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


Sidor EA and Andreyanov ON. (2020). The Role of Glycogen in Biological Cycle of Trichinella spiralis.
Enteritidis was not recovered from the intestinal tract of vaccinated challenged groups. There were monitored for extra 10 days. Compared to the aluminum hydroxide adjuvanted bacterin, the CpG-ODN adjuvant bacterin induced significant cellular responses and mucosal and systemic immune responses of Enteritidis bacterin groups. First three groups were immunized with CpG ODN at 50µg, 100µg and 200µg. The control groups included a group that was immunized with aluminum hydroxide. The intestinal colonization, cellular responses, mucosal and systemic immune responses of Enteritidis bacterin groups, were used in this study. First three groups were immunized with Salmonella fresh bacterial culture (1.2x10^8 CFU/ml). The survival rates and the pathological changes of challenged chickens in the different immunized chickens was measured at different intervals, until 42 days of age.

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Capripox virus (Ca PV) is the causative agent of important diseases in sheep and goat with severe socio-economic impact. Sheep Poxvirus (SPPV), Goat Poxvirus (GTPV) and Lumpy Skin Disease Virus (LSDV) are three members of the Capripox virus genus of Poxviridae family, which infect sheep, goats, and cattle, respectively.

A rapid diagnostic assay for Ca PV by using conventional PCR and real-time qPCR was examined for the presence of Ca PVs. In goats, 1 and 2 from 26 scab biopsy samples, respectively, were positive, which are useful for differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without further purification steps required. It was done in 3 minutes only.

Skin biopsy samples were collected from clinically affected animals (54 sheep and 26 goats) to confirm the suitability of the PCR-based RNA polymerase gene RP030 gene and real-time-PCR considered sensitive, rapid, and reliable methods for early confirmation of positive Ca PVs in low-income countries. PCR based RNA polymerase gene RP030 and real-time qPCR would be useful for differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without further purification steps required.

Skin biopsy samples
DNA extraction by Microwave methods

Rapid Detection and Differentiation between Sheep Pox and Goat Pox Viruses by Real-Time qPCR and Conventional PCR in Sheep and Goats


Conventional PCR RNA polymerase gene RP030 and real-time qPCR would be useful for differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without further purification steps required. It was done in 3 minutes only. The results of the current study confirmed that the suitability of the PCR-based RNA polymerase gene RP030 gene and real-time-PCR considered sensitive, rapid, and reliable methods for early confirmation of positive Ca PVs in low-income countries.
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 kDa 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
Determination of the Appropriate Inoculum Dose and Incubation Period of Cassava Leaf Meal and Tofu Dreg Mixture Fermented with Rhizopus oligosporus

The inoculum dose (6, 8, and 10%), and the incubation period of the fermentation (2, 3, 4, and 5 days), with 4 replications.

The appropriate inoculum dose to ferment CLM and TD mixture with R. oligosporus was 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.


Key words: Inoculum dose, Incubation time, Cassava leaf meal, Tofu meal, Rhizopus oligosporus.