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CISTUSRUMEN PROJECT – USE OF *CISTUS LADANIFER* L. IN RUMINANT DIETS TO IMPROVE PRODUCTS QUALITY

Cristina Pinheiro^{1,2*}, Ana L. Garrido², Elsa Lamy¹, Lénia Rodrigues¹, Letícia Fialho³, Liliana Cachucho³, David Soldado³, Olinda Guerreiro³, Eliana Jerónimo^{1,3}

¹ICAAM, U. Évora, Ap. 94, 7006-554 Évora

²Departamento de Zootecnia, ECT, U. Évora, Ap. 94, 7006-554 Évora

³Centro de Biotecnologia Agrícola e Agro-Alimentar do Alentejo(CEBAL)/IPBEJA, Rua Pedro Soares, s.n, Campus IPBeja, 7801-908 Beja, Portugal

[*ccp@uevora.pt](mailto:ccp@uevora.pt)

The production of small ruminants, is of significant economic interest in the Mediterranean region, and is mostly based on pasture utilization and follows the pasture availability pattern. Due to climate changes, numerous essential activities in this region are being increasingly affected, more specifically, the performance of sheep and goat, which have been decreasing during the last years because to the constant increase of animal food cost. This problematic leads to the development of alternative systems, and search by alternative feeding resources.

Cistus ladanifer L. (rockrose) is a perennial shrub, of the family *Cistaceae*, which grows spontaneously in the Mediterranean countries, it is well adapted to the climate and possibly to upcoming environmental changes. In Portugal, it is widely distributed from north to south, and is one of the most abundant shrubs. This plant is rich in phenolic compounds, particularly flavonoids in the exudate secreted by the plant and condensed tannins in the leaves and stems. Since that in the Mediterranean countries the extensive livestock production systems are often based on the consumption of tannin-rich feed, especially during periods of pasture scarcity, the use of this natural resource may be a viable solution for animal food. This type of diet, rich in phenolic compounds, may have an important effect on chemical and sensorial characteristics of ruminant products [1-3].

CistusRumen project aims to explore the utilization of the *Cistus ladanifer* plant or its condensed tannins in small ruminant diets, namely evaluating the potential of these nutritional strategies to improve the quality of their products (meat, milk and cheese), particularly the fatty acid profile, oxidative stability and organoleptic properties. Result show that these nutritional strategies allow improve the nutritional value of lipids from lamb meat, increasing the healthy fatty acids levels (vaccenic and rumenic acids) [2,3]. Moreover, inclusion of *Cistus ladanifer* in lamb diets also limit the lipid oxidation in meat, even in meat more susceptible to oxidation [4]. The same nutritional strategies are being tested in dairy production systems, with evaluation of its impact on the quality of milk and cheese.

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