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Economic of Pratapdhan Poultry under Backyard System Rearing in Bhilwara District of Rajasthan, India

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A B S T R A C T

A study was conducted on pratapdhan birds under backyard poultry rearing in Bhilwara district of Rajasthan. During the study two block selected in which five villages of each block selected randomly. Ten backyard poultry farmers randomly selected in each village out of 100 respondents. Pratapdhan chicks provided by Krishi Vigyan Kendra under ATMA, Bhilwara for the respondent of economic point of view.20 chicks provided each respondent. Majority of respondents belong to general caste (46 %) Rajput only. Mixed agriculture and animal husbandry are the main occupation of majority (56%) of the poultry rearing. The average body weight at 12 and 20 weeks of age was 1120.32 +34.30 and 1702.28 + 37.30 g in females, respectively and after considering the mortality the average economic gain was found to be Rs. 801.26. It is concluded that pratapdhan chicks is definitely increase family income and nutrition level of rural poor.

Introduction

The rural poultry farming in villages, which is the primary source of animal protein and supplementary income for more than 50 percent of the population of this country. Poultry farming small number in under traditional backyard poultry or free range or semi –intensive system. The adequate scope for development of backyard poultry in the rural and tribal areas, which is turn, can contribute substantially to raise the overall per capita availability of egg and meat as well as employment to rural women or youth. Abundant availability of natural food base such as domestic waste, pulse, cereal grains, grain by products, insects, warms, green grass etc. is boon to backyard poultry in all part of this region. The system of bird keeping varies from place to place and caste to caste. The most popular developed pratapdhan chicks used in backyard poultry. The Rajasthan has less than 2 percent poultry as well as egg production of the country. Pratapdhan is a dual purpose chicken variety to cater to the needs

of rural poultry keepers of Rajasthan. It was developed as part of AICRP on Poultry Breeding by MPUAT, Udaipur. It resembles local birds of Rajasthan. Attractive multicolour feather pattern, as rural people like coloured birds from aesthetic point of view and better looking. Because of colour plumage birds have camouflagic characters to protect themselves from predators. Birds have longer shank length which helps in self protection from predators in backyard areas and has capacity to survive on low plane of nutrition (low and negligible input) and harsh climatic conditions. It lays brown eggs weighing around 50 g and has broody characteristic to some extent. It has fast growth rate with average adult body weight at 20 weeks of age ranged from 1478 to 3020 g in males and 1283 to 2736 g in females. The age at sexual maturity was 170 days. Pratapdhan produces 161 eggs annually, which is 274% higher than local native (43 eggs).

Hence, the rural poultry farming has good potential in the state especially in the rural areas to improve the socio-economic condition and overcoming protein deficiency. So, that the present study has been undertaken pratapdhan chicks under backyard poultry rearing in Bhilwara district of Rajasthan.

Materials and Methods

The present study was carried out by the Krishi Vigyan Kendra, Bhilwara district of Rajasthan. For this purpose mandel and suwana block selected for backyard poultry distribution under ATMA, Bhilwara during the year 2014-2015. Five villages from each two block were selected randomly making it a total of ten villages, and from each selected villages, ten families rearing poultry were selected randomly making a total of 100 respondents for the study. Data were collected with the help of a semi structured interview schedule and through observation. Data so collection, tabulated and analysed as per standard statistical procedures of Snedecor and Cochran (1994). Pratapdhan poultry developed by AICRP on poultry breeding at poultry farm, Maharana Pratap University of agriculture and technology, Udaipur, Rajasthan.

Results and Discussion

The study showed that in all 42 percent family heads were illiterate while among the literate family head 55.17 percent had educational level of primary, 27.58 percent secondary, 13.79 percnt graduate and 3.44 percent post graduate (Table 1). Uder persent situation, for popularization of the backyard poultry there is a need for making more efforts to motivate for adoption of new technologies. In Rajastan there are religious restrictions to rears particular species of livestock. Perusal of table 1 showed that majority of rural poultry owners 89 percent belongs to hindu religion and remaining 11 percent belong to Muslim. According to caste indicate the majority of respondents belong to Rajput only general caste (46 %), followed by SC (21%), OBC (20%) and ST (13 %).

Majority (38%) of poultry rearer had kaccha house followed by pucca (32%) and mixed (30%). Mixed agriculture and animal husbandry are the main occupation of majority of the poultry rearing (56%). In almost all the cases, the families had more than one occupation for their source of income. The result got supported by various researchers Mandal,*et al*. (2006) and Rahman *et al*.(2002). Data indicates the production performance of the pratapdhan birds reared by farmers. The average body weight at 12 and 20 weeks of age were 1216.62+41.68 and 2110.60 + 40.36 in males and 1120.32 +34.30 and 1702.28 + 37.30 g in females, respectively.

Table.1 Socio- economic parameters of respondents

Parameters		N	Frequency
Educational status of family head			
Illiterate		42	42.00
Literate		58	58.00
(I)	**Primary**	32	55.17
(II)	**Secondary**	16	27.58
(III)	**Graduate**	8	13.79
(IV)	**Post-graduate**	2	3.44
Religion			
Hindu		89	89.00
Muslim		11	11.00
Caste			
ST		13	13.00
SC		21	21.00
OBC		20	20.00
General		46	46.00
Type of residence			
Kaccha		38	38.00
Pucca		32	32.00
Mixed		30	30.00
Main Occupation			
Service		8	8.00
Agriculture		22	22.00
Animal husbandry		14	14.00
Agriculture + Animal Husbandry		56	56.00

Table.2 Economic of backyard poultry farming (average cost of production per bird)

S.No.	Particulars	Average expenditure (Rs.)	Particulars	Average Income (Rs.)
	Input		**Output**	
1.	Cost of Pratapdhan chicks	75	Sale of per bird female	300
2.	Cost of labour	437.43	Sale of per bird male	500
3.	Feeding cost	346.5	Egg produced per bird per year (148 eggs @Rs.10/egg)	1480

4.	Treatment cost	10	Mortality rate	10%
5.	Housing cost	20	Production cost per bird	888.93
6.	Total cost	888.93	Total output per bird	1780
			Economic gain per bird	891.07
			Average bird per household	20 no.
			Mortality (20X10x1/100)	02 no.
			Total numbers of bird per household, after considering mortality	18 no.
			Sale price for 18 numbers of birds (18 X 300)	5400
			Income from egg production for 18 number of birds (18X148) @Rs.10/eggs	2664 Eggs 26640
			Economic gain for 18 bird (32040-16000.74)	16039.26
			Economic gain per bird after considering mortality (16039.26/20)	801.96
			Final economic gain per bird per year	801.26

Labour RS. 2500/month and Concentrate @Rs. 22/kg

The average weight of the birds at marketing 2.0 to 2.25 kg and average egg laid/bird/year were 148 eggs, respectively. In perusal of Table 1, it was found that the average economic gain per bird was Rs. 921.07. After considering the mortality the average economic gain was fond to be Rs. 828.26.It was found that many constraints were reported by the respondents regarding their backyard poultry farming. High input cost (78%) and high incidence of disease (88%) was one of the major constraints reported by the respondents Gawanda *et al*., (2007) and Mapiye and Sibanda (2005) also reported diseases and chick's mortality as major constraints in village poultry production (Table 2).

It is concluded that Pratapdhan backyard poultry significantly role in increase income and nutrition level of rural livelihood under free range semi-intensive system. Therefore, the focus should be on providing necessary advance training programmes to scientific management practices to the farmers regarding poultry farming and availability of superior germplasm for rearing in the backyard system. Final economic gain of pratapdhan per bird per year Rs. 801.26/-

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