

Original article

# The efficacy of lactic acid bacteria *Pediococcus acidilactici*, lactose and formic acid as dietary supplements for turkeys

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## Abstract

A feeding trial was performed on 1400 Big-6 turkey toms divided into experimental groups subject to the use of dietary supplements. The aim of this study was to evaluate the efficacy of the probiotic supplement Bactocell, containing lactic acid bacteria *Pediococcus acidilactici*, and lactose, administered to turkeys separately or in combination, as well as a formic acid supplement.

The addition of the probiotic under test (lactic acid bacteria *Pediococcus acidilactici*) to diets for turkeys contributed to higher daily gains and lower feed consumption per kg weight gain only during the first 12 weeks of their life. Diet supplementation with lactic acid bacteria and lactose reduced mortality rates. A slaughter value analysis revealed only a slightly (by approximately 1%) higher content of breast muscle and a lower content of thigh muscle in birds fed diets supplemented with lactic acid bacteria. Turkeys receiving lactic acid bacteria or lactose and a combination of both these supplements were characterized by a higher fat content of meat and slightly lower pH values, whereas meat from turkeys fed lactose-supplemented diets was darker in color. The addition of formic acid *Acidum formicum* to diets for turkeys contributed only to lower mortality rates.

**Key words:** turkeys, probiotics, lactose, formic acid, slaughter value, meat quality