DIETARY MANIPULATION AND ADDITION OF Bifidobacterium animalis FOR THE PRODUCTION OF A PROBIOTIC CONJUGATED LINOLEIC ACID-ENRICHED CAPRINE COALHO CHEESE

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Abstract / Resumo:

The aim of the study was to investigate the influence of an enhanced CLA concentration on the viability of a recognized probiotic strain, Bifidobacterium animalis subsp. lactis Bb12, in caprine coalho cheeses during a 60 days storage period. Saanen goats (n=30) were divided in two groups, characterized by the diets without and with soybean oil supplementation, for the production of control milk or CLA-enhanced milk, respectively. Four pilot-scale cheese-making trials were performed, in triplicates. Cheeses T1 and T2 were produced with milk from control group, and T3 and T4 with milk from CLA-enhanced group. B. animalis Bb12 was added to cheeses T2 and T4. CLA content was determined in goat's milk and in coalho cheeses, after 1, 30 and 60 days. Population of B. animalis was monitored fortnightly for cheeses T2 and T4. The supplementation of goat's diets with soybean oil increased the CLA content (isomer C18:2 cis-9, trans-11) in milk, compared to the control, and in T3 and T4 cheeses ($P < 0.05$), compared to T1 and T2. Populations of B. animalis were around 8 log cfu/g in T2 and T4 cheeses during the period studied. The higher CLA content in T4 cheese did not influence the viability of B. animalis . Therefore, CLA-enhanced goat milk obtained through dietary manipulation may be used for the production of a probiotic caprine coalho cheese with increased content of CLA.