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 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 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

[Full text- PDF ] [XML] [Google Scholar] [Crossref Metadata]
The aim of the present genome-wide association study (GWAS) was to identify single-nucleotide polymorphisms (SNPs) associated with milk lactose traits in the Egyptian buffalo. A total of 300 animals, including 150 males and 150 females, were genotyped using the Axiom Buffalo Genotyping 90K Array. The key markers and candidate genes affecting lactose traits were identified, including TPD52 and ZBTB10 on chromosome 15; AADAT and GALNTL6 on chromosome 6; and COL8A1 and PLOD2 on chromosome 1.

Our findings provide the basis to uncover the genetic basis underlying the variation in lactose traits and facilitate the exploration of the traits. The determination of potential candidate genes associated with milk lactose in Egyptian buffaloes aims to identify the genetic factors contributing to the variation in lactose traits and to provide a foundation for further genetic studies.
Immunomodulatory Effect of CpG ODN-Adjuvanted Bacterin Against Salmonella enterica serovar Enteritidis in Broiler Chickens.

Key words: \textit{Salmonella} enterica, CpG ODN, Mucosal immunity, cellular responses, CpG ODN, Mucosal immunity.

ABSTRACT

This study used six testes obtained from four immature and two mature Sunda porcupine originated from Ngawi Regency, East Java Province, Indonesia. Testis tissues were stained with hematoxylin and eosin and lectin histochemistry of Lens culinaris agglutinin (LCA), Phaseolus vulgaris leucoagglutinin (PHA-L), Pisum sativum agglutinin (PSA), Sophora japonica agglutinin (SJA), and Wheat germ agglutinin (WGA). Data were analyzed with ANOVA followed by Tukey’s test. Carbohydrate residues contained in immature and mature of Sunda porcupine’s testes and to discuss its role in the development and maturation of Leydig and Sertoli cells. Mature testes showed a strong positive reaction to the LCA, SJA, PSA, and WGA which indicated the presence of alpha-D-mannose and alpha-D-glucose, N-acetylgalactosamine, mannose, and N-acetylglucosamine residues in the immature and mature testes.

Distribution Profile and Function of Carbohydrate Residues in Testes of Immature and Mature Sunda Porcupine (Hystrix javanica).

Key words: \textit{Hystrix javanica}, Carbohydrate residues, Testes, Immature and Mature, Development, Maturation.

ABSTRACT

This study was to investigate the distribution profile and functional role of carbohydrate residues in testes of immature and mature \textit{Hystrix javanica} using hematoxylin and eosin staining and lectin histochemistry of Lens culinaris agglutinin (LCA), Phaseolus vulgaris leucoagglutinin (PHA-L), Pisum sativum agglutinin (PSA), Sophora japonica agglutinin (SJA), and Wheat germ agglutinin (WGA). Data were analyzed with ANOVA followed by Tukey’s test. Carbohydrate residues contained in immature and mature testes of \textit{Hystrix javanica} and to discuss its role in the development and maturation of Leydig and Sertoli cells. Mature testes showed a strong positive reaction to the LCA, SJA, PSA, and WGA which indicated the presence of alpha-D-mannose and alpha-D-glucose, N-acetylgalactosamine, mannose, and N-acetylglucosamine residues in the immature and mature testes.

Foot and Mouth Disease (FMD) is a highly contagious disease affecting cloven-hoofed animals that result in substantial economic losses. The present study was aimed to detect FMDV by different tests. The rRT-PCR provided an accurate and rapid laboratory diagnosis of FMDV infection.


Capripox virus 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. Presented research work was conducted in an attempt to develop a rapid diagnostic assay for Ca PV. We collected eighty scabs from clinically affected animals (54 sheep and 26 goat) that 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 skin. DNA extraction from clinical samples and positive CAM with pox lesions using DNA slandered references extraction kits compared to novel modification method (Microwave extraction). The novel microwave method was performed with no 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; Conventional PCR RNA polymerase gene RP030 and real-time qPCR were examined for the presence of Ca PVs. We used to isolate high quality of DNA extracted from infected skin biopsy with SPPV and GPPV with 15 positive with percentage 27.77% (CIE), and conventional PCR and real time qPCR were examined for the presence of Ca PVs in goats were 1 and 2 from 26 scab biopsy samples respectively, however they are useful for differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without further isolation and propagation in embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the skin.

Key words: Capripox virus, DNA extraction, Goat pox, KOH extraction method, Real-Time PCR, Conventional PCR.
ABSTRACT
Lately humans have become more apprehensive for the health and their food relationship. Eggs are considered a cheap source of animal protein. Eggs are rich in various essential nutrients that contribute to the quality of human diet. But its cholesterol can contribute to some human serious diseases. 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 eggs 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.
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 replicates.

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


Quantitative real-time PCR analysis for gene expression profile


Creative Commons Attribution-NonCommercial 4.0 International License