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Saturated fatty acids may ameliorate environmental heat stress in broiler birds by affecting mitochondrial energetics and related genes*

**Kazem Seifi^{1*}, Mansour Rezaei¹, Asad Teimouri Yansari¹, Gholam Hossein Riazi²,
Mohammad Javad Zamiri³, Reza Heidari⁴**

¹Department of Animal Science, Faculty of Animal Science and Fisheries, Sari Agricultural Sciences and Natural Resources University, Sari 4818168984, Iran

²Institute of Biochemistry and Biophysics, University of Tehran, Tehran 13145-1365, Iran

³Department of Animal Science, College of Agriculture, Shiraz University, Shiraz 71964-84334, Iran

⁴Pharmaceutical Sciences Research Center, Shiraz University of Medical Sciences, Shiraz 71468-64685, Iran.

*Corresponding author. Kazem.seifi@gmail.com

Abstract

Heat stress decreases performance of poultry. The novel strategies to maintain production level, or at least minimizing the decrease in productivity during hot days need to be elucidated. This study was conducted to determine the effect of four fat types on mitochondrial energetics in heat-stressed broilers. In experiment 1, nitrogen-corrected apparent metabolizable energy (**AMEn**) content of four supplemental fat sources, including olive oil, soybean oil, coconut oil and beef tallow, all supplemented at 3, 6, and 9% in the basal diet, was evaluated. The AMEn values of fats were determined as 9738.0±137.9, 8949.0±159.9, 7844.0±91.7, and 7368.0±190.3 kcal/kg for olive oil, soybean oil, coconut oil

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