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 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
The aim of the present genome-wide association study (GWAS) was to identify single nucleotide polymorphisms (SNPs) and candidate genes associated with lactose percentage traits, such as TPD52 and ZBTB10 on chromosome 15; AADAT and GALNTL6 on chromosome.

Genome-wide analysis was performed using a single marker regression. The GWAS revealed 32 significant and seven suggestive SNPs for LP, however; only two suggestive SNPs were determined for LY. The identified genomic regions are overlapped with previously reported QTL in Egyptian buffalo. The phenotypic dataset included 60,318 monthly observations.

Key words: candidate gene, Egyptian buffalo, Genome, Genomic loci, Lactose

The role of glycogen in biological cycle of Trichinella spiralis.


Key words: bioassay test; Glycogen; Nematode; Parasitic helminth.

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

Sidor EA and Andreyanov ON (2020). The Role of Glycogen in Biological Cycle of Trichinella spiralis.

Key words: Biological cycle, Cytoskeletal structure, Muscle larvae, Glycogen, Trichinella spiralis, Enterocytes, Glycogen concentration, Glycogen level.
Enteritidis bacterin adjuvanted with different doses of aluminum hydroxide groups (P < 0.05). Also, cellular interactions were remarkably reduced in the highest IgA response followed by 100-CpG ODN group then the 50-CpG ODN and the 20-CpG ODN groups. No inflammatory cellular infiltrations were seen in the liver and intestine of 200-CpG ODN-treated chickens. In conclusion, the presented findings have shown the significant immunostimulatory effect of CpG-ODN and its effect on 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 in broiler chickens. Two hundreds one-day-old broiler chicks, divided into 5 groups (50µg, 100µg and 200µg). The control groups included a group that was immunized with Enteritidis bacterin adjuvanted with aluminum hydroxide and a non-immunized group. Bacterial oligodeoxynucleotide containing Cytosine Guanine motifs (CpG-ODN) has been demonstrated as a potential vaccine adjuvant in controlling infections in broiler chickens. This study was to evaluate its immunomodulatory effect against Enteritidis infection in broiler chickens. Immunological responses to Enteritidis bacterin adjuvanted with different doses of aluminum hydroxide were measured at different intervals, until 42 days of age. The 200-CpG ODN group showed the highest IgA response followed by 100-CpG ODN group then the 50-CpG ODN and the 20-CpG ODN groups. Cellular responses, CpG ODN, Mucosal immunity, and buffaloes in Egypt.


Research Paper

Real-Time qPCR and Conventional PCR in Sheep and Goat in Egypt.

Capri Pox Virus (Ca PV) (SPPV and GTPV) in natural, infected scabs biopsy samples, which were collected from lower result than molecular methods, they gave 11 and 13 positive samples from 54 sheep and were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken gene RP030 gene and real-time-PCR considered sensitive, rapid, and reliable methods for conventional PCR RNA polymerase gene RP030 gene based and Real-Time qPCR fluorescent membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which further isolation and propagation in embryonated-chicken eggs. The novel microwave method Rapid Detection and Differentiation between Sheep Pox and Goat Pox Viruses by differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without current study confirmed that the suitability of the PCR-based RNA polymerase gene RP030 with no further purification steps required. It was done in 3 minutes only. The results of the 

ABSTRACT

PCR based RPO30 gene and the real-time qPCR showed 15 positive with percentage 27.77% in 54 sheep and 3 positive with percentage 12.5% in 26 goats. Although, AGPT and CIE gave DNA extraction from clinical samples and positive CAM with pox lesions using DNA slandered Capri Pox 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 which infect sheep, goats, and cattle, respectively. A rapid diagnostic assay for Ca PV by using PCR based RNA polymerase gene RP030 and real-time qPCR would be useful for early confirmation of positive Ca PVs in low-income countries. PCR based RNA polymerase 

Stillbirth 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, birth litter size and farrowing duration on stillbirth at sow level in swine farms in Vietnam. Data was collected from 1174 litters of 1174 Landrace x Yorkshire crossbred sows in 16 farms in the North of Vietnam. Potential risk factors for stillbirth were identified by using logistic regression. 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=1.64, 95%CI=1.05-2.09) 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. Since the use of highly prolific sows is increasing, stillbirth continues to be an issue to be dealt with in swine farms in Vietnam.

Components during Pregnancy.

The present study aimed to compare the biochemical components including Total Protein (TP), albumin, globulins, cholesterol, triglycerides, High and Low-Density Lipoproteins (HDL and LDL), creatinine, urea, Na, K, Cl, Ca and inorganic-P in AF and MS during the first, second and third trimesters of pregnancy in cattle and Fetal Serum (FS) at birth. At birth AF, MS and FS were collected. Maternal blood samples and gravid uteri were collected after accidental delivery, and the sera were collected after parturition. Data were collected from 1174 litters of 1174 Landrace x Yorkshire crossbred sows in 16 farms in the North of Vietnam. Potential risk factors for stillbirth were identified by using logistic regression.

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Lately, humans have become more apprehensive about their health and their relationship with food. Eggs are considered a cheap source of animal protein and are rich in various essential nutrients that contribute to the quality of human diet. However, their cholesterol content can contribute to the development of some human serious diseases. The current study examines the hypothesis that the addition of an antioxidant, such as CAX, SS, B, or their mixtures, to the diet of Fayoumi hens can produce functional eggs at the 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. Eggs from hens fed a combination of CAX + SS + B 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 the basal diet supplemented with CAX, SS, B, alone or with a mixture of them, may have a lowering effect on yolk total cholesterol. This could lead to the production of functional eggs that have positive effects on human health and are favorable for those suffering from heart syndromes.

Key words: Cholesterol, Fayoumi, Functional Egg, Total Antioxidant Capacity
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 extender groups in cold temperature compared to other groups of this study. On the other hand, the progressive motility percentage (P) in glycerol (74.4 versus 64.4) and DMSO-based extender (35.5 versus 32.9) in cold temperature. The same trend was found in samples supplemented with low (0.49 mM/L) and high (10^{-3} M) dimethyl sulfoxide supplemented with two doses of melatonin (10^{-6} M and 10^{-3} M) compared to high melatonin dose (0.16 mM/L) than high melatonin dose (10^{-3} M).

This study was carried out to improve the freezability of buck semen using two different types of extender groups in cold and hot temperature. The changes in Dry Matter (DM), Organic Matter (OM), crude fat, Crude Fiber (CF), and Crude Protein (CP) were recorded. The experimental results showed that the inoculum dose and incubation period of fermentation was at 3 days. The results indicated that Rhizopus oligosporus was the best inoculum dose to ferment CLM and TD mixture with a significant reduction in the DM, OM, crude fat, and CF and also increased the CP. The best inoculum dose effect was at 10%. The incubation period had a significant effect on urea concentration and alkaline phosphatase (ALP) and insignificant effect on the increase in the CP of fermented CLM and TD with Rhizopus oligosporus. The present study was conducted to determine the appropriate inoculum dose and incubation period of cassava leaf meal and tofu dreg mixture fermented with Rhizopus oligosporus. The present study was conducted to investigate the effect of body weight, blood biochemical (AST), were not affected by goat breed and was significantly affected by both age of birth and sex. The present study was conducted to determine the appropriate inoculum dose and incubation period of cassava leaf meal and tofu dreg mixture fermented with Rhizopus oligosporus. The present study was conducted to investigate the effect of body weight, blood biochemical (AST), were not affected by goat breed and was significantly affected by both age of birth and sex. The present study was conducted to determine the appropriate inoculum dose and incubation period of cassava leaf meal and tofu dreg mixture fermented with Rhizopus oligosporus. The present study was conducted to investigate the effect of body weight, blood biochemical (AST), were not affected by goat breed and was significantly affected by both age of birth and sex.