53 The Role of Veterinary Services on Nutrition Schemes, Management, and Health Practices for Sheep and Goats in Rural Ngaka Modiri Molema District Municipality, Northwest Province of South Africa. Baitsholetsi G. Mokolopi, James W. Oguttu, University of South Africa

Abstract: Poverty is a feature of rural households, and as a result, rural folks usually adopt low-input agriculture to alleviate poverty. Many households in Ngaka Modiri Molema District keep animals, particularly sheep and goats, for a variety of reasons, including as source of income, milk, and meat. However, they lack the management skills that are necessary for their livestock to increase their productivity. Inadequate animal management, including poor feeding and housing standards and poor application of proper animal health procedures are compounded by a lack of agricultural experience and low-input farming methods. In addition, poor animal nutrition, sickness and a high prevalence of parasites, and low animal production output further contribute to low overall productivity. Therefore, support offered by the veterinary services, and the impact these interventions have on sheep and goat farming among rural farmers need to be investigated. The present study will seek to describe the feeding schemes and management practices adopted by sheep and goat owners, as well as the role played by veterinary and extension services in the development of such practices. Health care provided to sheep goat farmers by the veterinary services will also be determined. A survey will be conducted in Ngaka Modiri Molema District Municipality, a rural area in North West Province of South Africa. The study population will consist of all farmers rearing sheep and goats, both female and male. Animal and farm information level data and general farm management practices will be collected via a questionnaire survey. Using the Statistical Kit for STATA (version 16), data will be examined by computing frequency, percentages, and proportions based on the characteristics of the sample population. This survey will help to provide opportunities for resource-poor farmers in rural areas to develop their flocks.

Keywords: feeding schemes, goats, management practices, rural households, sheep, veterinary services

51 Determining the Best Indicators for Targeted Selective Treatment Against Gastrointestinal Nematodes in Sheep and Goats in Mississippi. Lindsey Dearborn, Leyla Rios de Alvarez, Juan Felipe Torres-Acosta, Animal and Dairy Sciences Department, Mississippi State University.

Abstract: Successful Targeted Selective Treatment (TST) against gastrointestinal nematodes (GIN) in small ruminant farms require the accurate measurement of phenotypic indicators of the animals. Specific indicators to predict the GIN burden include the age of the animal (A, years), bodyweight (BW, lbs), FAMACHAÓ (score from 1 to 4), body condition score (BCS, score from 1 to 5), and fecal egg count (FEC, eggs per gram of feces or EPG). Objective: Determine the indicator(s) that will more accurately contribute to TST for sheep and goats in the state of Mississippi (MS). Five (05) sheep and five (05) goat herds were used for data collection during fall 2021, the indicators of ewes (n=182) and does (n=197) were individually measured and FEC was determined using a modified McMaster technique. Statistical analysis was performed using Statistix for Windows v. 8.0., and two by two contingency tables were used to evaluate the association between FAMACHA and EPG, and BCS and EPG. The average indicators for sheep and goats sampled were, respectively, for A 2.91 and 2.98 years (P>0.05); BW 137.99 and 89.69 lbs. (P=0.0000); FAMACHA 2.53 and 2.99 (P=0.0000); BCS 3.25 and 2.98 (P=0.0000); FEC 510.05 and 487.56 EPG (P=0.0001). The correlations of FEC and FAMACHA for both species were positive 0.1753 (P=0.0006). Negative correlations were found for FEC and BCS of -0.1517 (P=0.0031) and for FAMACHA and BCS of -0.2945 (P=0.0000). The 2x2 contingency tables showed that goats with FAMACHA 4-5 had 37% chances to have >500 EPG compared to goats with FAMACHA 1-3 (28.2%) (P >0.05). Meanwhile, the BCS 1-2 resulted in 1.01-2.73 times more goats with >500 EPG (45.8% vs. 27.7%; P< 0.05). That effect was more evident for sheep, where 62.6% of animals with BCS 1-2 had >500 EPG vs. 15.8% with BCS 3-5, but the sample size was insufficient to assign statistical significance.

Keywords: parasites, small ruminants, sustainable control