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Feeding sainfoin to goats – influence on milk and cheese quality and yield

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Although the administration of sainfoin is associated with anthelmintic effects, information on the consequences of feeding this legume on product quality is scarce. In the present study we looked at milk quality and yield of goats fed either sainfoin or a non-tanniferous control forage. Twelve lactating goats of the alpine breed were used for the study. They received grass/clover hay for a period of 15 days (grass clover feeding period, GCFP). Then the feed was switched to sainfoin hay (approx. 90 % of daily intake) for another 15 days (sainfoin feeding period, SFP). Both feeds were supplemented with concentrates in order to guarantee isoproteic and isoenergetic feeding throughout the trial. Milk yield and quality (fat, protein, energy and urea) were determined for every goat at day 10 of the respective feeding periods. Furthermore, the milk of the animals from day 4 to 15 of the respective feeding periods (i.e. hay/grass, sainfoin) was transformed to cheese. There was no difference in milk yield between GCFP and SFP (1.54 and 1.37 kg for GCFP and SFP respectively, $p=0.17$). Sainfoin feeding was associated with a significantly higher ($P<0.001$) milk protein concentration when compared to grass/clover feeding. Also, compared to GCFP, milk fat content was significantly lower in SFP ($p<0.05$). Cheese yield was numerically higher for SP when compared to GCP. A sensory panel evaluated the taste of the cheese produced from 'sainfoin milk' to be significantly different from cheese produced from 'grass/clover milk' ($p<0.05$). However, both types of cheese were judged to be equally tasty. We conclude that sainfoin feeding to goats has no negative influence on milk yield and has a positive effect on milk protein content.