Innovation for Sustainability in Sheep and Goats

Innovación para la Sostenibilidad en ovinos y caprinos

Vitoria-Gasteiz, Spain, 3-5 October 2017

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BOOK OF ABSTRACTS – LIBRO DE RESÚMENES
The aim of this study was to assess the nutritive value for ruminants of five samples of crude olive cake (COC) and two commercial olive fruits extracts (Prolivols® and Hytaolive®). Alfalfa hay (AH) and barley straw (BS) were also evaluated for comparative purposes. Gas production kinetics was determined in 144-h in vitro incubations with sheep rumen fluid, whereas fermentation parameters and in vitro dry matter digestibility (IVDMD) were analysed after 24 h incubation. Crude protein, neutral detergent fibre (NDF), acid detergent fibre (ADF) and ether extract (EE) contents of COC ranged from 65.2 to 105, 374 to 448, 269 to 316 and 145 to 267 g/kg dry matter (DM), respectively. The high amount of N bound to the ADF in the COC samples (25 to 45% of total N) indicated low N availability, and the lignin/NDF ratios were high (0.272 to 0.401). The IVDMD values of COC (47.9 to 60.8%) were lower than that for AH (67.5%), but greater than that for BS (42.4%). Potential gas production values of COC samples (60.3 to 103 ml/g DM) were lower (P<0.05) than those for olive fruits extracts, AH and BS (values > 170 ml/g DM). There were no differences (P>0.05) among COC samples in total volatile fatty acid (VFA) production, and values were similar to those of BS, but lower (P<0.05) than those for the two commercial extracts and AH. The COC could be used in ruminant diets replacing low-quality feeds such as BS, but due to its high EE content it could be also used in dairy animals to increase the content of insaturated fatty acids in milk.