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Effective Way to Enhance Farmer Income through Rural Poultry Farming: A Success Story

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ABSTRACT

Backyard poultry is an important source of supplementary income and nutritional security for poor households across the country. An improved variety for back yard poultry namely *Pratapdhan* birds were distributed to rural families of Scheduled Caste (SC) community to improve their livelihood and entrepreneurship in the year 2019-2020, in Jodhpur district of western Rajasthan. A total of 1200 chicks were distributed to 60 identified SC families free of cost. Each unit comprised of sixteen females and four male birds. The results revealed that the improved poultry strain *Pratapdhan* has an immense production potential in arid region under back yard system. The average expenditure on rearing of birds was calculated ₹ 31,635. The benefit cost ratio was recorded at 2.53:1 which appears to be very much economical and viable for rearing of birds under backyard system. It is a profitable and economic venture for resource poor families in terms of livelihood and entrepreneurship.

Key words: Backyard farming, Poultry, Economic venture, Entrepreneurship, *Pratapdhan*

Back yard poultry, a traditional system of poultry keeping is a part of livestock rearing practiced by rural folk since time immemorial. It is type of organic farming with no harmful residue in egg and meat and advantageous and provides supplementary income in shortest possible time with very minimum capital investment. Poultry rearing is simple in operation and ensures availability of egg and meat even in remote rural areas [1]. Backyard poultry widely accepted by the rural people is characterized by small flock size consisting of 5-20 birds predominantly non-descript birds maintained in extensive system [2]. Rural poultry farming (RPF) provides high quality protein and supplemental income to the local population. Adapting the RPF in backyards of rural households can ensure the availability of eggs and meat in rural and underdeveloped areas; which will help in alleviating the incidence of protein deficiency in the vulnerable group (Women, Children, expectant mothers etc.). The native chicken varieties adopted in free-range backyard conditions for centuries about 11% of total egg production in our country [3]. The growing demand for indigenous poultry products and low investment in back yard poultry sector provides opportunity

for the rural farmers [4]. Therefore, it is necessary to test suitable chicken variety, which can thrive and survive in backyard free-range conditions without demanding expensive inputs like feed, disease management, predator menace, harsh and arid climatic conditions and consumer preference etc. Keeping these facts in view, an attempt was made to evaluate the performance of *pratapdhan* birds in backyard poultry farming in arid eco-system of Jodhpur district of Western Rajasthan.

MATERIALS AND METHODS

The locale of the study is characterized by scanty and erratic annual precipitation (100-400mm), high evaporation rate (1500-2000mm), high temperature and poor fertility of the soil. In addition to this frequent draught, extreme events triggered by climatic change may pose serious threat to survival of living being in arid region [5]. College of Agriculture, Jodhpur has purchased faster weight gain and higher egg producing strain-*Pratapdhan* birds (6-8 weeks old) from MPUAT, Udaipur under ICAR, New-Delhi sponsored SC-SP project for entrepreneurship and to strengthen their livelihood and economic improvement of Schedule cast youth through backyard poultry farming. The strain-*Pratapdhan* birds are demonstrated for replacing the non-descript poor egg producing birds in rural households of Keru village of Jodhpur District. The participants were trained on all aspects of rural poultry farming before the distribution of 20 birds (Comprising 16 females and 4 males) to each selected respondent. Close monitoring was

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also follow-up by regular field visits of project staff member for technical backstopping. The performance of birds at household level was assessed by collecting the data on the basis of egg production up to 72 weeks of age were recorded. Egg production 'Data Card' was distributed to all selected respondents for maintaining records of daily egg production. At the age of 28 and 40 weeks, egg's weight were recorded by the Mettlor and Toledo balance (nearest to 0.01 gram accuracy). Further, egg mass was calculated using North's egg mass formula. A partial budgeting analysis measures were used for computation of expenditure and income generated from the demonstrated poultry units.

RESULTS AND DISCUSSION

Sh. Deva Ram S/o Suntha Ram is non-metric Scheduled Cast farmer from Keru village of Jodhpur district of Western Rajasthan. He is traditional farmer engaged in agriculture also reared some non-descript poultry birds for domestic consumption and could not succeed due to lack of scientific knowledge on backyard poultry farming. He has participated in residential training programme organized at the college campus. He received one unit of 20 *Pratapdhan* birds comprised of (16 females and 4 males) and begun new journey of semi-intensive poultry unit with technical input of SC-SP project, College of Agriculture, Jodhpur. These trainings instilled in his mind to do something that earns his bred and also give a message to the mass particular the youth. He constructed a poultry unit shed with using of locally available bamboo, thatch grass and pearl millet straw as litter material for night shelter. He reported that hens laid 1869 eggs in 72 weeks of age. He reported that even the hens stop egg laying than after some selected fertilized eggs were placed for natural hatching blending with scientific practices. According to him 245 chicks were born, baby chicks were raised up to marketing the same. He reared the

birds under backyard system supplemented with locally available some concentrate feed including crushed maize, rice, wheat, marble grit and supplement with *Azolla* (5%) and followed prophylactic measurement to reduce mortality and morbidity among the birds.

The means of body weight and other economic parameters of *pratapdhan* chicks showed better performance over the non-descript birds; in respect of average body weight of male ($2452.62 \pm 65.43g$) and female ($2150.45 \pm 84.34g$) at 21 weeks of age, average age at first egg lying (158.63 ± 1.12 days) in arid climatic condition [6]. A partial budgeting analysis measures was used in those items of expenditure and incomes. Therefore, the cost of feeds, medicines and equipment's has been considered. The recurring cost i.e., cost of feeding, prophylactic measurement, miscellaneous expenditure and income from sale of eggs and chickens are presented in Table-1. The total gross and net income earned from sale of eggs and birds for rearing of *pratapdhan* chickens were ₹ 79,920 and ₹ 31635 respectively. The benefit cost ratio (2.53:1) was revealed that poultry farming beneficial and viable under backyard farming system in the western part of Rajasthan. Backyard poultry farming have the potency to improve the economic status of a large majority of tribal rural families in the study area [7]. Because the selected progressive farmer was able to earn an annual net profit of ₹ 1,17600 from poultry rearing as it is a low input or no input venture in the selected study area. Presently Sh. Deva Ram is a champion farmer in the field of backyard poultry farming in selected study area i.e., Keru. Now, he became a free launcher for advocating the importance of backyard poultry farming in the rural communities of adjoining areas. The meat and egg of *Pratapdhan* bird were highly accepted by the public and his success has motivated to the fellow villagers especially by the rural folk. Pioneering efforts would go a long way in driving their sistren towards sustainable growth [8].

Table 1 Economics performance of *Pratapdhan* birds in arid climatic condition

Particulars	Cost involved
Cost of chicks (₹)	Free of cost (16+4)
Cost of feeding (₹)	26,500
Cost of medicines and miscellaneous (₹)	5,135
Total cost of rearing (₹)	31,635
No. of eggs produced	1887
No. of eggs consumed at home	410
Eggs sold @ ₹ 10/- egg	10,320
No. of birds died	27
Female birds culled & sold @ ₹ 200/-	25,600
Male birds sold @ ₹ 400/-	44,000
Total Eggs hatched by hen	445
Gross income (₹)	79,920
Net income	50,785
B:C ratio	2.53:1

CONCLUSION

Based on the facts, backyard poultry is a very important sector in resource-constrained families as it

provides nutrition and income which support family health care, education, and other social needs. However, the productivity is not encouraging, so more education and support on backyard poultry keeping is essential to enhance

an economic impact on the local communities. It could be concluded that *Pratadhan* bird has an immense potential for rural poultry farming in arid climatic conditions. Moreover, it is not only viable to meet the nutritional security but also economic venture for resource poor farm families in terms of livelihood and economic security. It is also helped in checking the people migration to urban/semi-urban areas. The Government is making concerted efforts to create an ecosystem to support their hard work so that the farmers get optimum returns on a sustainable basis. It would go a long way to encourage farmer across India to follow the recommended backyard poultry farming practices and enhance their income. Thus, paving a way of sustainable livestock

production for doubling of farmers' income in arid eco system.

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