

MODIFICATION OF QUAIL MEAT QUALITY WITH OLIGOSACCHARIDE FEED SUPPLEMENTATION

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Summary. The studies were carried out on 40 female Pharaoh quails. In the fifth week of age, the quails were weighed and randomly assigned to 5 feeding groups. In the group I, control, the females were fed on standard feed formed for adult quail feeding. The experimental groups II and III received the standard mixture with oligosaccharides added, which had been extracted from pea seed, in the quantities and duration, respectively: 0.4 g/kg of mixture for 3 weeks, 0.4 g/kg for the entire period of the experiment, that is 4 months. In the groups IV and V, the addition of oligosaccharides was 3 g/kg of feed; with the group IV fed this way for 3 weeks and the group V – for 4 months.

The quail were slaughtered on the completion of the experiment. Breast muscles were collected from the carcass and stored at approx. 6 °C for 24 hours. Thereafter, pH, colour – visually and with SPECOL 11 at wave length of 560 nm – as well as the quantity of the thermal drip were evaluated; sensory analysis of the boiled muscles was done and the broth obtained through boiling.

Basing on the results of the studies it was observed that the degree of breast muscle acidification in 24 hours post mortem was different between the particular experimental groups. Moreover, an improvement of sensory characteristics of boiled meat was found if oligosaccharides had been applied in the quantity of 3 g for 3 weeks, whereas a deterioration was observed when 0.4 g was applied for 3 weeks, and 3 g of oligosaccharides were applied throughout the period of raising. Application of oligosaccharides, irrespective of the experiment variant, improved the water-holding capacity of meat (lower meat juices drip loss). Application of higher doses of oligosaccharides in quail feeding may lead to raw breast muscle meat colour brightening.

Keywords: quail, feed supplementation, oligosaccharide, quail meat.