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Genetic parameters of reproductive traits in a prolific w line of barbarine sheepC. Ziadi¹ and S. Bedhiaf-Romdhani²¹Institut National Agronomique de Tunisie, Cité Mahrajène, 1082 Tunis, Tunisia, ²Institut National de la Recherche Agronomique de Tunisie, Laboratoire des Productions Animales et Fourragères, Rue Hédi Karray, 2049 Ariana, Tunisia; ziadichiraz4@gmail.com

This study aims at estimating genetic parameters of ewe reproductive traits in a prolific «W» line of Barbarine sheep. This breed is well adapted to the hard local conditions in low input production systems. The «W» line was created by screening prolific ewes among conventional flocks at the experimental station of the Tunisian National Institute for Agronomic Research (INRAT) and was selected for prolificacy since 1979. A total of 2,726 reproductive records was collected between 1989 and 2016. Traits analysed were litter size at birth (LSB), litter size at weaning (LSW), litter weight at birth (LWB) and litter weight at weaning (LWW). Genetic parameters were estimated with bivariate linear animal model using Gibbs sampling methodology of Bayesian inference. Heritabilities estimates were 0.11, 0.05, 0.04, and 0.05 for LSB, LSW, LWB and LWW, respectively. Genetic correlations estimates between traits were positive and ranged from 0.70 between LSW and LWW to 0.92 between LSB and LSW. Despite the low heritability of reproductive traits, selection on litter size at birth may results in a genetic improvement of other traits since they are highly correlated.

Immune cell profiles associated with resistance against *Haemonchus contortus* in Morada Nova sheepC.H. Okino¹, J.H.B. Toscano², L.G. Lopes³, M.H. Silva³, L.A. Giraldeiro³, S.C.M. Niciura¹, M.V. Benavides⁴, S.N. Esteves¹ and A.C.S. Chagas¹¹Embrapa, Southeast Livestock Unit (CPPSE), Rod. Washington Luiz km 234, São Carlos, SP, 13560970, Brazil, ²UNESP, Via Prof. Paulo D. Castellane, Jaboticabal, SP, 14884-900, Brazil, ³UNICEP, R. Miguel Petroni, 5111, São Carlos, SP, 13563-470, Brazil, ⁴Embrapa, Southern Livestock Unit (CPPSUL), Rod. BR-153, Km 632,9, Bagé, RS, 96401-97, Brazil; carolina.chagas@embrapa.br

Effective mucosal immune response is essential for the development of resistance to *Haemonchus contortus* in sheep. This study aimed to better elucidate the immune mechanisms involved in the resistance against *H. contortus* in the Brazilian Morada Nova breed. Two groups of 5 sheep, previously characterized as resistant or susceptible to infection by this parasite (extremes from 151 phenotyped animals), were challenged with 4,000 L₃ of *H. contortus* Embrapa2010 isolate, and euthanized at 7 days post-infection. Blood samples were collected for blood count, including differential analysis for granulocytes. Two fragments of abomasal pyloric gland and fundic regions were collected and subjected to histological procedures, and to immunoperoxidase using monoclonal antibodies against CD3, CD79a, MUM1 and lysozyme. The Mann Whitney test was performed to compare all evaluated parameters from resistant and susceptible groups (P<0.05). Pathological changes in the fundic abomasal region consisted mainly of moderate lymphoplasmacytic inflammatory infiltrate, including edema, presence of slight secretory and fibrinoid material, while in the pyloric region the main findings included slight mucosa irregularity and heterogeneous inflammatory infiltrate in the mucosa and lamina propria. No significant differences were observed for immunoperoxidase assays, mastocytes for both abomasal regions, and also for eosinophils in the pyloric region, nor for different subtypes of leucocytes in whole blood. Significantly higher levels were observed in the resistant group for eosinophils in the fundic region and for erythrocytes, haemoglobin and total leucocytes. Our partial results indicate an important role of eosinophils in the development of resistance against *H. contortus*, especially those located in the mucosa.