

Agriculture, Horticulture & Epigenetics

February 25- 26, 2019
Paris, France

Int J Appl Sci Res Rev 2019, Volume: 6
DOI: 10.21767/2394-9988-C1-009

EFFECT OF THE INCORPORATION OF ARGANIA SPINOSA'S SUB PRODUCTS DIET ON CAMEL MILK ANTIOXIDANT ACTIVITY AND NUTRITIONAL COMPOSITION

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Many studies reported that beneficial biomolecules compounds have been identified from various parts of the *Argania spinosa*'s (L.) skeels and can play an important role in fighting diseases and could be used in pharmaceutical and personal care products. Certainly, Morocco includes the most important rate of production, but the culture experiments in many countries are promoters, and the valorization of the different products of these plants must take place. In this present study, we investigate the effect of the incorporation of the Argane tree's sub product in animal feeding by evaluating the antioxidant activity, the microbiological quality, the physicochemical and mineral composition of camel milk collected from Ounagha (Essaouira Morocco) and compare it to the milk of a control population Argane free. The preliminary results of this study revealed a remarkable improvement in several of the analysed parameters, especially the fat rate with an increase of 51.21%, which remains the most noteworthy. Microbiological analysis showed that the mean mesophilic aerobic flora count for camels consuming the Argane diet (AD) was $1.38 \cdot 10^7 \pm 2.67 \cdot 10^7$ Cfu.mL⁻¹ comparing to $2.96 \cdot 10^7 \pm 5.42 \cdot 10^7$ Cfu.mL⁻¹ for those consuming the control diet (CD). Phenolic compounds are increasingly of interest in the food industry because they retard oxidative degradation of lipids and thereby improve the quality and nutritional value of food. The total phenolic content of milk collected from camels consuming the Argane diet varied from 17.29 ± 0.61 to 22.65 ± 1.15 mg GAE/g of DM, while that the total phenolic content of milk collected from camels consuming ranged a control diet varied from 10.74 ± 0.39 to 12.46 ± 0.33 mg GAE/g of DM. Furthermore, mineral analysis demonstrated that AD milk samples are rich in potassium, magnesium and other minerals with many health benefits.

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