



**ICG2022**  
13<sup>th</sup> INTERNATIONAL  
CONFERENCE  
ON GOATS



# IGA 13<sup>TH</sup> INTERNATIONAL CONFERENCE ON GOATS

On-line, September 19-22, 2022



## BOOK OF ABSTRACTS

**Editors:** Lucia Sepe (Coordinator), Carina Visser, Noemí Castro,  
Paula Menzies, Anastasio Argüello, Sándor Kukovics





**S04 0-08 | Samira El Otmani | Morocco | samira.elotmani@inra.ma**

**Do olive cake and cactus cladodes affect the rumen microbial community and meat quality of goat kids?**

Samira El Otmani<sup>1</sup>, Youssef Chebli<sup>1</sup>, Mouad Chentouf<sup>1</sup>, Jean-Luc Hornick<sup>2</sup>, Jean-François Cabaraux<sup>2</sup>

<sup>1</sup>Regional Center of Agricultural Research of Tangier, National Institute of Agricultural Research, Avenue Ennasr, BP 415 Rabat Principale, Rabat 10090, Morocco

<sup>2</sup>Department of Veterinary Management of Animal Resources, FARA, IVT, Faculty of Veterinary Medicine, University of Liège, Belgium

Cactus cladodes (CC) and olive cake (OC) are two alternative feed resources that could be valorized in ruminants' diet. Their incorporation and impact in goat kids diet are not widely investigated. The aim of this work is to evaluate their effects on meat quality and ruminal microbiota of goat kids. Forty-four of local goat kids were divided into four groups. The control group received a conventional concentrate (0%OCCC), while the three test groups supplemented with 35%OC, or 30% CC, or their mixture (15%OC+15%CC). After 3 months of the assay, kids were slaughtered, and rumen liquor was collected to determine pH and to extract DNA in order to identify the microbial community. The *longissimus dorsi* (LD) and *semimembranosus* (SM) muscles samples were collected to determine color, humidity, ash, water retention capacity, proteins, and fat. For meat quality, color, and moisture of both muscles were not affected by diet. Diet with 30%CC increased proteins ( $P<0.001$ ) and decreased fat and ash ( $P<0.05$ ) in LD, and increased water retention capacity ( $P<0.001$ ) in SM. However, 35%OC decreased proteins in LD. Rumen liquor of test groups had low acidity compared to control ( $P<0.001$ ). Alpha (richness, evenness, and reciprocal Simpson indexes), and beta diversity (NMDS plot, HOMOVA, PERMANOVA) were not affected by diet. At genus level, *Aeriscardovia* was more abundance in control liquor compared to test groups which explains the low ruminal pH of 0%OCCC ( $P<0.05$ ). 35%OC increased *Lachnospiraceae\_NK4B4\_group* in rumen liquor which could be due to the high fibers of OC ( $P<0.05$ ). *Defluviitaleaceae* is negatively correlated to obesity, it was higher in 30%CC which reflected on the low fat content of LD ( $P<0.05$ ). In conclusion, OC and CC did not strongly change the bacterial composition of rumen liquor and meat quality. Thus, they could be introduced as alternative feed resources in goat kids' diet to reduce feeding cost.