

News & Comments

***C. papaya* and *A. vera* Aqueous Extracts had Good Anticoccidial Properties and Improves RBC and WBC**

Nirmal Kumar

Since immunizations for coccidia are extremely uncommon, many chicken farmers heavily rely on chemoprophylactic medications to combat this illness. In the fight against coccidiosis, misuse, and excessive use of these synthetic medications in poultry have resulted in drug resistance. The use of medicinal plants is one of several alternative methods being researched for the efficient, cost-effective, and environmentally friendly control of coccidiosis.

In this regard, promising immunomodulatory benefits of two medicinal plants, *Aloe vera* and *Carica papaya*, to reduce coccidiosis have been observed. *A. vera* and *C. papaya* are widely grown in Cameroon, and it is quite simple to prepare and administer these plant extracts to birds.

Farmers will also benefit from appropriate training on how to use these plants. According to the findings, this work will be very important to local farmers who have small farms with few birds because these plants are easily accessible, highly effective, and inexpensive to obtain.

Additionally, because less money will be spent on synthetic medications to treat coccidiosis, profits will increase.

A. vera and *C. papaya* leaves were the plants that were harvested and identified at the Ekona Research Centre (IRAD), Buea, Fako Division, Southwest Cameroon. Each extract had three experimental groups (T_1 - T_3) and two control chambers (T_4 , T_5). Aqueous extracts of *A. vera* were given to the first experimental group (T_1 - T_3) at concentrations of 0.32, 0.80, and 1.44 g chicken per day, respectively, while aqueous extracts of *C. papaya* were given to the second experimental group (T_1 - T_3) at various concentrations of 0.32, 0.80 and 1.44 g chicken per day, respectively. The leaves of the *C. papaya* plant were collected and then dried in a warm, shady environment. After drying, undesirable components and pieces were hand-picked from the leaves, and the desired components were ground. The SPSS 20.0 Statistical Software Program was used to do an analysis of variance (ANOVA) and Duncan's Multiple-Range (DMR) test on the data.

After comparing the effectiveness of the two extracts against erysipelas, it was found that *Aloe vera*'s aqueous extract was more effective than *C. papaya*'s aqueous leaf extract at the same dose, even if the



differences were not statistically significant at $p < 0.05$. Oocyst counts were greatly reduced by the aqueous extract of *A. vera*, and the rate of oocyst reduction grew as extract concentration did. The greater RBC values in extract-treated hens compared to control groups can be related to the high nutritional value of *A. vera* and papaya leaves, which are highly rich in vitamin A and carotene and hence promote the synthesis of RBC in the marrow. The hens of T_4 ($0.80.31012 \text{ uL g}^{-1}$), infected but untreated, had the lowest RBC value. This may have been caused by the fact that T_4 comprised of hens that were infected but not treated, which may have allowed the *Eimeria* parasites to multiply unchecked and cause substantial blood loss (RBC) as they perforate the birds' caeca. Due to papaya leaves' high vitamin A content, a high platelet level may result which is very effective in wound healing and increase the production of platelets.

Aqueous extracts of *Carica papaya* and *Aloe vera* are both highly effective at treating coccidiosis and have good anticoccidial activities. Depending on the concentration, both extracts have an impact on the haematological characteristics of chickens and have different effects on the growth of chickens. Chickens treated with extracts from *C. papaya* and *A. vera* leaves had significantly fewer oocysts and better RBC and WBC levels. To fight coccidiosis and enhance chicken health, these extracts could be utilized as an organic substitute for synthetic chemicals.

JOURNAL REFERENCE

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KEYWORDS

Aloe vera, coccidiosis, Kabir chickens, *Carica papaya* leaves, chicken growth

