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 10⁸ 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 10⁸ cfu/ml plus 1 ml/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
Determination of Potential Candidate Genes Associated with Milk Lactose in Egyptian Buffalo

The aim of the present genome-wide association study (GWAS) was to identify single key markers and candidate genes affecting lactose traits which facilitate the exploration of the genetic mechanisms that control lactose traits variation in Egyptian buffalo.

Genome-wide analysis was performed using a single marker regression. The GWAS revealed different cattle breeds. In addition, novel genomic loci were detected. The identified genomic regions are overlapped with previously reported QTL in Buffalo.

3 and COL8A1 and PLOD2 on chromosome 1. Our findings provide the basis to uncover the genetic mechanisms that control lactose traits variation in Egyptian buffalo.

Ashour G, Fed A, Fayed Al, Ashrawy NA and El- Sayed A (2020); Evaluation of Growth Performance, Blood Metabolites and Gene Expression Analysis in Egyptian Sheep Breeds, in early ages is a good and accurate indicator for growth performance in Egyptian sheep breeds.

The Role of Glycogen in Biological Cycle of Trichinella spiralis.

The energy sources of T. spiralis were passaged on laboratory rodents under the vivarium conditions. Sixty-nine white rats (350 g each) were used to infect laboratory mice. The invasive capacity of T. spiralis was evaluated using a modified method of El-Ashry and El-Gebaly (1992) where 5 muscle larvae were administered in the stomach of each laboratory rat and their viability was determined in 10 days. The first day of larval appearance was taken as the beginning of the invasion period, day 0.

The content of glycogen in Trichinella spiralis in white rats during the infection period was investigated. The glycogen concentration in muscular larva was 0.0054 ± 0.0027 μg/ larva on day 21, 0.0136 ± 0.0026 μg/ larva on day 28, and 0.0771 ± 0.0025 μg/ larva on day 45 after the rats were infected. Maximum concentration of glycogen was recorded 4 months post-infection (0.0930 ± 0.0007 μg/ larva).

Sider EA and Andreyevyna ON (2020), The role of glycogen in Biological Cycle of Trichinella spiralis

Glycogen is one of the main energy sources for T. spiralis. It is stored in the larval muscle during the first stages of its life, and it is used later for muscle invasion. The amount of glycogen at the muscle stage of T. spiralis 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 glycogen concentration in muscular larva was 0.0054 ± 0.0027 μg/ larva on day 21, 0.0136 ± 0.0026 μg/ larva on day 28, and 0.0771 ± 0.0025 μg/ larva on day 45 after the rats were infected. Maximum concentration of glycogen was recorded 4 months post-infection (0.0930 ± 0.0007 μg/ larva).
Immunomodulatory Effect of CpG ODN-Adjuvanted Bacterin Against Salmonella Enteritidis in Broiler Chickens.

Diagnosis of Foot and Mouth Disease in cattle and buffaloes:


Salmonella CpG ODN


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


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


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
This study was carried out to improve the freezability of buck semen using two different types of cryoprotectants supplemented with melatonin as antioxidant in cold and hot temperature of breeding season. Ejaculates from four mature Egyptian baladi bucks were pooled after breeding season. Therefore, it could be concluded that the glycerol based extender in cold season supplemented with low dose of melatonin improved semen post-thaw fertilizing ability of buck semen.