

## **Physico-chemical traits of meat from slaughter turkey females, kept in extensive management system**

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### **Summary**

The aim of study was to estimate the influence of extensive system of feeding and management on physical traits of breast and thigh muscles of slaughter turkey females. The experiment included 200 turkey females of BUT 9 (middle heavy) and of BIG 6 (heavy) strain. Up to the 6th week of life the birds were reared together under intensive conditions. After this time, turkeys of both strains were randomly divided into two groups: C – control and E – extensive. Birds from the experimental group were transferred to the building with an open access to runs. During the first 6 weeks of rearing, all turkeys were fed with balanced mixtures composed appropriately to their age. Turkey females from E group were additionally given green fodder made of nettle, lucerne and grass in the amount of 0.1 kg daily per bird, and also from the 13th to 16th week, 0.1kg of steamed potatoes. Birds were reared for 16 weeks. During the slaughter, samples of breast and thigh muscles were collected. The quality evaluation of meat included the measurement of pH after 6 and 24 hours from slaughter, conductivity after 24 and 48 hours, water holding capacity, drip loss and cooking loss. The colour parameters ( $L^*a^*b^*$ ) as well as the shear force of muscles were determined. Statistically significant interaction between the rearing system and the birds strain were confirmed for breast muscle brightness, for pH measured one hour after the slaughter as well as the colour parameters  $L^*$  and  $b^*$  and thermal loss from thigh muscle. Most physical traits were influenced by feeding and management system of turkey females. The meat of birds derived from the extensive system was characterized by a slightly higher pH level, smaller water holding capacity and bigger thermal loss. This meat was also darker and less tender in relation to meat obtained from birds reared intensively. The occurrence of PSE-like meat was not noticed, however, considerably higher individual variability of evaluated traits was observed.

KEY WORDS: slaughter turkeys / meat / physico-chemical traits / glycolysis