

## Review

# Broiler meat quality: Proteins and lipids of muscle tissue

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**Proteins and lipids of muscle tissue are important meat quality parameters. They contribute substantially to the nutritional characteristics of meat. A number of studies has been conducted on the effect of different factors on the protein and lipid content of broiler meat. Given the above, the subject matter of the present paper was to provide a review of latest research results on the said quality traits as affected by the most commonly tested factors. The results were grouped and presented in terms of the effect of nutrition, genotype, sex, age and rearing system. The objective of the paper was to review major previous studies on the subject in an attempt to define a future research pathway and facilitate the promotion of scientific findings towards wider practical implementation.**

**Key words:** Broilers, meat quality, proteins, lipids.

## INTRODUCTION

The quality of meat in general and hence poultry meat is an extremely complex notion that can be assessed from different points of view. From the standpoint of consumer interests and the slaughter industry, broilers should have not only high slaughter yields and desirable carcass conformation scores but also good aesthetic, sensory and nutritional characteristics. Nutritionally speaking, poultry meat is a valuable source of proteins, vitamins and minerals, and has a relatively low fat content. In that respect, the chemical composition of muscle tissue of major primal cuts is an important element of broiler meat quality (Demby and Cunningham, 1980; Ristić, 1999; Bogosavljević-Bošković, 2003; Grashorn and Closterman, 2002).

The above quality traits are dependent upon a number of factors. Genotype, sex and age stand out among biological factors (Lewis et al., 1997; Bokkers and Koene, 2003; Hellmeister et al., 2003). Among numerous non-genetic factors that substantially affect certain meat

quality traits, broiler nutrition plays an important role. Diet composition and feed consumption can affect the chemical composition of muscle tissue to a greater or lesser extent. Particular importance has been attached to broiler rearing system in the last years (Ristić, 2003; Holcman et al., 2003; Bogosavljević-Bošković et al., 2006a, 2011). Broiler rearing system is gaining importance along with the fact that the modern broiler meat market dominated solely by price competitiveness is undergoing radical transformation into a market equally dominated by both price and quality competitiveness.

Given the above, the objective of this work was to provide a review of latest research results on the chemical composition of broiler meat, protein and lipid content in particular, in terms of the effect of major genetic and non-genetic factors.

## PROTEINS AND LIPIDS IN MUSCLE TISSUE OF BROILERS AS DEPENDENT UPON MAJOR REARING FACTORS

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As regards the anatomic region, origin, structure and function of muscle tissue of broilers, most authors









