

THE INFLUENCE OF SEASON AND STOCKING DENSITY ON MEAT QUALITY IN BROILER CHICKENS

C.D. Curea¹, R.M. Radu-Rusu¹, A. Usturoi¹, R.N. Rațu²,
M.A. Davidescu¹, M.G. Doliș¹, M.G. Usturoi^{1*}

¹Faculty of Food and Animal Sciences, “Ion Ionescu de la Brad” Iasi University of Life Sciences, 8 Mihail Sadoveanu Alley, 700489 Iasi, Romania

²Faculty of Agriculture, “Ion Ionescu de la Brad” University of Life Sciences, 3 Mihail Sadoveanu Alley, 700489 Iasi, Romania

*e-mail: marius.usturoi@iuls.ro

Abstract

To assess the influence of season and stocking density on meat quality in Ross-308 chickens, two experiments were conducted (one in December-January and the other in July-August), each with three groups differentiated by stocking density (19 birds/m² = Lc-1 and Lc-2; 17 birds/m² = Lexp-1 and Lexp-3; 16 birds/m² = Lexp-2 and Lexp-4). In the warm season, the pH of the meat showed narrower ranges between measurements on warm meat (6.70-6.76) and refrigerated meat (6.03-6.11), compared to the values found in the cold season (6.75-6.80 vs. 6.11-6.18). The sensory qualities of the meat were influenced by stocking density, with lower densities receiving higher scores. However, the scores in the warm season were lower than those in the cold season. Compared to the chickens reared at higher densities, those housed at the 16 birds/m² stocking rate had the highest dry matter content (0.60-0.71% higher in the cold season and 0.65-0.71% higher in the warm season), protein content (0.41-0.55% and 0.54-0.62% higher, respectively), and lipid content (0.10-0.11% and 0.13-0.17% higher, respectively). In conclusion, to maintain meat quality within normal limits during periods of extreme temperatures, lower stocking densities should be applied.

Key words: broiler, density, season, meat quality