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**EFFECT OF DIETARY SUPPLEMENTATION OF** Melissa officinalis and Aloe vera on hematological traits, lipid oxidation of carcass and performance in rainbow trout (*Oncorhynchus mykiss*)
ABSTRACT: This was conducted to investigate the effect of feeding lemon balm (Melissa officinalis) and Aloe (Aloe vera) on growth performance, hematological parameters and oxidative stability of rainbow trout. 360 uniform rainbow trout were divided into six groups with 60 fish each. The control group received a diet without any supplement, while the other five groups received diets containing 0.5, 1.0, 1.5, 2.0 and 2.5% of lemon balm and Aloe, respectively. The results showed that supplementation with lemon balm and Aloe herbs could be protective against lipid peroxidation in fish meat during chilling storage (4°C, 7 days). However, any significant differences (p>0.05) were not observed in RBC and Hb in treatments (P>0.05). Results of WBC and Hct showed that there were significant enhancements (higher value) in supplementation compared with control (P<0.05).

Key words: Lemon balm (Melissa officinalis), Aloe (Aloe vera), plants supplementation, Rainbow trout (Oncorhynchus mykiss)

Growth and development of muscles, bones and fat of guinea fowl

Original Research, B2
Y. H. Elhashmi, A. El Amin, F. A. Omer

Online J. Anim. Feed Res.
ABSTRACT: This study was conducted to evaluate the growth pattern of muscles, bones and fat of guinea fowl. Eighteen day old chicks were slaughtered serially at weekly intervals until 56 days of age. The slaughter was done to determine the growth pattern of carcass yield. The result showed that thorax and hind limb had high growth rate when compared with pelvis, wing, neck and flank.

Key words: carcass yield, body regions, serial slaughter

Original Research, B3
Hassan Mohammed Adam Sulieman and Omyia Ahmed Mohammed Khamis

ABSTRACT: The study was conducted to investigate the effect of salt concentration level and season on chemical composition of wet-salted fermented product (local name; fassiekh) processed from new two fish species (Labeo spp, local name; Debs, Schilbe spp local name; Shilbaya) compared with popular fassiekh fish species (Hydrocynus spp, local name: Kass), in reducing the over fishing and use of Alestes and Hydrocynus spp. in fassiekh production in the Sudan.

Keywords: salt concentration levels, season, chemical, composition, wet-salted Fermented, fish species
ANTI-NUTRIENT FACTORS, PERFORMANCE AND SERUM BIOCHEMISTRY OF BROILER CHICKS FED RAW AND FERMENTED ALCHORNEA CORDIFOLIA SEEDS

Original Research, B4
Emenalom, O.O., Obiora, A.B., Okehie, U.N.

Online J. Anim. Feed Res.
**ABSTRACT:**

This study was carried out to determine some anti-nutrient factors in differently processed Christmas bush (Alchornea seed). The aim was to determine the effect of raw and fermented seeds on the performance and serum chemistry of broilers. The results indicated that raw seed meal before fermentation improved the feeding value of the seeds for broilers at 10% replacement for maize.

**Keywords:** Alchornea seed; Anti-nutrients; Broilers; Fermentation

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**SURVEY OF PRODUCTION AND USE OF POULTRY LITTER IN KHARTOUM STATE, SUDAN**

**Original Research, B5**

MB Elemam, AM Fadeelseed, OMA Abdelhadi, AO Idris, I Bushara and AM Salih


**ABSTRACT:**

A survey of chicken litter production was undertaken by hand submitted questionnaire. The survey covered 219 farms out of 340 farms in Khartoum State, Sudan. The survey showed that the main producers of chicken litter are private businesses. However, there are no significant differences on other chemical compositions.

**Key words:** Poultry litter, survey, chemical composition.
ABSTRACT: In this research, linear regression models were
improved for estimation of body weight using various linear body measurements. The model including the
most appropriate measurements such as heart girth, height at wither and height at hip were the best fitted model for estimation of body weight in Sudanese Shugor sheep in this study.

Keywords: Linear body measurements, Body weight, regression analysis, Shugor sheep, Sudan.
APPARENT DIGESTIBILITY COEFFICIENT OF PELLETED FISH FEED INCORPORATED WITH WATER HYACINTH (Echhornia crassipes)

M.E. A-Rahman Tibin, A.B. Abol-Munafi, A. Mat Amiza, Tahir Ahmad, H.M. Adam Sulieman

ABSTRACT:
The objective of this study was to determine the apparent digestibility coefficients (ADC) of dry matter, protein, gross energy and fiber of five pelleted fish feed incorporated with different levels of water hyacinth. The results showed that red tilapia digested maximum nutrients at the inclusion level of 20% of water hyacinth.

Keywords: Apparent digestibility, pelleted, water hyacinth and fish

EFFECT OF FROZEN Daphnia magna DIET MIXED WITH PROBIOTIC PROTEXIN ON GROWTH AND SURVIVAL OF RAINBOW TROUT (Onchorhynchus mykiss)

Sharareh Ahmadvand, Hojattollah Jafaryan, Amin Farahi, and Sheyda Ahmadvand

ABSTRACT:
Effect of probiotic Protexin was experimentally tested on growth and survival of rainbow trout fry reared under controlled conditions. Experiments to determine the effect of different levels of probiotic (2×10^4 (T1), 2×10^5 (T2) and 2×10^6 (T3) CFU/g) on growth and survival rates of rainbow trout in comparing with those of control diet containing no probiotic were conducted. Results indicated that probiotic diet affected growth and feed conversion ratio (FCR) of rainbow trout. There was no effect of probiotic supplementation on survival at the end of experiment in T1 and T3, but survival rate in T2 was higher than other groups, significantly (P<0.05). Viability against high temperature stress was affected by dietary treatments. Mortality increased when temperature was increased. Viability and growth rate of T2 and T3 were significantly higher (P<0.05) than that of T1 and control groups. Viability of T2, T3 and control in challenging with high salinity was homogenous, while T1 showed the significant difference (P<0.05) with others, properly.

Keywords: Probiotic, growth, survival, rainbow trout (Oncorhynchus mykiss)

Relationships between haemoglobin (Hb) type and productive and reproductive performance of Rahmani ewes and lambs

M. Abd-Allah, H. A. Hassan and M.A. Al-Baroady

ABSTRACT:
Two hundred Rahmani ewes and seventy-one lambs used to study the relationship between the type of haemoglobin and some productive and reproductive traits. Distribution of Hb types and allelic frequencies were higher for type AA of ewes, while for lamb's type BB was higher than type AA. The percentage of monoheterozygous (Hb AB) was high in the population. Daily gain, the number of lambs born and lambing rate were significantly (P<0.05) higher in ewes and lambs with Hb BB compared to ewes and lambs with Hb AA or Hb AB. The daily gain at all periods studied was highest in (1/2 A 1/2 B) lambs with Hb BB. The highest and lowest mean values of all productive and reproductive traits were observed in type AA and (1/2 A 1/2 R) lambs with Hb AB had the lowest value of daily gain at all periods studied than lambs with Hb AA or Hb BB.

Keywords: haemoglobin type, Rahmani ewes, reproductive performance

GROWTH Performance of desert sheep under grazing conditions in NORTH KORDOFAN STATE

M.A.M. Tibin, I.M. Tibin, and I. Bushara

ABSTRACT:
The experiment was conducted to study the effect of changing the nomadic husbandry practices during summer with feed supplementation. Differences in body measurements were observed. Feed supplementation will probably reflect positively on the performance of Hamari sheep under range conditions.

Keywords: Desert sheep, growth performance, Body linear measurements, concentrate ration, Sudan

SYNERGISTIC EFFECTS OF DIETARY GLUCOSAMINE AND PLANT / ANIMAL PROTEINS ON THE GROWTH PERFORMANCE OF ASIAN CATFISH (Clarias batrachus)

S. Chowdhary, P. P. Srivastava, S. Mishra, A. K. Yadav, R. Dayal, and W.S. Lakra

ABSTRACT:
A 84-days feeding trials was conducted to evaluate the use of animal and plant protein, in combination with glucosamine. Glucosamine showed best in F6 followed by F5 and F4. The survival was improved in glucosamine supplemented feeds ranging from 49±3.2 to 85±1.7 whereas the control showed 41±1.8 %. Results indicate that animal protein rich feeds were much acceptable in the feeds of fish need more evaluation along with synergistic effects of growth promoter like glucosamine.

Key words: Clarias batrachus, glucosamine, animal protein, plant protein, growth

Induced Spawning of Silver Carp, Hypophthalmichthys molitrix Using Hormonal Analogues with Dopamine Antagonists
COMPARATIVE UTILIZATION IMPACT OF VARIOUS DIETARY LIPIDS, ON GROWTH INDICES, IN STRIPED MURREL, *CHANNA STRIATUS* (BLOCH) FINGERLINGS

R. Dayal, P. P. Srivastava, A. Bhatnagar, S. Chowdhary, N.K. Yadav and W. S. Lakra

ABSTRACT:
A 84-day feeding trial was conducted to evaluate the utilization impact of dietary omega – 3 HUFA as a dietary energy source on the growth and feed utilization of striped murrel fry. The results indicated that feed containing fish oil had a higher growth performance than those with other dietary lipids. The best result was obtained with the diet containing 1% fish oil. The feed conversion ratio of the fish was lowest with this diet. It is concluded that dietary lipids of unsaturated origins could be effectively utilized by striped murrel fry with a better resultant growth.

Key words: lipid, utilization, growth, *Channa striatus*

POSSIBILITIES OF USING MORINGA (*Moringa oleifera*) LEAF MEAL AS A PARTIAL SUBSTITUTE FOR FISHMEAL IN BROILER CHICKENS DIETS

H.K. Zanu, P. Asiedu, M. Tampuori, M. Abada And I. Asante

ABSTRACT:
A six-week feeding trial involving 180 2-week old Cobb broiler chicks was conducted to partially replace fishmeal with Moringa (*Moringa oleifera*) leaf meal. The birds were randomly assigned in equal numbers in a Completely Randomized Design (CRD) to four dietary treatments containing 0, 5, 10, and 15% Moringa leaf meal (MLM). Each treatment was replicated three times giving 15 birds per replicate. Feed and water were supplied ad libitum. The parameters measured include feed intake, final weight, weight gain, feed conversion ratio, mortality, and blood variables. The results showed that partial replacement of fishmeal with Moringa leaf meal had a positive effect on growth performance of broiler chickens. However, addition of MLM does not adversely affect mortality, carcass traits and blood variables.

KEYWORDS: Moringa, Performance, Haematology, serum biochemistry and Meat quality.

EVALUATION OF FALSE YAM (*Icacina oliviformis*) LEAVES ON THE GROWTH PERFORMANCE OF WEANER RABBITS

T. Ansah, A.A. Emelia, G. Deku and P.K. Karikari

ABSTRACT:
This study was conducted to determine the effect of *Icacina oliviformis* leaf meal (IOLM) on the growth performance of weaner rabbits. The results of this study, IOL can be used as a feed ingredient in the diet of rabbits at 5% without any detrimental effects.

Keywords: *Icacina oliviformis*, Rabbits, performance, apparent digestibility.
BIOSECURITY PRACTICES IN ALGERIAN POULTRY FARMS

ABSTRACT:
The objective of this study was to determine the level of adoption within the Algerian poultry farms (broiler chickens, layereggs and table birds). From the results was that the poultry farms are not protected by biosecurity barriers. Class 1 and 2 regroup 55% of poultry farms and demonstrates that the number of faecal streptococci colonies /25 cm² is the lowers (3<UFC<9) and (10<UFC<25) respectively. In these farms, the sanitary teams apply very rigorous barriers of biosecurity, practice good hygienic practices, isolation of disease and use of vaccines on a large scale.

Keywords: poultry farms, biosecurity, production performances, Algeria

Biochemical And Non-Specific Immune Parameters Of Healthy Nile Tilapia (Oreochromis niloticus), Blue Tilapia (Oreochromis aureus) And Their Interspecific Hybrid (♂O. aureus x ♀O. niloticus) Maintained In Semi-Intensive Culture System

ABSTRACT:
Oreochromis niloticus, Oreochromis aureus and their interspecific hybrid tilapia (♂ O. aureus x ♀ O. niloticus) maintained under semi-intensive culture system were compared in a preliminary study to explore the variations in blood biochemical and non-specific immunological parameters. Comparisons were performed after one week of acclimation (“base-line” level). Serum cholesterol, albumin, SGPT and SGOT level were significantly higher (P < 0.05) in the purebred O. aureus than the purebred O. niloticus and their crossbred hybrid. The tested genotypes showed no significant difference (P > 0.05) in total protein, globulin and urea. Additionally, the level of creatinine was significantly higher in the purebred O. niloticus followed by the crossbred hybrid and then the purebred O. aureus but still without a significant difference (P > 0.05) between the latter two genotypes. The phagocytic activity and phagocytic index were significantly higher (P < 0.05) in the crossbred hybrid (♂O. aureus x ♀O. niloticus) than the other purebred genotypes. The differences identified suggest that hybrid families from the two species would be used to construct a segregating population for genetic analysis of immunological traits and disease resistance.

Keywords: Purebred, Oreochromis niloticus, Oreochromis aureus, inter-specific hybrid tilapia normal blood biochemical reference, phagocytic activity, phagocytic index.

Production potentials and the physicochemical composition of selected duck strains:

ABSTRACT:
Physicochemical composition of meat is an important factor in human nutrition and contributes to the choice of food by mankind. In recent times humans are much conscious of the health benefits of what they consume. Duck meat is a nutritious food due to its high protein and low fat content, rich in vitamins, minerals and other beneficial compounds. Duck is a good source of protein and other nutrients for humans. Duck meat is high in protein, iron, selenium and niacin; and lower in calories compared to many cuts of beef. This mini-review reports on the production potentials of ducks and the physicochemical composition of selected duck strains. It also reports on world duck population.

Key words: Duck meat, consumption, health benefits, nutrition, physicochemical

Effect of date pits on the performance of Sudanese desert lambs

ABSTRACT:
Twelve Sudanese desert lambs with an average live weight of 20.9 kg were divided into three groups of equal number to study the effect of date pits (realized in the form of a powder) on the performance of the lambs from 15 to 45 days. The experiment was conducted by feeding the date pits to the lambs ad libitum for 45 days. Performance of experimental lambs did not significantly influence with introduction of date pits.

Key words: Lambs, date pits, chemical composition, performance

Estimation of live body weight from linear body measurements for Farta sheep

ABSTRACT:
Twelve Farta sheep aged 12 months were used in this study. Body weight was determined by a scale. Linear body measurements were measured for each sheep, using a tape measure, according to the method recommended by the International Committee of Animal Measurement. Body weight was also estimated using five different statistical equations: the equation recommended by the International Committee of Animal Measurement, and four other equations reported in the literature. The results showed that the equation recommended by the International Committee of Animal Measurement provided the best estimate of live weight for the sheep. The study also showed that the accuracy of the estimation equation was influenced by the age and sex of the sheep. The results of this study are useful for the estimation of live weight in Farta sheep.

ABSTRACT:

A study, to develop regression models for prediction of body weight from other linear body measurements, was conducted in Farta sheep at the Livestock Institute of Addis Ababa University to determine the possibility of using different body measurements at different ages to predict weight and use for selection as well.

Key words: Farta sheep, body weight, linear body measurements, regression model