

## Comparison the anticoccidial effect of *Origanum vulgare* and *Artemisia sieberi* with salinomycin in broilers

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### Abstract

Coccidiosis is the most important intestinal parasitic disease of poultry. The safe alternative of anticoccidial drugs are herbal extracts, because they don't results drug resistance and residues in meat and eggs. The present study compared the effects of two herbal extracts, *Origanum vulgare* and *Artemisia sieberi*, as well as their combination with the salinomycin sodium anticoccidial drug on the broilers' performance parameters during the coccidiosis challenge. A total of two hundred and sixteen, one-day-old Ross 308 broilers were randomly divided into six groups. Two types of herbal extracts and an ionophore anticoccidial drug were investigated with positive and negative control groups. The birds in of groups, except negative control group, were inoculated with a mixture of *Eimeria* sporulated oocysts at 21 days of age. Body weight gain, feed intake, feed conversion ratio, and mortality rates were assessed weekly. The rate of oocyst per gram and the lesion scoring were assessed weekly up to three weeks after challenge. Growth parameters of the birds that were challenged with *Eimeria* were reduced when compared to the uninfected birds. The best results were obtained in the groups that were treated with salinomycin sodium and a mixture of two herbal extracts, which had better results in terms of body weight, food intake and feed conversion ratio, which was significantly better than the positive control group. The OPG in groups treated with herbal extracts had significantly reduced compared to the positive control group. It seems that using a combination of *Origanum vulgare* and *Artemisia sieberi* extracts is more efficient than using any of them alone for achieving better results in controlling and preventing coccidiosis, having more productive function and preventing intestinal lesions in broiler chickens. Finally, further studies are recommended with the combination of these herbal extracts with different dosages.

**Keywords:** *Origanum vulgare*, *Artemisia siberi*, Salinomycin, Coccidiosis, Broiler

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