

Evaluation of Performance of Improved Dual Purpose Coloured Birds under Backyard System of Rearing at Morena district of Madhya Pradesh

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Paper Received on May 05, 2017, Accepted on June 15, 2017 and Published Online on July 01, 2017

ABSTRACT

Backyard poultry farming is a social phenomenon rather than an economic proposition. It is popular among the communities who have no inhibition against keeping birds, eating eggs produced and the meat. Keeping the importance of backyard poultry system in rural areas the present study was undertaken as On Farm Trial (OFT) to know the Performance of Improved dual purpose Coloured Birds reared in backyard system of farming in Morena district of M.P. Day old fifteen female with five male chicks of Improved dual purpose Coloured birds breed (Total Two hundred chicks) were randomly distributed to 10 farmers. From the experiment it was concluded that body weight gain was significantly higher in Improved dual purpose coloured birds as compare to local non descriptive birds, similarly egg production was also significantly higher in the Improved dual purpose coloured birds but age at 1st laying and mortality data were non-significant among dual purpose coloured bird and local non descript birds.

Key words: Dual purpose coloured birds; Non descript birds; Performance;

Backyard poultry is an important source of supplementary and nutrition security for a large number of poor households across the country. In the present scenario rural poultry farming is contributing nearly 21 percent to the national egg production (Anonymous, 2010). The demand of eggs and meat of rural areas is fulfilled by rearing of backyard poultry (Nath et al 2012 & Panda et al 2008). Coloured plumage birds are preferred by rural and tribal people for socio-cultural purposes and ceremonial offers (Mahopatra et al., 1999; Rangnekar and Rangnekar, 1999). The native chicken varieties adopted in free range backyard conditions for centuries contribute about 11 per cent of total egg production in India (Kumaresan et al., 2008). Village chickens provide cheap, readily harvestable protein-enriched white meat and eggs with high quality, digestible protein for immediate home consumption and sale for income generation. In poultry sector impressive growth has been achieved in the intensive poultry farming in India, but the rural poultry sector remained rather stagnant. Therefore, the consumption of eggs in

rural areas is far below the national average of egg consumption. Increasing the genetic potential of the local native chicken varieties greatly helps in increasing the availability of poultry meat and eggs in rural areas.

It is a low input or no input venture that provides ready cash and food. Rural/backyard poultry farming with improved chicken varieties is slowly gaining popularity as a potential tool to alleviate protein deficit and provides subsidiary income among the rural and tribal people across the country. Krishna-J Bird is developed by Department of Poultry Science, J.N.K.V.V., Jabalpur for backyard, rural and tribal area poultry keeping. The Improved dual purpose coloured bird is evolved by mating coloured normal bodied synthetic sire line with Krishna-J female line. The plumage pattern varies from dark brown to multi coloured barred, black gray having long shank and single, pea and rose comb.

The present study was carried out to evaluate the performance of dual purpose coloured bird under backyard system of poultry rearing.

METHODOLOGY

Day old improved dual purpose coloured chicks were randomly distributed to ten (10) farmers as fifteen females with five males (Two hundred chicks) reared in backyard system of farming in village situation. The experiment was conducted at farmers’ level under the operational area villages of KVK, Morena (M.P.). The birds were vaccinated against Newcastle disease (F1 - strain) and Infectious Bursal disease. The data for body weight, mortality and egg production were recorded weekly. The deworming was done at regular interval to overcome the worm infestation. The data obtained during experiment were statistically analyzed, following the procedure described by *Snedecor and Cochran (1994)*.

RESULTS AND DISCUSSION

The average weekly body weight and gain in body weight of improved dual purpose coloured birds and local non descript birds are shown in Table 1 from 1 to 12th week of age. The data shows that gain in body weight was statistically significant from 1st to 11th week in dual purpose coloured bird as compared to local non descript birds, however in 12th week the gain in body weight was found non significant between the two types of bird. The present findings are not in line with earlier report of *Sharma et. al. (2016)* in which they compared the Dual Purpose Coloured Bird with Kadaknath and Krishna J breeds and reported non significant changes in weekly body weight gain from 1st to 7th week and in 12th week, among the three breeds. The findings of the

present study are partially in line with report of rearing of Dual purpose coloured birds under backyard system at farmer’s field in Umaria district of M.P. where a weight gain of 1.25 Kg at an age of 4 months was recorded.

The production performance (egg production, age at first laying, and mortality) of improved dual purpose colored birds and non descript birds are shown in Table 2. From the table it is clear that egg production was significantly higher ($P>0.05$) in Improved dual purpose coloured birds as compare to local non descript birds. The findings of the present study are different from the report of rearing of Dual purpose coloured birds under backyard system (semi intensive) in villages in Tikamgarh district of M.P. where they have recorded egg production to the tune of 180 eggs per year. The possible reason behind this higher egg production may be attributed to rearing under semi intensive system of housing coupled with supplementary feeding and good management. The present findings are in line with earlier report of *Vij et al (2006)*, *Sharma et. al. (2016)*. It was observed that the availability of scavenging area mainly attributed to the higher egg production in maximum of the study area. The eggs were laid between 20-25 days interval. The age at 1st Laying, was significantly low as compared to non descript breed indicating superiority of dual purpose coloured bird over the non descript local bird. *Sharma et. al. (2016)* has also reported age at first laying to about 21.15 ± 0.36 weeks in Dual Purpose coloured bird. Age at first laying in Dual purpose coloured bird was lower than Aseel

Table 1. Weekly Body weight gain of improved Dual purpose coloured birds and Non descript local birds

Age (Weeks)	Improved Dual Purpose colored bird						Non descript local bird					
	Body weight(g)			Gain in body weight(g)			Body weight(g)			Gain in body weight(g)		
1	90.50 ^a	±	2.32	28.60 ^a	±	0.66	59.35 ^a	±	0.94	24.30 ^a	±	0.67
2	128.60 ^a	±	0.97	34.56 ^a	±	0.91	91.55 ^a	±	0.90	30.70 ^a	±	0.90
3	181.20 ^a	±	1.03	48.36 ^a	±	0.85	130.10 ^a	±	1.37	40.97 ^a	±	0.89
4	236.10 ^a	±	0.99	51.33 ^a	±	0.63	176.90 ^a	±	1.20	42.64 ^a	±	0.68
5	287.60 ^a	±	1.35	50.00 ^a	±	0.94	221.00 ^a	±	1.49	43.32 ^a	±	1.05
6	341.60 ^a	±	1.07	49.70 ^a	±	0.85	270.10 ^a	±	1.20	47.88 ^a	±	0.62
7	404.70 ^a	±	1.16	57.43 ^a	±	1.10	337.60 ^a	±	1.07	63.56 ^a	±	0.60
8	515.10 ^a	±	1.66	102.55 ^a	±	1.07	430.00 ^a	±	1.25	86.02 ^a	±	0.90
9	630.20 ^a	±	1.75	117.61 ^a	±	1.05	541.90 ^a	±	1.20	102.38 ^a	±	1.31
10	785.30 ^a	±	1.42	149.85 ^a	±	1.13	681.50 ^a	±	1.08	141.13 ^a	±	0.94
11	960.00 ^a	±	1.33	170.83 ^a	±	1.45	840.90 ^a	±	1.60	153.44 ^a	±	0.97
12	1130.60 ^a	±	2.37	164.58 ^a	±	1.19	1021.70 ^a	±	2.21	164.83	±	0.74

a: figures with in a row differ significantly ($P>0.05$)

Table 2. Production performance of improved Dual purpose Coloured birds and Non descript local birds

Particulars	Improved Dual Purpose colored bird			Non descript local bird		
Age at Ist laying	21.29 ^a	±	0.509	24.22 ^a	±	0.605
Egg production	69.40 ^a	±	1.075	60.40 ^a	±	1.265
Mortality%	15.59 ^a	±	0.899	16.25 ^a	±	0.851

a : figures with in a row differ significantly (P>0.05)

(187.43±1.54) and Kadaknath (196.12±1.75) birds as per the observations of *Dilip et al (2013)*. The mortality was comparable among both type of birds. The high mortality in both types of birds was due to the animal attack (cat, dog and eagle) and severe cold in the month of December and January.

CONCLUSION

From the experiment, it may be concluded that Improved dual purpose coloured bird has high body weight gain, higher egg production as compared to local non descript breed. Dual purpose coloured bird can be popularize in rural areas for backyard rearing.

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