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Research Article Open Access

Effect of Biofield Treated Energized Water on the Growth and Health Status in Chicken (*Gallus gallus domesticus*)

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Abstract

The current study was attempted to investigate the effect of Mr. Trivedi's biofield energy treated energized water on chicken. The total 4200 chicks were equally divided into two groups *i.e.* control and treated. The biofield treated energized water was provided to the treated chicks, while the control chicks were drunk with standard drinking water. During the experiment the parameters such as mortality, body weight, food intake etc. were assessed in both control and energized water treated birds. The mortality rate was reduced in the energized water treated chicks as 54.55% in week 1, 42.11% in week 6, and 39.13% in week 4, as compared to the control chicks. Moreover, the average body weight was increased by 12.50% in week 1 as compared to the control chicks. The feed conversion ratio was gradually decreased which indicated that the energized water treated chicks took less feeds while the body weight was increased in comparison to the control chicks. Besides, the energized water treated birds showed statistically significant ($p<0.007$) with 15.47% increase in the edible meat weight as compared to the control chicks. Moreover, the feather, skin and internal organ weight were significantly reduced by 21.22% ($p<0.001$) of energized water treated chicks as compared to the untreated chicks. The protein content was increased by 10.11% and cholesterol was decreased by 4.64% in birds of the treated group as compared to the control. The European efficiency factor was also increased by 10.67% in the energized water treated birds as compared to the control chicks.. The European efficiency factor was also increased by 10.67% in the energized water treated birds as compared to the control chicks. Altogether, the results suggest that Mr. Trivedi's biofield treated energized water could be a cost effective feeding approach in chicken production.

Keywords: Poultry; Biofield energy treatment; Energized water; Feed-conversion-ratio; Edible meat weight

Abbreviations

GPA: Growth-Promoting Antibiotic; NIH/NCCAM: National Institute of Health/National Center for Complementary and Alternative Medicine; FCR: Food Conversion Ratio; EEF: European Efficiency Factor; NFCS: Nationwide Food Consumption Survey

Introduction

The poultry industry is among the most successful sector in agriculture around the world. In a little over 50 years, poultry farming has evolved into a highly efficient, vertically integrated, progressive industry supplying customers around the Globe. Over 9 billion chickens are raised and utilized as food in the United States in factory farms alone. Chickens play a significant role as a part of the human nutrition and as the income source. The growth and development of livestock is very complicated life process [1,2]. Based on literature, the poultry production technology is increased in Asian countries. Brazil is the world's largest chicken meat producer. Besides, Thailand is also one of the world's leading countries in the production of both chicken and eggs. The production of poultry depends on the type of feeding materials in climatic conditions. For example, in hot climate, wet feeds are beneficial for the optimum growth of birds [3]. Several growth-promoting antibiotic (GPA), pesticides and growth hormones are routinely used (to prevent the spread of disease and improve body weight of birds) by poultry feeding operations that may pose if they enter in the human system. The antibiotics used in poultry are same as used by the humans. Farmers used antibiotics just to prevent the diseases rather than to treat it that enhances the drug resistance pattern of pathogenic microbes to specific bacteria in human [4-6]. The World Health Organization, the American Medical Association, and the American Public Health Association have banned the uses of GPAs, argued that GPA might lead to increase the antibiotic-resistant infections in humans [7,8]. The use of GPA for obtaining the fast growth usually increased the body fats of chicken that lead to high incidence of metabolic disorders, skeletal diseases and mortality [9]. Besides, the feed restriction is one of the main technique to decrease the incidence of metabolic diseases, carcass fat deposition, reduce maintenance requirement and improvement of feed efficiency in broiler chickens production, which enhance the growth and production efficiency [10].

Based on above facts and informations authors wish to find an alternative treatment approach to minimize these lacunas. In recent years, biofield energy treatment was proved to be an alternative method which has impact on various properties of living organisms and non-living materials in a cost effective manner. It is already demonstrated that energy can neither be created nor be destroyed but it can be transferred through various processes such as thermal,

chemical, kinetic, nuclear etc. [11-13]. Similarly, electrical current exists inside the human body in the form of vibratory energy particles like ions, protons, and electrons and they generate magnetic field in the human body [14,15]. National Institute of Health/National Center for Complementary and Alternative Medicine (NIH/NCCAM) have reported that biofield (putative energy fields) or electromagnetic based energy therapies were commonly used to promote the health and healing [16]. Harold Saxton Burr had performed the detailed studies on the correlation of electric current with physiological process and concluded that every single process in the human body had an electrical significance [17]. Recently, it was discovered that all electrical process happening in body have strong relationship with magnetic field as mentioned by Ampere's law, which states that the moving charge produces magnetic fields in surrounding space [18,19]. Thus, the human body emits the electromagnetic waves in form of bio-photons, which surround the body and it is commonly known as biofield. According to Rivera-Ruiz *et al.* it was reported that electrocardiography has been extensively used to measure the biofield of human body [20]. Thus, human has the ability to harness the energy from environment or universe and can transmit into any living or nonliving object(s) around the Globe. The objects always receive the energy and responding into useful way that is called biofield energy and the process is known as biofield treatment. Mr. Trivedi's unique biofield treatment (The Trivedi effect®) has been known to transform the structural, physical and thermal properties of several metals and ceramic in materials science [21-23], improved the overall productivity of crops [24,25], altered characteristics features of microbes [26-28], and improved growth and anatomical characteristics of medicinal plants [29,30]. Based on increasing infections in poultry farming resulting low broiler meat yield and reduced profitability, and significant outcomes obtained from Mr. Trivedi's biofield energy therapy in agriculture research the present work was undertaken to investigate the impact of Mr. Trivedi's biofield treated energized drinking water on chicken. The following parameters were analyzed such as mortality rate, average body weight, feed intake, and edible weight.

Materials and Methods

Husbandry arrangement

The poultry shed was divided in two by separators, one for control and another for treated birds. The space allotted was 1.2 sq. feet per bird. Brooding temperature was maintained at 1 Watt per chick and it was decreased day by day for the next 10 days. One chick feeder and water drinker was placed between every 70 birds (14 no. per 1000 birds). The control chicks were provided adequate amount of standard poultry feeds (component of foods such as maize, soya doc, oil, poultry feed supplements and additives like vitamins premix, trace minerals, antioxidants, coccistac, probiotics, liver tonics, etc.), standard drinking water (*i.e.* Encivet-WT), vaccines (*i.e.* F-Strain Parvo) and medicine (*i.e.* oxytocin) ad libitum while the other group was only given energized water along with standard poultry feeds, without any feed supplements and additives as provided in case of control chicks. Various categories of feeds were provided to chicks from time to time depending on the age *i.e.* pre-starter, starter and finisher.

Study design and biofield treatment strategy

Total 4200 birds (Cobb 400 Y breed) were supplied from M/s. Anand hatcheries Pvt. Ltd., India. The birds were divided in two groups with equal numbers *i.e.* control and treated. Bottled water was treated with Mr. Trivedi's from US through his remote biofield energy transmission process and termed as energized water. This energized water was then filled in the water drinkers and provided to the treated chicks for consumption, while the control chicks were received normal drinking water (*i.e.* Encivet-WT).

Assessment of mortality, average body weight and feed intake

The chicks were monitored daily for mortality, health status, and food intake. The observed data was calculated on weekly basis. In brief, on every 7th day, 50 chicks were randomly selected from each lot of control and treated groups and weighed. The mortality, average body weight of 50 birds and the food conversion ratio (FCR) for each lot for the week were calculated with the help of standard formulae and recorded [31]. The whole batch performance was assessed based on European efficiency factor (EEF) in terms of profitability [32]. Feed consumption was calculated by noting the number of bags consumed in a week.

Measurement of edible weight

At the end of this experiment the samples were drawn from both lots by randomly selecting the female birds for analysis of edible meat weight. For the analysis of edible meat weight, the weight of three birds was taken from each lot.

Statistical analysis

Data from edible meat weight and others accessory parameters were expressed as Mean ± SEM and analyzed through a Student's t-test to ascertain statistical differences between control and energized water treated chicks at the end of the experiment. A probability level of $p<0{\cdot}05$ was considered as statistically significant as compared to the control.

Results and Discussion

Assessment of mortality, average body weight and feed intake

The mortality data was calculated on weekly basis and shown in Table 1. The percent mortality is shown in Figure 1. Results from this experiment indicated that in every week the mortality rate was reduced as compared to control, except week 2. In week 2, the mortality rate was raised may be due to inadequate water intake during first few days of life that favor the gout condition in chicks. Hence, the mortality rate was increased in week 2; however, after that the adequate treatment measures were taken. In the initial outbreak of gout, the chicks were given jiggery (a traditional non-centrifugal cane sugar) 5 gm per liter of water along with essential nutrients and supplements for 4 days. This is the recommended treatment strategy in poultry during initial growth period [33]. The reduction in mortality was observed 54.55% in week 1, 39.13% in week 4 and 42.11% in week 6, as compared to the control chicks that was may be due to the biofield energy treated energized drinking water (Figure 1). Based on literature, the mortality during the first week of brooding has been used to assess the quality of chicks in the poultry industry [34]. In layer-type poultry production, mortality is the key factor for profit from egg production [35]. Based on a survey related to the early chick mortality on small-scale poultry farm, it was reported that disease, management and nutrition plays a crucial role for overall productivity of chicks apart from genetic variations [36]. The average body weight was calculated on weekly

basis and shown in Table 1. The percent change in average body weight of the energized water treated group as compared to the control is shown in Figure 2. Throughout the experiment the average body weights were higher in the energized water treated chicks as compared to the control. The results showed 12.5% higher body weight in week 1 as compared with the control chicks. The consumption of food and improvement of body growth are presented in Table 2 and Figure 3. Feed conversion ratio (FCR) i.e. ratio of feed consumption to the gain in body weight data showed gradual decreasing order with respect to the control values. The results indicated that, the energized water treated chicks took less feed while their body weight gain was more in comparison to the untreated chicks. The feed conversion showed its impact in week 5 and 6 predominantly. The fattening efficiency evaluation in chicks can be expressed in terms of the EEF index by utilizing the information on mortality rate, body mass and FCR [31]. The age-dependent FCR is presented in Figure 3. Based on the literature, several methods are available to predict the food intake and simultaneously gain of body weight from birth to maturity time-phase. Energy is the main limiting resource that was supplemented through foods. Animals eat the foods in such a manner just to fulfill its requirement of energy [37]. In this experiment, the biofield energy may be transferred to the drinking water. Thus the energized water may be the main rate limiting resource to improve the body growth and the overall production of chicks in terms of EEF index.

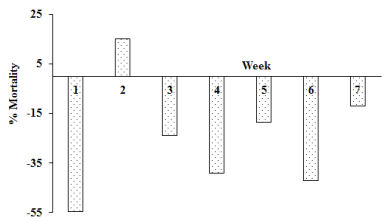

Figure 1: Mortality (%) data of energized water treated chicks as compared to the control.

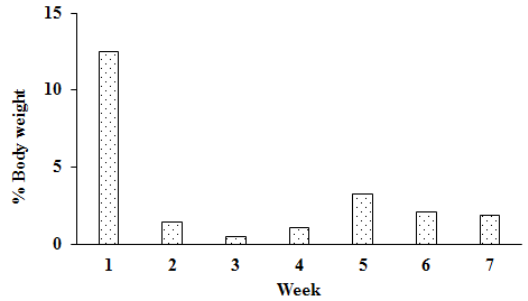

Figure 2: Body weight (%) of energized water treated chicks as compared to the control.

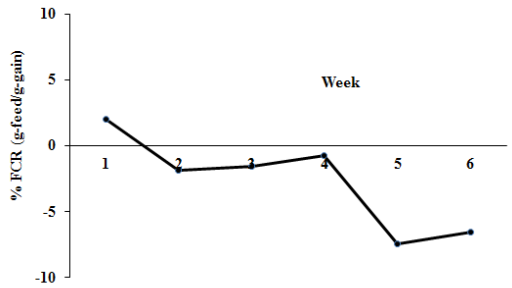

Figure 3: The percent of feed-conversion-ratio (FCR) of energized water treated chicks as compared to the control.

Week	Mortality (Bird No.)		Body weight# (gm)		FCR (g-eed/g-gain)		Feed bags (80 kg per bag)		Stock (Bird No.)	
	C	T	C	T	C	T	C	T	C	T
1	11	5	160	180	0.98	1s	3.5	3.5	2089	2095
2	210	242	410	416	1.09	1.07	7.5	7.5	1879	1853
3	25	19	786	790	1.3	1.28	11	11	1854	1834
4	23	14	1375	1390	1.37	1.36	21	18	1831	1820
5	27	22	1840	1900	1.61	1.49	27	27	1804	1798
6	19	11	2400	2450	1.83	1.71	27	25	1785	1787
Last week (5 days)	25	22	2630	2680	-	-	20	-	1760	1765
C: Control; T: Treatment; FCR: Feed-conversion-ratio; #Weekly body weight taken from average weight of total 50 chicks of each flock; Feed consumed was calculated by noting the bags of feed emptied into the feeder trays.										

Table 1: Production performance and mortality of energized water treated chickens.

Group	Sample number	Gross weight (gm)	Net edible weight (gm)	Internal organs weight (waste) (gm)	(Feather + skin + internal organ) weight (gm)
Control	1	2100	1200	250	900
	2	2150	1300	200	850
	3	2150	1300	200	850
Mean ± SEM		2133 ± 16.67	1267 ± 33.33	217 ± 16.67	867 ± 16.67
Treated	1	2150	1500	300	650
	2	2150	1450	250	700
	3	2140	1440	250	700
Mean ± SEM % Difference		2147 ± 3.33 0.66%	1463** ± 18.56 15.47%	267 ± 16.67 23.04%	683*** ± 16.67 -21.22%
SEM: Standard error of mean; n = 3; **p≤ 0.007 and ***p≤ 0.001 was considered as statistically significant					

Table 2: Analysis of edible meat weight and nutritional parameters of energized water treated chicks as compared to the control.

Measurement of edible weight and nutritional parameters

The poultry industry is one of the most efficient industries for the production of animal protein. Animal products contribute the total nutrients in the food supply as a source of vitamins (B2, B3, B6 and B12) and minerals (zinc, phosphorus, and calcium). Nationwide Food Consumption Survey (NFCS) reported that from total calories of the diets of all individuals, about 45% calories has been supplemented from animal products, in which, about 28% calories has been supplemented from meat, poultry, and fish products [38]. In this experiment on day 47, three birds were taken randomly from each group for the measurement of edible meat weight. An average weight was found on the higher side (2%) in the energized water treated group, while the net edible weight was found statistically significant by 15.47% ($p<0.007$) in the energized water treated chicks as compared to the control group. However, the treated chicks were observed with 23.04% heavier internal organs (waste) but the average waste products including feather, skin and internal organs were significantly reduced as 21.22% ($p<0.001$) in the treated group as compared to the control chicks. In India the contribution of livestock industry has gained substantially in gross domestic product (GDP) which accounts for >40% of total agricultural sector. The animal bi-products have much efficient utilization as feed additives in other sectors and direct impact on countries economy and environmental pollution [39]. Moreover, the litter smell of the treated birds was very less as compared to the control group indicating a healthy digestive system. The nutritional parameters such as protein content was increased by 10.11% and cholesterol was decreased by 4.64% in the treated birds as compared to the control. Others nutritional parameters were negligible changes in the treated sample with respect to control. The EEF index showed the whole batch performance in which a higher side index number showed better batch performance in terms of profitably. In this experiment, the treated batch showed the EEF as 270.94 as compared to the control, 244.81. The EEF index was increased by 10.67% in the energized water treated chicks with respect to the control which indicates a lower cost of brooding and higher profits.

Biofield treatment might be responsible to improve the production of edible meat that simultaneously increased the profitability. It is assumed that the energized water may enhance the metabolic activities, led to gain in body weight and ultimately improved the overall growth of chicks. Recently our research groups have published several article showing the beneficial effect of Mr. Trivedi's biofield energy for alteration in microorganism at enzymatic and/or genetic level, which may act on receptor protein [27,28]. In this study, the energized water might increase the metabolism, which could be due to alterations in enzymatic activities of chicks. This altered enzymatic activity possibly results in increased weight gain and enhance the overall production of poultry farm. This altered enzymatic activity possibly results in increased weight gain and enhance the overall production of poultry farm. The taste and aroma were improved in the treated sample as compared to the control. Moreover, the treated sample showed less infectious bacteria with respect to control. Based on these results, it is expected that biofield treatment has the scope to be an alternative and cost effective approach in poultry industry in terms of profitability in near future. In general, energized water has a potential as a feed supplement to the chicks that reduce maintenance requirements and improved the efficiency of chicken production. Due to economical savings in the cost of feeding in chicken production, the energized water treated by Mr. Trivedi's biofield energy may be useful for commercial chick production in near future.

Conclusion

The mortality data showed upto 54.55% reduction in energized water treated chicks in week 1 as compared to the control chicks. The average body weight was increased by 12.5% in week 1 in energized water treated chicks as compared to the control chicks. Apart from

physical appearance, the edible meat weight was also significantly increased by 15.47% ($p<0.007$) in the energized water treated chicks as compared to the control chicks. The protein content was increased by 10.11% and cholesterol was decreased by 4.64% in birds of the treated meat as compared to the untreated birds. The EEF index was also increased by 10.67% in the energized water treated birds as compared to the control chicks. Based on these results, it seems that biofield energy treatment could be used as alternate approach in terms of feed supplement and chick productivity in poultry industry and the energized water may be useful for commercial chick production in near future. In conclusion, the energized water could be acting as a key regulator for feed consumption and body weight in chicks.

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