Tropentag, September 20-22, 2023, hybrid conference

"Competing pathways for equitable food systems transformation: Trade-offs and synergies"

Effect of *Ocimum gratissimum* on carcass quality of broiler chicken

Eyerin-Ebi H. Japan

Niger Delta University, Dept. of Animal Sciences, Nigeria

Abstract

Phytogenics (natural growth promoters derived from plant) feed additives are added in poultry diets as appropriate replacement for antibiotics. This experiment was aimed at accessing the effect of *Ocimum gratissimum* extracts on carcass quality of broiler chickens. The specific objectives were to evaluate the possibility of *O. gratissimum* to enhance breast meat and to determine the effect of *O. gratissimum* on organ weight of broiler chicken.

The study was carried out at Niger Delta University Teaching and Research Farm. A total of one-hundred and ninety-five Cobb-500 day-old broiler chicks were randomly distributed into three treatment groups of sixty-five birds each, with five replicates of thirteen birds per replicate. The control group (T1) was given commercial starter and finisher diets, treatment two (T2) was given *O. gratissimum* extract in commercial feed and treatment three (T3) was administered aqueous extract of *O. gratissimum*. The experiment lasted fifty-four days and was arranged in a completely randomised design. Data on carcass weight was collected, weight of different carcass cut-up parts and internal organs was determined by weighing. All data was collected twice (at day 40 and day 54). The data was subjected to one-way analysis of variance and significant differences were identified.

Aqueous *O. gratissimum* extract significantly ($p < 0.05$) improved the final live weight and breast weight of T3 at day 54 (2137.75 and 536.25, respectively), compared to T1 (1684.20 and 395.25, respectively). *O. gratissimum* extract in feed (T2) also significantly enhanced ($p < 0.05$) live weight and breast meat weight (1858.80 and 420.50, respectively), compared to T1. There was no significant difference ($p > 0.05$) in organ weights of each treatment.

The results showed that *O. gratissimum* improved breast meat and had no adverse effect on organs, such as enlarged organs.

Keywords: Breast meat, broiler chicken, carcass quality, *Ocimum gratissimum*

Contact Address: Eyerin-Ebi H. Japan, Niger Delta University, Dept. of Animal Sciences, Km3 512101, Igwuruta Road, 511101 Port Harcourt , Nigeria, e-mail: japaneyerinebi@gmail.com