

with GG genotype for DRD2 SNP had heavier lambs at birth and weaning but postweaning growth may be hindered with fescue consumption during gestation.

**Key Words:** Sheep, fescue, growth

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**40 Relationship among gastrointestinal nematode infection indicators in meat goat kids.** D. O'Brien<sup>1</sup>, S. Schoenian<sup>2</sup>, J. Semler<sup>3</sup>, D. Gordon<sup>4</sup>, M. Bennett<sup>5</sup>, <sup>1</sup>Virginia State University, Petersburg, United States, <sup>2</sup>University of Maryland Extension, Keedysville, MD, United States, <sup>3</sup>University of Maryland Extension, Boonsboro, MD, United States, <sup>4</sup>University of Maryland Extension, Derwood, MD, United States, <sup>5</sup>West Virginia University Extension Service, Martinsburg, VA, United States

A pasture-based meat goat performance test was conducted at the University of Maryland's Western Maryland Research & Education Center (39° 30' N/77° 44' W) from 2007–2016. The purpose of the test was to evaluate the performance of meat goat bucklings (mostly Kiko and Kiko crosses), consuming a pasture-based diet, with natural exposure to gastro-intestinal parasites. While on test, the goats were handled bi-weekly to determine body weights (BW), FAMACHA© scores (FAM) and body condition (BCS) scores. Coat condition (COAT), dag (DAG) and diarrhea scores (DISCO) and deworming frequency (TX) were also recorded from 2012–2016. Fecal samples were collected bi-weekly to determine individual fecal eggs counts (FEC; 2007–2016) and pooled samples were collected every 28 days for larvae ID (2009–2016). Data came from 811 meat goat kids representing 100 herds in 20 states. Residual correlations among log-transformed FEC (LFEC), FAMACHA© scores, BW, ADG, BCS, coat condition, dag and fecal consistency scores were determined. In addition, deworming frequency by year was determined by PROC FREQ in SAS. The predominant genera of gastrointestinal nematode cultured was *Haemonchus contortus* ranging from 70–95% over the 10-yrs. Overall, residual correlations ( $r$ ) of FAMACHA scores with ADG (-0.15), LFEC (0.24), BCS (-0.09), COAT (-0.06), DAG (0.12) and DISCO (0.04) were significant ( $P < 0.05$ ). Correlations of LFEC with ADG (-0.07), BCS (-0.07), COAT (-0.06) and DISCO (0.06) were significant ( $P < 0.01$ ) but LFEC was not significantly correlated with DAG scores (0.03,  $P = 0.16$ ). Within years, the correlation between LFEC and FAM varied (0.10–0.38) but were significant for all years with the exception of 2007 (0.10,  $P = 0.16$ ). Deworming frequency also varied by year, ranging from 18.5–29.6% and highest in 2013.

Results demonstrate that higher FAMACHA© scores are associated with increased FEC, more runny stools and fecal soiling in slower growing, less conditioned meat goat kids with rougher coats.

**Key Words:** Goats, Internal Parasites, Performance test

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**41 Use of clinic refractometer at farm, as a tool to estimate the IgG content in goat colostrum.** N. Castro<sup>1</sup>, A. Arguello<sup>2</sup>, L. Gomez-Gonzalez<sup>1</sup>, <sup>1</sup>University of Las Palmas de Gran Canaria, Las Palmas, Spain, <sup>2</sup>University of Las Palmas de Gran Canaria, Arucas, Spain

Refractometry has been proposed as a farm technique to estimate the IgG concentration in colostrum. In order to validate the method in goat colostrum using a clinical refractometer, 216 colostrum and milk samples were obtained from 54 dairy goats. Samples were evaluated for protein concentration using a clinical refractometer and IgG concentration was measured using a commercial ELISA. The  $r^2$  for the linear regression between refractometry value and IgG concentration measured by ELISA was 0.79, and the area under the receiver operating characteristics curve was 0.99. The proposed cutoff value using the clinical refractometer was 10 mg/mL. At this point, the sensitivity, specificity, negative predictive value, positive predictive value, Youden index and accuracy were 100%, 95.19%, 100%, 76.32%, 0.95 and 95.83%.

**Key Words:** Colostrum, Goat, Clinical refractometer, IgG, ELISA

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**42 Extra-light-treated bucks and rams dramatically enhanced the response of ewes and goats to the “male effect”.** P. Chemineau<sup>1</sup>, M. Keller<sup>2</sup>, A. Abecia<sup>3</sup>, J. Delgadillo<sup>4</sup>, <sup>1</sup>INRA, Nouzilly, Centre, France, <sup>2</sup>CNRS, Nouzilly, Centre, France, <sup>3</sup>University of Zaragoza, Zaragoza, Aragon, Spain, <sup>4</sup>Universidad Autonoma Agraria Antonio Narro, Torreón, Coahuila de Zaragoza, Mexico

Seasonality of breeding has major technical and economical consequences in farms. The “male effect” is known to be a sustainable technique to induce out-of-season fertility but with variable results depending on breed and time in the year. Recently, we showed the high efficiency of light-treated rams and bucks to dramatically increase the efficiency of this “male effect”. While maintained in natural light, rams and bucks received extra-light (7 h daily to reach 16 h) during 2 consecutive months in winter. One and half month after the end of extra-light, males showed intense libido, high plasma