



IPM Clinics for Small Ruminant Producers

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BOTTOM LINE

Internal parasites are the single largest health threat to sheep and goats in the southern United States.

Summary

- *Haemonchus contortus* infestations cost the sheep and goat industries millions of dollars annually via impaired performance and/or death loss.
- Fecal egg count analysis is the most practical method for assessing the internal parasite burden of small ruminants.
- Hands-on educational clinics are an effective method for teaching producers how to conduct fecal egg counts and monitor internal parasite loads.

Introduction

Internal parasites are a perennial problem and are the largest health threat to sheep and goat enterprises across the southern United States. Historically, producers have either: 1) utilized veterinary services for fecal analysis or, 2) relied on tradition, instincts and circumstantial evidence to determine when to administer anthelmintics.

Proximity to veterinary clinics, time constraints, inconvenience and expense have precluded the use of veterinarians by numerous producers. Visual appraisal of internal parasite status can be misleading and fails to measure the response of parasites to the anthelmintics applied.

Development of resistance to anthelmintic compounds is a well documented problem among sheep and goat producers. Without analytical tools, such resistance often goes undetected until serious production losses occur. Introduction of new anthelmintic products labeled for domestic use in sheep and goats has been at a stand-still since the late 1960's. The number of products labeled for use in the United States is limited (n=4). Therefore, efficient and judicious use of the products available is of paramount importance to long-term sustainability of these industries.

An ongoing series of hands-on management clinics was developed to train producers in the use of fecal egg counts as a tool for monitoring internal parasite dynamics.

Experimental Approach

Fecal egg counts are a rapid analytical method for assessing internal parasite burdens of sheep and goats. Egg counts, conducted according to the modified McMasters technique, do not require elaborate laboratory equipment or reagents. A microscope represents the largest expense incurred (usually less than \$500). Other equipment required includes an eye dropper, small plastic vial (35-40 ml), tongue depressors, a McMasters two-chamber microscope slide (\$10) and a saturated salt solution.

Clinics are typically taught in a local high school biology lab where participants have access to several microscopes and sinks where slides can be rinsed. Strategic parasite management plans, biology of the primary parasites (including resistance development and avoidance), and the anthelmintics available for use are discussed in a classroom session to begin the clinic. During the hands-on portion of the clinic, participants analyze fecal samples collected on their farm/ranch.

Results

Over 450 sheep and goat producers representing in excess of 1 million sheep and/or goats have participated in this ongoing series of clinics. As a result of this effort, 40% of the participants now routinely use fecal egg counts as an integral part of their internal parasite

management plan. A similar survey conducted prior to this series of clinics indicated only 14% of Texas producers were using fecal egg counts.

Several producers have reported substantial savings of labor and product within the first 12 months of performing their own fecal egg

counts. In addition, numerous reports also indicate these savings are greater than the expense associated with equipment and supplies needed to perform egg counts.

Although several producers have purchased microscopes, a more exciting development is the

"corporate" purchase of microscopes and supplies by local feed stores, cotton gins and animal health suppliers. These corporate and community efforts have facilitated communication between producers and improved the area's internal parasite management programs.