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-derides, 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
traits, such as TPD52 and ZBTB10 on chromosome 15; AADAT and GALNTL6 on chromosome 32 significant and seven suggestive SNPs for LP, however; only two suggestive SNPs were genetic mechanisms that control lactose traits variation in Egyptian buffalo.

Key words:

ABSTRACT
different cattle breeds. In addition, novel genomic loci were detected. The identified genomic regions harbored many candidate genes with biological roles associated with milk production key markers and candidate genes affecting lactose traits which facilitate the exploration of the

The aim of the present genome-wide association study (GWAS) was to identify single nucleotide polymorphisms (SNPs) and candidate genes associated with lactose percentage (LP) and lactose yield (LY) in Egyptian buffalo. The phenotypic dataset included 60,318 monthly

Ashour G, Gad A, Fayez AA, Ashmawy NA and El- Sayed A (2020); Evaluation of Growth Performance, Blood Metabolites and Gene Expression Analysis in Egyptian Sheep Breeds, in

The growth performance of lambs attributes the economic viability of animals. Faster growth linear body measurements were observed in Ossimi breed. There was a non-significant inverse measurements, blood metabolites and GH, IGF-1 and Leptin genes in early ages is a good and significant down-regulation of IGF-1compared to the Ossimi breed in 7-9 months. Meanwhile,

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depend on the glycogen content. When the glycogen concentration in the parasite is insufficient, maximum concentration of glycogen was recorded 4 months post-infection (0.0930 ± 0.0003 μg/ larva). After infection, the amount of glycogen in a larva was 0.0786 ± 0.0023 μg. In the body of intestinal nematodes, 3 hours after infecting the animals, the glycogen concentration was reduced to 0.0472 ± 0.0003 μg in one nematode. The number of glycogen at the muscle stage of

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Immunomodulatory Effect of CpG ODN-Adjuvanted Bacterin Against Salmonella Enteritidis bacterin in Broiler Chickens.

Two hundred one-day-old broiler chicks, divided into 5 groups, were used in this study. First three groups were immunized with Salmonella Enteritidis fresh bacterial culture (1.2x10^8 CFU/mL) adjuvanted with aluminum hydroxide, the CpG-ODN adjuvant bacterin, and a non-immunized group. The control groups included a group that was immunized with the Salmonella Enteritidis bacterin adjuvanted with aluminum hydroxide and a non-immunized group.

At two weeks post-immunization, 20 chicks from each group were orally challenged by the dose-dependent immunostimulatory adjuvant effect of CPG-ODN on the level of secretory IgA and the induced mucosal responses. The 200-CpG ODN group showed the most significant immune responses.

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 CpG ODN-treated chickens. No inflammatory cellular infiltrations were seen in the liver and intestine of 200-CpG ODN treated group. In conclusion, the presented findings have shown the significant immunostimulatory effect of CpG-ODN and its effect on protection and improved survival rate of challenged chickens.

Key words: Salmonella, CpG ODN, Cellular interactions, Immunomodulation.
Capripox virus, DNA extraction, Goat pox, KOH extraction method, Real-Time PCR
Using Feed Additives to Produce Functional Eggs in Fayoumi Hens.

Dief Allah RA, Ali MN, EL-Manylawi MAF, Abass AO and Desouky A.

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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.

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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 18.3 kDa 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.

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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 arloingi 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 arloingi, Goat Kids, Oxytetracycline, Treatment

Gene Expression Profile and Enzymatic Activities of Frozen Buck Sperm Supplemented with Melatonin in Cold and Hot Temperature

Antioxidant enzymes, Bucks, Melatonin, Motility, Transcript abundance

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The results revealed that the progressive motility percentage was significantly higher in the control group. Types of motility as well as velocity, enzymatic activity and expression profile of selected genes were measured. The results revealed that the progressive motility percentage was significantly higher in cold temperature. The activity of total antioxidant capacity (TAC) was significantly higher in samples supplemented with low dose of melatonin (0.49 M/L) in glycerol (74.4 versus 64.4) and (10^{-3}) than high melatonin dose (0.16 M/L) in dimethyl sulfoxide supplemented with two doses of melatonin (10^{-3} and 10^{-6}).

The present study was conducted to investigate the effect of body weight, blood biochemical parameters and post parturient behavioral activities of goats and their kids on kids' mortality rate towards their dams when compared to Shami ones. It was concluded that body weight, blood biochemical parameters and Maternal and kids' behavior had notable effect on kid's survivability.

Post partum. Present data revealed that goat breed and neonatal period showed a significant effect on urea concentration and alkaline phosphatase (ALP) and insignificant effect on other blood biochemical parameters and Maternal and kid's behavior had notable effect on kid's survivability. Our results might declare superiority of Baladi kids than Shami ones which spend lesser time to concern their newly born kids. Baladi kids had more strong behavior towards their dams when compared to Shami ones. It was concluded that body weight, blood biochemical parameters and Maternal and kids' behavior had notable effect on kid's survivability.

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