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Effects of dietary plant extract rich in *Allium sativum* and *Woodfordia fruiticosa* on chicken growth performance, intestinal microbiota and meat oxidative stability

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Aim/Objective: The aim of the present study was to investigate the effects of two herbal products on growth performance, intestinal microbiota of jejunum and cecum, the breast and thigh meat composition and its oxidative stability during refrigerate storage.

Methods: A total of 240, one-day-old, broiler chicks were used in a 42-day trial. Chickens were randomly distributed into three treatments with four replicates of twenty chickens per pen: Control group; Vilocym Z group; Salcocheck Pro group. Vilocym Z and Salcocheck Pro are herbal products of the Ayurvet® Company and were given at the level of 1.0g/kg of feed for each one throughout the trial that lasted 42 days. At the end of the trial, total counts of bacteria, *Lactobacilli* and *Escherichia coli* counts were enumerated by real time PCR at both jejunum and cecum. Chemical composition and oxidative stability was also evaluated in both breast and thigh meat.

Results: The results of the present study showed that Vilocym Z group had higher jejunum, cecum and *Lactobacilli* counts and improved oxidative stability of breast and thigh meat after 1 and 4 days of refrigerated storage, compared to the control group. Salcocheck group had higher jejunum *Lactobacilli* counts and *Escherichia coli* cecum count, and improved oxidative stability of breast and thigh meat after 1 and 4 days of refrigerated storage, compared to the control group.

Conclusion: On the above basis, *Allium sativum* and *Woodfordia fruiticosa* enriched products could be used as substances to increase antioxidant activity of chicken tissues.

Biography

Efterpi Christaki is a Veterinarian Nutritionist and graduated from the Faculty of Veterinary Medicine, Aristotle University of Thessaloniki, where she completed her PhD in 1991. She was elected as Professor in 2012. Since 2015, she is the Head of the Department of Animal Production. Her research interests include nutrition, feed additives (probiotics, prebiotics, etc), aromatic plants quality of animal feeds, nutritive value of feedstuffs, functional foods, macro-and micro-algae. She has more than 170 publications (books, research articles, reviews and congress presentations) with more than 1800 citations. She is reviewer and Member of Editorial Boards in peer-reviewed journals and Member of Scientific Committees.

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