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.


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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<sup>8</sup> 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<sup>8</sup> 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
A genome-wide association study (GWAS) was performed on Egyptian buffaloes to identify single marker regression. The study aimed to uncover genetic mechanisms that control lactose traits variation in these animals. The GWAS revealed identified genomic regions that overlapped with previously reported QTL for lactose production (LP) and lactose yield (LY) in Egyptian buffaloes. The phenotypic dataset included 60,318 monthly observations.

Our findings indicate that significant and suggestive SNPs were identified for LP, although only two suggestive SNPs were found for LY. These findings provide a basis to further investigate the genetic basis of lactose traits in Egyptian buffaloes.

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

DOI:

Blood metabolites, Egyptian breeds, Gene expression, Growth performance, Linear


Bovine respiratory syncytial virus, Cattle, PCR, Phylogenic analysis.

Jassiem Hussain Kh, AL-Farwachi MI and Dhahir Hassan S. (2020); Bovine Respiratory Syncytial Virus in Cattle in Iraq, In: World Vet. J., 2020; PiI:S232245682000002-10

Sidor EA and Andreyanov ON (2020); The role of glycogen in the biological cycle of Trichinella spiralis larvae. In: World Vet. J., 2020; PiI:S232245682000004-10


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

ABSTRACT
Abed M, Elhariri M, El-Helw R, Khattab MS, Setta A and Soliman R.

At two weeks post-immunization, 20 chicks from each group were orally challenged by 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 aluminum hydroxide adjuvanted bacterin, the CpG-ODN adjuvant bacterin induced significant protection and improved survival rate of challenged chickens.

Bacterial oligodeoxynucleotide containing Cytosine Guanine motifs (CpG-ODN) has been 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 evaluate the effect of CpG ODN on the intestinal colonization, cellular responses, mucosal and systemic immune responses of immunized chickens.

The intestinal colonization, cellular responses, mucosal and systemic immune responses of immunized chickens was measured at different intervals, until 42 days of age. There was a significant dose-dependent immunostimulatory adjuvant effect of CPG-ODN on the level of protection and improved survival rate of challenged chickens.

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


further isolation and propagation in embryonated-chicken eggs. The novel microwave method PCR based RPO30 gene and the real-time qPCR showed 15 positive with percentage 27.77% eggs. The positive CAM showed pock lesions, which were observed with a thickening of the based. We collected eighty scabs from clinically affected animals (54 sheep and 26 goat) that with no further purification steps required. It was done in 3 minutes only. The results of the DOI: World Vet. J. current study confirmed that the suitability of the PCR-based RNA polymerase gene RP030 gene is suitable for differentiating between SPPV and GTPV; in one PCR run; without any post-processing steps.

Skin Disease Virus (LSDV) are three members of the Capripox virus genus of Poxviridae family, for management and treatments of outbreaks. The present study aimed to detect and identify differentiating SPPV and GTPV from AGPT and CIE in CAM or in clinical samples without were determined by Agar Gel Precipitation Test (AGPT), Counter Immune Electrophoresis (CIE), and conventional PCR and real time qPCR were examined for the presences of Ca PVs. were vaccinated in Chorio-Allantoic-Membranes (CAM) from 10-days-old embryonated-chicken which infect sheep, goats, and cattle, respectively. A rapid diagnostic assay for Ca PV by using Ca PV (SPPV and GPPV) in natural, infected scabs biopsy samples, which were collected from sheep and goats in different governorates in 2017 during outbreaks in Egypt using the ABSTRACT

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. 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 Risk Factors Associated with Stillbirth in Swine Farms in Vietnam.
Using Feed Additives to Produce Functional Eggs in Fayoumi Hens.
Dief Allah RA, Ali MN, EL-Manylawi MAF, Abass AO and Desouky A.

DOI: [https://dx.doi.org/10.36380/scil.2020.wvj12](https://dx.doi.org/10.36380/scil.2020.wvj12)

**ABSTRACT**

Lately, humans have become more apprehensive for the health and their food relationship. Eggs are considered a cheap source of animal protein. They are rich in various essential nutrients that contribute to the quality of human diet. However, their cholesterol can contribute to some human serious diseases. The current study examines the hypothesis that the addition of antioxidants 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 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 a lowering effect on yolk total cholesterol. This could lead to produce 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

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**SDS-PAGE Profile Analysis of SeM-like Protein of *Streptococcus equi* subspecies *equi*.**
Abdelmageed ShMEl, El-Shafii SElA and El Jakee JKAH.

DOI: [https://dx.doi.org/10.36380/scil.2020.wvj13](https://dx.doi.org/10.36380/scil.2020.wvj13)

**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 kDa in SeM2; 5 bands at MW 70.9, 58.9, 37.2, 29.8 and 18.3 kDa 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*

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**Evaluation of The Efficacy of Oxytetracycline on Experimentally Induced Caprine Coccidiosis Due to *Eimeria arloingi* Infection.**
Mikail HG, Saidu SNA and Mamman M.

DOI: [https://dx.doi.org/10.36380/scil.2020.wvj14](https://dx.doi.org/10.36380/scil.2020.wvj14)

**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 $1.5 \times 10^3$ 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 $\leq 0.05$) 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 arloingi*, Goat Kids, Oxytetracycline, Treatment
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 experimental results showed that there was no interaction between the inoculum dose and incubation period of fermentation in the reduction of DM, organic matter, and crude fat as well as the increase in the CP of fermented CLM and TD mixture. However, the interaction was occurred between inoculum dose and incubation period in the reduction of DM, OM, crude fat, and CF and also increased the CP. The best treatments arrangement with 4 replications. The first factor was the inoculum dose (6, 8 and 10%) and the second factor was the incubation period of the fermentation (2, 3, 4, and 5 days). In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose. The inoculum dose significantly decreased the DM, OM, crude fat and CF and also increased the CP. The best inoculum dose of 6% at each incubation period. 

<table>
<thead>
<tr>
<th>Inoculum Dose (%)</th>
<th>Incubation Period (Days)</th>
<th>DM Reduction (%)</th>
<th>OM Reduction (%)</th>
<th>CF Reduction (%)</th>
<th>CP Increase (%)</th>
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<td>11.7</td>
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</tr>
<tr>
<td>6</td>
<td>5</td>
<td>12</td>
<td>13.2</td>
<td>14.4</td>
<td>16.8</td>
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The inoculum dose (6, 8 and 10%), and the incubation period of the fermentation (2, 3, 4, and 5 days), with 4 replications. The appropriate inoculum dose to ferment CLM and TD mixture with R. oligosporus was 6% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.

The appropriate inoculum dose and incubation period of Cassava Leaf Meal and Tofu Dreg Mixture Fermented with Rhizopus oligosporus

Determination of the appropriate inoculum dose and incubation period of Cassava Leaf Meal and Tofu Dreg Mixture Fermented with Rhizopus oligosporus.