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Global research ensuing in an invention for comprehensive control of coccidiosis in poultry

This study deals with a global research data, compiled of eight countries, aimed at replacement of synthetic poultry coccidiostats by an invented comprehensive dual approach of decontaminating poultry barns by Wide Spectrum Disinfectant (WSD) and intermittent supplementation of drinking water with natural emulsion of Essential Oil Blend in Water Extract (EOBWE) of plants. Six trials of this global research were concluded in isolation unit facilities and laboratories, while the other four trials were performed in the field. The six isolation facility and laboratory trials had different objectives that included, analyzing the protection methods against coccidiosis by intermittent or continuous administration of EOBWE in drinking water against controlled challenge by sporulated oocysts of *Eimeria* spp., via the mouth or contaminated floors. Another two objectives were to study the effect of different concentrations of EOBWE and WSD on lysis of *Eimeria*-oocysts. A fourth objective compared the control of coccidiosis in broilers by the invented dual approach of using WSD and EOBWE versus classical disinfectants and synthetic coccidiostats. The field trials were four. The first compared the dual intervention by classical disinfectants and synthetic coccidiostat vs. the invented intervention by WSD and EOBWE against controlled floor contaminated-challenge in broilers by equivalent number of sporulated oocysts of 8 *Eimeria* spp. The second and third trials had the same comparison but against field challenge of broilers by *Eimeria* spp. The fourth trial compared the impact of synthetic coccidiostat alone vs. concurrent administration of both the synthetic coccidiostat and the EOBWE on protection of broilers against field challenge by *Eimeria* spp. The compiled data of this global research resulted in a US patented-invention of dual method for decontamination of surfaces by WSD and for drinking water supplementation by natural EOBWE, that led to comprehensive control of coccidiosis in poultry, by significant reduction of oocysts output and its associated lesions, and consistent enhancing of the chicken performance.

Biography

Elie K Barbour has completed his MS in Animal Sciences at the American University of Beirut, and his PhD at University of Minnesota, St. Paul. He has served for many years as Chairman of the Animal and Veterinary Sciences Department at the American University of Beirut, and as a Consultant to major intensive domestic farms in the Middle East. He is on the Editorial Board of the World Animal Health Organization (*Revue Scientifique Et Technique Journal*), and *Veterinaria Italiana Journal*. He has around 125 manuscripts published in international journals in the field of animal production and health.

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