Hygienic and technological value of meat of turkey raw meat originating from flocks with green muscle disease

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Abstract

Breeding selection of slaughter poultry aimed at assuring fast body weight gains of birds has resulted in the occurrence of various forms of chronic diseases, including deep pectoral myopathy, also known as green muscle disease. The objective of the study was to determine the hygienic and technological value of meat of turkeys originating from flocks with diagnosed green muscle disease. The experimental material comprised 376 samples of the major and minor pectoral muscle from post-production turkey hens. The samples were subjected to microbiological analyses as well as determinations of pH, water binding capacity, color and chemical composition (fat, protein, water). The results obtained enabled concluding that, in terms of microbiological assessment, the meat originating from turkeys affected by the green muscle disease may be acknowledged as suitable for consumption. In turn, due to negligibly diminished technological value, resulting from deviations in pH value, water binding capacity, color and chemical composition, the authors postulate considering the advisability of stipulating separate qualitative standards for meat originating from post-production turkey hens.

Introduction

A current priority of the poultry industry is reaching the highest dressing percentage of breeding birds by increasing the growth rate, a change in shape and body mass of slaughter poultry in the shortest possible time.


In case of green muscle disease observed in turkeys and slaughter chickens (Mutinelli 1993, Bilgili and Hess 2002, Bianchi et al. 2006), pathological changes identified macroscopically occur mainly in the minor pectoral muscle (m. pectoralis minor), whereas the major pectoral muscle (m. pectoralis major) usually remains unchanged (Pastuszczak et al. 2002). In practice, the macroscopically changed muscles are subjected to confiscation during sanitary