Research Paper

Impact of Thyme Oil and Lactobacillus acidophilus as Natural Growth Promoters on Performance, Blood Parameters and Immune Status in Growing Rabbits.

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ABSTRACT

Present study was conducted to evaluate the effect of thyme oil and *lactobacillus acidophilus* (supplement) as growth promoters in rabbit. 72 weaned V-Line male rabbits were randomly allocated into 4 equal groups. The first group (G1) was without any additives and consider as control group. The second group (G2) treated with the addition of *lactobacillus acidophilus* in drinking water in a concentration of 10^8 cfu/ml. The third group (G3) treated with the addition of thyme oil in drinking water in a concentration of 1 ml/ liter. The fourth group (G4) treated with the addition of both *lactobacillus acidophilus* and thyme oil in drinking water in a concentration of 10^8 cfu/ml plus 1ml/L, respectively. The obtained results showed that, all treatments had significant improvement effects on the measured parameters (performance characteristics, cecum characteristics, RBCs, WBCs, kidney function, trigly-cerides, total cholesterol, sheep RBC’s titer, liver antioxidant markers and hormones markers) when compared to the control group. The live body weight of G3 and G4 groups were higher (2116 and 2058 g) than those found in G2 and G1 groups (1958 and 1850 g) respectively. In addition, the body weight gain of G3 and G4 groups were higher (1364 and 1307 g) than those found in G2 and G1 groups (1207 and 1100 g). Moreover, the daily weight gain of G3 and G4 groups were higher (32.49 and 31.13 g/d) than those found in G2 and G1 groups (28.74 and 26.19 g/d). In addition, feed conversion ratio of G3 and G4 groups were higher (3.41 and 3.61) than those found in G2 and G1 groups (3.66 and 4.67). While G4, G2 and G3 groups had a significant enrichment effect on the intestinal beneficial bacteria. In conclusion, in present experiment inclusion thyme oil and/or *lactobacillus acidophilus* in the drinking water that stimulated body weight gain and increased feed conversion rate, and can be used as growth promoters in rabbit nutrition successfully without notable side effects on growing rabbits. Furthermore, it showed a significant positive effect on the physiology for treatment groups G3, G4 and G2 respectively compared to the control group. 

**Key words**: Immunity, *Lactobacillus acidophilus*, Performance, Probiotic, Rabbit, Thyme oil

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Determination of Potential Candidate Genes Associated with Milk Lactose in Egyptian Buffalo


Key words: Bovine respiratory syncytial virus, Cattle, PCR, Phylogenic analysis.

Molecular and Phylogenic Analysis of Bovine Respiratory Syncytial Virus in Nineveh Province, Iraq

Salih EA and Andreyamery ON (2020). The Role of glycogen in Biological Cycle of Trichinella spiralis

Ashour G, Ged A, Fayed AI, Ashrawey NA and El- Sayed A (2020). Evaluation of Growth Performance, Blood Metababilities and Gene Expression Analysis in Egyptian Sheep Breeds, in the 16 months. The results showed that there was a significant increase in sheep’s live body weights toward advanced ages till the second age category for all breeds, the highest values of any significant effect of interaction between age and breed on plasma total protein concentrations. According to age categories, Barki breed showed a significant up-regulation of gene expression analysis in sheep. Therefore, the aim of this study was to compare the growth performance, blood metabolites and expression of IGF-1, GH, and Leptin genes in three different Egyptian sheep breeds across age. Thirty Egyptian sheep males from three breeds (Ossimi, Rahmani and Barki) were divided into three ages categorize (7 – 9, 10 – 12, and 13 - 16 months). The results showed that there was a significant increase in sheep’s live body weights toward advanced ages till the second age category for all breeds, the highest values of any significant effect of interaction between age and breed on plasma total protein concentrations.
Enteritidis bacterin adjuvanted with different doses of immunomodulatory Salmonella ODN has been found to be effective in controlling Salmonella infection in broiler chickens. Two hundred one-day-old broiler chicks were divided into 5 groups, were used in this study. First three groups were immunized with Salmonella Enteritidis fresh bacterial culture (1.2x10^10 CFU/mL). The highest IgA response followed by 100-CpG ODN group then the 50-CpG ODN and the 25-CpG ODN groups, were monitored for extra 10 days. Compared to the aluminum hydroxide adjuvanted bacterin, the CpG-ODN adjuvant bacterin induced significant protection and improved survival rate of challenged chickens. Findings have shown the significant immunostimulatory effect of CpG-ODN and its effect on the intestinal colonization, cellular responses, mucosal and systemic immune responses of broiler chickens.
Zeedan GSG, Mahmoud AH, Abdalhamed AM, Ghazy AA and Abd EL-Razik KhA.

**ABSTRACT**

Capri Pox Virus (Ca PV) is the causative agent of important diseases in sheep and goat with gene RP030 gene and real-time-PCR considered sensitive, rapid, and reliable methods for Ca PV (SPPV and GTPV) in natural, infected scabs biopsy samples, which were collected from early confirmation of positive Ca PVs in low-income countries. PCR based RNA polymerase further isolation and propagation in embryonated-chicken eggs. The novel microwave method were determined by Agar Gel Precipitation Test (AGPT) Counter Immune Electrophoresis (CIE), and conventional PCR and real time qPCR were examined for the presences of Ca PVs. Rapid Detection and Differentiation between Sheep Pox and Goat Pox Viruses by Real-Time qPCR and Conventional PCR in Sheep and Goats. DOI: 10.36380/scil.2020.wvj9

**Key words:** World Vet. J., Sheep pox virus, DNA extraction, Goat pox, KOH extraction method, Real-Time qPCR, Sheep pox, Goat pox, Lumpy skin disease virus, Capripox virus, Comparison between biochemical analysis of cattle, quantitative PCR and conventional PCR and propagation of Capripox viruses. 

**Reference**


Stillbirth in pig has been studied worldwide, but its situation in Vietnam has never been studied. The incidence of stillbirth at sow level was 47.9%, and the stillbirth rate was 5.2%. Multivariate logistic regression showed that parity 1 (OR=1.81, 95%CI=1.24-2.63) and >4 (OR=1.87, 95%CI=1.33-2.64), a gestation length <114 days (OR=1.80, 95%CI=1.23-2.65), a birth litter size ≥9 piglets (OR=1.64, 95%CI=1.04-2.61) and a farrowing duration ≥5 hours (OR=1.48, 95%CI=1.05-2.09) were risk factors for stillbirth. This study indicated that stillbirth was common issue to be dealt with in swine farms in Vietnam.

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**Key words:** Stillbirth, Swine, Vietnam, Risk factors, Multivariate logistic regression.

**Reference**


The present study aimed to compare the biochemical components including Total Protein (TP), albumin, globulins, cholesterol, triglycerides, High and Low-Density Lipoproteins (HDL and LDL), creatinine, urea, sodium (Na), potassium (K), chloride (Cl), calcium (Ca) and inorganic-P. The TP, albumin, globulins, cholesterol, triglycerides, creatinine, urea, Na, K, Cl, Ca and inorganic-P were significantly higher than the AF during the first trimester. At delivery, the concentrations of cholesterol, triglycerides, and creatinine in the AF were lower than those in the MS or FS. The concentrations of Ca and inorganic-P in the FS were higher than those in the MS or AF. The levels of Na and Ca in the AF decreased as the gestation stage advanced while the K concentration increased. In conclusion, our results indicated an active placental transport for Ca and P. The TP, albumin, globulins, cholesterol, triglycerides, HDL and LDL, creatinine, urea, Na, K, Cl, Ca and inorganic-P were significantly higher than the AF during the first trimester. At delivery, the concentrations of cholesterol, triglycerides, and creatinine in the AF were lower than those in the MS or FS. The concentrations of Ca and inorganic-P in the FS were higher than those in the MS or AF. The levels of Na and Ca in the AF decreased as the gestation stage advanced while the K concentration increased. In conclusion, our results indicated an active placental transport for Ca and P.

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**Key words:** Total Protein (TP), albumin, globulins, cholesterol, triglycerides, High and Low-Density Lipoproteins (HDL and LDL), creatinine, urea, sodium (Na), potassium (K), chloride (Cl), calcium (Ca) and inorganic-P.

**Reference**

Using Feed Additives to Produce Functional Eggs in Fayoumi Hens.
Dief Allah RA, Ali MN, EL-Manylawi MAF, Abass AO and Desouky A.
DOI: https://dx.doi.org/10.36380/scil.2020.wvj12

**ABSTRACT**
Lately human have become more apprehensive for the health and their food relationship. Egg considered cheap source of animal protein. Eggs are rich in various essential nutrients that contribute to the quality of human diet. But its cholesterol can contributes with some human serious disease. The current study examines the hypothesis that assumed addition of antioxidant such as CAX, SS, B or their mixtures to the diet can produce functional egg from Fayoumi hens at late phase of egg production. A number of 168 Fayoumi hens (46 weeks of age) were randomly assigned into 8 dietary groups as follows: Basal diet alone or with CAX (6 ppm), SS (0.5 g/kg), B (1 g/kg), CAX+SS, CAX+B, SS+B, and CAX+SS+B separately. Forty eight eggs (6 per each group) were analyzed for estimating cholesterol and total antioxidant capacity. Egg of hens fed a combination of CAX+SS+B which had the best total antioxidant capacity value, while the CAX group recorded the best lowest cholesterol value compared to other groups (P < 0.05). It could be concluded that basal diet supplemented with CAX, SS, B alone or with mixture of them may have lowering effect on yolk total cholesterol. This could lead to produce functional eggs which have positive effects on human health and favorable for those suffering from heart syndromes.

**Key words:** Cholesterol, Fayoumi, Functional Egg, Total Antioxidant Capacity

SDS-PAGE Profile Analysis of SeM-like Protein of *Streptococcus equi* subspecies *equi*.
Abdelmageed ShMEl, El-Shafii SElA and El Jakee JKAH.
DOI: https://dx.doi.org/10.36380/scil.2020.wvj13

**ABSTRACT**
*S. equi* subspecies *equi*, causing strangles in equine, is characterized by comprising a major virulence factor called M like protein or SeM protein. This study aimed to extract SeM protein from local *S. equi* strain in Egypt and to detect its antigenic components. After centrifugation, the native 58 kilo Dalton (kDa) SeM protein was detected both in the supernatant and sediment of the prepared extract. With modification by more centrifugation, the formed supernatants were separated and fractionated using SDS-PAGE with silver nitrate staining, which led to the appearance of a band at Molecular Weight (MW) 70.9 kDa. in SeM1, the presence of 7 bands at MW of 105, 87.8, 70.9, 61.1, 44, 37.9 and 18.4 in SeM2; 5 bands at MW 70.9, 58.9, 37.2, 29.8 and 18.3kDa in SeM3 and 4 bands at MW of 72.0, 58.6, 29.8 and 18.0 kDa in SeM4. This study suggested that a further modification of SeM extraction revealed the presence of heterogeneous complex fragments of SeM.

**Key words:** SeM protein, SDS-PAGE, Strangles, *Streptococcus equi* subspecies *equi*

Evaluation of The Efficacy of Oxytetracycline on Experimentally Induced Caprine Coccidiosis Due to *Eimeria arloingi* Infection.
Mikail HG, Saidu SNA and Mamman M.
DOI: https://dx.doi.org/10.36380/scil.2020.wvj14

**ABSTRACT**
Coccidiosis is a protozoan disease caused by members of the genus *Eimeria* that affect domestic animal species. The current study was aimed at evaluating the effect of oxytetracycline administration on experimental caprine coccidiosis. Sixteen red Sokoto goat kids divided into four groups (A to D) of four goat kids each, were used for the study. Groups A, B and C were infected by oral inoculation with two ml containing 1.5 ×10^3 sporulated oocysts of *Eimeria arlongi* per animal, while group D was the neutral control group. Group A was treated with 10 % oxytetracycline intramuscularly daily for five days. Group B was treated with Sulfadimidine 33.3% subcutaneously daily for five days and group C served as an infected untreated group. Fecal oocysts per gram count was conducted during the experiment. The present result showed a significant decrease (P ≤ 0.05) in fecal oocysts load in the treated groups. Neither schizonts nor merozoites were detected in the intestinal smear of kid treated with oxytetracycline but were detected in the intestinal smear of infected untreated goat kid. Cystic degenerative changes were seen in the intestinal glandular cells of the infected untreated goat kid. Conclusively, the current finding suggests that oxytetracycline can effectively be used in treating caprine coccidiosis.

**Key words:** Coccidiosis, Caprine, *Eimeria arlongi*, Goat Kids, Oxytetracycline, Treatment
Antioxidant enzymes, Bucks, Melatonin, Motility, Transcript abundance

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Key words: Gene Expression Profile and Enzymatic Activities of Frozen Buck Sperm Supplemented with Melatonin in Cold and Hot Temperatures.

The experimental results showed that there was no interaction between the inoculum dose and incubation period of fermentation in the reduction of DM, organic matter, and crude fat as measured variables. However, the interaction was occurred between inoculum dose and incubation period in the increase in the CP of fermented CLM and TD mixture. The best inoculum dose effect was at 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days. The results indicated that the changes in Dry Matter (DM), Organic Matter (OM), crude fat, Crude Fiber (CF), and Crude Protein (CP) were significantly affected by the inoculum dose and incubation period in the fermentation process. Moreover, there was a significant reduction in the CP of fermented CLM and TD mixture with the increasing inoculum dose, while the OM and crude fat content increased. The best inoculum dose and incubation period for the mixture of Cassava Leaf Meal (CLM) and Tofu Dreg (TD) fermented with Rhizopus oligosporus were 6% and 3 days, respectively.

The present study was conducted to determine the appropriate inoculum dose and incubation period of cassava leaf meal and tofu dreg mixture fermented with Rhizopus oligosporus. The measured variables were DM, OM, crude fat, CF, CP, and CP percentage. The experiment was arranged in a factorial arrangement with 4 replications. The first factor was the inoculum dose (6, 8 and 10%) and the second factor was the incubation period of fermentation (2, 3, 4, and 5 days). The results showed that the inoculum dose and incubation period had a significant effect on the measured variables. The incubation period had a significant effect on the CP and CP percentage, while the inoculum dose had a significant effect on the OM and crude fat. The best inoculum dose and incubation period for the mixture of CLM and TD fermented with Rhizopus oligosporus were 8% and 3 days, respectively.

The present study was conducted to investigate the effect of body weight, blood biochemical indices and Maternal and Kid's behavior on kid's survivability. Twenty-five adults does of each breed (Baladi and Shami) were selected during breeding season. All female goats were estrus synchronized and naturally mated. After parturition, one hundred and one kids (39 Baladi and 62 Shami) were selected. The percent of death for male and female kids was higher for Shami breed compared to Baladi. The percent of death was significantly higher in female kids compared to male kids. Male kids had more daily gain (g/day) during the first 30 days of age. Male kids spent lesser time to concern their newly born kids. Baladi kids had more strong behavior and spent more time to concern their newly born kids compared to Shami kids. Our results might declare superiority of Baladi kids than Shami ones which might be due to the difference in the maternal behavior and the body weight between Baladi and Shami breeds.