Advantages and disadvantages of coccidiosis control programs in poultry and the invention of a new comprehensive protocol

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The evaluation of the control programs of coccidiosis in poultry will include their advantages and disadvantages, based on literature from different parts of the world. The presented control programs will include house management, vaccines, and the approach of coccidiostat-inclusion in feed. A global data, accomplished in nine countries, aimed at replacement of commercial poultry coccidiostats by an invented comprehensive dual approach of decontaminating poultry barns by an invented Wide Spectrum Disinfectant (WSD) and intermittent supplementation of drinking water with an emulsion of natural Essential Oil Blend in Water Extract (EOBWE) of plants. The first six trials were concluded in isolation unit facilities and laboratories and the other four were field trials. The first six trials had different objectives including, studying the protection against coccidiosis by intermittent or continuous administration of EOBWE in drinking water against controlled challenge by sporulated oocyctes of *Eimeri*a spp., administered intra-esophageally or through contaminated floors. Another two objectives studied the effect of different concentrations of EOBWE and WSD on lysis of *Eimeria* oocyctes. A fourth objective compared the control of coccidiosis in broilers by the invented dual approach of applying WSD and EOBWE versus the application of classical disinfectants and commercial coccidiostats. The four field trials compared the dual intervention by classical disinfectants and commercial coccidiostats versus the invented intervention by WSD and EOBWE against controlled floor contaminated-challenge of 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 commercial coccidiostat alone versus concurrent administration of both the commercial coccidiostat and the EOBWE on protection of broilers against field challenge by *Eimeria* spp. The compiled data of this global research led to comprehensive control of poultry coccidiosis by the dual approach of the invented method, resulting in significant reduction of oocyctes output and its associated lesions, and consistent improvement of the chicken performance.