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EFFECT OF 'HELOFUGINONE" AND SALINOMYCIN AS ANTICOCCIDIALS ON BROILER PERFORMANCE

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INTRODUCTION

Infectious diseases whether vi- bacterial or parasitic are among main problems facing poultry duction (Cockrio, 1971). Cocci- sis is one of the major parasitic eases offecting poultry. It is a ease condition usually of the di- stive tract caused by Eimeria ecies characterized by diarrhea, gh monbidity and mortality be- le poor growth rate. among the st dangerous species of Eimeria fecting poultry, is Eimeria terella hich causes flock mortality 0%) within a period of 2-3 days, ood loss from cecal lesions and arrhea (Calneck et al., 1990). efore 1936 poultry producers had assistance from chemotherapy controlling devastating out- eaks of coccidiosis. In 1936 sul- r was found markedey to reduce ortality from E. tenella when fed 1.5% or higher in the diet.

Although this product was too xic for general use yet, its dis- very in the control of cocciaiosis means of sulfonamides prepara- tions. Three years later, Sulfona- mides were found suppressive against 6 intestinal species of Ei- meria but ineffective on pathogenic E. tenella. Addition of an anticoc- cedial durg in the feed provides the most convenient method of admin- istration, Halofuginonl is one of the new anticoccidiae products ad- ministered in the feed of poultry for this purpose. The present study was designed to study the effec- tivenesss of Halofuginone on con- trolling cecal coccidiosis in addi- tion to its effect on birds performance compared with Sali- nomycin.

MATERIAL AND METHODS

Experimental birds:

Six hundred white "Arbor ecars" one day-old chicks which were proved to be free from coc- cidia were obtained from El Salam Poultry Company and reared under complete hygienic conditions on deep litter system.

Ration:

Commercial broiler ration was obtained from El-Salam Poultry Company, this ration was requested not contain any anticoccidiostats, the ingredients of the dry ration were yellow corn, soya bean cake, fish meal, cotton seed cake, brane, calcium carbonate, calcium phosphate, sodium chloride and premex.

Oocysts :

Seed occysts of Eimeria tenella strain, a pure strain of E. tenella was prepared, the oocysts were kept in 25% patassium dichromate until use. The preparation of culture and inoculation of birds were performed as described by (Barwick et al., 1970). Counting of oocysts output per gram of feces was done using Mac master slide by the same technique described by Soulsby (1968).

Experimental desion:

Six hundred one-day old chiks were equally divided in the following groups and treated as follows:

Group I: Were fed on a ration free from Halofuginone and not inoculated with sporulated E. tenella oocysts.

Group II: Were fed on a ration containing Holofuginone (1/2 kg/ton) but not inoculated with sporulated E. tenella oocyst.

Group III: Were fed on a ration containing Halofuginone and inoculated with sporulated oocysts. The infective dose (5000 oocyst/bird).

Group IV: Were fed on a ration free from Halofuginone & Salinomycin and inoculated with sporulated oocysts by the previously mentioned infective dose.

Group V: Were fed on a ration contain Salinomycin " 1kg/ton" and inoculated with sporulated E. tenella oocysts.

Group VI: Were fed on ration containing Salinomycin "1 kg/ton" and not inoculated with sporulated oocysts.

Random fecal samples were collected daily from each group until the end of the experiment (up to 45 days). Each sample was examined for E. tenella oocysts. The daily feed consumed as well as the body weight gain was calculated and recorded.

RESULTS AND DISCUSSION

This study was carrried out to evaluate the effect of Halofuginone & Salinomycin as anticoccidial drugs in prevention and control of cecal coccidiosis as well as their

effect on broiler performance. The obtained results revealed that the feed conversion ration at day 39 and 45 in Halofuginone fed group (3 and 2.5) is much better than that of the control one (3.4, 2.8) as well as Salinomycin fed group (3.2 & 2.7). Concerring the appearance of the effect of Halofuginone on birds performance, the results cleared out that the performance of the birds was much better in the group fed on diet containing Halofuginone rather than that which was fed on the ration free from the compound or fed on ration containing Salinomycin in addition to minimum feed intake.

This may be attributed to the role played by articoccidial drug in prevention of cecal coccidiosis occurrence, this may lead to healthy individuals not suffering from any illness which was reflected in the form of good production and increased body weight gain.

Concerning the ocurrence of infection after artificial inoculation, the results cleared out that, the symptoms of cecal coccidiosis were more pronounced in the group which was artificially inoculated with sporulated oocyst and fed on ration free from Halofuginone or Salinomycin, in which, there was a significant difference between the group which was inoculated with oocyst and fed on ration free from Halofuginone and that which was inoculated but fed on ration containing Halofuginone or Salinomycin. The appearance of symptoms of illness was more pronounced in all members which were not fed on ration containing either Halofuginone or Salinomycin, as the percentage of mortality increased in that froup in comparison to those fed on ration containing anticoccidials "Halofuginone or Salinomycin".

The obtained results agree with that obtained by **Smith et al., 1972), Reid and Cong (1979) and Coickrill (1971).**

Concerning the performance of birds in groups artificially inoculated with sporocystic oocyst, the results revealed that the group fed on ration containing Halofuginone and inoculated with sporocysted oocyst showed high performance rather than the members of other group fed on ration free from Halofuginone or ration containing Salinomycin. These results may be due to the decease in severity of coccidiosis due to the effect of such drug, which helped the birds to become more healthier and consequently the body weight gain was increased.

SUMMARY

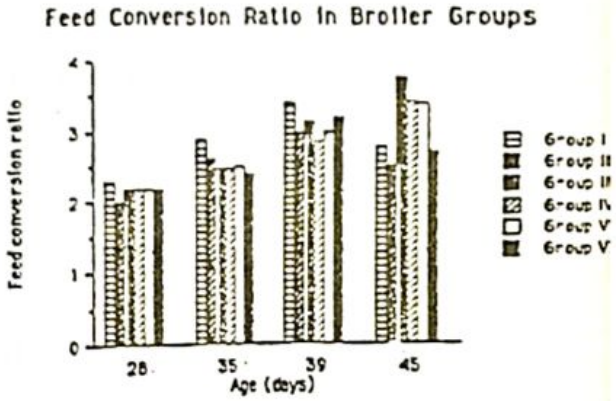
This experiment was conducted in Faculty of Vet. Med. Cairo Univ. to evaluate the effectivenesss of Halofuginone & Salinomycin "anticoccidial drugs" against the

Feed consumption in treated groups

Age(days)	Group I	Group II	Group III	Group IV	GroupV	Group VI
28	2.3	2	2.2	2.2	2.2	.2
35	2.9	2.6	2.48	2.48	2.5	2.4
39	3.4	3	3.15	2.86	3	3.2
45	2.8	2.5	3.77	3.43	3.4	2.7

Group I = Control group
Group II = Holofuginone only
Group III= Halofuginone + Coccidia
Group IV = Coccidia only
Group V = Salinomycin + Coccidia
Group VI = Salionomycin only

infection with cecal coccidiosis in broilers, in addition to evaluate their effect on the bird performance. The results revealed that addition of Halofuginone in ration of broilers "1/2 kg/ton" led to reduction in the probability of infection with coccidiosis, in addition to inappearance of any clinical symptoms on artificially infected birds. Also the bird's performance when fed on a ration containing Halofuginone was much better than that obtained for the birds fed on a ration free from Halofuginone or contained Salinomycin.



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