



## Research Article

### Study of production performance of Uttara breed of chicken

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#### ABSTRACT

Present study was conducted on Uttara chicken to evaluate the productive performance. Day Old Chicks (DOC) of which were obtained from hatchery Instructional Poultry Farm of G.B. P.U.A.T., Pantnagar. Weekly body weight was recorded from day old to 12 weeks of age and at the end of trial (i.e. after 12 weeks of age) three birds were randomly selected and slaughter for study of carcass traits parameters. It has been found that Uttara fowl under farm condition performed better in context of productive parameters viz. weight gain, dressing percentage, edible weight percentage, processing loss etc. These findings clearly revealed that Uttara chicken has genetic potential for further improvement and also suitable for backyard poultry farming in hilly areas of Uttarakhand.

**Keywords:** Uttara, weight gain, backyard poultry

#### INTRODUCTION

Among livestock, poultry plays an important role in providing nutritional security as well as the source of income to rural families in Uttarakhand. Demography of the state is a limiting factor in the propagation of intensive poultry farming, backyard poultry can play a vital role with low input income generation activity. Backyard poultry farming is a traditional & old age practice in the underprivileged section of the rural community of Uttarakhand. In this context rearing of indigenous chicken, varieties become important. The introduction of improved germplasm of indigenous chicken can bring a significant improvement in sustainable backyard poultry production in hilly areas of Uttarakhand.

Keeping these points in view, the present study was designed to evaluate the growth and carcass traits of "Uttara" a native chicken of Uttarkhand. This chicken breed has been evolved through natural selection and is well adapted to the local environment. These birds possess an appreciable degree of resistance to diseases compared with other exotic chicken breeds. Since this breed has a feathered shank, Uttara chickens are also resistant to cold winter stress and can thrive very well under adverse environments like poor housing, poor management, and poor feeding. These birds are black in color and have crest/crown type structure on the head due to which they have socio-economic importance.

In the present study, a trial was conducted to study the production performance traits of farm conditions.

#### MATERIALS AND METHODS

Day-old chicks for the present study were produced at a university farm from the existing breeding stock of Uttara parental lines. These DOCs were obtained simultaneously from one hatch so that their subsequent rearing could be done under similar environmental and managemental conditions. All standard brooding management was practiced with proper feeding and watering. The experiment was conducted for a period of 12 weeks.

Statistical analysis

The experimental data obtained during the study were finally analyzed statistically using a completely randomized design (CRD) with the analysis of variance (ANOVA) technique which is based on the test statistics F (or variance ratio) which is given by Snedecor (Snedecor and Cochran, 1994). For fulfilling this purpose data were analyzed by the one-way ANOVA option for the general linear model of SPSS 16.0 software is used.

#### RESULTS AND DISCUSSION

Average body weights at end of the 2nd and 4th weeks were  $96.23 \pm 4.32$  g and  $195.83 \pm 14.76$  g, respectively, which were higher than the reports of Kaur (2007) in

Uttara fowl. The value reported in the present study was found higher than the study conducted by Gurung and Singh (1999) and Binda et al. (2012) and higher 4th-week bodyweight than the present study were reported by Saadey et al. (2008), Enaiat et al. (2008), Rach-Moujahed (2011) and Taha et al. (2011) in different indigenous local breeds other than the Uttara chicken.

Table 01: Average body weight (Mean±S.E.) of Uttara Chicken

Age (in weeks)	Weight (in gm)
Hatch weight	36.11±1.15
2 <sup>nd</sup> week body weight	96.23±4.32
4 <sup>th</sup> week body weight	195.83±14.76
6 <sup>th</sup> week body weight	310.17±17.38
8 <sup>th</sup> week body weight	480.00±24.62
10 <sup>th</sup> week body weight	641.63±25.74
12 <sup>th</sup> week body weight	837.00±24.23

Table 02: Other important parameters of Uttara chicken during trial

Parameters	Age	Value (Mean±S.E.)
Egg weight(g)	-	52.67±1.56
Percent livality	0-12 weeks	82.61
Dressing percent		72.42±0.41

The average 6th and 8th weeks body weights of Uttara chicken were found as 310.17±17.38 and 480±24.62 g, respectively, which were higher than the reports of Kaur (2007). Gurung and Singh (1999) and Binda et al. (2012) also found lower body weight at eight weeks of age in different indigenous local breeds than the values reported in the present study while Saadey et al. (2008), Enaiat et al. (2008), Rach-Moujahed (2011) and Taha et al. (2011) reported higher body weight at eight weeks of age in different indigenous local breeds than the values reported in the present study.

Average 10th and 12th-week body weights in the present study were reported as 641.63±25.74 and 837±24.23 g, respectively, which were again found higher than Kaur (2007) in Uttara chicken than the present study. Gurung and Singh (1999) and Pradhan et al. (2009) reported lower twelve-week body weight in different indigenous local breeds than the corresponding values reported in the present study while Saadey et al. (2008), Enaiat et al. (2008), Rach-Moujahed (2011) and Taha et al. (2011) reported higher body weight at twelve weeks of age in different indigenous local breeds than the values reported in the present study.

The dressing percentage was 72.52±0.41 which was found lower than the findings of Kaur (2007) and Pant

(2007), while it was in agreement with Magala et al. (2012) in Ugandan local chickens, Thutwa et al. (2012) in the normal strain of Twasana and lower dressing percentage was obtained by Sahota et al. (1990), Jaturistha et al. (2008) and Iqbal et al. (2009) different indigenous local chickens.

## CONCLUSION

The results of this study help to shed more light into the growth characteristics of Uttara fowl and suggests that Uttara fowl is a promising native breed of Uttarakhand and has genetic potential for improvement through intensive selection and breeding programme to develop birds with improved efficiency for sustainable use in poultry farming in harsh and cold of hilly region of Uttarakhand for the benefits of rural farmers who main rear the birds. If birds are adequately fed, one can easily plan for instance, when to market them to raise cash for specific household needs such as paying for school fees. Research should focus on improvement of growth parameters such as reducing the half-growth time and increasing asymptotic weights without increasing cost of production. Findings from such studies and the ones presented here could be a significant prelude to the improvement of the Uttara fowl.

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