the Commission after the call of European Parliament to ensure a profitable and sustainable future for sheep and goat farms.

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Microbiological characteristics of *mozzarella* type cheese from raw ewe milk

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The aim of this study was to produce *mozzarella* type cheese from raw ewe milk so that curd acidification might develop at both high and low temperatures.
Four replicates per *mozzarella* processing were performed in small cheese plant. Starters based on thermophilic (T) lactic acid bacteria (LAB) or thermophilic and mesophilic (TM) LAB were added. Curd was let acidify under whey until it reached pH 5.0. During the stretching phase, hot water at about 85-90 °C was used. Cheese was then molded in shape of about 200 g, firmed in cold water, salted in saturated brine for 2 hours and stored at 4° C into governing liquid with 2-3% of NaCl. Samples of milk, curd, T and TM cheese at day 1 were submitted to the following microbiological analyses: *Salmonella* and *Listeria monocytogenes*, used as food safety markers, coagulase-positive staphylococci and β-glucuronidase-positive *E. coli*, used as hygiene markers, *enterobacteriaceae*, coliforms at 30 °C and total microbial count (TMC) at 30 °C. At day 5, coliforms and TMC analyses were performed on cheese samples. Differences were tested by GLM procedure using the factorial model including the fixed effect of starter type and storage time of cheese.
Both T and TM curds were successfully stretched at pH 5.0, but the length of the acidification phase was affected by the kind of starter. TM curd was ready for stretching in four hours and a half on average, while T curd in seven hours on average, starting from whey draining. Pathogens were absent in milk, curd and both kind of cheeses. Average counts of microorganisms considered as hygiene markers, coagulase-positive staphylococci and β-Glucuronidase-positive *E. coli*, were, respectively, 2.019 and 1.803 log 10 cfu $\times$ g^{-1} in milk samples, 2.375 and 3.319 log 10 cfu $\times$ g^{-1} in curd ones. These microorganisms resulted not detectable in T and TM cheeses. *Enterobacteriaceae* and coliforms decreased from curd to fresh cheeses, respectively, by 71% and 72%. After cheese storage, coliforms did not increase in TM *mozzarella*, while they increased (48%), but not significantly, in T cheese. In conclusion, results of this study showed that the high temperatures reached during stretching phase of *mozzarella* processing strongly contributes to the safety of the resulting cheeses. Moreover, in colder seasons, the use of starter based on TM LAB allowed the reduction of curd acidification time. The different curd acidification time did not affect significantly microbiological characteristics.

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The Net Waterfootprint: a proposal to calculate the water consumption of animal products

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Water can be classified among blue water (man-managed freshwater of lakes and aquifers); green (soil rainwater which eventually evaporated through plants); and grey water (polluted). Water FootPrint (WFP) is an indicator of the water used for the production of a unit of goods or services. In 2017 the International Dairy Federation published *The IDF guide to water footprint methodology for the dairy sector*. It suggest to estimate milk WFP with a Life Cycle Assessment for blue water consumption and then to apply local adjustments for water stressing index. It allow consider how milk production will limit water availability for other uses. For the US dairy production the guide reported WFP that varies with the watersheds from 517 to 0.9 L of blue water/kg of milk.
We propose an alternative method, the Net Waterfootprint (WFP_{net}) to estimate the WFP of the foods at farm gate accounting for green and blue water. Green water is calculated considering the differential evapotranspiration (ΔET) between the total ET of a crop or pasture used for animal feeding and the ET of a hypothetical scenario of a natural cover (e.g. a natural grassland under Mediterranean conditions 3000 m^3/ha of ET) from the same land surface, which represents the natural substitute to the human activity. The blue water is consumed for irrigation and for animal drinking and servicing). The values of WFP_{net} of sheep milk were simulated for two standard flocks raised on intensive (INT)