserved pending future processing. Chlamydospores from an isolate of Df were acquired and mass cultured to propagate chlamydospores.

Publications:

No Publications Reported

Participants:

J.E. Miller (PI), LSU AgCenter; J.M. Burke, USDA-ARS, Booneville, AR; and T.H. Terrill, Fort Valley State University.

Target Audiences:

Animal and veterinary science professionals and small ruminant producers

Project Modifications:

Nothing significant to report during this reporting period.

Approved (Signature)	Title	Date
Glyn H Ehn		3-23-12