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Effect of ageing on technological properties of goose meat

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Abstract

Among the poultry species, goose meat is relatively hard and cohesive and characterised by the highest chewiness and gumminess. Therefore, it can be assumed that goose meat ageing can improve its quality[1,2].

The aim of the study was to determine the effect of ageing time of goose breast muscle on selected technological properties.

The study material consisted *musclus pectoralis* of Polish White Kołuda oat geese, slaughtered at 15–17 weeks of age, weighing 6–7 kg. After slaughter, carcasses were cooled and breast muscles were cut out, vacuum packed and stored at 4°C ± 1°C. Analyses were performed 1, 7, 14, 21 days *post mortem* on eight breast muscles on each of the days (n = 8).

The following parameters were determined: pH, muscle surface and cross-section colour, natural drip, free water, water absorption, thermal drip and shear force. A one-factor variance analysis method with Duncan's test ($P \leq 0.05$) was used to evaluate the variation of mean values.

It was demonstrated that muscle pH increases with an increase in the cool storage period. This parameter considerably increased from day 14 of ageing. Muscle colour changes were observed only on its surface between day 1 and 21. The ageing period had an effect on the meat hydration properties. Natural drip volume increased with an increase in the storage period and corresponded with the free water volume. A significantly greater volume of natural drip (1.77%) and a lower volume of free water (8.98%) were observed on day 21. Water absorption significantly increased on day 7 of ageing and remained constant until the end of the ageing time. A similar relationship was found while evaluating the shear force. A rapid drop in shear force was observed, which reflected an increase in meat tenderness by almost 5N between day 1 and 7 of the experiment. Based on the results, it can be concluded that the analysed raw material featured the most favourable technological properties on day 7 of ageing and that an extension of the ageing process was unjustified.

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Conflict of Interest

There is no conflict of interest

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