

New selection criteria for female fertility in Florida dairy goat using random regression modelsC. Ziadi¹, E. Muñoz-Mejías², M. Sánchez³, M.D. López⁴, F. Arrebola⁵, A. Menéndez-Buxadera¹ and A. Molina¹¹Universidad de Córdoba, Genética, Edificio Gregor Mendel. Campus de Rabanales, 14071 Córdoba, Spain, ²Universidad de Las Palmas de Gran Canaria, Departamento de Patología Animal, Producción Animal, Bromatología y Tecnología de los Alimentos, Campus Universitario Cardones de Arucas, 35413 Arucas, Spain, ³Universidad de Córdoba, Departamento de Producción Animal, Campus de Rabanales, 14071, Córdoba, Spain, ⁴ACRIFLOR, Edificio de Producción Animal, Campus de Rabanales, 14071, Córdoba, Spain, ⁵IFAPA, IFAPA, Hinojosa del Duque, 14270, Hinojosa del Duque, Córdoba, Spain; ziadichiraz4@gmail.com

This study was conducted to estimate genetic parameters of new selection criteria for female fertility across the age trajectory in Spanish Florida dairy goat using random regression models (RRM). Traits analysed (univariate) in this analysis were: parity number (PN) treated as a character and as a deviation between optimal and real parity number at each age considered as a continuous trait (DORPN). Using 136.583 reproductive records of 50.803 females over a period of 34 years (1986-2019), genetic parameters were estimated with Bayesian inference using the GIBBS3F90 software. Estimates of heritabilities were moderate to high, ranging from 0.28 to 0.41 for PN and from 0.25 to 0.38 for DORPN, respectively. Phenotypic correlations for PN across ages were close to unity and for DORPN, they varied from -0.41 to 0.84. The genetic correlations for PN and DORPN at different age points were positive in all cases ranging from 0.61 to 1.00 and from 0.20 to 0.98 for PN and DORPN, respectively, decreasing their magnitude when increasing the female age. This results indicate that selecting for these trait separately or through a selection index could lead to improve goat female fertility.

Crude protein level in post-weaned lambs diet did not affect productive and meat quality parametersC. Baila¹, M. Blanco¹, G. Ripoll¹, J. Pelegrín-Valls², J. Álvarez-Rodríguez² and M. Joy¹¹Centro de Investigación y Tecnología Agroalimentaria de Aragón, Animal Production, Av. Montañana, 930, 50059 Zaragoza, Spain, ²Universitat de Lleida, Animal Production, Plaça de Victor Siurana, 1, 25003, Lleida, Spain; cbaila@cita-aragon.es

In the Mediterranean area, the light lamb production is based on flocks of medium-small frame sized autochthonous breeds. Fattening lambs are concentrate-fed indoors until 20-25 kg live weight (LW). In this phase, the crude protein (CP) in the concentrate ranges between 15-21% on dry matter basis (DM). Optimising the level of CP in the lamb's diet reduces feed costs and contributes to the mitigation of environmental emissions of ammonia and nitrous oxide, and could improve the production efficiency. The aim of this study was to evaluate the effect of the reduction of the CP level (Control vs Low) in the fattening concentrates of light lambs of Ripollesa breed. The iso-energetic concentrates and straw were fed *ad libitum*. Half of the lambs received a concentrate with 20% CP from 15 to 19 kg LW and a concentrate with 19% CP until 25 kg LW (Control). The other half received a concentrate with 18% CP and 17% CP in the same periods (Low). Weekly, intake and LW were recorded. After slaughter and cooling for 24 h, carcass characteristics (weight, carcass yield, fatness score and colour of Rectus abdominis muscle) and meat quality parameters of Longissimus thoracis et lumborum muscle (pH, colour, haeminic pigments, lipid oxidation, chemical composition and fatty acid profile) were evaluated. The reduction of 2% CP tended to increase the daily concentrate intake ($P<0.10$) without affecting the feed *conversion rate* ($P>0.05$). Regarding the effect on carcass quality, the reduction decreased the carcass weight (11.9 vs 11.3 kg, $P<0.05$) and the carcass yield (49 vs 46%, $P<0.01$), but no effect was observed on the fatness score and the colour of Rectus abdominis muscle ($P>0.05$). The reduction of 2% of CP had minor effects on meat quality. Minor changes in fatty acids and an increase of metmyoglobin content at 3 and 6 days of air exposure were detected ($P<0.05$). It is advisable to reduce the CP of the concentrate during fattening of light lambs of medium-small framed breeds, although the price of the lamb and the cost of protein ingredients has to be taken into account. However, more studies should be carried out to evaluate possible effects of CP level on meat oxidation.