

Effect of Grazing on the Fatty Acid Composition of Goat 's Milk or Cheese

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Abstract

The objective of this study was to compare the fatty acid profile of caprine milk or cheese from animals raised under extensive, semi-extensive or full confinement production system in México. Feeding systems particularly grazing have been shown to affect essential fatty acid profiles, particularly the $\omega 6/\omega 3$ balance. Utilization of concentrates probably raises the omega 6 contents, or decreases omega 3 concentration, often exceeding 4:1 $\omega 6/\omega 3$ ratio, diminishing beneficial effects of $\omega 3$ regarding consumer health. The present study was conducted for two years (2016 and 2017) on 5,079 lactating goats from the states of Querétaro, Guanajuato, Colima, San Luis Potosí and Michoacán in México. Average milk production was 1.5/d liters (DS \pm 0.9). Of the 98 farms studied, 35% were in full confinement, feeding basically alfalfa hay and concentrate (18% CP), 22% grazed rye grass, 17% pastured alfalfa (45% of these grazing systems were supplemented), finally 26% grazed were in silvopastoral surroundings, mainly without supplement. The use of concentrate in more than 35% of total feed consumption had an effect on the profile of essential fatty acids exceeding $\omega 6/\omega 3$ 4/1 ratio. In 36 of the studied farms

levels of $\omega 6/\omega 3$ exceeded 4:1, all of them were supplemented with 700 g /d or more concentrate. In those units the use of the supplement decreased $\omega 3$ or increased $\omega 6$..

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