

Evaluation of the effect of *Phyllanthus amarus*, *Jatropha curcas* and *Piliostigma thonningii* on experimental chicken coccidiosis

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1 SUMMARY

The anticoccidial activity of *Phyllanthus amarus* (Hurricane weed), *Jatropha curcas* (purging nut) and *Piliostigma thonningii* (monkey bread) was tested on seventy five *Eimeria tenella* infected Isa-brown male day-old chicks in a completely randomized design as an alternative measure of controlling coccidiosis. Each chick was orally challenged with 15 000 *Eimeria tenella* sporulated oocysts. There were five groups infected chicks. The first, second and third groups received , the decoction of *Phyllanthus amarus*, *Jatropha curcas* and *Piliostigma thonningii*, *ad libitum* respectively for five days post-inoculation as drinking beverage. The fourth group was treated with Amprolium orally for also five days post-infection and the fifth group was the infected untreated control. Body weight gain, feed conversion ratio, lesion score, proportion of bloody droppings, survivability, morbidity and oocyst excretion were evaluated. The results showed an efficacy of *Phyllanthus amarus* in the reduction of oocyst excretion with a reduction rate of 87% compared with the infected untreated control group oocyst excretion. Moreover, macroscopic lesion intensity reduction and low presence of bloody diarrhoea were observed with the *Phyllanthus amarus* treated chicks. The oocyst excretion reduction rate was 74% with *Jatropha curcas* infected treated chicks. The growth performance results were similar among the infected treated chick groups. *Piliostigma thonningii* was less effective in reducing oocyst excretion compared with the other two medicinal plants. Further spectroscopic studies are needed to value the active anticoccidial ingredients in these plants.