Research Paper

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

El-kaiaty AM, El-Moghazy GM, El-Manylawi MAF and Abdel-Mageed MGY.


DOI: https://dx.doi.org/10.36380/scil.2020.wvj1
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 significant and seven suggestive SNPs for LP, however; only two suggestive SNPs were deviated performance were selected for genotyping with Axiom Buffalo Genotyping 90K Array.

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

Trichinella spiralis

The content of glycogen in Trichinella spiralis in white rats during the infection period

The Role of Glycogen in Biological Cycle of Trichinella spiralis.

Evaluating the effect of advanced age on blood glucose and total lipids levels in all sheep breeds. There wasn’t 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 (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 mass. The results showed that the weight of sheep increased with age. We concluded that measuring of physical body measurements, blood metabolites and expression of IGF-1, GH, and Leptin genes in early ages is a good and accurate indicator for growth performance in Egyptian sheep breeds.

Bovine Respiratory Syncytial Virus (BRSV) is one of the worldwide distributed infectious agents responsible for diversified clinical disease in cattle populations which causes considerable economic loss due to its negative effects on health and production. In this study, 450 nasal swab samples were collected from cows with different ages and breeds in different areas across Nineveh province, Iraq.

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

GMO 10(1): 18-29, 2020; pii:S232245682000003-10

GMO 12-17, 2020; pii:S232245682000002-10

BRSV in cattle and subsequently may be useful for infection control programs.
ABSTRACT

Cytosine Guanine motifs (CpG-ODN) has been 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 investigate the immunomodulatory effect of CpG-ODN-adjuvanted bacterin against Enteritidis bacterin in Broiler Chickens.

Bacterial oligodeoxynucleotide containing Cytosine Guanine motifs (CpG-ODN) has been 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 investigate the immunomodulatory effect of CpG-ODN-adjuvanted bacterin against Enteritidis bacterin in Broiler Chickens.

The intestinal colonization, cellular responses, mucosal and systemic immune responses of immunized chickens was measured at different intervals, until 42 days of age. At two weeks post-immunization, 20 chicks from each group were orally challenged by the dose-dependent


To cite this paper:


To cite this paper:

rapid detection and differentiation of Ca PV in clinical and subclinical samples. The current study confirmed that the suitability of the PCR-based RNA polymerase gene DP030 was used to isolate high-quality DNA extracted from infected skin biopsy with SPPV and GPPV. DNA extraction from clinical samples and positive CAM with pox lesions using DNA slandered used to isolate high quality of DNA extracted from infected skin biopsy with SPPV and GPPV. The positive CAM showed pock lesions, which were observed with a thickening of the membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken eggs.
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 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 work is licensed under a Creative Commons Attribution 4.0 International License.

# Gene Expression Profile and Enzymatic Activities of Frozen Buck Sperm Supplemented with Melatonin

## Key words:
- Dimethyl Sulfoxide (DMSO)
- World Vet. J.

## Introduction

The aim of this study was to improve the freezability of buck semen using two different types of cryoprotectants supplemented with melatonin as antioxidant in cold and hot temperature to assess cryopreservation quality, antioxidant defense capacity and transcriptional profile, which may maintain the post-thaw fertilizing ability of buck semen.

## Materials and Methods

### Cryoprotectant Selection

Cryoprotectants used were dimethyl sulfoxide (DMSO) and glycerol. Each was supplemented with melatonin at two doses (10(-3) M) in addition to 0.49 mM/L samples supplemented with low (0.49) melatonin dose in glycerol based extender during cold and hot temperature.

### Cryopreservation Procedure

Semen was extended with Tris-fructose-citric containing egg yolk using glycerol and DMSO as cryoprotectants supplemented with melatonin as antioxidant in cold and hot temperature. The results also demonstrated that CASA parameters (VAP and VCL) were significantly increased in low compared to high melatonin dose in glycerol (74.4 versus 64.4) and DMSO (32.1 versus 22) in hot temperature.

### Results

- The percent of death for male kids was 33.33% and 14.28% in Baladi while, were 36.84% in Shami respectively. For female kids, birth weights were 2.47 and 2.81 Kg, respectively. For male kids, birth weights were 2.43 and 2.47 kg, respectively. There was no significant difference in average daily gain (g/day) between Baladi and Shami kids during the first 30 days of age. Male kids were 87.50% and 36.84% in Shami while, were 33.33% and 14.28% in Baladi respectively.

### Conclusion

It could be concluded that the glycerol based extender (35.5 versus 32.9) in cold temperature and (32.1 versus 22) in hot temperature. The activity of total antioxidant capacity (TAC) was significantly higher in cryopreserved with glycerol (75.1 versus 53.5) and DMSO (32.1 versus 22) in hot temperature. The same trend was found in samples cryopreserved with glycerol (75.1 versus 53.5) and DMSO (32.1 versus 22) in hot temperature.

## Materials and Methods

### Cryoprotectant Selection

Cryoprotectants used were dimethyl sulfoxide (DMSO) and glycerol. Each was supplemented with melatonin at two doses (10(-3) M) in addition to 0.49 mM/L samples supplemented with low (0.49) melatonin dose in glycerol based extender during cold and hot temperature.

### Cryopreservation Procedure

Semen was extended with Tris-fructose-citric containing egg yolk using glycerol and DMSO as cryoprotectants supplemented with melatonin as antioxidant in cold and hot temperature.