

## **Chemical composition and fatty acid profile in meat of slaughter turkey females, managed in an extensive system**

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### **Summary**

The aim of study was to estimate the extensive feeding and management influence on chemical composition and fatty acid profile of slaughter turkeys' breast and thigh muscles. The experiment included 200 turkey females of 2 hybrid types: BUT 9 and BIG 6. Until the 6<sup>th</sup> week of life, the turkeys were kept together under the intensive system of rearing conditions, then the birds of both types were randomly divided into 2 groups: control (C) and the extensive one (E). Birds from the E groups were transferred to the building with an open access to grass runs. All turkeys until the 6<sup>th</sup> week of rearing were fed with the balanced full-ration mixtures, composed appropriately to their age. Apart from this feed, E birds from 7<sup>th</sup> week of their life were given green fodder, consisting of nettle, lucerne and grass in amount of 0.1 kg daily per bird, and also from 13<sup>th</sup> to 16<sup>th</sup> week - 0.1 kg of steamed potatoes. The birds were reared for 16 weeks. During the slaughter, the samples of breast and thigh muscles were collected. The chemical composition of meat as well as the fatty acid profile was evaluated in both muscles. Statistically significant interactions between system of birds rearing and hybrid type were found for dry matter and fat content in breast muscle, as well as dry matter, fat and protein content in thigh muscle. The hybrid type did not affect chemical composition; dry matter and fat content were, however, influenced by the method of turkey females' rearing. The interaction between the experimental factors significantly influenced almost all elements of fatty acid profile in both muscles. Considerably higher level of *n*-3 fatty acids and higher values of PI (Peroxidizability Index) in the experimental turkey meat could demonstrate the better health-related properties of meat obtained from these birds.

Key words: slaughter turkeys / meat / chemical composition / fatty acid profile