

EFFECTIVENESS OF SLAB51 PROBIOTICS AND *Moringa oleifera* LEAF MEAL FOR TREATMENT OF COCCIDIOSIS IN BROILERS

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Coccidiosis is the major parasitic disease of poultry and it is caused by protozoa of the phylum *Apicomplexa*, family *Eimeriidae* [1]. Drugs and vaccines are the two main control measures for this disease however, due to concerns on prophylactic drugs use and the high vaccines cost, alternative methods are needed [2]. The use of probiotics is now preferred to antibiotics in poultry industry [3]. Also herbal preparations could be an alternative to treat coccidiosis in poultry and Drumstick tree (*Moringa oleifera*) is indicate for its effectiveness [4]. Aim of this study is to formulate a new poultry diet, integrated with probiotic blend SLAB51 (Sivoy®, Mendes SA, Switzerland) or *Moringa oleifera* leaf meal, to avoid parasitic overgrowth and the usual administration of anticoccidic drugs. Three groups (M=Moringa; P=probiotics; C=control) of 150 chickens each, with naturally acquired coccidia infection, were studied. All groups were bred and fed in the same conditions. Group M received *M. oleifera* leaf meal added to the food (5%) from day 60 and Group P received SLAB51 probiotics in water (7.5 Billion/50ml), from day 1. At day 120, poultry were slaughtered and gut samples were collected for histopathology. Intestinal morphology (IM) was evaluated: sections from duodenum, ileum and cecum were used to measure the height of villi, the depth of crypts, and the ratio villi/crypts. At the level of cecum, thickness of the lamina propria was measured. Lesions due to coccidia replication were evaluated according to Lesions Score (LS) criteria [5]. The scoring system was standardized for a scale of 0 to 4 [6]. Data on growth performances and mortality were recorded. Lesion Score (LS) and oocysts count (OC=oocysts/microscopic field) in different intestinal tracts were used to evaluate the different groups. In group P, LS, OC, IM, ponderal increase, final weight and mortality reduction were statistically significant, compared to group C. In group M, only LS, OC and mortality reduction resulted statistically significant. *M. oleifera* leaves had a positive effect against the coccidiosis but had no effect on the IM, ponderal increase and final weight. In general, group P showed better results than group M. SLAB51 probiotics seem to have a protective activity in poultry coccidiosis, and an additional auxinic activity, preserving IM and integrity. In conclusion, *M. oleifera* leaf meal and SLAB51 probiotics can be useful to formulating a diet that avoids the use of anticoccidial drugs in broilers.

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