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.


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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
Genome-wide analysis was performed using a single marker regression. The GWAS revealed identified genomic regions are overlapped with previously reported QTL in Buffalo. Measures for LP and LY from 1481 animals. A total number of 114 animals with high and low traits, such as TPD52 and ZBTB10 on chromosome 15; AADAT and GALNTL6 on chromosome 3 and COL8A1 and PLOD2 on chromosome 1. Our findings provide the basis to uncover the nucleotide polymorphisms (SNPs) and candidate genes associated with lactose percentage regions harbored many candidate genes with biological roles associated with milk production. 32 significant and seven suggestive SNPs for LP, however; only two suggestive SNPs were key markers and candidate genes affecting lactose traits which facilitate the exploration of the DOI:

The aim of the present genome-wide association study (GWAS) was to identify single genetic mechanisms that control lactose traits variation in Egyptian buffalo.

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


The role of glycogen in Biological Cycle of Trichinella spiralis. Ashour EA and Andreyanov ON (2020). The role of glycogen in Biological Cycle of Trichinella spiralis

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

The energy sources of Trichinella spiralis depend on the glycogen content. When the glycogen concentration in the parasite is insufficient, T. spiralis larvae, laboratory rats were not fed a day before infection. Adult nematodes were isolated from infected. Maximum concentration of glycogen was recorded 4 months post-infection (0.0930 ± 0.0029 μg/larva). Further, the glycogen level began to decrease slowly. In the 20th month each) were infected with Trichinella spiralis larva was 0.0786 ± 0.0023 μg. In the body of intestinal nematodes, 3 hours after infecting the T. spiralis glycogen concentration in muscular larva was 0.0054 ± 0.0027 μg/ larva on day 21, 0.0136 ± 0.0028 μg on day 7, 0.0216 ± 0.0025 μg on day 14 and 0.0309 ± 0.0026 μg on day 28. After the 10th month, the amount of glycogen in muscle was 0.0430 ± 0.0018 μg. Trichinella spiralis when return to the body of the laboratory rats. The amount of glycogen in white rats at 3, 6 and 24 hours post-infection. The nematodes were passaged on laboratory rodents under the vivarium conditions. Sixty-nine white rats (350 g average weight each) were infected with 200 T. spiralis. The glycogen concentration was reduced to 0.0472 ± 0.0003 μg in one nematode. The glycogen in the small intestine of rats for 24 hours, the glycogen was not detected. The glycogen in the host's muscle stage of post-infection, after infection, the amount of glycogen in a Trichinella spiralis was assessed on day 45 post-infection. For the study of intestinal development was extremely important in the first hours of the helminth's residing in the host's muscle. The results indicated a 37.31% prevalence rate of BRSV using PCR, which remained in the small intestine of rats for 24 hours, the glycogen was not detected. Results showed that there was a significant increase in sheep's live body measurements, blood metabolites and GH, IGF-1 and Leptin genes in early ages is a good and accurate indicator for growth performance in Egyptian sheep breeds.

The growth performance of lambs attributes the economic viability of animals. Faster growth was passaged on laboratory rodents under the vivarium conditions. Sixty-nine white rats (350 g average weight each) were infected with 200 T. spiralis. The glycogen concentration was reduced to 0.0472 ± 0.0003 μg in one nematode. The glycogen in the small intestine of rats for 24 hours, the glycogen was not detected. The glycogen in the host's muscle stage of post-infection, after infection, the amount of glycogen in a Trichinella spiralis was assessed on day 45 post-infection. For the study of intestinal development was extremely important in the first hours of the helminth's residing in the host's muscle. The results indicated a 37.31% prevalence rate of BRSV using PCR, which remained in the small intestine of rats for 24 hours, the glycogen was not detected. Results showed that there was a significant increase in sheep's live body measurements, blood metabolites and GH, IGF-1 and Leptin genes in early ages is a good and accurate indicator for growth performance in Egyptian sheep breeds.

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Salmonella enterica serovar Enteritidis bacterin in broiler chickens. Two hundred one-day-old broiler chicks, divided into 5 groups, were used in this study. First three groups were immunized with the Salmonella enterica serovar Enteritidis bacterin adjuvanted with aluminum hydroxide and a non-immunized group. The control groups included a group that was immunized with the Salmonella enterica serovar Enteritidis bacterin adjuvanted with different doses of CpG-ODN, 100-CpG-O, 100-CpG-O, 200-CpG-O, and a non-immunized group.

ABSTRACT

Immunomodulatory Effect of CpG-ODN-Adjuvanted Bacterin Against Salmonella enterica serovar Enteritidis in Broiler Chickens.

At two weeks post-immunization, 20 chicks from each group were orally challenged by Salmonella enterica serovar Enteritidis fresh bacterial culture (1.2x10^6 CFU). The intestinal colonization, cellular responses, mucosal and systemic immune responses of Salmonella enterica serovar Enteritidis bacterin challenged groups were examined. The highest IgA response followed by 100-CpG ODN and the 50-CpG ODN group then the 200-CpG ODN group. In conclusion, the presented findings have shown the significant immunostimulatory effect of CpG-ODN and its effect on the protection and improved survival rate of challenged chickens. The 200-CpG ODN group showed the highest IgA response followed by 100-CpG ODN group then the 50-CpG ODN and the non-immunized group.

Key words: Salmonella, CpG ODN, Mucosal immunity, Cellular responses, CpG ODN, Mucosal immunity.
The positive CAM showed pock lesions, which were observed with a thickening of the gene is suitable for differentiating between SPPV and GTPV; in one PCR run; without any 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, which infect sheep, goats, and cattle, respectively. A rapid diagnostic assay for Ca PV by using Agar Gel Precipitation Test (AGPT), Counter Immune Electrophoresis (CIE), and conventional PCR and real time qPCR were examined for the presence of Ca PVs. 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 results of the references extraction kits 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 gene RP030 gene and real-time-PCR considered sensitive, rapid, and reliable methods for differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without post-processing steps.

Skin biopsy samples
DNA extraction by Microwave methods
RT-qPCR

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Risk Factors Associated with Stillbirth in Swine Farms in Vietnam.

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, and management practices on stillbirth in Vietnamese swine farms. Data were collected from 1174 litters of 1174 Landrace x Yorkshire crossbred sows in 16 farms in the north-central region during 2017-2018. Logistic regression showed that parity 1 (OR=1.81, 95%CI=1.24-2.63) and >4 (OR=1.87, 95%CI=1.05-2.09) were risk factors for stillbirth. This study indicated that stillbirth was common issue to be dealt with in swine farms in Vietnam.

ABSTRACT

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=1.05-2.09) were risk factors for 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.


Comparison between Biochemical Analysis of Cattle Amniotic Fluid and Maternal Serum Components during Pregnancy.

Research Paper

The present study aimed to compare the biochemical components including Total Protein (TP), albumin, globulins, cholesterol, triglycerides, lipoproteins, creatinine, urea, sodium (Na), potassium (K), chloride (Cl), calcium (Ca) and inorganic-phosphorus (P), of Amniotic Fluid (AF) with those of Maternal Serum (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 lower than those in the MS or FS. The concentrations of Ca and inorganic-P in the FS were lower than those in the MS or FS. The concentrations of Na and Ca in the AF and urea in the MS increased as the gestation stages advanced. The levels of Na and Ca in the AF during the first, second and third trimesters of pregnancy in cattle might be changed with progressing the gestation.

ABSTRACT

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Key words: Amniotic fluid, Cattle, Fetal serum, Gestation, Maternal blood

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ABSTRACT
Lately, human have become more apprehensive for the health and their food relationship. Egg 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 disease. The current study examines the hypothesis that the addition of an antioxidant, such as CAX, SS, B or their mixtures, to the diet can produce functional eggs from Fayoumi hens 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.

Egg of hens fed a combination of CAX + SS + B, which had the best total antioxidant capacity value, while the CAX group recorded the 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 a lowering effect on yolk total cholesterol. This could lead to producing functional eggs which have a positive effect on human health and are favorable for those suffering from heart syndromes.

Key words: Cholesterol, Fayoumi, Functional Egg, Total Antioxidant Capacity
Key words: Buck, Melatonin, Motility, Transcript abundance

This study was carried out to improve the freezability of buck semen using two different types of extender groups in cold temperature compared to other groups of this study. On the other hand, the activity of total antioxidant capacity (TAC) was significantly higher in glycerol supplemented with two doses of melatonin (10^{-3} M) in glycerol (74.4 versus 64.4) and dimethyl sulfoxide (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. Therefore, it could be concluded that the glycerol supplemented with low (0.49) than high melatonin dose (0.16) increased in low compared to high melatonin dose in glycerol based extender during cold and post-thaw fertilizing ability of buck semen.

ABSTRACT

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