

#### ANIMAL FOOD QUALITY AND SAFETY

infra vitam: birth weight (kg), trend of live weight (LW) in relation to age (kg/day), average daily gain (ADG; kg/day), Biological Efficiency (BE=ADG/LW; g/Kg) and Livestock Efficiency (LE=ADG/LW<sup>0.75</sup>; g/Kg), slaughter weight (kg) and post mortem: slaughter yield (%, carcass weight/LW) and carcass composition (% meat, % "fat+rind", and % bone; Total carcass dissection). Data were analyzed according to GLM procedure (SAS Institute, 1996). CS pigs showed the highest birth weight, growth performance (range from 1 to 480 days), and ADG (p < .05), while SNL pigs showed tendentially the lowest values for all parameters considered. No significant differences were detected among the three AAGT studied for BE and LE, even if S pigs showed higher BE value while CS pigs presented higher LE value.

At slaughter (480 days), CS showed the highest weight (119.71 kg), while SNL presented the lowest weight (96.10 kg). The average slaughter yield was about 80%; it was higher in CS pigs (80.5%) compared to SNL (77.5%) and S (72.9%) pigs. As regards to carcass composition, SNL pigs provided a higher meat quantity (37.2%), in particular meat for dry-cured products as salame and soppressata (28.6 and 8.6%, respectively; p < .05), and a lower "fat+rind" quantity (29.0%) compared to other AAGT considered (p < .05). CS pigs presented a higher bone quantity (12.07%), while S pigs showed a lower meat and bone quantity (29.5 and 10.2%, respectively) and a higher "fat+rind" quantity (40.3%).

### P118

## Microbiological and chemical dynamics during manufacturing and ripening of pasteurized goat's cheese in a dairy farm

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The aim of this study was to evaluate the microbiological and chemical dynamics of the cheese produced from pasteurized goat's milk during the first stage of ripening.

Seven cheesemaking of "Caprino cheese" were performed in a small cheese plant, located in the province of Rome.

Goat raw milk was pasteurized ( $64\,^{\circ}\text{C} \times 18\,\text{minutes}$ ) in tank. Starters based on thermophilic lactic acid bacteria were added to pasteurized milk ( $40\,^{\circ}\text{C}$ ), after  $10\,\text{minutes}$  rennet was added.

Ripening was at  $9\,^{\circ}\text{C}$  and a relative humidity of 86% for 30 days.

Alkaline phosphatase was determined on pasteurized milk (Fluorophos®). Curd (day 0), and cheese (days of ripening 1, 7, 14, 28) were collected and submitted to the following microbiological analyses: Colony count at 30 °C, *Enterobacteriaceae*, *E. coli* and Coagulase-positive staphylococci.

Fat, protein, total solid and moisture, were determined using an infrared analyzer FoodScan<sup>TM</sup> (Foss, Hillerød, Denmark).

All data are presented as means and standard deviation. Mean and standard deviation were calculated by MedCalc Software.

Alkaline phosphatase in pasteurized milk was on average  $382 \pm 82$  mU/L.

The average colony count at 30 °C ranged from  $6.95 \pm 0.53$  log cfu  $\times$  g<sup>-1</sup> in curd to  $9.50 \pm 1.5$  log cfu  $\times$  g<sup>-1</sup> in cheese at 28 days of ripening. *Enterobacteriaceae* ranged from  $3.79 \pm 2.51$  log cfu  $\times$  g<sup>-1</sup> in curd to  $6.87 \pm 0.4$  log cfu  $\times$  g<sup>-1</sup> in cheese at 7 days of ripening.

E. coli increased from 1 to 14 days of ripening (1.48 log cfu  $\times$   $g^{-1}$  to 4.04 log cfu  $\times$   $g^{-1}$  respectively), while it was not found in the curd.

Coagulase-positive staphylococci were found in curd (1.30 log cfu  $\times\,g^{-1})$  and in 1 day cheese (2.53 log cfu  $\times\,g^{-1})$  of one only trial.

The average chemical composition of goat cheese was: fat  $(21.1 \pm 4.1\%)$ , protein  $(13.2 \pm 7.9\%)$ , total solid  $(43.1 \pm 11.3\%)$  and moisture  $(56.9 \pm 11.2\%)$ , similar to other cheese produced in the Mediterranean area.

The presence of high count of *Enterobacteriaceae* and *E. coli* in stored cheese suggests giving greater attention of hygiene practices during cheese making and storage of cheese.

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#### P119

# Indigenous proteolytic enzymes in buffalo milk and fresh cheese

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The aim of the present research was to evaluate the level of indigenous proteolytic enzymes in buffalo milk obtained from

