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 \textit{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 \textit{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 \textit{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, triglycerides, 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 \textit{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, \textit{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 in milk of Egyptian buffalo. Buffalo is a valuable resource for milk lactose production due to its high genetic potential. Thus, the determination of potential candidate genes associated with milk lactose in Egyptian buffalo is crucial. A total of 273 Daughters of Ossimi breed were selected for genotyping with Axiom Buffalo Genotyping 90K Array.

Genome-wide analysis was performed using a single marker regression. The GWAS revealed regions harbored many candidate genes with biological roles associated with milk production in different cattle breeds. In addition, novel genomic loci were detected. The identified genomic regions are overlapped with previously reported QTL in different cattle breeds.

Determination of Potential Candidate Genes Associated with Milk Lactose in Egyptian Buffalo.


Skin Disease Virus (LSDV) are three members of the Capripox virus genus of Poxviridae family, Real-Time qPCR and Conventional PCR in Sheep and Goat in Egypt. The novel microwave method for isolation and propagation in embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the Dermis. Sheep Poxvirus (SPPV), Goat Poxvirus (GTPV) and Lumpy Skin Disease Virus (LSDV) are three members of the Capripox virus genus of Poxviridae family, Real-Time qPCR and Conventional PCR in Sheep and Goat in Egypt. The novel microwave method for isolation and propagation in embryonated-chicken eggs. The positive CAM showed pock lesions, which were observed with a thickening of the Dermis.

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=1.95, 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 large birth litter size and farrowing duration on stillbirth at sow level in swine farms in Vietnam. Since the use of highly prolific sows is increasing, stillbirth continues to be an issue to be dealt with in swine farms in Vietnam.

The maternal blood samples and gravid uteri were collected after accidental abortion. The AF was collected at term. The MS and FS were collected at birth. The AF, MS and FS were collected at parturition. The maternal blood samples and gravid uteri were collected after accidental abortion. The AF was collected at term. The MS and FS were collected at birth. The maternal blood samples and gravid uteri were collected after accidental abortion. The AF was collected at term. The MS and FS were collected at birth. The maternal blood samples and gravid uteri were collected after accidental abortion. The AF was collected at term. The MS and FS were collected at birth. The maternal blood samples and gravid uteri were collected after accidental abortion. The AF was collected at term. The MS and FS were collected at birth. The maternal blood samples and gravid uteri were collected after accidental abortion. The AF was collected at term. The MS and FS were collected at birth.

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


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


Key words: 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, litter size and farrowing duration on stillbirth at sow level in swine farms in Vietnam. Data were collected from 225 sow-parities in 20 swine farms from the North of Vietnam. Potential risk factors for stillbirth were identified by using logistic regression. The results showed that parity 1, >4, sows with a large birth litter size and 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.


Key words: Sheep Pox, Goat Pox, DNA extraction, KOH extraction method, Real-Time qPCR, Conventional PCR, Skin biopsy samples, DNA extraction by Microwave methods, RT-qPCR, c-PCR.
Research Paper

Using Feed Additives to Produce Functional Eggs in Fayoumi Hens.
Dief Allah RA, Ali MN, EL-Manylawi MAF, Abass AO and Desouky A.

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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

Research Paper

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

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

Research Paper

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

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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 arlongi 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 arlongi, Goat Kids, Oxytetracycline, Treatment
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**ABSTRACT**

Gene Expression Profile and Enzymatic Activities of Frozen Buck Sperm Supplemented with DMSO and Glycerol in Hot Temperature. Dessouki ShM, Ashour G, El-Gayar M, El-Azzazi FE, Kodi E and Ghanem N.

This study was carried out to improve the freezability of buck semen using two different types of cryoprotective agents. The cryopreservation of semen was carried out with dimethyl sulfoxide (DMSO) and glycerol. Two doses of melatonin were used in both types of extender: 0.16 and 10 mM/L. The results showed no significant difference in the post-thaw sperm count between the DMSO and glycerol. However, the sperm percentage was significantly higher in samples supplemented with low dose of melatonin (10 vs. 100 mM/L) in glycerol based extender during cold and hot temperatures. 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 temperatures. One of the most important results was the significant increase in the post-thaw fertilizing ability of buck semen. The CPT2, ATP5F1A and SOD2 genes were up regulated in glycerol based extender groups in cold temperature compared to other groups of this study. On the other hand, the NFE2L2 gene was up-regulated in groups cryopreserved with DMSO in hot temperature.

**Key words:** Dimethyl Sulfoxide (DMSO), glycerol, semen cryopreservation, melatonin, buck sperm, gene expression, enzymatic activities.

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**Full text**

**Annisa, Rizal Y, Mirnawati, Suliansyah I and Bakhtiar A.**

**ABSTRACT**

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*. Measured variables were dry matter (DM), organic matter, crude fat, crude protein, and also the increase in the CP of fermented CLM and TD with *Rhizopus oligosporus* period for the mixture of Cassava Leaf Meal (CLM) and Tofu Dreg (TD) fermented with *Rhizopus oligosporus*. The present study was conducted to determine the appropriate inoculum dose and incubation period of Cassava Leaf Meal (CLM) and Tofu Dreg (TD) mixture fermented with *Rhizopus oligosporus*. This experiment was carried out in a completely randomized design in a 3 x 4 factorial 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). The inoculum dose (6, 8 and 10%), and the incubation period of the fermentation (2, 3, 4, and 5 days), with 4 replicates. The appropriate inoculum dose to ferment CLM and TD mixture with *Rhizopus oligosporus* was 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.

**Key words:** Fermentation, Inoculum dose, Incubation time, Protein (CP).

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**Full text**

**Ahmad, Man Y, Halim, Taliesyn - see better A.**

**ABSTRACT**


The present study was conducted to investigate the effect of body weight, blood biochemical interactions. Baladi breed showed significantly better maternal activity than Shami does as they spend lesser time to concern their newly born kids. Baladi kids had more strong behavior towards their dams when compared to Shami ones. It was concluded that body weight, blood biochemical parameters and Maternal and kid's behavior had notable effect on kid's survivability. Our results might declare superiority of Baladi kids than Shami ones which reflected on the significant reduction of mortality rate in Baladi kids as compared to Shami ones. The percent of death for male and female kids were 87.50% and 36.84% in Shami while, were 33.33% and 14.28% in Baladi respectively.

**Key words:** Body weight, Goat, Kids behavior, Maternal behavior, Offspring survival.

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**Full text**