

**PERFORMANCE OF ATHULYA STRAIN UNDER KERALA CLIMATIC CONDITION**

P.Ponnuvel and K. Narayanankutty

Centre for Advanced Studies in Poultry Science

College of Veterinary and Animal Sciences, Mannuthy- 680 651

Corresponding author : Email - ponnuvelpalanivel@gmail.com

Received 24-10-2012 Accepted 21-3-2013

**ABSTRACT**

An attempt was made to find out the production performance of the Athulya strain for commercial farming. Two hundred Athulya strain were used to study the production potential from 20 to 40 weeks of age at farm condition at AICRP, Mannuthy. The body weight at 20 and 40 week were 1.42 and 1.75 kg respectively and average hen housed egg production was 91.34 per cent. The egg weight at 40 week was 55.06 gram and the overall livability of 99.5 percent was recorded with a mean daily feed intake of 114.67 grams and mean FCR per dozen of egg was 1.56.

**KEY WORDS** : Athulya, White Leghorn, egg production

**INTRODUCTION**

Several strains are available from private breeders in market for commercial egg production. However, there are only few strains available from government farms. Athulya is one of the best strains produced at All India Co-ordinated Research Project (AICRP) on Poultry, Kerala Veterinary and Animal Sciences University (KVASU), Mannuthy. Athulya is a White Leghorn hybrid produced from crossing two pure line namely Indian White Leghorn N (IWN) and Indian White Leghorn P(IWP). These two strains are being maintained at this center since 1976 and are intensively selected for egg number for higher egg production with an optimum egg weight. In the present study the cross used belongs to the offspring of 25<sup>th</sup> generation.

**MATERIALS AND METHODS**

Two hundred Athulya birds were randomly selected at sixteenth week of age and were housed in individual cages. The cages were numbered individually. All the birds were offered *ad libitum* feed and drinking water in nipple drinkers. Sixteen hours lighting programme was followed which included 12 hours day light and 4 hours artificial lighting. At twentieth week all the birds were individually weighed. The standard managemental protocol was followed. Daily egg production was recorded and total feed intake was calculated fortnightly. The livability of the bird was noted. FCR per dozen of egg produced was calculated. Egg weight of all the birds was recorded at four week intervals.

**RESULTS AND DISCUSSION**

The recorded data revealed that the peak egg production ( above 90 per cent) was reached at 23<sup>rd</sup> week and was maintained up to 40 week of age while that of BV-300 with maximum 97 per cent at 26<sup>th</sup> week . Similar trend of egg production was noted by Kannan(2005) in commercial layers. The data on feed intake presented in table revealed an increasing trend in feed consumption after 32 weeks of age . Highest feed intake was noted in the last period due to lower environmental temperature recorded during the month of December which may be a contributing factor for increased feed intake. However the average body weight of bird at 40 week was 1.75 kg which may be a second factor for increased feed intake of bird in addition to lower environmental temperature. Feed conversion ratio (FCR) also followed the same trend as that of feed intake however the lowest FCR of 1.40 was recorded at 25- 28 week period which was in agreement with

Kannan (2005) who recorded FCR of 1.50 in commercial layers. Similar result was noted by Sukumar (1999) during his experiment in Athulya birds. The highest FCR of 1.71 and 1.69 was recorded during the first and last period of the study. Data on egg weight showed an upward trend until the last period. The lowest egg weight of 49.49 gram was recorded in the first period, however the egg weight in the last period improved to 55.06 gram. Over all livability of birds was excellent during the entire experimental period. Out of two hundred birds only one bird died which showed excellent adaptability of the strain to hot and humid climatic conditions of Kerala which was comparable with BV-300 layers.

From the present study it can be concluded that Athulya strain developed at AICRP, Mannuthy is capable of producing more than 91 per cent hen housed egg production from 20 to 40 weeks of

**Table. Performance of Athulya Strain under farm condition**

| Parameters                         | Period    |           |           |           |           |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|
|                                    | 21-24week | 25-28week | 29-32week | 32-36week | 37-40week |
| Egg production(HH)%                | 80.39     | 96.52     | 94.21     | 94.07     | 91.75     |
| Egg weight(g)                      | 49.49     | 51.75     | 53.12     | 54.17     | 55.06     |
| Feed intake(g/bird)                | 112.58    | 112.82    | 111.53    | 116.39    | 120.01    |
| FCR                                | 1.71      | 1.40      | 1.42      | 1.58      | 1.69      |
| Livability%                        | 100       | 100       | 99.5      | 99.5      | 99.5      |
| Average body weight(kg) at 20 week | 1.42      |           |           |           |           |
| Average body weight(kg) at 40 week | 1.75      |           |           |           |           |

age as that of commercial strains presently available in market and may be a beneficial strain with its excellent egg production potential and livability for farmers who want to start a layer farm under hot-humid climatic conditions.

#### REFERENCES

- Sukumar, D. (1999). Effect of phytase supplementation on phosphorus utilization and performance in layer chicken. M.V.Sc, Thesis submitted to Kerala Agricultural University. p122.
- Kannan, D. (2004). Influence of enzyme phytase supplementation on the performance of layers. Ph.D Thesis submitted to Tamil Nadu Veterinary and Animal Sciences University. p160

□