Efficacy of species-specific probiotic Pediococcus acidilactici FT28 on blood biochemical profile, carcass traits and physicochemical properties of meat in fattening pigs

Runjun Dowarah, Ashok Kumar Verma, Neeta Agarwal, Putan Singh

PII: S0034-5288(17)30156-X
DOI: doi:10.1016/j.rvsc.2017.11.011
Reference: YRVSC 3463

To appear in: *Research in Veterinary Science*

Received date: 10 February 2017
Revised date: 2 November 2017
Accepted date: 18 November 2017

Please cite this article as: Runjun Dowarah, Ashok Kumar Verma, Neeta Agarwal, Putan Singh , Efficacy of species-specific probiotic Pediococcus acidilactici FT28 on blood biochemical profile, carcass traits and physicochemical properties of meat in fattening pigs. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Yrvsc(2017), doi:10.1016/j.rvsc.2017.11.011

Efficacy of species-specific probiotic *Pediococcus acidilactici* FT28 on blood biochemical profile, carcass traits and physicochemical properties of meat in fattening pigs

Runjun Dowarah, Ashok Kumar Verma*, Neeta Agarwal and Putan Singh

Centre of Advanced Faculty Training in Animal Nutrition, ICAR-Indian Veterinary Research Institute, Izatnagar-243122, UP, India

*Corresponding author: Tel.: +91-9412318322; fax: +915812310281

E-mail address: vermaak62@gmail.com

Abstract

The present study investigates the influence of supplementing *Pediococcus acidilactici* strain FT28 on serum biochemistry, carcass and physicochemical properties of meat in fattening pigs. A total of 36 piglets (28 day) were randomly divided into three groups of four replicates of three animals in each. Each group was fed one of the experimental diet as basal diet alone (Control-T0); basal diet supplemented with *Pediococcus acidilactici* strain FT28 (swine origin probiotic-T1) and basal diet supplemented with *Lactobacillus acidophilus* NCDC-15 (dairy origin probiotic-T2). Increased ($P<0.05$) level of serum total protein and albumin, and decreased ($P<0.05$) triglyceride were observed with probiotic supplementation either of swine or dairy origin, compared to control. The level globulin and glucose were higher ($P<0.05$) in T1 group among the dietary groups. Carcass traits remained unaltered except for the weight of ham, kidney and spleen which were higher ($P<0.05$) in the T1 group. Water holding capacity and TBARS were improved ($P<0.05$) in the T1 group than control, however comparable to the T2 group. The ether extract, pH and sensory attributes (juiciness and appearance) were improved ($P<0.05$) in the T1 group among the dietary groups. It is evident from the present study that *P. acidilactici* FT28 could serve as probiotic for enhancing carcass quality and physicochemical properties of pork without influencing the blood metabolites.

Key words: carcass quality; probiotics; species-specific; sensory attributes

1. Introduction