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
The aim of the present genome-wide association study (GWAS) was to identify single genetic mechanisms that control lactose traits variation in Egyptian buffalo. Awad MAA, Abou-Bakr S, El-Regalaty H, El-Assal S.E-D and Abdel-Shafy H. Determination of Potential Candidate Genes Associated with Milk Lactose in Egyptian Buffalo. World Vet. J. 2020; pii:S232245682000004-10. DOI: https://dx.doi.org/10.36380/scil.2020.wvj4


Salmonella the liver and intestine of CpG ODN-treated chickens. No inflammatory cellular infiltrations were reported to induce immunostimulatory activity against a variety of bacterial, viral, and protozoan infections in a wide range of vertebrate species. The objective of this study was to evaluate the immunomodulatory effect of CpG ODN-adjuvanted bacterin against Salmonella enterica serovar Enteritidis in broiler chickens. Two hundreds one-day-old broiler chicks, divided into 5 groups, were used in this study. First three groups were immunized with Salmonella Enteritidis bacterin adjuvanted with aluminum hydroxide and a non-immunized group.

Salmonella enterica

**ABSTRACT**

Salmonella Enteritidis bacterin adjuvanted with different doses of CpG ODN was not recovered from the intestinal tract of vaccinated challenged groups. There was a significant dose-dependent immunostimulatory adjuvant effect of CPG-ODN on the level of immunoglobulin A (IgA) in the intestinal tract of vaccinated groups. The highest IgA response followed by 100-CpG ODN group then the 50-CpG ODN and the aluminum hydroxide adjuvanted bacterin, the CpG-ODN adjuvant bacterin induced significant immunostimulatory responses against Salmonella enterica serovar Enteritidis in Broiler Chickens.

**Key words:**

Salmonella, Enteritidis, Immunostimulatory, Adjuvant, Bacterin.
Real-Time qPCR and Conventional PCR in Sheep and Goat in Egypt.

Zeidan GSG, Mahmoud AH, Abdalhamed AM, Ghazy AA and Abd EL-Razik KhA.

In this study, we aimed to detect Sheep Poxvirus (SPPV), Goat Poxvirus (GTPV) and Lumpy Skin Disease Virus (LSDV) in sheep and goats using the conventional PCR and real-time qPCR methods. The results showed that the conventional PCR was more sensitive compared to the qPCR method. The study also indicated that the microwave extraction method was more effective than the reference extraction kits.

Key words: Sheep Pox, Goat Pox, Lumpy Skin Disease, Real-Time qPCR, Conventional PCR.
Research Paper

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 (46weeks 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

Research Paper

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 18.3kDa 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

Research Paper

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 ×10³ 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
Gene Expression Profile and Enzymatic Activities of Frozen Buck Sperm Supplemented with Extender in Cold Season Supplemented with Low Dose of Melatonin Improved Semen Collection. Semen was extended with Tris-fructose-citric containing egg yolk using glycerol and compared with all other experimental groups. Therefore, it could be concluded that the glycerol cryopreserved with glycerol (75.1 versus 53.5) and Dimethyl Sulfoxide (DMSO) (32.1 versus 22) in hot temperature.

M) compared to high dose (10

Research Paper

Dimethyl Sulfoxide (DMSO) was significantly higher in samples supplemented with low dose of melatonin (10

ABSTRACT

The present study was conducted to determine the appropriate inoculum dose and incubation period of Cassava Leaf Meal and Tofo 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. The same trend was found in samples supplemented with low dose of melatonin (10

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Key words: Cassava Leaf Meal, Tofo Dreg mixture, Rhizopus oligosporus, inoculum dose, incubation period.

The experimental results showed that there was no interaction between the inoculum dose and incubation period of fermentation. The inoculum dose significantly decreased the Dry Matter (DM), Organic Matter (OM), crude fat and Crude Fiber (CF) and also increased the Crude Protein (CP). The best inoculum dose effect was at 10%. The incubation period had a significant reduction in the DM, OM, crude fat, and CF and also increased the CP. The best inoculum dose effect was at 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.

The results indicated that

Research Paper

was 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.

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

Cassava Leaf Meal

Tofe Dreg mixture

Inoculum: Rhizopus oligosporus

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.