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**Effect of dietary linseed supplementation on milk coagulation properties of dairy goats with different CSN1S1 genotype**

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In this study, the effects of dietary supplementation with extruded linseed on milk coagulation properties of dairy goats with different alpha-s1 casein (CSN1S1) genotype are investigated. Twenty-four Saanen goats selected on the basis of the CSN1S1 genotype were divided in two groups: one with low (Low group; goats with FF, 0101, and F01 genotype) and the others with high (High group; goats with AA genotype) level of CSN1S1. Goats of each genotype were allocated into two dietary treatments: one was the control (CON) and one was supplemented with 200 g/d of extruded linseed (LIN). The trial lasted 4 weeks. Milk samples of morning milking were collected weekly and analyzed for fat, protein, lactose, and somatic cell count (SCC). The milk coagulation properties (RCT rennet coagulation time, K20 curd firming time, A30 curd firmness) were determined with a Formagraph. Data were analyzed using a mixed linear model that included the period, diet, genotype and diet  $\times$  CSN1S1 genotype interaction as fixed factors, and the goat as random factor. The CSN1S1 genotype did not significantly influence milk composition, even in terms of protein percentage (3.22 and 3.24% in Low and High groups, respectively). The RCT (12.3 vs. 12.1 min) and A30 (25.3 vs. 26.6 mm) did not vary significantly ( $P > 0.05$ ) between the Low and High CSN1S1 genotypes, whereas the K20 tended to be lower in Low than High groups (2.8 vs. 3.6 min;  $P < 0.10$ ). No significant effect of extruded linseed was observed on milk composition and milk coagulation properties. In conclusion, no interaction between CSN1S1 genotypes and dietary linseed was found on milk composition and milk coagulation properties. Acknowledgements: Research supported by Fondazione Banco di Sardegna.

## P-165

**Effect of feeding extruded linseed (*Linum usitatissimum* L.) and oregano (*Origanum vulgare* L.) on meat production and quality in Jonica kids**

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The autochthonous Jonica goat breed has suffered a considerable genetic erosion in the last decade in Apulia. This research was planned in order to exploit feeds and animal resources available in our region, such as extruded linseed, with or without oregano supplementation, a natural Mediterranean essence with antioxidant properties, on meat production and quality in Jonica kids. Male kids (N=18) were divided into 3 homogeneous groups and fed *ad libitum* with the following treatments beginning on 20 days of age: C, control group; L, feedstuff containing extruded linseed (3%); L+O, feedstuff containing extruded linseed (3%) and sun dried oregano plants in bloom (0.6%). During the trial kids suckled goats' milk, therefore the 3 feedstuffs were offered to kids' respective mothers. Once a week kids were individually weighed to determine the average daily gain (ADG) and the amount of feed given and refused was recorded to evaluate the voluntary feed intake. Kids were slaughtered at 60 days of age. Carcasses were evaluated and sectioning data were recorded. The Longissimus lumborum muscle was analyzed for chemical composition and lipid peroxidation by performing the TBARS (thiobarbituric acid reactive substances) test. Data were processed by ANOVA using the GLM procedure, and means were compared by Student's t test. The final live weight (11.39, 11.66, 11.42 kg) and ADG (0.119, 0.118, 0.127 g/d) were very comparable among groups, respectively for C, L and L+O. Diet had no influence on performances at slaughter. The sectioning data showed a lower incidence of the brisket in the L+O group (6.15%) as compared to L (6.27%) and even more to the control (6.87%;  $P < 0.05$ ). Supplementation with oregano determined a significant reduction in the amount of fat (6.75%) of the loin, in comparison with L (9.90%;  $P < 0.05$ ) and C groups (10.92%,  $P < 0.01$ ). Similarly, the dissection of the hind leg showed a reduction of the amount of fat following the L+O diet (4.80%) in comparison with the L group (6.30%) and especially with the control one (7.73%;  $P < 0.05$ ). The beneficial effects of oregano supplementation found in this trial were also confirmed by the TBARS test by a lower lipid peroxidation (0.247 vs. 0.398 and 0.434 mg malonaldehyde/kg meat, respectively for L+O, L and C;  $P < 0.01$ ).

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