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Effects of dietary plant extract rich in *Ocimum sanctum* and *Ocimum basilicum* on chicken growth performance, intestinal microbiota and meat oxidative stability

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Aim: The aim of the present study was to investigate the effects of two herbal products on growth performance, intestinal microbiota of jejunum and caecum, breast and thigh meat composition and oxidative stability.

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; Stresomix group; Ayucee group. Stresomix and Ayucee are herbal products of the Ayurved® Company, and were given at the level of 0.5 and 1.0 g/kg of feed, respectively, 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 Stresomix group had higher final body weight, breast and thigh meat moisture content, jejunum *Lactobacilli* counts populations and caecum *E. coli* counts, compared to the control group, as well as improved oxidative stability of breast and thigh meat after 1 and 4 days of refrigerated storage, compared to the control group. Ayucee group had higher breast meat moisture content, and caecum *E. coli* counts, as well as improved oxidative stability of breast and thigh meat after 1 and 4 days of refrigerated storage, compared to the control group.

Conclusion: In conclusion, this study provides indirect evidence that those antioxidant compounds of *Ocimum sanctum* and *Ocimum basilicum* enriched products were absorbed by the chicken tissue, increasing its antioxidative capacity.

Biography

Panagiota Florou-Paneri is a Veterinarian Nutritionist graduated from the Faculty of Veterinary Medicine, Aristotle University of Thessaloniki, Greece, where she completed her PhD in 1988. She is Professor of the Aristotle University in 2007. Since 2004, she is the Director of the Laboratory of Nutrition. Her research interests include animal nutrition, feed additives (acidifiers, probiotics, prebiotics, etc), aromatic plants and their extracts, quality of animal feeds, nutritive value of feedstuffs, functional foods, macro- and micro-algae and digestibility. She has more than 170 publications (books, research articles, reviews, congress presentations) with more than 1800 citations. Also, she is Member of Editorial Boards in several peer-reviewed journals.

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