**MORPHOMETRIC MEASUREMENTS, PRODUCTIVE AND REPRODUCTIVE PERFORMANCE OF DESHI BLACK AND DESHI WHITE DUCK**

****

**SUBMITTED BY**

NAME: Mohammad Mohiuddin Akram

INTERN ID: F-59

ROLL NO: 11/117

REG NO: 00701

SESSION**:** 2010-11

**Faculty of Veterinary Medicine**

**Chittagong Veterinary and Animal Sciences University**

**Khulshi, Chittagong**

**DECEMBER 2017**

# Authorization

I hereby declare that, I am the sole author of the clinical report. I also authorize the Chittagong Veterinary and Animal Sciences University (CVASU) to lend this report to other institutions or individuals for the purpose of scholarly research. I further authorize the CVASU to duplicate the report by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

I, the undersigned, and author of this work, declare that the **electronic copy** of this report provided to the CVASU library, is an accurate copy of the print report submitted, within the limits of the technology available.

**Mohammad Mohiuddin Akram**

**(Author)**

**DECEMBER 2017**

**MORPHOMETRIC MEASUREMENTS, PRODUCTIVE AND REPRODUCTIVE PERFORMANCE OF DESHI BLACK AND DESHI WHITE DUCK**

**Approved as to style and content by:**

**………………………………**

**DR. Babu Kanti Nath**

**Assistant Professor**

**Department of Dairy and Poultry sciences**

**(Supervisor)**

**This is to certify that I have examined the above Intern report and have found that is complete and satisfactory in all respects**

**Faculty of Veterinary Medicine**

**Chittagong Veterinary and Animal Sciences University**

**Khulshi, Chittagong**

**DECEMBER 2017**

**CONTENTS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TITLE** | | | | **PAGE** |
| **CONTENTS** | | | | **iv** |
| **LIST OF TABLES** | | | | **v** |
| **LIST OF FIGURES** | | | | **vi** |
| **ABSTRACT** | | | | **vii** |
| **INTRODUCTION** |  | | | **1** |
| **MATERIALS AND METHODS** | | | | **3** |  |
| 2.1 Study area  2.2 Study population  2.3 Period of study | |  | | 3  3  3 |
| 2.4 Data collection | | |  | 3 |
| 2.5 Management procedure | | |  | 3 |
| 2.6 Statistical analysis | | |  | 4 |
| **RESULTS** | | |  | **5** |
| 3.1 Phenotypic characteristics | | |  | 5 |
| 3.2 Morphometric characteristics | | |  | 7 |
| 3.3 Productive and reproductive performances | | |  | 8 |
| 3.4 Growth performance | | |  | 9 |
| 3.5 Phenotypic correlation | | |  | 11 |
| **DISCUSSION** | | |  | **12** |
| 4.1 Phenotypic characteristics | | |  | 12 |
| 4.2 Morphometric characteristics | | |  | 12 |
| 4.3 Productive and reproductive performances | | |  | 13 |
| 4.4 Growth performance | | |  | 14 |
| 4.5 Phenotypic correlation | | |  | 15 |
| **CONCLUSION** | | |  | **16** |
| **ACKNOWLEDGEMENT**  **REFFERENCES**  **BIOGRAPHY** | | |  | **17**  **18**  **21** |

**LIST OF TABLES**

|  |  |  |
| --- | --- | --- |
| **TABLE** | **TITLE** | **PAGE** |
| Table 2.1.1 | Nutrient composition of feeds | 4 |
| Table 2.1.2 | Vaccination schedule of duck | 4 |
| Table 3.1 | Color and shape of different body parts of Deshi black and Deshi white duck | 5 |
| Table 3.2 | LSMean±SE of morphometric characteristics of Deshi black and Deshi white duck according to sex, type and type\*sex | 7 |
| Table 3.3.1 | LSMean±SE of productive and reproductive performances of Deshi black and Deshi white ducks | 8 |
| Table 3.3.2 | LSMean±SE of fertility and hatchability of Deshi black and Deshi white ducks | 9 |
| Table 3.3.3 | LSMean±SE of egg weight and duckling weight of Deshi black and Deshi white ducks | 9 |
| Table 3.4 | LSMean±SE of body weight of Deshi black and Deshi white ducks at different ages according to sex, type and type\*sex | 10 |
| Table 3.5 | Phenotypic correlation among body length, feather length, head length, beak length, neck length, shank length of Deshi black and Deshi white ducks | 11 |

**LIST OF FIGURES**

|  |  |  |
| --- | --- | --- |
| **FIGURE** | **TITLE** | **PAGE** |
| Figure 3.1.A | Beak and head feather color of female and male of Deshi black duck | 6 |
| Figure 3.1.B | Beak and head feather color of female and male of Deshi white duck | 6 |
| Figure 3.1.C | Shank color of male and female of Deshi white duck | 6 |
| Figure 3.4.A | Mature male and female of Deshi black and Deshi white duck | 10 |

**ABSTRACT**

The present study was conducted to measure morphometric, productive and reproductive performances of Deshi black and Deshi white duck under intensive condition. The study was conducted at Central Duck Breeding farm at Hajiganj in Narayanganj and encompassed about 50 duck (25 Deshi black and 25 Deshi white). Body length, head length, bill length, neck length, feather length, shank length of mature male and female in Deshi black and Deshi white duck were 59.56±0.87 and 61.87±0.48 cm, 2.25±0.12 and 3.4±0.06 cm, 5.86±0.12 and 6.23±0.06 cm, 19.21±0.47 and 21.08±0.26 cm, 21.85±0.53 and 26.71±0.29 cm, 9.93±0.29 and 10.81±0.16cm, respectively. Females were significantly (*p<0.01*, *p<0.05*) higher than their male counterparts for all morphometric traits but no significant differences (p*>0.05)* were found between two types of duck except body length, head length and feather length (p*<0.01*, *p<0.05*). The body weight of male and female in Deshi black and Deshi white duck at day old, 4th week, 8th week and 12th week of age were 42.65±0.35 and 43.40±0.35 gm, 318.00±9.13 and 319.04±9.13 gm, 835.85±8.94 and 794.20±8.94 gm, 1345.80±2.67 and 1347.90±2.67 gm, respectively. Females were significantly heavier than males 8th week of age ( *p < 0.*01) but no significant difference ( *p> 0.05* ) were observed for body weights between two types of duck except 12th week of age ( *p < 0.01*). The age at sexual maturity, fertility% and hatchability% of Deshi black and Deshi white duck were 136.0±0.52 and 139.0±0.52 days, 67.62±0.83 and 63.18±0.83%, 63.63±0.56 and 59.42±0.56%, respectively. The age at sexual maturity, fertility% and hatchability% of Deshi black duck were significantly (*p <0.0*) higher than that of Deshi white duck. The egg weight, female weight at 1st lay and egg weight at 1st lay were 66.69±0.49 and 66.78±0.49 gm, 1439.55±6.98 and 1422.0±6.98 gm, 48.90±0.18 and 47.12±0.18 gm, respectively for Deshi black and Deshi white. Egg weight at 1st lay of Deshi black duck was significantly (*p<0.01*) higher than that of Deshi white duck. The egg production per year of Deshi black and Deshi white duck were 214±2.65 and 211.40±2.65 (*p>0.05*). The result of this study provided some baseline information on Deshi black and Deshi white duck of Bangladesh which could be useful for conservation and future improvement programs in Bangladesh.

*Keywords:*  Deshi black duck, Deshi white duck, Morphometric, Productiveand Reproductive.