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Adoption of Rural Women Regarding Pratapdhan Poultry Production Technology Promoted by KVK Bhilwara

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ABSTRACT: This study was conducted in the Bhilwara district of Rajasthan, focusing on the adoption of Pratapdhan Poultry Production Technology among rural women. Bhilwara was chosen purposely for its familiarity with the researcher and the widespread promotion of this technology through KVK Bhilwara. The research involved a total sample of 100 respondents from five selected villages, with 20 rural women randomly chosen from each village. Data collection was accomplished through personal interviews. The data analysis employed various methods, including frequency, percentage, mean per cent score, and adoption index. The overall adoption of Pratapdhan poultry production technology among the respondents was identified as medium. The categorization of respondents revealed that the majority (93%) fell into the medium level of adoption, while a smaller percentage (7%) belonged to the low adoption category. Surprisingly, none of the respondents fell into the high adoption category. Breaking down the adoption of Pratapdhan poultry production technology into its components, the findings indicated that, on average, the respondents demonstrated high adoption in two components: health care management (92.00% adoption index) and housing management (82.65% adoption index). However, in the breeding and rearing of chicks and feeding management component, adoption was comparatively low, with adoption indices of 58.18% and 41.37%, respectively.

Keywords: Pratapdhan, Poultry, Production, Adoption, rural women.

INTRODUCTION

In India, poultry farming occupies a pivotal position in bringing about rapid economic growth. India has one of the world's largest and fastest-growing poultry industries, ranking 3rd in egg production with an annual production of 122.11 billion and 8th in poultry meat production (Anand, 2022). The livestock and poultry sector is expected to be one of the fastest-growing sectors in Indian agriculture, adding a considerable proportion to the national GDP (Chatterjee and Rajkumar 2015). Poultry farming has been an age-old traditional practice in rural, hilly areas of India since time immemorial. It plays an indispensable role in poverty alleviation through income generation through the sale of eggs or chicken (Moreki, 2012; Lenka and Behera 2015), maintains family food security and also provides quality protein for growing and malnourished children. Even with the proliferation of industrial poultry on a large scale, backyard poultry constitutes a significant proportion of the total poultry population at the national level and the demand for eggs and meat in rural areas is fulfilled by the rearing of backyard poultry (Vetrivel and Chandrakumarmangalam 2013; Singh *et al*., 2021). In spite of the low productivity of local birds, the contribution of backyard poultry to Indian egg production is about 21 per cent. Hence, backyard poultry has a tremendous contribution to the upliftment of rural families with reference to socio-cultural and nutritional needs, thus boosting the poultry sector of the country. The poultry industry in India is a very old practice, and this food industry is one of the important contributors to the economy of rural and semi-urban India. The Indian poultry industry is 5,000 years old, and since the last four decades, it has witnessed remarkable growth from backyard to poultry industry. India ranks seventeenth in the world poultry production index. Further, India is the fifth-largest producer of eggs and the ninth-largest producer of poultry meat among all the countries. The organized sector of the poultry industry is contributing nearly 70 per cent of the total output and the rest is 30 per cent in the unorganized sector. The broiler industry is well dominated in the southern states of our country, with nearly 60–70 per cent of total output coming from these states. The layer industry, once again, is represented more in southern states, especially. Andhra Pradesh, Tamil Nadu, and Maharashtra produce nearly 70 per cent of the country's egg production (Ithika *et al*., 2013; Patra *et al.*, 2018). India's 75 per cent of egg production is consumed by the 25 percent of the population living in urban and semi-urban areas. India has emerged as the

only country in the developing world to be a self-reliant, technology-driven industry with the capability to produce every essential input for successful poultry farming, including indigenous genetic resources and breeding, world-class poultry vaccines and medicines, specific pathogen-free eggs (SPF), farms and hatchery automation systems, pelleted feed, egg processing, poultry processing, a nationwide network of disease diagnostic laboratories, and facilities for entrepreneurial development and training in both the private and public sectors (Meena *et al*., 2017). In the last four decades, poultry farming in India has transformed from a mere tool of supplementary income and nutritious food for the family to a major commercial activity generating the required revenue. The growth of the industry, with steady production of 1,800 million kg of poultry meat, 40 million eggs per year, and employment generation of about 3 million people, indicates the future prospects for the industry (Nath *et al*., 2012).

MATERIAL AND METHODS

MPUAT, Udaipur has eight KVK's under its jurisdiction. Out of which Bhilwara is one of district which comes under MPUAT. Bhilwara was selected purposively for the study as the researcher iswell known to the area and Pratapdhan Poultry Production Technology has been widely promoted in the district through KVK Bhilwara. As per the information provided by Subject matter Specialist and Senior Scientist-cum Head KVK, Bhilwara, a chick rearing unit has been established under RKVY and is running efficiently since 2016. KVK has provided 1000 units of Pratapdhan poultry through demonstration under KVK budget and ATMA in fifty villages, out of which five villages were, selected randomly which were namely Pondras, Akola, Salariya, Suwana and Kodukota. For selection of sample, village – wise list of all those rural women among whom the Pratapdhan poultry production technology have been promoted by the KVK through training, demonstration and also possessing poultry unit was prepared with the help of Senior Scientist and Head, KVK Bhilwara and from the list, a random sample of 20 rural women was selected from each village to form a total sample of 100 respondents from five selected villages.

RESULTS AND DISCUSSION

Adoption is a sequence of thoughts and action which an individual goes through before he finally adopts a new idea. No technology is of any consequence unless it is transmitted to the ultimate users in usable form and gets adopted. During investigation, an effort was made to measure adoption level of the respondents about Pratapdhan poultry production technology by using a three-point continuum of always, sometimes and never. Adoption index for different components of Pratapdhan poultry production technologywas also calculated.

Table 1: Adoption of Pratapdhan poultry production technology by the respondents n=100.

Sr. No.	Components	Adoption index (%)
1.	Breeding and rearing of chicks	58.18
2.	Housing management	82.65
3.	Health care management	92.00
4.	Feeding management	41.37

Perusal of data in Table 1 and Fig. 1 clearly reveals that in two components i.e. health care management and housing management, the respondents had high adoption with index 92.00 and 82.65 per cent, respectively. In breeding and rearing of chicks and feeding management component, the respondents had medium adoption with adoption index of 58.18 and 41.37 per cent respectively. Bhati *et al*. (2021) also found varying level of adoption across different components of poultry farming practices.

Fig. 1. Component wise Adoption of respondents regarding Pratapdhan poultry production technology.

Table 2: Adoption of improved breeding and rearing practices of chicks by therespondents n=100.

Sr. No.	Practices	Extent (f / %)			Adoption index (%)
		Always	Sometimes	Never	
1.	Test and select the eggs suitable for hatching	20	52	28	46
2.	Maintain appropriate male and female ratio atpoultry farm for breeding purpose	62	38	0	81
3.	15-20 eggs should be placed under broody hens.	46	54	0	73
4.	Dispose dead birds systematically by burring in field	67	33	0	83.5

Perusal of Table 2 indicates that respondents had adopted breeding and rearing of chick's practices at medium level as the testing and selection of eggs suitable of hatching was adopted sometimes by more than half of the respondents (52%), less than one fourth of the respondents (20%) followed it always and more than one fourth of the respondents (28%) did not adopt this practice. Regarding practice of maintaining appropriate male and female ratio at poultry farm for breeding purpose was followed by two - third of the respondents (62%) always and one third of them (38%) maintained it sometimes. Keeping 15-20 eggs under broody hens was followed by more than half of respondents (54%) sometimes and nearly half of the

respondents (46%) followed it always. Disposing dead birds systematically by burring in field was followed by two third of therespondents (67%) and one third of the respondents (33%) followed sometimes. In the study by Singha *et al*. (2016) it was observed that respondents exhibited a moderate level of adoption in breeding and rearing practices.

Table 3: Adoption of improved housing management by the respondents n=100.

Sr. No.	Practices	Extent (f / %)			Adoption index (%)
		Always	Sometimes	Never	
1.	Change litter every 6months	56	35	9	73.5
2.	Free-range area in poultry house for scavenging and expression of natural behavior (in semi- intensive system)	65	35	10	82.5
3.	Periodically clean & disinfect poultry house	75	25	0	87.5
4.	Avoid entrance onoutside person on poultry house	68	22	10	79
5.	Keep lime power/foot bath at the entrance of poultry house is essential	77	23	0	88.5

Perusal of Table 3 depicts that improved housing management practices were adopted always by majority of the respondents and hence the adoption index ranged between (73.5% to 88.5%) i.e. changing of litter every 6 months was done by more than half of the respondents (56%) always, by one third of the respondents sometimes and very few respondents (9%) did not follow this practice. Periodic cleaning and disinfecting the poultry house was done by three fourth of the respondents always (75%) and one fourth of the respondents (25%) followed it sometimes. Three fourth of the respondents (77%) kept lime power foot bath at the entrance of poultry house always and one fourth of respondents (23%) practiced it sometimes. Two third of respondents (68%) took care always that entrance of outside person be avoided in poultry house, while 22 per cent followed it sometimes and there were few (10%) who did not follow it.

Table 4: Adoption of improved health care management by the respondents n=100.

Sr. No.	Practices	Extent (f/%)			Adoption index (%)
		Always	Sometimes	Never	
1.	Use of quick lime for disinfection of poultry shed	77	20	3	87
2.	Separate sick birds fromrest of the flock	71	20	9	81
3.	Treat sick birds soon.	87	10	3	92
4.	Provide clean water tobirds every day	82	15	3	89.5
5.	Proper cleaning of sheds done when new lot is started	92	8	0	96
6.	Follow vaccination inpoultry	94	6	0	97

Health is a very important aspect for human beings as well as animals, birds or plants. To have good production, and profit in poultry farming, health of poultry birds need to be good. Perusal of Table 4 indicates that respondents had adopted health care practices very well as the adoption index clearly indicates, that 94 per cent respondents always followed the vaccination schedule i.e. they were very particular that most of the disease can be prevented by timely vaccination, followed by proper cleaning of sheds when new lot started was done by 92 per cent of the respondents and sometimes followed by very few of them (8%) and (6%) respectively. Similarly, treatment of sick birds soon was adopted by 87 per cent of the respondents always and very few of them (10%) practiced sometimes. Majority of the respondents (82%) provided clean water to birds every day, few (15%) did it sometimes and 3 per cent of the respondents were careless about it. Separate sick birds from rest of the flock was adopted by 71 per cent of the respondents always and less than one fourth of the respondents (20%) followed it sometimes, less than 10 per cent of the respondents did not care about it. Use of quick lime for disinfection of poultry shed was always done by 77 per cent of the respondents regularly and 20 per cent of them followed it sometimes.

Table 5: Adoption of improved feeding management by the respondents n=100.

Sr. No.	Practices	Extent (f/%)			Adoption index (%)
		Always	Sometimes	Never	
1.	Regularly clean and disinfect water & feeder	25	70	5	60
2.	Provide balanced feed to birds	20	52	28	46
3.	Frequency of feedingis two times per day	30	60	10	60
4.	Feeding of grit to poultry birds	25	60	20	55
5.	Feeding the birds inutensils.	57	43	0	78.5
6.	Debeaking of birds	20	50	30	45

Perusal of Table 5 clearly indicates that adoption of improved feeding management practices by respondents was average as almost all practices were carried out sometimes by majority of the respondents regular cleaning and disinfecting water and feeder practice were adopted sometimes by the majority (70%) of the respondents and one fourth of the respondents did it always. Regarding providing balanced feed to

birds less than one fourth of the respondents only (20%) followed it always and half of the respondents (52%) sometime gave balanced feed and mostly fed whatever they had at home. The reason behind may be as majority of the respondents were from average socio-economic status. Feeding of grit was also adopted always by only one fourth of the respondents (25%) and 60 per cent of the respondents fed it sometimes. Less than one fourth of the respondents never fed grit to poultry birds time only. Regarding feeding of birds in utensils was adopted by 57 per cent of the respondents always and 43 per cent fed the birds by throwing on ground. Regarding debeaking of birds half of the respondents (50%) followed it sometimes, less than one fourth of the respondents (20 %) followed it sometimes and nearly one third of the respondents (30%) did not practice debeaking.

Table 6: Distribution of respondents by their overall adoption of Pratapdhan poultry production technology n=100.

Sr. No.	Adoption Category	Scores	f/%
1.	Low	0-14	07
2.	Medium	15-28	93
3.	High	29-42	0

To know the level of adoption of Pratapdhan poultry production technology by the rural women they were grouped into three categories of adoption namely low, medium and high on the basis of their adoption scores. Perusal of Table 6 highlights reveals that overall adoption of Pratapdhan poultry production technology by the respondents was found to be medium as depicted by overall adoption index (65.00%). Further, categorization of respondents in different adoption categories depict that majority of them (93%) were in the category of medium level of adoption whereas, 7 per cent respondents belonged to low adoption category. None of the respondents was found in the high adoption category. The results are in conformity with the findings of Shekhar and Ranjan (2020) who observed that 87 per cent of respondents were in medium category and 23 per cent of the respondents were in low category regarding adoption of technologies promoted rural women. The results are in line with findings of Kushwah *et al.* (2016) who reported that majority of the poultry farmers showed medium level of adoption (65.43%) of recommended technology after training. The overall adoption index of different Pratapdhan poultry rearing practices were recorded 67.11 per cent.

CONCLUSIONS

The study found that, on the whole, the adoption of Pratapdhan poultry production technology among the respondents can be characterized as moderate. When categorizing the respondents into different adoption groups, the majority (93%) demonstrated a medium level of adoption, while a smaller percentage (7%) fell into the low adoption category. Notably, none of the respondents reached the high adoption category. Delving into the specific components of Pratapdhan poultry production technology, it was observed that, on average, respondents displayed a high degree of adoption in two out of the four components: health care management (with an adoption index of 92.00%) and housing management (with an adoption index of 82.65%). However, in the components related to breeding and rearing of chicks and feeding management, the adoption rates were comparatively low, with adoption indices of 58.18% and 41.37%, respectively.

In the future, it is essential to explore the factors that contribute to the moderate adoption of Pratapdhan poultry production technology. This can involve conducting further research to understand the reasons behind the limited adoption in specific components, such as breeding and rearing of chicks and feeding management. Additionally, interventions and strategies can be developed to encourage higher adoption rates, particularly in these lower-performing components. Furthermore, it would be valuable to assess the long-term impact of adopting Pratapdhan poultry production technology on the livelihoods and well-being of rural women in the Bhilwara district.

This could include studying changes in income, food security, and overall living conditions resulting from technology adoption. Additionally, future research could focus on the experiences and challenges faced by those in the low adoption category to provide insights into how to effectively support and promote technology adoption among this group. This information can inform tailored interventions and strategies to enhance the adoption of Pratapdhan poultry production technology in various regions.

FUTURE SCOPE

The study can contribute valuable insights to the fields of agriculture, rural development, and women's empowerment, ultimately promoting the sustainable adoption of Pratapdhan poultry production technology in the Bhilwara district and similar regions.

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Conflict of Interest. None.

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