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.


DOI: https://dx.doi.org/10.36380/scil.2020.wvj1
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
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 the milk of Egyptian buffalo. The identified genomic regions are overlapped with previously reported QTL in lactose percentage. 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 found in the candidate regions. The identified polymorphisms were overlapped with previously reported QTL in lactose percentage and candidate genes in other livestock species. The findings provide the basis to uncover the genomic regions that contribute to the trait of lactose percentage in the milk of Egyptian buffalo.

**Key words:** Genomic loci, Lactose, Candidate gene, Egyptian buffalo, Genome, Genomic loci, Lactose.
ABSTRACT
Abed M, Elhariri M, El-Helw R, Khattab MS, Setta A and Soliman R.

Salmonella enterica serovar Enteritidis bacterin adjuvanted with aluminum hydroxide and a non-immunized group.

Crossfit Pox Virus (Ca PV) is the causative agent of important diseases in sheep and goat with which infect sheep, goats, and cattle, respectively. A rapid diagnostic assay for Ca PV by using (CIE), and conventional PCR and real time qPCR were examined for the presences of Ca PVs. The current study confirmed that the suitability of the PCR-based RNA polymerase 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.

Key words: Capripox virus, DNA extraction, Goat pox, KOH extraction method, Real-Time qPCR.
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.
DOI: https://dx.doi.org/10.36380/scil.2020.wvj12

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.
DOI: 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 ×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 arloingi, Goat Kids, Oxytetracycline, Treatment
Gene Expression Profile and Enzymatic Activities of Frozen Buck Sperm Supplemented with Melatonin

Dessouki ShM, Ashour G, El-Gayar M, El-Azzazi FE, Kodi E and Ghanem N.

ABSTRACT

This study was carried out to improve the freezability of buck semen using two different types of cryoprotectants supplemented with melatonin as antioxidant in cold and hot temperature. The activity of total antioxidant capacity (TAC) was significantly higher in cryopreserved with glycerol (75.1 versus 53.5) and DMSO (32.1 versus 22) in hot temperature. The progressive motility percentage increased in low compared to high melatonin dose in glycerol based extender during cold and hot temperature. The activity of CPT2, ATP5F1A and SOD2 genes were up-regulated in glycerol based extender in cold season supplemented with low dose of melatonin improved semen quality, antioxidant defense capacity and transcriptional profile, which may maintain the post-thaw fertilizing ability of buck semen.

Determination of the Appropriate Inoculum Dose and Incubation Period of Cassava Leaf Meal and Tofu Dreg Mixture Fermented with Rhizopus oligosporus

Armes, Rizal Y, Mirnawati, Suliansyah I and Bakhtiar A.

ABSTRACT

This experiment was carried out in a completely randomized design in a 3 x 4 factorial 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 significantly decreased 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 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 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 reduction in the DM, OM, crude fat, and CF and also increased the CP. The best inoculum dose effect was at 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.

Maternal and Kids’ Behavior in Baladi and Shami Goats under Semi-Arid Condition

Ibrahim NH, Badawy MT, Zakzouk IA and Younis FE.

ABSTRACT

The present study was conducted to investigate the effect of body weight, blood biochemical parameters and Maternal and kids' behavior on kids' survivability. Our results might declare superiority of Baladi kids than Shami ones which are reflected in the higher DM, OM, crude fat and CF and also increased the CP. The best inoculum dose effect was at 10% at each incubation period. In the meanwhile, the appropriate incubation period was 3 days for each inoculum dose.