Title: The effect of increased crude protein level and/or dietary supplementation with herbal extract blend on the performance of chickens vaccinated against coccidiosis

Authors: A. Arczewska-Włosek, S. Świątkiewicz, J. Kowal, D. Józefiak, J. Długosz

PII: S0377-8401(16)30496-5
DOI: http://dx.doi.org/doi:10.1016/j.anifeedsci.2017.04.021
Reference: ANIFEE 13773

To appear in: *Animal Feed Science and Technology*

Received date: 13-8-2016
Revised date: 20-4-2017
Accepted date: 21-4-2017

Please cite this article as: Arczewska-Włosek, A., Świątkiewicz, S., Kowal, J., Józefiak, D., Długosz, J., The effect of increased crude protein level and/or dietary supplementation with herbal extract blend on the performance of chickens vaccinated against coccidiosis.Animal Feed Science and Technology http://dx.doi.org/10.1016/j.anifeedsci.2017.04.021

The effect of increased crude protein level and/or dietary supplementation with herbal extract blend on the performance of chickens vaccinated against coccidiosis

A. Arczewska-Włosek [a], S. Świątkiewicz [a], J. Kowal [b], D. Józefiak [c] and J. Długosz [c]

[a] Department of Animal Nutrition and Feed Science, National Research Institute of Animal Production, 1 Krakowska Street, 32-083 Balice, Poland

[b] Department of Zoology and Ecology, University of Agriculture, 24/28 Mickiewicza Avenue, 30-059 Cracow, Poland

[c] Department of Animal Nutrition and Feed Management, Poznan University of Life Sciences, 33 Wołyńska Street, 60-637 Poznan, Poland

[*] Corresponding author:

E-mail address: anna.arczewska@izoo.krakow.pl (A. Arczewska-Włosek)

Highlights

- The anticoccidial vaccines may lead to transient performance deterioration in broilers.
- The increased dietary CP level and herbal extracts ameliorated partially this effect.
- The studied dietary treatments did not interfere with circulation of vaccine's oocysts.

ABSTRACT

The experiment was designed as a 2 x 2 x 2 factorial arrangement with 6 replicate pens per treatment (8 male Ross 308 chicks per pen) conducted from 1 to 42 d of age to evaluate the effect of dietary crude protein level (CP) and herbal extract blend on performance indices, results of slaughter analysis, and oocyst shedding in broilers vaccinated against coccidiosis. Treatments included a lack or single dose of live anticoccidial vaccine (Livacox T®, administered at 1 d of age, VAC), normative (21.6 and 20 % in the starter and grower-finisher feeding phase, respectively) or increased (23.6 and 21.6 % in the starter and grower-finisher feeding phase, respectively) dietary crude protein level, with or without supplementation with an herbal extract blend (*Echinacea purpurea*, *Salvia officinalis*, *Thymus vulgaris*, *Rosmarinus*