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Impact of Amaranthus caudatus leaf meal on blood profile, internal organs and carcass characteristics of rabbit bucks

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Abstract

Some authors have proposed that Amaranthus caudatus leave can enhance the formation of the haemoglobin and improves blood profile. Also, Amaranthus caudatus leave is high in energy, protein, carbohydrates, fat, vitamins, minerals and other trace elements. Thus, a Completely Randomized Design Experiment (CRD) was conducted to investigate the blood profile, internal organs and carcass characteristics of New Zealand White rabbit bucks fed Amaranthus caudatus Leave Meal (ACLM). The treatments designated treatment 1 (T_1), treatment 2 (T_2) and treatment 3 (T_3) having 12 rabbits each were replicated 3 times with 4 rabbits per replicate. The age of the rabbits was 3 to 4 months, and they weighed approximately 2.56 kg. Three diets formulated with ACLM and supplemented at 0, 10 and 20g/kg feed were fed to rabbits in the respective treatments. Data were collected for haematology, serology, internal organs and carcass characteristics of the rabbit bucks. Data collected on different parameters were subjected to analysis of variance (ANOVA). Results showed that significant increases ($P<0.05$) were observed on the Red blood cell (T_1 5.19; T_2 6.20; T_3 7.88 x10 ^{6}/mm^3), White blood cell (T_1 6.01; T_2 8.03; T_3 11.32 x10^9/mm^3), total protein (T_1 5.62; T_2 6.55; T_3 6.59g/dl), Glucose (T_1 69.06; T_2 71.20; T_3 73.90mg/dl), Urea (T_1 22.15; T_2 25.77; T_3 25.83mmol/l), Heart (T_1 0.46; T_2 0.54; T_3 0.56%), Dressed percentage (T_1 51.90; T_2 54.41; T_3 54.90%), Shoulder (T_1 3.61; T_2 4.04; T_3 4.05%) and Forearm (T_1 3.13; T_2 3.49; T_3 3.44%) following supplementation of ACLM. The serum total cholesterol significantly decreased (T_1 106.34mg/dl; T_2 90.05mg/dl and T_3 95.97mg/dl) as the level of supplementations increased. Thus, supplementation of ACLM at 10g/kg and 20g/kg on the diets of rabbit bucks improved some haematology, serum biochemistry parameters, internal organs and carcass characteristics of the rabbit bucks.

Biography:

Wisdom Amaduruonye is an assistant lecturer in the Department of Animal Breeding and Physiology, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria. He was born at Okpuala Ekere Nvosi in Isiala Ngwa South, Abia State Nigeria. He obtained a B.Agric Degree in Animal Science from Federal University of Technology, Owerri, Imo State Nigeria, in 2010, and M.Sc. in Animal Physiology from the Department of Animal Breeding and Physiology, Michael Okpara University of Agriculture, Umudike Abia State, Nigeria in 2016. He is a member of Animal Science Association of Nigeria and Nigerian Institute of Animal Science. Currently, he is doing a doctorate degree in Animal Physiology with specialization in Reproductive Physiology.

Speaker Publications:

1. Y., Nathaniel, & M.A.,, ., & Wisdom, Amaduruonye & K.L.,, Akinsola, & E.N., Obasi, & Y., Suleiman,. (2019). Seroprevalence of brucellosis in donkeys (Equus asinus) and assessment of donkey management practices in Gamawa local government area, Bauchi state, Nigeria. 21 (3). 134-144.
2. Oguike, Mary & Onuta, Stephen & Wisdom, Amaduruonye & Akpan, Isaac. (2019). Impact of Aspilia africana on Semen and Testicular Characteristics of Rabbit Bucks. Journal of Advanced Agricultural Technologies. 6. 144-149. 10.18178/joaat.6.2.144-149.
3. Nosike, Reginald & Onunkwo, Dozie & J.C.,, Ezike, & Wisdom, Amaduruonye & E.N.,, Obasi, & O.M., Obike, & F.,, Nwakpu, & S.N., Ibe, & Oke, Uma. (2018). Correlations between blood markers and growth parameters in establishing marker bank for Black colour Nigerian local Turkey. 20 (2). 16-25.
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