

## Quality and lysozyme activity of eggs depending on the species of Galliformes

### Summary

The aim of the study was to analyse the quality and hydrolytic lysozyme activity of the eggs of five species of Galliformes: domestic chicken, Japanese quail, domestic turkey, domestic guinea fowl, and pheasant. The study was conducted on 150 eggs (30 from each species). The analysis included characteristics of the whole egg and its components, i.e. the shell (strength, colour, weight, thickness, surface area, volume, and density), albumen (height, Haugh units, weight, and pH), and yolk (colour, weight, and pH). Eggs were broken to collect albumen samples for further analysis of the hydrolytic activity of lysozyme. General trends in the egg weight of the poultry species were confirmed. The most favourable percentage of yolk was recorded in the pheasant, turkey and guinea fowl eggs. The highest percentage of albumen was obtained for chicken and quail eggs. Guinea fowl eggs had the highest share of shell, and these shells also had the highest values for strength and thickness (143.51 N and 0.6465 mm). The lowest values of these traits were found in Japanese quail eggs (11.48 N and 0.184 mm). Haugh units were highest for chicken eggs and lowest for turkey eggs. The highest hydrolytic activity of lysozyme was found in Japanese quail eggs, at 77 742 U/ml. The values in the egg albumen of the other poultry species were not significantly different.

**KEY WORDS:** *Gallus gallus domesticus*, *Coturnix japonica*, *Meleagris gallopavo*, *Numida meleagris*, *Phasianus colchicus*, muramidase