Effect of supplementing Different Levels of Kefir Milk to Drinking Water on Productive Performance, Physiological and Immunological Traits of Broiler

By

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Summary

This study was conducted at commercial poultry farm, AL-Zubair, Basra during a period October 30th 2012 to December 4th 2013. The aim of this study was to investigate the effect of adding different levels of kefir milk to drinking water on productive performance and some physiological and immunological characters of broiler chicks. One day of 270 unsexed chicks of Ross 308 strain were used in this study. The chicks were randomly distributed into five treatment with three replicates. Each replicate contain eighteen chick.

The treatment as follow:-

1- Control group without any addition.

2- Control group with adding antibiotic only according to the program of preventive health approach.

3- Treatment added to milk Kefir average of 4 ml/L of drinking water.

4- Treatment added to milk Kefir average of 8 ml/L of drinking water.

5- Treatment added to milk Kefir average of 12 ml/L of drinking water.

All Treatments fed on the same basal diet.

The results indicated the following:-

1- There were significant increase ($p < 0.05$)) in the final body weight rate and the rate of increase total weighted coefficients fourth and fifth added to it Milk Kefir 8, 12 ml / liter of drinking water.

2- There was significant increase ($p < 0.05$)) in the amount of feed consumed for the fourth treatment added to milk Kefir 8 ml / liter of drinking water.

3- There was significant ($p<0.05$) improvement in feed conversion ratio in kefir treatment four and five (8, 12) ml/L water on compared with control treatment.

4- There was significant ($p<0.05$) decrease in rate of drinking water / feed consumption in kefir treatment three, four and five (4, 8, 12) ml/L water, but moisture manure percentage were decrease in these treatments as compared with control treatment.

5- Treatments four and five had significant ($p<0.05$) decrease mortality percent as comparing with control and treatment two.

6- There were no significant difference between treatments in the relative rate of liver, heart, gizzard, spleen, breast. Pancreas, ceca weight and length of intestine. While there was significant increase ($p<0.05$) in dressing percentage in treatments four and five.

7- There were no significant effect in blood parameters , blood red cells , white blood cells , PCV , Hb , glucose , GOT and GPT .

8- Total protein and globulin in plasma serum were significant ($p<0.05$) increased in treatments four and five, but the cholesterol levels were significant ($p<0.05$) decrease in the same treatments as comparing with others.

9- H/L ratio was significant ($p<0.05$) decrease in the treatments two, three, four and five as compared with control.

10- There were not any significant differences on crop, duodenum, rectum and ceca in pH value, but the pH value in gizzard and jejunum were significant lower in treatments four and five as compared with other.

11- The economical benefits of the study chicks drank 8 and 12 ml kefir treatments became in the first class in production coefficient and performance index as well as economical cost.

12- There were significant ($p<0.05$) increase in digestibility of dry matter, protein and fat in treatments four and five as compared with other.

13- Significant increase ($p<0.05$) in lactic acid bacteria count in Jejunum , while *E. coli* bacteria numbers were significantly decrease in jejunum and manure for treatments two , three , four and five as compared with control .

14- Significant increase ($p<0.01$) in villi length and crups depth in treatments, three, four and five as compared with one and two.