

PERFORMANCE OF KUTTANAD DUCKS UNDER BACKYARD SYSTEM OF REARING

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Abstract: *Indigenous ducks in Kerala are reared extensively by foraging in post harvest paddy fields traditionally. Large number of ducklings is being produced in Alappuzha district and the grown up ducks are distributed among duck growers in other districts. The layer ducks are being reared in flocks of 500 to 5000 and the minimum flock size is 500 layers. The present study was carried by distributing 10 layer ducks each in 75 households in three districts. The results indicated that the duck housed egg number was 59.15, 78.24 and 73.88 eggs per duck in Trissur, Malappuram and Ernakulam districts respectively with corresponding duck housed per cent (DHP) production of 32.32, 42.75 and 40.37 upto 44 weeks of age during the period from June to November. A significant variation in egg production was observed due to variations in feeding system. The feasibility of rearing of ducks under backyard system of rearing was proved successful in Kerala.*

INTRODUCTION

Non-Governmental Organizations (NGO) in Kerala play a significant role in poultry production programs especially in rural sector. NGO named 'Kudumbasree' is a role model for women empowerment in the State involved in multi-various activities for generating income, employment and self help programs with high reputation and acceptance among public. Backyard rearing of chicken is widely popular in households and is being carried out extensively with high support through Government departments. Backyard rearing of ducks is not practiced in households due to various constraints misconceived by farmers in this venture and which is not come across with rearing of domestic chicken. Jalaludeen et al (2000) reported that chicken layers are being reared in small flocks in Kerala profitably. Rearing of ducks in Kerala is a peculiar nomadic system of management associated with paddy harvest seasons with layer flock size of 500 to 2500 per farmer employing separate caretakers (Leo *et al.* 2003). These flocks move long distances in search of post harvest paddy fields.

The present study was carried out to examine the feasibility of rearing indigenous ducks under backyard system of rearing ducks in households.

MATERIALS AND METHODS

Twenty five households each under Kudumbasree units, in three districts Thrissur, Malappuram and Eranakulam of Kerala were selected for conducting the study. These units were varied in several respects within and between districts. Each unit was supplied with 10 laying ducks of Kuttanad breed of Indigenous ducks. These ducks are produced in large numbers locally in Alappuzha district in Kerala and reared under popular method of nursery management and distributed among farmers for free range rearing in paddy fields. At the age of four months, these ducks are procured and distributed among 75 household units. Thus a total of 750 ducks were utilized in this study. The study was conducted during the period from June to November, 2004 upto 48 weeks of age. Leaders of the Kudumbasree units were employed in each district for collection of data pertaining to the management, feeding pattern, livability and egg production.

RESULTS

The results obtained in the study are presented in Table1. The mean age at first egg was 169.8, 171.6 and 176.0 days in Trissur, Malappuram and Ernakulam districts respectively. The overall duck housed number (DHN) was 59.15, 78.24 and 73.88 eggs per duck in Trissur, Malappuram and Ernakulam districts respectively with corresponding duck housed percentage (DHP) production of 32.32, 42.75 and 40.37 over a period of 183 days during the period from 21 to 44 weeks of age from June to November 2004.

The overall egg production achieved in Thrissur district was significantly lower than that recorded in Malappuram ($P<0.01$) and Ernakulam ($P<0.05$) districts. The farmers' households in Malappuram and Ernakulam districts are located adjacent to the paddy fields. The system of feeding in these areas facilitated the ducks to forage in post harvest paddy fields every day.

The June and July months coincided with the monsoon season in this area and the egg production was low since foraging could not be feasible during these periods. Though egg production was low in Thrissur district, it is expected that these ducks will lay at higher rates when foraging was made possible

Table 1. Mean duck housed number and per cent production in ducks under backyard system of rearing.

	Name of District			
	THRISSUR	MALAPPURAM	ERNAKULAM	OVERALL
Mean AFE	169.8	176	171.6	172.47
Duck housed number (DHN) egg number				
Month				
June	3.01	1.06	5.17	3.08
July	11.08	7.74	12.84	10.56
August	14.86	22.36	12.13	16.45
September	15.99	20.20	13.85	16.68
October	8.51	16.10	16.92	13.84
November	5.70	10.77	12.96	9.81
Overall DHN (183 days)	59.15±5.24 ^b	78.24±0.95 ^a	73.88±4.80 ^a	70.42±2.54
Duck housed per cent (DHP) production				
Month				
June	10.04	3.55	17.24	10.28
July	35.75	24.98	41.43	34.06
August	47.92	72.13	39.14	53.06
September	53.31	67.32	46.17	55.60
October	27.45	51.94	54.59	44.66
November	18.99	35.91	43.19	32.69
Overall DHP (183 days)	32.32 ^b	42.75 ^a	40.37 ^a	38.48

The variations in egg production during the period from June to November were due to seasonal variation. It is obvious that non-availability of feed resources lead to poor egg production in the locality. The influence of egg weight on pattern of egg production could not be inferred as the trait was not measured in this study.

Table 2. Egg out put under back yard system of rearing ducks in Kerala.

Egg production Period/Month	Name of District			TOTAL
	THRISSUR	MALAPPURAM	ERNAKULAM	
June	753	266	1293	2312
July	2771	1936	3211	7918
August	3714	5590	3033	12337
September	3998	5049	3463	12510
October	2127	4025	4231	10383
November	1424	2693	3239	7356
Total Eggs	14787	19559	18470	52816
Net Return @Rs.2 per egg	29574	39118	36940	105632

A total of 52816 eggs were produced under the scheme during the period of study (Table 2).

DISCUSSION

The ASM was early at Thrissur (169.8 days) and the egg production was 10.04 per cent during the first period in June. Since the ASM was delayed in Malappuram (176 days), the DHP was very low in the first period (3.55 per cent).

The egg output was relatively low in Thrissur district compared to Malappuram and Ernakulam districts. The major reason that can be attributed to this variation was the variation in the system of feeding. Foraging system of rearing ducks was possible in Malappuram and Ernakulam districts. The low availability of natural feed resources in Thrissur district resulted in significantly low egg production. The results of the study clearly indicated the feasibility of rearing ducks under backyard system in households and the farmers willingness for adopting the system was exemplary. Therefore it was concluded that there is further scope for expanding the backyard system for rearing indigenous ducks. Andrews *et al.*(1984), Eswaran *et al.*(1985), Mahanta *et al.*(1997)and Ravi *et al.*(2003) reported similar pattern of egg production under intensive system of rearing indigenous ducks. Mahanta (1997) obtained 70.6 eggs in Chara ducks and 72.4 eggs in Chemballi ducks of Kerala and Anon (2002) reported 80.64 eggs in indigenous ducks up to 40 weeks of age.

The return from duck rearing is comparatively higher than chicken since the level of production is high and the eggs fetch a higher price. The egg production in different regions was varied because of the differences in the feeding pattern locally. Households with proximity to paddy fields recorded maximum number of eggs. Leo *et al.* (2003) and Jalaludeen *et al* (2003) reported similar findings in indigenous ducks.

The duck eggs could fetch an average price of Rs.3 per egg and the feeding cost averaged Re.1 per egg. Thus the womenfolk could get a margin of Rs.2 per egg. The net supplementary revenue generated from 52816 eggs works out to Rs. 1,05,632, giving an average of Rs.1408 per family in a period of 6 months from 10 ducks.

Extensive studies have been carried out in Kuttanad ducks in Kerala Agricultural University under intensive system of rearing ducks. The egg production recorded in the present study is almost similar to that obtained under intensive system of rearing. Similar rate of production was reported by farmers under the free range system of rearing. Wherever the production potential could not be exploited in full, the household rearing was supported with hand feeding practices.

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