Analysis Of Variance (ANOVA) In Total Protein Count of Broiler

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Abstract:*This research investigates that Analysis of variance (ANOVA) in total protein count of broiler. Analysis of variance (ANOVA) reported significant (P>0.05) difference in total protein count of broilers among the groups. All-pair-wise (LSD) test indicated that there was significant variation in total protein count between treatment groups B, C, D with control group-A, respectively. The result (Figure-13) indicated that average total protein count in groups A, B, C and D was 3.33, 3.46, 3.53 and 4.03 g/dl, respectively. Maximum total protein count of 4.03 g/dl were noted in group D where the bird fed on Herbitol level of 6 ml / liter of water as compared to group C (3.53 g/dl) where the birds fed on Herbitol level of 4 ml / liter of water. The average total protein count further decreased to 3.46 g/dl in group B where the bird fed on Herbitol level of 2 ml / liter of water. Minimum total protein count (3.33 g/dl) was recorded for group A (control) where the birds do not fed on Herbitol compound. The results reveal that broilers in group D received highest total protein count as compared to broiler in group C, B and A, respectively.*
Key Words: *Analysis, variance, (ANOVA), total protein.*

Introduction: Antibiotics and growth promotors are being largely use to get ideal weight and profit in the products of poultry like eggs and meat (NOAH, 2001). Antibiotic usage provides good profitable market but there is criticism over the usage of antibiotics because of its residual effect in poultry products (Donoghue, 2003). Among preventive antibiotics, herbs have been used for natural therapy as pharmaceuticals; however, recently aromatic plants and their extracts are introduced into the animal feeding. Some herbs and herbal extracts beneficially improve the feed intake and secretion of digestive juices (Faleiro *et al*., 2003). Since ancient time there is large usage of plant sources to treat ill animals and birds (Ganesan and Bhatt, 2008). Herbal plants have no harmful effect on hematological and serum biochemical parameters of the birds (Oduola *et al*., 2007).

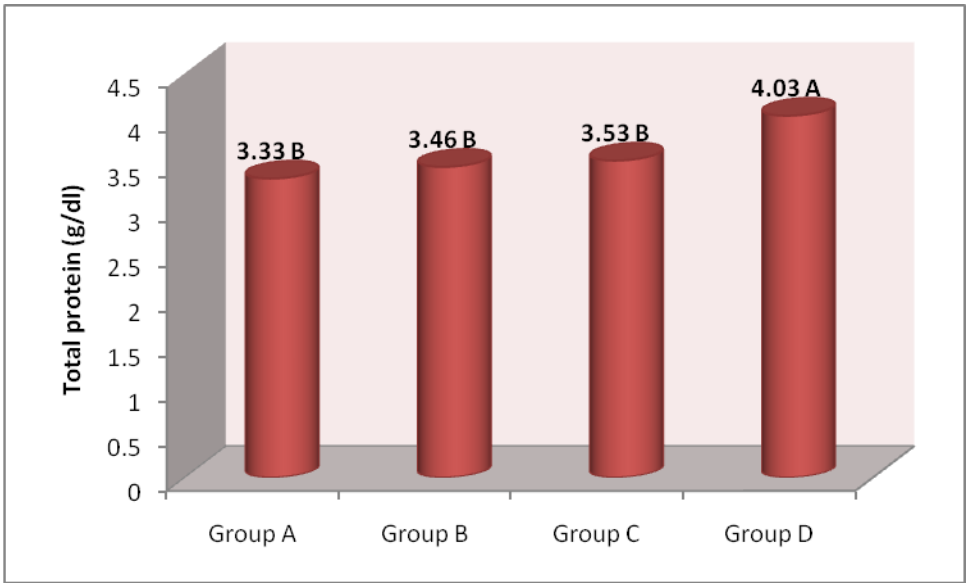
History of herbs is as long as the human story, since the earliest times, people uses these plants. War has been fighting tto conquer the land because of the plant, even if today we continue to rely on many of our new alien species pharmaceuticals and chemicals (Richmond and Mackley, 2000). Now a days many countries tended to minimize or ban the chemical components for their harmful side effects on both animals and human. So, it is essential to use natural herbs. In China medicinal herbs have been used for growth of broilers (Sajid *et al.,* 2015). In addition, many plants have natural properties, e.g., tonics, antiparasitic, anti-fungial, stimulant, carminative antiseptic, anti-bacterial and anti-microbial (Soliman *et al*., 1995). Edible plants, herbs, and Vegetable spices are suggested as non-traditional growth promoters or feed additive in diets to increase the growth of broiler, feed conversion efficiency (FCR) and decrease the feed cost (Hassan *et al*., 2004). In broiler diets useful herbal plants supplemented as growth promoters and detected a noticeable development in their body weight, feed conversion and mortality percentage (Sabra and Mehta, 1990). Herbs and herbal products positively influence the growth performance (Guo *et al*., 2000). Mottaghitalab (2000) reported that garlic may be used as a natural herbal growth promoter for broilers, without any side effect, neither for chicken performance nor for consumers. Wezyk *et al*. (2000) reported that replacing antibiotic growth promoters with herbs resultantly decrease the body weight, increased feed conversion ratio. The results of some experiments with broiler chickens indicate that herb supplements have a positive effect on the growth performance and the colour of skin (Zglobica *et al*. 1994). Feeding dietary garlic powder for 21 days significantly reduce plasma cholesterol level of broiler chicken, without altering the growth performance of the broiler chickens or the feed efficiency (Konjufca *et al*. 1997).

Hematology normally contains the full blood count and the organs which are responsible for blood formation. The full blood count includes red blood cells, platelets, packed cell volume, hemoglobin, white blood and the red blood cell; mean cell volume, mean corpuscular hemoglobin and mean corpuscular hemoglobin concentration (West and Haines, 2002). Sajid *et al*. (2015) observed that supplementation of herbal products showed significant effect against the on the immune response of broilers against various infectious diseases. Herbal medication showed significant effects on blood glucose and red blood cells (RBC), but showed non-significant effect on hemoglobin, white blood cells (WBC), cholesterol and packed cell volume (PVC), in their conclusion, herbal supplementations in broiler showed positive effect on immunity, performance and blood parameters.
The composition of herbitol is composed of Dextrose, Ginger ext; Allium ext; Vinigar,Clove oil, Belladonna, safrol ₊ biochemic salts. Herbitol is used mainly for growth promotion and for constipation.

Data collection Methodology

A total of 200, day-old broiler chicks will be purchased and randomly distributed in 4 groups with 3 replicates having 10 birds in each and reared for six weeks on standard managemental conditions. The commercial product herbitol will be incorporated in the drinking water at following different levels with a control group. **Treatment plan is given as under:**

Group A = control
Group B = 2 ml / liter of Herbitol
Group C = 4 ml / liter of Herbitol
Group D = 6 ml / liter of Herbitol



Normal range : 3.53 – 4.96 g/dl

Figure 13: Total protein count (g/dl) of broiler fed on various level of commercial Herbitol compound.

S.E.±	0.1841
LSD 0.05	0.4245
P-value	0.0238*

The values in column matching with similar alphabets did not differ significantly at probability level of 0.05**.**
The results indicated that feed intake was considerably higher in broiler of group D as compared to broiler in group C, A and B, respectively. There was no significant difference in feed intake among the treatment and control group. Water intake was remarkably higher in broiler of group D as compared to broiler in group C, B and A, respectively. There was significant difference in water intake among the treatment and control group. Live body weight was extremely higher in broiler of group D as compared to broiler in group C, B and A, respectively. There was significant difference in live body weight among the treatment and control group. Broilers in group B have maximum capacity to convert feed into body mass more rapidly and efficiently as compared to broiler in group C, B and A, respectively. There was significant difference in FCR among the treatment and control group. Carcass weight were higher in broilers of group D as compared to broiler in group C, B and A, respectively. There was significant difference in carcass weight among the treatment and control group. Dressing percentage was remarkably higher in group D as compared to broiler in group C, B and A, respectively. There was significant difference in dressing percentage among the treatment and control group. There was no significant variation in weight of liver, heart, spleen and gizzard among the treatment and control groups. Hemoglobin, packed cell volume, red blood cells, white blood cells, glucose, total protein, cholesterol and serum glutamic pyruvic transaminase level were considerable at peak level for group D as compared to the treatment groups B & C as well as control group A, respectively. It was concluded that economically the broiler managed in group D (Herbitol @6ml/litre water) proved to be more profitable as compared to rest of the treatment groups and control group.

Conclusions

There was significant difference in FCR among the treatment and control group. Carcass weight were higher in broilers of group D as compared to broiler in group C, B and A, respectively. There was significant difference in carcass weight among the treatment and control group. Dressing percentage was remarkably higher in group D as compared to broiler in group C, B and A, respectively. There was significant difference in dressing percentage among the treatment and control group. There was no significant variation in weight of liver, heart, spleen and gizzard among the treatment and control groups. Hemoglobin, packed cell volume, red blood cells, white blood cells, glucose, total protein, cholesterol and serum glutamic pyruvic transaminase level were considerable at peak level for group D as compared to the treatment groups B & C as well as control group A, respectively. It was concluded that economically the broiler managed in group D (Herbitol @6ml/litre water) proved to be more profitable as compared to rest of the treatment groups and control group. It was concluded that economically the broiler managed in group D (Herbitol @6ml/litre water) proved to be more profitable as compared to rest of the treatment groups and control group. The birds supplemented with harbitol compound resulted more body weight gain by taking less feed intake (save the cost of feed

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