



M-73

Meat quality of goat kids fed whole cow's milk and an exogenous source of DHA

Moreno-Indias, I.¹, L. E. Hernández-Castellano¹, A. Morales-delaNuez¹, D. Sánchez-Macías¹, J. Capote², N. Castro¹, A. Argüello¹

(1) *Animal Science Department, Universidad de Las Palmas de Gran Canaria, Las Palmas, Spain.* (2) *Instituto Canario de Investigaciones Agrarias, La Laguna, Sta. Cruz de Tenerife, Spain.*

As the main role of dairy goat farming is to yield marketable milk, artificial rearing is closely linked to the intensification of these farms. Therefore, the use of milk replacers is paying attention. There are many milk replacers on the market, but their high price is doing farmers to leave the kids with their dams or dispose of them. Classic works did not recommend the use of cow's milk to feed goat kids, due to mainly problems with diarrheas. On the other hand, since some years ago a hot topic is the use of omega-3 fatty acids in the nutrition such as the docosahexaenoic acid (DHA) to enhance the nutritional quality of the meat. 30 Majorera males and females newborn goat kids were randomly assigned to three groups according to sex and diets: goat milk (GM), whole cow's milk (WCM) and whole cow's milk plus Docohexanoic Acid (DHA-gold©, DHA) (WCM9). All animals were fed ad libitum during the experiment. Goat milk was taken from the bulk tank every day during the experiment and the dehydrated WCM was rehydrated and used to feed WCM and WCM9 groups. For WCM diets, the dry matter was 16% w/w, being 9g the concentration used of DHA-gold©. When goat kids reached 8 kg of body weight, they were slaughtered following EU regulation. In order to study the meat quality physicochemical parameters (moisture, fat, protein, ash, total and soluble collagen, water holding capacity, cooking losses and tenderness) were measured as well as fatty acid profiles, which were performed on subcutaneous and intermuscular depots from the shoulder, pelvic fat from the leg cut, peri-renal fat from the rib cut, and intramuscular fat from the semimembranous muscle. Results indicated that the diet containing DHA did not affect meat quality characteristics, or proximate composition of the meat. However, C22:6n3 fatty acid levels, mainly in intramuscular fat, were enriched in CM-DHA animals, and the n-6/n-3 PUFA ratio was improved, although no differences were found with respect to WCM. In conclusion, powdered WCM is an effective option for feeding goat kids, and the inclusion of DHA to WCM increases the quantity of this fatty acid in the meat.