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P26. Incorporation of Mediterranean shrub (*Cistus ladanifer* L.) in lamb diets to improve the nutritional value and oxidative stability of meat

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ABSTRACT

The consumption of ruminant fat has been associated to detrimental effect on human health, due to their high levels of saturated fatty acids and low content of polyunsaturated fatty acids (PUFA). Nutritional strategies to reduce the saturation and increase the healthy PUFA, such as conjugated linoleic acid isomers (CLA) in ruminant fat has been target of intensive research. However, high content of PUFA in meat increases its susceptibility to oxidation. Supplementation of diets with plants or plant extracts rich in secondary compounds like condensed tannins (CT) has been explored not only to improve the fatty acid profile of ruminant products, with particular interest in increase of the CLA levels, but also to limit the lipid oxidation. *Cistus ladanifer* L. (rockrose) is a Mediterranean shrub that contain high levels of CT¹. Results showed that aerial part (leaves and soft stems) or CT extract from *Cistus ladanifer* are able to modulate the ruminal lipid metabolism, increasing the production of vaccenic acid (t11:18:2)^{2,3}, the precursor for endogenous synthesis of the major CLA isomer found in ruminant fat, the rumenic acid (c9,t11:18:2). Moreover, increased deposition of c9,t11:18:2 was observed in intramuscular fat of lambs fed high-forage diets supplemented with PUFA-rich vegetable oils and *Cistus ladanifer* aerial part². Inclusion of *Cistus ladanifer* in lamb diets also allowed limit the lipid oxidation in meat, including in PUFA-enriched meat^{4,5}. So, utilization of *Cistus ladanifer* in ruminant diets seems to be a promising approach to improve the nutritional value and lipid oxidative stability of meat.

KEYWORDS: *Cistus ladanifer*, Ruminants, Meat, Fatty acids, Lipid oxidation

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