Population genetic indices in Hungarian Cikta sheep

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Samples of 72 animals from three flocks were analysed using nine microsatellites in order to evaluate the connection between existing populations of Cikta sheep, an indigenous breed in Hungary. Cikta was a well-known and popular breed until 1960-70. Nearly 30,000 animals were recorded in 1947 whereas the breed came close to extinction in 1975 when only 112 animals remained and a genetic preservation programme was launched. Today's population is considered stable with approximately 1000 recorded animals. Fluorescent-labelled oligonucleotides and fragment length analysis was applied for microsatellite genotyping. Overall, observed and effective allele numbers were 5.63±1.71 and 3.76±1.10, respectively. Mean Fis (-0.18±0.12) and Fit (-0.13±0.11) values indicated heterozygous excess. Considerably low mean Fst (0.04±0.03) and discriminant analysis revealed lasting effects of the 1970s bottleneck as three analysed populations showed slight genetic differentiation. Three of the nine microsatellites significantly ($P<0.05$) deviated from Hardy-Weinberg equilibrium, namely *BM8125*, *CSSM47*, and *MAF214*. Results can be applied in mating plans to maintain existing diversity in the breed. This publication was supported by the EFOP-3.6.1-16-2016-00017 project.

Effect of soybean meal treated with *Cistus ladanifer* tannins on lambs growth and meat quality

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Condensed tannins (CT) may improve the digestive utilization of feed in ruminants, mainly due to a decrease of protein rumen degradability and a subsequent increase of amino acid flow to the intestine. A productive trial was conducted during 6 weeks to evaluate the effect of treating soybean meal (SBM) with an extract of *Cistus ladanifer* CT on lamb´s growth, carcass and meat quality. Twenty four Merino Branco lambs were individually housed and assigned to three dietary treatments based on hay and concentrate in a proportion of 15/85 (W/W) and fed at 4% live weight. Concentrates were formulated to contain: 16% of crude protein (CP) with untreated SBM (Control); 12% of CP with untreated SBM (Restricted protein (RP)); 12% of CP with SBM treated with 15 g/kg on DM of *C. ladanifer* CT (RPCT). Intake was controlled daily and lambs were weighed weekly. Blood samples were collected to determine total protein, glucose and urea N (BUN). After slaughter carcass dressing percentage and high priced joints proportion were determined and the shoulders were dissected. *Longissimus* muscle was sampled for chemical and physical analysis. Lambs fed with RPCT diet had average daily weight gain (ADG) similar ($P>0.05$) to lambs fed with Control and higher ($P<0.05$) than lambs fed with RP diet (212 vs 168 g). Animals fed with RP and RPCT diets showed similar BUN level, but lower ($P<0.05$) than animals fed with Control diet (14.6 vs 22 mg/dl). Carcass traits and meat quality parameters were not affected by treatments ($P>0.05$). Concluding, *C. ladanifer* CT can be used as feed additive to reduce the protein content of diets, and hence the feed costs, without compromising lamb performance and meat quality.