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## ABSTRACTS

### Volume 1, Issue 4, 2011

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<p style="text-align: center;"><b>Toxicity of copper sulphate and behavioural locomotor response of Tilapia (<i>Oreochromis niloticus</i>) and Catfish (<i>Clarias gariepinus</i>) Species.</b></p> 	<p style="text-align: center;"><b>Original Research, A19</b></p> <p style="text-align: center;"><b>Ezeonyejiaku, C.D., Obiakor, M.O. and Ezenwelu, C.O. 2011.</b> <b><i>Online J. Anim. Feed Res.</i>, 1(4): 130-134.</b></p> <p><b>ABSTRACT:</b> <i>Acute toxicity of copper sulphate (CuSO<sub>4</sub>.5H<sub>2</sub>O) to tilapia (Oreochromis niloticus) and catfish (Clarias gariepinus) species was investigated using toxicity index of 96 hours LC<sub>50</sub> and the quantal response determined by the statistical probit analysis method. In response to the lethality of the copper toxicant, behavioral anomalies (locomotor response) of the exposed fish species were studied as indication of toxic effects of the heavy metal. Fish species shows different mortality responses to the varying concentrations of copper studied (50, 60, 70, 80, 100, and 120 mg/l) due to toxicity. Copper was significantly (no overlap in 95% C.L of 96 hrs LC<sub>50</sub> values) more toxic to Oreochromis niloticus than the catfish. 96 hrs LC<sub>50</sub> values for Oreochromis niloticus and Clarias gariepinus were revealed to be 58.837 and 70.135 mg/l, respectively. Behavioral changes, mostly locomotor responses (avoidance) were observed among the test animals on exposure to the different concentrations of copper sulphate. There is need to control the use of copper because of its observed toxicity and fish avoidance test shows to be an important predictive and sensitive biomarker in aquatic monitoring and pollution management.</i></p> <p><b>Keywords:</b> <i>Heavy metal toxicity, 96 hrs LC<sub>50</sub>, biomarker, dose-response effect.</i></p>	
<p style="text-align: center;"><b>False yam (<i>Icacina oliviformis</i>) leaf meal as an ingredient in the diet of weaner rabbits (<i>Oryctolagus cuniculus</i>) to improve blood profile.</b></p> 	<p style="text-align: center;"><b>Original Research, A20</b></p> <p style="text-align: center;"><b>Ansah, T. and Aboagye, C. 2011.</b> <b><i>Online J. Anim. Feed Res.</i>, 1(4): 135-138.</b></p> <p><b>ABSTRACT:</b> <i>A 60 day feeding trial was conducted to determine the effect of Icacina oliviformis leaf (IOL) as a feed ingredient on the hematology of weaner rabbits. There were arranged in three treatments with four replicates in a completely randomized design. The control diet (T<sub>0</sub>) contained 0% Icacina oliviformis leaf (IOL) while the treatment diets (T<sub>1</sub> and T<sub>2</sub>) contained 5% and 10% IOL, respectively. An amount of 200 g of the experimental diet was given to the animals each day while water was given ad libitum. Initial blood samples were collected two days earlier before experimental diet was fed. Data were analyzed using Genstat Discovery Edition 3. There were no significant differences (P&gt;0.05) in (Haemoglobin) Hb concentration, PCV, RBC however all the erythrocytes values increased from the initial low values to higher values. The margin of increase was higher for T<sub>1</sub>. There were no significant differences (P&gt;0.05) among the treatment means for WBC, Neutrophiles, Eosinophiles, Monocytes counts in the final readings. The hematology values recorded for all the treatments fell within the normal ranges for rabbits. Feeding 5% and 10% IOL to a weaner rabbits led to an increase in erythrocytes values and could be used in feeding without any detrimental effect.</i></p> <p><b>Keywords:</b> <i>Haematology, Icacina Oliviformis, false yam, terpenes.</i></p>	
<p style="text-align: center;"><b>Toxicological study of single action of zinc on Tilapia species (<i>Oreochromis niloticus</i>).</b></p> 	<p style="text-align: center;"><b>Original Research, A21</b></p> <p style="text-align: center;"><b>Ezeonyejiaku, C.D. and Obiakor, M.O. 2011.</b> <b><i>Online J. Anim. Feed Res.</i>, 1(4): 139-143.</b></p> <p><b>ABSTRACT:</b> <i>Lethal effects of zinc sulphate (ZnSO<sub>4</sub>.H<sub>2</sub>O), a widespread environmental pollutant was evaluated following exposure at different concentrations of the toxicant to Tilapia species, Oreochromis niloticus based on toxicity index of 96 hrs LC<sub>50</sub> values. The obtained results were analyzed by the Finney's Probit Analysis LC<sub>50</sub> Method and 96 hrs LC<sub>50</sub> value for Oreochromis niloticus was found to be 72.431 mg/l. The work further documented the lower and upper confidence limits for the LC<sub>50</sub> to be 77.288 mg/l and 67.682 mg/l, respectively. The research showed zinc to be lethal to the test organism and recommends proactive control measures to be put in place to avert possible disaster of zinc poisoning.</i></p>	

<p data-bbox="132 297 467 477"><b>Effect of soaked and dried false yam (<i>Ipomoea pes-caprae</i>) seed meal on carcass and sensory characteristics of broiler chicken.</b></p> 	<p data-bbox="515 136 1171 163"><b>Keywords:</b> Lethality, heavy metal, single action, pisces, 96 hrs LC<sub>50</sub>.</p> <p data-bbox="788 203 1083 230" style="text-align: center;"><b>Original Research, A22</b></p> <p data-bbox="537 266 1337 331" style="text-align: center;"><b>Teye, G.A., Adua, E.A. and Teye, M. 2011. <i>Online J. Anim. Feed Res.</i>, 1(4):144-149.</b></p> <p data-bbox="515 360 1358 808"><b>ABSTRACT:</b> This study was conducted to determine the effect of soaked and dried false yam seed meal (SFYSM) on the carcass and sensory characteristics of broiler chicken. A total of 48 chickens (12 birds in each treatment) were randomly selected from 120 birds fed diets containing 0% (T1, control), 5% (T2), 7.5% (T3) and 10% (T4) SFYSM. The birds were weighed and slaughtered after a 24 hours feed withdrawal. Carcass and visceral weights were taken, after which the thigh and breast muscles were bagged separately for laboratory and sensory analyses respectively. The breast muscles were thawed, grilled in an oven to a core temperature of 70°C for sensory analysis, while the thigh muscles were used for moisture, fat, crude protein and lipid per-oxidation analyses. The results indicated that the use of SFYSM had no significant effect on carcass and sensory characteristics of the birds. In addition, there was no significant difference in moisture and lipid per-oxidation of the products. However, the crude protein contents of the carcasses significantly (<math>P&lt;0.05</math>) increased with an increasing SFYSM inclusion rates. Feeding of SFYSM to broiler birds up to 10% inclusion on weight basis has no effect on carcass, sensory and storability of the carcasses.</p> <p data-bbox="515 837 1190 864"><b>Keywords:</b> False yam seeds, carcass, sensory quality, broiler chicken.</p>	
<p data-bbox="132 1104 467 1261"><b>Haematological and serum biochemical indices of starter broilers fed neem (<i>Azadirachta indica</i>) leaf meal.</b></p> 	<p data-bbox="788 904 1083 931" style="text-align: center;"><b>Original Research, A23</b></p> <p data-bbox="528 967 1345 1032" style="text-align: center;"><b>Obikaonu, H.O., Okoli, I.C., Opara, M.N., Okoro, V.M.O., Ogbuew, I.P., Etuk E.B. and Udedibie, A.B.I. 2011.</b></p> <p data-bbox="679 1061 1193 1088" style="text-align: center;"><b><i>Online J. Anim. Feed Res.</i>, 1(4): 150-154.</b></p> <p data-bbox="515 1122 1358 1827"><b>ABSTRACT:</b> A 28 days feeding trial was conducted to evaluate the effects of dietary inclusion of Neem (<i>Azadirachta indica</i>) leaf meal on the haematological and serum biochemical indices of starter broilers. The Neem leaves used in the experiment were manually harvested, air-dried and milled to become Neem leaf meal. The Neem leaf meal was included in broiler starter diets at 0, 2.5, 5.0, 7.5 and 10% levels, respectively. One hundred and fifty (150) Anak broiler starter chicks raised on a commercial starter mash for one week were used. They were divided into 5 groups of 30 birds each and randomly assigned to the 5 experimental diets in a completely randomized design (CRD). Each group was sub-divided into 3 replicates of 10 birds each and each replicate housed in a pen fitted with necessary brooding facilities. Feed and water were given to them ad libitum for 4 weeks. Proximate analysis of the Neem leaf meal displayed same characteristics as leaf meals from other tropical browse plants - high crude fibre (15.56%) and moderate crude protein content (18.10%). At the end of the feeding trial, blood was collected from the birds, 4 per treatment and analysed for haematological and serum biochemical indices. Haemoglobin (Hb) and packed cell volume (PCV) of the birds were significantly reduced (<math>P&lt;0.05</math>) but not below the level considered normal for birds. No traces of monocytes, eosinophils and basophils were observed. Blood sugar was significantly raised (<math>P&lt;0.05</math>) by the leaf meal but cholesterol was significantly (<math>P&lt;0.05</math>) decreased. Alkaline phosphatase (ALP), alanine transaminase (ALT) and aspartate transaminase (AST) decreased with increase in leaf meal (<math>P&lt;0.05</math>). Serum electrolytes: calcium, sodium, potassium, chloride and bicarbonate tended to show that Neem leaf meal up to 10% dietary inclusion level could still maintain the integrity of the kidney in boosting cation/anion exchange. The haematological and serum biochemical parameters obtained from this study suggested that dietary Neem leaf meal has no deleterious effects on the some physiological parameters of starter broilers.</p> <p data-bbox="515 1856 1358 1906"><b>Keywords:</b> Neem leaf meal, starter broilers, haematological, serum, biochemical indices.</p>	