Sericea Lespedeza--a Natural Dewormer for Sheep and Goats

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Sericea lespedeza- a natural dewormer for sheep and goats

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Introduction Infection with gastrointestinal nematodes (GIN) , particularly *Haemonchus contortus* , is a constraint to economic goat and sheep production throughout the world . Widespread anthelmintic resistance in small ruminant GIN has led to development of alternative control methods , including use of plants containing condensed tannins . Sericea lespedeza [SL , *Lespedeza cuneata* (Dum .-Cours) G . Don] hay has been evaluated as an anti-parasitic agent in a number of trials with sheep and goats .

Materials and methods In a pen trial , Shaik et al (2006) fed unground SL and bermudagrass [BG , *Cynodon dactylon* (L) Pers .] hays at 75% of the diet to goats artificially-infected with *H . contortus* . Fecal and blood samples were collected weekly to determine fecal egg count (FEC) and packed cell volume (PCV) , respectively . Goats were slaughtered at the end of the 7-wk trial , with adult worms in the abomasum and small intestine recovered , counted , and identified to species . Lange et al (2006) completed a similar trial with naturally and artificially-infected sheep . To determine level of SL in the diet needed to control GIN , Dykes et al (2006) fed ground SL hay to naturally-infected goats at 0 , 25 , 50 , and 75% of the diet , with the remainder made of up 25% concentrate and 75 , 50 , 25 , and 0% ground BG hay . To determine effect of processing SL hay for pellets on efficacy against goat GIN , Terrill et al (2007) fed goats ground SL , pelleted SL , or ground BG hay (75% of the diet) . In each experiment , fecal and blood samples for FEC and PCV determination , and adult worm recovery from slaughtered animals were completed as described previously .

Results and discussion Unground SL hay reduced FEC compared with BG in both goats (79 .7% ; Shaik et al . , 2006) and sheep (67-98% ; Lange et al . , 2006) . Blood PCV improved in SL-fed goats , and worm burdens were lowered by SL hay feeding , with the primary effect on *H . contortus* in both goats and sheep (69 .4 and 67 .2% , respectively) . In goats , SL feeding also reduced development of ova into infective larvae in fecal cultures compared with BG . In a dose titration trial , Dykes et al (2006) reported reduced FEC and increased PCV in goats fed ground SL hay at 75 and 50% of the diet , but not at 25% . Goats fed the 25% SL ration reduced adult *H . Contortus* compared with controls (Terrill et al . , unpublished data) . In another trial , Terrill et al (2007) reported reduced FEC and increased PCV in goats fed pelleted SL hay compared with ground BG hay . The pelleted SL-fed goats also had reduced worm burdens , with a 75 .5% reduction in *H . contortus* . In a recent trial , SL leaf meal lowered FEC compared with whole plant SL meal when fed at 25% of the diet (Terrill et al . , unpublished data) .

Conclusions Dried sericea lespedeza is an effective natural dewormer in sheep and goats , particularly against *H . contortus* Optimum level in the diet appears to be 50-75% , with some anti-parasitic activity at 25% . Processing SL hay by grinding and pelleting does not appear to reduce its efficacy . Additional information is needed on supplemental feeding of SL hay (whole plant , leaf meal , pellets) to control GIN infection in grazing livestock .

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