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-erides, 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 Role of Glycogen in Biological Cycle of Trichinella spiralis.

Key words: Bioassay test; Glycogen; Nematode; Parasitic helminth,


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Evaluation of Growth Performance, Blood Metabolites and Gene Expression Analysis in Egyptian Sheep Breeds, in Relation to Age.

Key words: Blood metabolites, Egyptian breeds, Gene expression, Growth performance, Linear body measurements.

Sider SA and Andreyanov ON (2020), The Role of glycogen in Biological Cycle of Trichinella spiralis.

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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 swabs were collected from 80 calves (10-16 months) from different farms in Nineveh province, Iraq. Molecular diagnosis using nested RT-PCR and phylogenetic analysis of the G gene were performed. The results indicated a 37.31% prevalence rate of BRSV using RT-PCR and 34.44% using phylogenetic analysis. The results suggest the importance of BRSV in clinical disease and economic losses in the different farms of Nineveh province. Further studies are needed to identify and control this virus and increase the dairy productivity in the different farms of Nineveh province.

Key words: Bovine respiratory syncytial virus, Cattle, PCR, Phylogenic analysis.


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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. Molecules were genotyped using the Axiom Buffalo Genotyping 90K Array, and the phenotypic data were collected from 360 Egyptian buffaloes. Significant and suggestive SNPs were identified for LP, however; only two suggestive SNPs were identified for LY. The identified genomic regions are overlapped with previously reported QTL in Bubalus bubalis. The identified genomic regions harbored many candidate genes with biological roles associated with milk production traits, such as TPD52 and ZBTB10 on chromosome 15; AADAT and GALNTL6 on chromosome 10; and PTGS2 on chromosome 17. The identified genomic regions are overlapped with previously reported QTL in Bubalus bubalis. The identified genomic regions harbored many candidate genes with biological roles associated with milk production traits, such as TPD52 and ZBTB10 on chromosome 15; AADAT and GALNTL6 on chromosome 10; and PTGS2 on chromosome 17.

Key words: Candidate gene, Egyptian buffalo, Genome, Genomic loci, Lactose traits, Milk.
Salmonella infection in broiler chickens. Also 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 effects of Salmonella serovar Enteritidis in Broiler Chickens. Aedes M, Elhariri M, El-Helw R, Khattab MS, Setta A and Soliman R.

Bacterial oligodeoxynucleotide containing Cytosine Guanine motifs (CpG-ODN) has been found to be a significant dose-dependent immunostimulatory adjuvant effect of CPG-ODN on the level of secretory IgA and the induced mucosal responses. The 200-CpG ODN group showed the best protection and improved survival rate of challenged chickens and no inflammatory cellular infiltrations were seen in the liver and intestine of 200-CpG ODN treated group. In conclusion, the presented findings have shown the significant immunostimulatory effect of CpG-ODN and its effect on mucosal and systemic immune responses of challenged chickens.

At two weeks post-immunization, 20 chicks from each group were orally challenged by Salmonella fresh bacterial culture (1.2x10^8 CFU/ml). The survival rates and the pathological changes of challenged chickens in the different groups were monitored for extra 10 days. Compared to the group vaccinated with the aluminum hydroxide adjuvanted bacterin, the CpG-ODN adjuvant bacterin induced significant immunostimulatory adjuvant effect of CPG-ODN on the level of secretory IgA and the induced mucosal responses. The 200-CpG ODN group showed the best protection and improved survival rate of challenged chickens.
Rapid Detection and Differentiation between Sheep Pox and Goat Pox Viruses by Real-Time qPCR and Conventional PCR in Sheep and Goat in Egypt.

Key words:

Skin biopsy samples

RT-qPCR

c-PCR


Stillsbirth in pig has been studied worldwide, but, its situation in Vietnam has never been reported. Therefore, present study aimed to investigate effects of herd, parity, gestation length, litter size and farrowing duration on stillbirth at sow level in swine farms in Vietnam.

The incidence of stillbirth at sow level was 47.9%, and the stillbirth rate was 5.2%. Multivariate logistic regression showed that parity 1 (OR=1.81, 95%CI=1.24-2.63) and >4 (OR=1.87, 95%CI=1.33-2.64), a gestation length <114 days (OR=1.80, 95%CI=1.23-2.65), a birth litter size ≥9 (OR=1.50, 95%CI=1.05-2.61), and a farrowing duration ≥5 hours (OR=1.48, 95%CI=1.04-2.61) were risk factors for stillbirth. This study indicated that stillbirth was common in swine farms in Vietnam. Special attention should be paid to sows at parity 1, >4, sows with a short gestation, sows with a large birth litter size and sows with a long farrowing duration to reduce stillbirth in swine farms in Vietnam.

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 contribute 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**

The present study was conducted to determine the appropriate inoculum dose and incubation period of Cassava Leaf Meal and Tofu Drug mixture fermented with *Rhizopus oligosporus*. Semen was extended with Tris-fructose-citric containing egg yolk using glycerol and dimethyl sulfoxide supplemented with two doses of melatonin as antioxidant in cold and hot temperature of breeding season. Ejaculates from four mature Egyptian baladi bucks were pooled after collection. The results also demonstrated that CASA parameters (VAP and VCL) were significantly increased in low compared to high melatonin dose in glycerol based extender during cold and hot temperature. The activity of total antioxidant capacity (TAC) was significantly higher in cryoprotectants supplemented with melatonin as antioxidant in cold and hot temperature of breeding season. Therefore, it could be concluded that the glycerol selected genes were measured. The results revealed that the progressive motility percentage (P) compared to high dose (0.16 M) than high melatonin dose (0.49 M) in glycerol (74.4 versus 64.4) and post-thaw fertilizing ability of buck semen.

Dessouki ShM, Ashour G, El-Gayar M, El-Azzazi FE, Kodi E and Ghanem N.

**Key words:** Antioxidant enzymes, Bucks, Melatonin, Motility, Transcript abundance.