



Research Article

A Study of Problems of Rural Farmers Keeping Desi Poultry in Southern Punjab

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All authors contributed to make the completion of this manuscript possible. AW conducted research and analyzed the data. AF and HMI helped in conduct of research and write up.

Keywords

Desi poultry, Household, Poverty alleviation, Income generation, Rural

Abstract | As desi poultry farming is an integral part of rural households everywhere in Pakistan, therefore a preliminary study was launched to highlight some aspects of this farming system prevailing in southern Punjab. For this reason data was collected from 30 households and was subjective to descriptive statistical analysis. The farmer's family size averaged 6.4 ± 1.6 with average monthly income of Rs. 14322.6 ± 3026.4 . These rural household had on the average 11.4 ± 4.5 hens, 2.1 ± 1.1 cocks, 6.9 ± 4.5 chicks, and 4.5 ± 3.4 laying hens. Majority of them kept hen in khuda (a small need-based structure like small room for keeping birds). Most of them offer grains to the desi birds and majority was aware of poultry diseases, mainly keeping desi birds. Without having any special training, vaccinating the birds for Rani Khet (New Castle disease). Most of them hatched chicks of their own, bought hens from the village, knew about ill birds and benefitted from the birds. Mostly they kept birds for sale, disliked cock fighting, provided positive gesture about poverty alleviation and showed minimum concern about poultry problems. It is concluded that poultry keeping in rural household provides a potential source of income with minimum health care and problems and adding to the income of households. This small-scale entrepreneurship might bring higher income to rural households and may help in alleviation of poverty a mass scale in rural areas.

Novelty Statement | This study will not only highlight the problems of rural (desi) poultry farming but also will pave a way for uplifting this sector in southern Punjab, that will help in poverty alleviation in this area.

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Introduction

Generally, poultry keeping is not only the hobby but also a source of income generation in rural areas anywhere in the world and particularly in Pakistani villages. Among other benefits, it provides food, entertainment and part time business in some cases. Because desi poultry is very closely related to organic production and many mythological superstitions involved, it fetches high priority and likeness along with higher prices. Desi birds are always a source of

higher income getting greater attraction as they have been considered a medicinal feast.

Poultry sector has been the very briskly growing sector in Pakistan. Current status shows that desi poultry exceeded 85 million (GOP, 2019-20) where 12 million cocks and 42 million hens are manifesting a major part. Brood hens are very rare yet commonly used for hatching chicks in rural areas. As resources, poor farmers/households either cannot bear the cost of commercial hatcheries or ignorant/not dealt with due to low number of eggs. Such eggs are mostly sold as desi eggs at higher prices as compared with table eggs. The demand of desi table eggs increases highly in winter season which also reduces the number of hatching chicks.

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In Pakistan, poultry is considered as one of vibrant section of livestock sector which provides direct as well as indirect employment to more than 1.5 million people. Currently, about seven hundred billion investments is present in poultry industry. This sector is serving as backbone of agriculture as it consumes over seven million metric tons agro-residues, thus a balancing force of check on mutton and beef prices in country. Almost 32% of total meat production of Pakistan comes from poultry. There was recorded growth of 7, 5 and 10 % respectively, in commercial layer, breeders and broiler stocks while rural poultry showed only 1.5 % development compared to 2015-16. The estimated production of commercial and rural poultry and products for since last 3 years reflected gradual increase still manifesting a gap between supply and demand (GOP, 2019-20). The presented study was conducted with the objectives to highlight some aspects of desi poultry rearing in southern Punjab, Pakistan. The presented study was conducted with the objectives to highlight some aspects of desi poultry rearing in southern Punjab, Pakistan.

Materials and Methods

The study was conducted in southern part of Punjab in some randomly selected areas lying at the border line between upper and lower Punjab in districts Sahiwal and Pakpattan. For this purpose, data about various attributes of desi birds was taken from 30 households (HH) who kept desi birds.

Results and Discussion

The results showed that none of the person keeping birds was uneducated to at least fifth standard where most of them were having passed this level (54.8%). A very few with higher education (6.5%) had poultry birds (Figure 1). The family size ranged from 4 to 10 averaging to 6.4 with not very high-income range of Rs. 8000 to 20000 thousand showing hand to mouth living status. They HH kept 3 to 19 desi hens, 0 to 4 breeding cocks, 0 to 15 chicks and 0 to 12 laying hens (Table 1).

Housing, feeding and breed

It was found that 22.6% household kept poultry in cages, 61.3% in khuda and 16.1% in bamboo baskets. Majority (51.6%) offered grains, 22.6 and 25.8 percent HH provided commercial feed and no special feed (kitchen wastes etc.), respectively. As regards the breed, 41.9% had desi, 29% fayumi and other 29% mixed birds.

Management personnel

In majority (51.6%) of the HH, any person at home

took care of birds including men (25.6%) and women (22.6%). Majority of them (67.7%) did not have any special training about poultry rearing. Only one third (32.3%) HH showed that they obtained some sort of training in bird keeping. A large majority (64.5%) did not get their birds vaccinated whereas only 35.5% HH get their birds vaccinated against Newcastle disease (commonly known as Rani khet of which they were well aware of). A good majority (77.4%) showed that they were aware of chicken illnesses, whereas only few (3.2%) who don't know about the illness of the bird.

Table 1: Descriptive analysis of some household characteristics.

	Family size	Monthly income (PKR)	No. of hens	No. of cock	No. of chicks	Laying hens
Mean	6.4	14322.6	11.4	2.1	6.9	4.5
SD	1.6	3026.4	4.5	1.1	4.5	3.4
Min	4	8000	3	0	0	0
Max	10	20000	19	4	15	12
CV	25.8	21.1	39.3	52.8	65.2	76.4

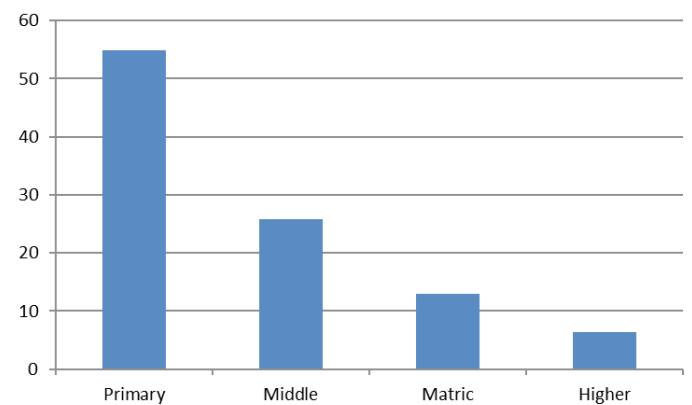


Figure 1: Percentage of people in different education levels.

Breeding and purchasing poultry

A large number of households (76.7%) had brood hens to hatch chicks of their own under natural circumstances. Some HH (23.3%) did not get hatch chicks. A large number of persons (58.1%) purchased desi poultry birds from villages, some from markets (19.4%) and while some others from butchers (22.6%).

Poultry problems and benefiting from poultry

A very large percentage of poultry keepers (93.5%) informed they get benefitted from poultry keeping where only 6.5% answered in no. A good number of HH kept birds for sale (41.9%), some for household needs (22.6%) and others for their hobby (35.5%). Majority disliked cock fighting (54.8%), somehow other people showed interest (41.9%) while a few (3.2%) declined to answer the question. A large number of farmers (71.0%) gave their consent about role of poultry in poverty alleviation, 25.8%

negated the role while 3.2% did not answer the question. Most of the poultry keepers showed a few or no problems (71.0%), some problems (16.1%) while others (12.9%) showed many problems.

This is wonderful to know that desi birds are kept by lower income groups managing larger families in rural areas. They showing their contentment in keeping desi poultry birds as integral component of their households providing meager but very important part in their family income along with source of food and entertainment. Majority of farmers with very lower level of education but great interest in rearing of poultry birds could be more effective productive units of bigger enterprise and provide ample amount of desi meat and eggs generally and organic type meat and eggs particularly when trained in the profession and provided with small handsome amount of financial support either in the form of birds or farming facilities (vaccines, dewormers, healthcare). In our view, the field has been seriously ignored and needs special concern as majority of population is still living in rural areas. Each rural HH could be productive unit of desi birds when provided with breeding hens and breeding cocks. The most probable scheme may the cyclic chain process where each household would be given a multiplier unit and cyclic process would create new production unit adding new households in the chain. A number of studies have been conducted in various parts of the world that highlighted similar findings (Rashid *et al.*, 1995; Barua *et al.*, 1997; Illango *et al.*, 1997).

Rural poultry could be the tool for poverty alleviation from the country. Ashley *et al.* (1999) comprehensively reviewed 800 projects regarding poverty alleviation and reported that there are many problems to the impact of such projects in reduction of poverty and livelihood development. They further claimed that livestock professionals and government officials are biased towards large animals and their owners, who typically not among the poorest list. The scavenging poultry production system is the most common animal production system among poor HH in the developing countries (Dolberg, 2001; Jensen and Dolberg, 2003) and it can be used for livelihood of rural poor thus plays a significant role poverty alleviation (Dolberg, 2016). Many poor women in developing countries are involved in poultry keeping (Quisumbing and McClafferty, 2006). Village poultry has a great contribution in the food security, especially for resource poor HH (Athar, 2019). Scavenging poultry is a common enterprise in the rural areas of developing countries, smallholder poultry production is used as a tool for poverty alleviation and applied exclusively in Bangladesh (Islam and Jabbar, 2005).

Literature data provides ample evidences that investment in small scale poultry sector (indigenous or

desi breeds) may contribute to socioeconomic uplift, poverty reduction and food security in many regions of the world (Jenson and Dolberg, 2003; Mack *et al.*, 2005; Pica Ciamarra and Otte, 2010). Rural poultry production has a positive significant impact on HH income and thus plays a pivotal role in poverty reduction as reported by Assa (2012). The importance of poultry production in the low and middle income countries are well extolled by the literature reviewed, Regmi (2001) reported that middle income countries accounted for the major share of world poultry production (about 52%), so it is very clear that rural poultry production has a significant role in the country's income and it could be a tool for income generation, and for food security and sovereignty in the Pakistan as well. Indigenous chicken is a valuable asset to the local / rural populations as it contributes significantly to food security, poverty alleviation and gender equality especially in less favored areas and disadvantaged groups (Gueye, 2000; Moges and Dessie, 2010). In tropical developing countries the poultry production is mainly based on scavenging poultry systems and about 80% of total poultry production is kept in traditional family based production systems (Permin and Pedersen, 2000; Gueye, 2005).

Rural poultry rearing at smaller may offer the source of income generation to the poor families by rearing a small unit (Ahmed, 2013). Rural poultry is practiced under traditional management system characterizing by smaller flocks and low inputs. Management factors, lack of genetic improvement and incidence of diseases are the major factors affecting the production of rural poultry thus, results in low productivity (Sonaiya, 2002; Molla, 2010). In Pakistan, major problem is of nutritional management to the rural poultry production, as mostly the scavenging is the only source of diet for rural chicken. The future hope is to strengthen the country's economy is improving the rural poultry (Bughio, 2018).

Conclusion

Rural poultry is a future hope for the development of southern Punjab and it could be the source of employment generation for the disadvantageous group of rural masses. It can play a pivotal role in the rural socioeconomic uplift and could be the source for poverty alleviation from the Pakistan. Improved management practices, modern husbandry, proper extension services and nutritional guidance should be provided by the government and local NGO's for the rural poultry production in the Pakistan.

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Conflict of interest

The authors have declared no conflict of interest.

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