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

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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 (LP) and lactose yield (LY) in Egyptian buffalo. The phenotypic dataset included 60,318 monthly observations on LP and LY for 22,981 animals. A total of 22,108,501 single nucleotide polymorphisms (SNPs) were genotyped with the Axiom Buffalo 90K Genotyping Array.

Key words: Genome-wide association study, Milk lactose, Lactose yield, Egyptian buffalo.

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Evaluation of Growth Performance, Blood Metabolites and Gene Expression Analysis in Egyptian Sheep Breeds


Key words: Growth performance, Blood metabolites, Gene expression, Egyptian sheep.

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


Key words: Bovine respiratory syncytial virus, Molecular diagnosis, Phylogenetic analysis.

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findings have shown the significant immunostimulatory effect of CpG-ODN and its effect on was a significant dose-dependent immunostimulatory adjuvant effect of CPG-ODN on the level Enteritidis bacterin adjuvanted with different doses of aluminum hydroxide groups (P < 0.05). Also, cellular interactions were remarkably reduced in Salmonella effect of CpG ODN on Enteritidis bacterin adjuvanted with aluminum hydroxide and a non-immunized group. reported to induce immunostimulatory activity against a variety of bacterial, viral, and protozoan Salmonella Enteritidis fresh bacterial culture (1.2x10 Enteritidis was not recovered from the intestinal tract of vaccinated challenged groups. There At two weeks post-immunization, 20 chicks from each group were orally challenged by the liver and intestine of CpG ODN-treated chickens. No inflammatory cellular infiltrations were seen in the liver and intestine of 200-CpG ODN treated group. In conclusion, the presented Salmonella of secretory IgA and the induced mucosal responses. The 200-CpG ODN group showed the Salmonella in controlling serovar Enteritidis in Broiler Chickens.

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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 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 DNA extraction from clinical samples and positive CAM with pox lesions using DNA slandered PCR based RNA polymerase gene RP030 gene and real-time qPCR showed 15 positive with percentage 27.77%. 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 membrane after 2-3 passages post samples inoculation, and harvested positive CAMs, which were used to isolate high quality of DNA extracted from infected skin biopsy with SPPV and GPPV. PCR based RNA polymerase gene RP030 gene is suitable for differentiating between SPPV and GTPV; in one PCR run; without any further isolation and propagation in embryonated-chicken eggs. The novel microwave method was done in 3 minutes only. The results of the conventional PCR RNA polymerase gene RP030 and the real-time qPCR showed 15 positive with percentage 27.77%.

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, 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=1.05-2.09) were risk factors for stillbirth. This study indicated that stillbirth was common with no further purification steps required. It was done in 3 minutes only. The results of the later molecular methods, they gave 11 and 13 positive samples from 54 sheep and 26 goat. DNA extraction by Microwave methods was used to isolate high quality of DNA extracted from infected skin biopsy with SPPV and GPPV.
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.

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.

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 arlongi, Goat Kids, Oxytetracycline, Treatment.
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 samples supplemented with low dose of melatonin (10 μM) in DMSO extender. CPT2, ATP5F1A and SOD2 genes were up regulated in glycerol based extender supplemented with melatonin during cold seasons. The percent of death for male and female kids of Baladi and Shami goats were 87.50% and 36.84% in Shami while, were 33.33% and 14.28% in Baladi respectively. Therefore, it could be concluded that the glycerol based extender groups in cold temperature improved semen quality, antioxidant defense capacity and transcriptional profile, which may maintain the post-thaw fertilizing ability of buck semen.

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