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-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
regions harbored many candidate genes with biological roles associated with milk production. In addition, novel genomic loci were detected. The identified genomic nucleotide polymorphisms (SNPs) and candidate genes associated with lactose percentage variation in Egyptian buffalo.

Key words:

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

32 significant and seven suggestive SNPs for LP, however; only two suggestive SNPs were identified on chromosome 1. Our findings provide the basis to uncover the genetic mechanisms that control lactose traits variation in Egyptian buffalo.

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The Role of Glycogen in Biological Cycle of Trichinella spiralis.


Molecular and Phylogenic Analysis of Bovine Respiratory Syncytial Virus in Nineveh province, Iraq. Molecular diagnosis using nested RT-PCR and phylogenetic analysis of BRSV was made using the neighbor-joining system after comparison with other GenBank data. In this study, 450 nasal swab samples were collected from cows with different ages and breeds in different areas across Nineveh province, Iraq.

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Growth performance, blood metabolites and expression of IGF-1, GH, and Leptin genes in three age categories of lambs were assessed on day 45 post-infection. For the study of intestinal glycogen concentration during the life cycle of Trichinella spiralis larvae, laboratory rats were not fed a day before infection. Adult nematodes were isolated from rats at a dose of 5 muscle larvae/gram of body weight. The animals were euthanized at different time periods from the start of the experiment.

Trichinella spiralis muscle larvae were isolated by artificial fermenting meat mince in gastric juice. To determine the amount of glycogen at the muscle stage of T. spiralis, infected laboratory mice were used to infect laboratory mice. The invasive capacity of Trichinella larvae will lose their invasion capacity. At 3 hours after infecting the small intestine of laboratory rats, the muscular larvae isolated from the rat muscles were passaged on laboratory rodents and then the amount of glycogen in a larva was 0.0786 ± 0.0023 μg. In the body of intestinal nematodes, 3 hours after infecting the small intestine of laboratory rats at 3, 6 and 24 hours post-infection, the amount of glycogen in muscular larvae was 0.0054 ± 0.0027 μg/ larva on day 21, 0.0136 ± 0.0024 μg/ larva on day 28, and 0.0771 ± 0.0025 μg/ larva on day 45 after the rats were 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 of infection, the glycogen concentration in muscular larva was 0.0054 ± 0.0027 μg/ larva on day 21, 0.0136 ± 0.0024 μg/ larva on day 28, and 0.0771 ± 0.0025 μg/ larva on day 45 after the rats were infected. The invasive capacity of Trichinella larvae will lose their invasion capacity, and only the larval stage can cause invasion.

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Bioassay test; Glycogen; Nematode; Parasitic helminth.