

Correlation between the anticoccidial sensitivity test for *Eimeria maxima* and number of oocysts excreted in poultry farms.

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Currently, the control of Coccidiosis is mainly performed with anticoccidial drugs available on market. The Anticoccidial Sensitivity Test (AST) and the oocysts per gram (OPG) are laboratory tools that help in the choice of these drugs and the evaluation of the flocks' degree of infection, respectively. The objective of this work was to perform the AST from an isolate of *Eimeria maxima* (EM) in farms in the state of Paraná, besides identifying the possible correlation of the results obtained using AST and OPG. Approximately 11,0lbs of feces were collected in 5 different farms. After feces collection, the oocysts were purified, sporulated and quantified for inoculum production. The inoculum was administered at a dose of 1mL/bird at the 14th day of life by oral route. Each AST test was composed by 4 replicates and 6 birds per treatment. The birds received a standard initial feed (without anticoccidials) until the 12th day of age. Afterwards, they received feed with the following treatments: T1-Negative control (non-medicated, unchallenged), T2-Positive control (non-medicated, challenged), T3-Lasalocid (90ppm), T4-Nicarbazin+Salinomycin (100ppm), T5-Decoquinate (30ppm), T6-Nicarbazin+Semduramycin (66ppm), T7-Monensin (120ppm), T8-Salinomycin (72ppm), T9-Nicarbazin+Narasin (100ppm) and T10-Nicarbazin (125ppm). At the 21st day of age, individual samples of fresh feces (25 grams) were collected from all groups for OPG (Gordon & Whitlock). The birds and the leftover feed were weighed to calculate feed conversion. After the sacrifice of the birds, intestinal lesions were scored for EM according to the methodology by Johnson & Reid. Different levels of sensitivity for EM could be identified. T3 presented lower injury scores, being statistically (Duncan's test) different from the other treatments. Groups T3, T4 and T6 showed the best weight gains. Treatments T3, T5 and T8 presented the best feed conversion. According to this study, there was no correlation between the groups that resulted in higher OPG (T2, T3, T4 and T7) and those that showed worst lesions scores, feed conversion and weight gain. As a conclusion, the AST can be used to monitor Coccidiosis at the flocks, but more surveys must be carried out to correlate the results of the AST and zootechnical data.