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Adoption of Improved Strain of Backyard Poultry

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ABSTRACT

Backyard poultry plays a major role in alleviating malnutrition in developing countries like India. The present study was undertaken among 120 backyard poultry farmers in Karaikal region of Puducherry an aim to assess the extent of adoption of improved strain of backyard poultry in Karaikal region, a backward area in Puducherry Union Territory. Majority of the respondents were middle aged with primary school level of education belonging to small family group with 6-15 years of experience in backyard poultry rearing. Nearly one third of the respondents had 1-5 birds in their backyard. Majority of the farmers reared desi birds followed by Giriraja strain. The average number of eggs per clutch and the average number of clutches per year were 16 and 6 respectively. Majority of the respondents were aware of the improved strains of backyard poultry. Most of them had discontinued rearing improved strain of backyard poultry mainly due to susceptibility to diseases and attack by predators.

Keywords: *Backyard poultry, Adoption, Ranikhet disease, Giriraja strain, Puducherry, India*

INTRODUCTION

Indian poultry sector is mostly organized and holds an important place in the country's GDP growth. Though the backyard poultry (BYP) population has dropped to 10 per cent in the total poultry population, it still plays a major role in rural household food security and income Generation. The government of India is also supporting rural backyard poultry production by introducing improved strains of backyard poultry viz.,

Vanaraja, Giriraja Krishibro, Krishilayer, CARIBRO, Gramapriya, Naked neck broiler, Dwarf broiler etc. The backyard poultry farmers, however, are facing lot of challenges in rearing these improved strains of BYP in their backyard. Thus, training is essential for these backyard poultry farmers in the fields like disease control, feeding, brooding, housing, breeding and marketing to successfully rear these improved strain of birds in their backyard.

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Hitherto, the potential of backyard poultry (BYP) in Puducherry has been unexplored by the researchers even in Karaikal region which ranks first in the backyard poultry population among the four regions of Puducherry Union Territory (U.T.). Keeping this in mind, a study was undertaken among 120 backyard poultry farmers in Karaikal region of Puducherry with an aim to assess the extent of adoption of improved strain of backyard poultry in Karaikal region, a backward area in Puducherry U.T.

METHODOLOGY

Karaikal was purposively selected to conduct the study since it ranked first in backyard poultry population among the four regions of Puducherry Union Territory. Altogether, 120 respondents were selected from the two communes namely Nedungadu and Thirunallar to study the socio economic profile of the backyard poultry farmers. From each commune, three villages were selected at random. A list of backyard poultry farmers was prepared for each of the six selected villages. From this list, 20 farmers from each village were selected randomly. Thus, the sample size included 120 respondents drawn from six villages representing two communes to study the socio economic profile of the backyard poultry farmers.

FINDINGS AND DISCUSSION

Profile of the BYP Farmers

The profile of the 120 backyard

poultry farmers in terms of their age, gender, education, family size, type of house, religion and caste was assessed. Almost half of the respondents belonged to middle age group. Nearly one third were young and the rest belonged to old age group. About per cent of the respondents had only primary level of education. Those who had secondary and higher secondary level of education were 24 per cent and 9 per cent respectively. There were about 10 per cent of the respondents who were illiterate.

Nearly 60 per cent of the respondents belonged to small family with less than or equal to four members. The respondents in medium and large family categories were 35 per cent and 5.8 per cent respectively. This showed that small family norm is being practiced even in rural areas.

Experience in Poultry Rearing

About 45 per cent of the respondents had more than 15 years of experience in backyard poultry rearing. Barring about a quarter of respondents, the rest had an experience of at least six years in rearing backyard poultry.

Flock Size

Nearly one third of the respondents had less than six birds in their backyard. The number of respondents with 6-10 birds and 11-20 birds in their backyard were nearly equal (25% each).

Number of Birds Reared

Majority of the respondents (109 families) were rearing native birds at their backyard. The average number of native

birds reared per family was 10.7. In addition to native birds few respondents were rearing birds such as Giriraja birds (26), Leghorn birds (14) and Aseel birds (9) The results are presented in Table1.

**Table 1.
Number of Birds Reared**

Sl. No.	Type	No.of families rearing *	Total	Average no. of birds per family
1.	Native birds	109	1171	10.7
2.	Giriraja birds	26	192	7.3
3.	Leghorn birds	14	86	6.1
4.	Aseel birds	9	96	10.7

*Multiple responses

Categorization of the Respondents Based on the Number of Eggs per Clutch

The number of eggs laid per clutch by the birds was between 11 and 20 eggs in about 87 per cent of the respondents' houses. The average number of eggs laid per clutch by the birds was 15.8.

Categorization of the Respondents Based on the Number of Clutches per year

The number of clutches per year ranged from 3-8 for *desi* birds in the study area. A little more than half of the respondents indicated that on an average their birds had 5 or 6 clutches per year. The clutches per bird per year was more in study area because the respondents were following the peculiar practice of

selecting one bird for brooding keeping other birds for laying purpose. When other birds start brooding, the respondents dip the birds in cold water to bring them out of brooding stage.

Adoption of Improved Strain of BYP

The respondents were categorised into adopters, discontinued and non adopters of improved strain of BYP based on Rogers' (2003) classification. The findings pertaining to the adoption of improved strain of backyard poultry by the respondents, its discontinuance and rejection are presented below:

a) Rearing Improved Strain of BYP

Although 80 per cent of the respondents were aware of the improved

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strain of backyard poultry (Table 2), only about 27 per cent of them reared improved strain of backyard poultry at the time of study and hence were categorised as adopters. The number of

the respondents who discontinued was 46 whereas, the non adopters who were aware of the improved strain of backyard poultry but rejected it were 24.

Table 2.
Adoption of Improved Strain of BYP

Sl. No.	Contents	f	%	N
1.	No.of Respondents aware of improved Strains of BYP	96	80.0	120
2.	No.of Respondents adopting at present	26	27.1	96
3.	No.of Respondents discontinued	46	47.9	96
4.	No.of non adopters	24	25.0	96

Table 3.
Adoption Characteristics of Improved Strain of BYP

Sl. No.	Contents	f	%	N
1.	Rearing improved strain of BYP at present	26	27.1	96
2.	Strain – Giriraja	26	100.0	26
3.	Age at purchase of chicks			
	a) 4 weeks	15	57.6	26
	b) 8 weeks	09	34.6	
	c) 24 weeks	01	3.9	
	d) Fertile eggs	01	3.9	
4.	Source			
	a) Vendor	12	46.2	26
	b) Dispensary	08	30.7	
	c) Neighbours/relatives	05	19.2	
	d) Farm	01	3.9	

The figures in the table reveal that out of 96 respondents who were aware of the improved strain, only 26 were found adopting improved strain (Giriraja). This was the strain being distributed by the Department of Animal Husbandry as well as sold by vendors in these villages. More than half of the respondents (57.6%) purchased these birds at four weeks of age. About 35 per cent of the respondents purchased these birds at 8 weeks of age. The study also revealed that none of the respondents purchased day old chicks of any improved strain including Giriraja.

These results indicate that the improved strains of BYP were not popular among the respondents.

b. Reasons for Adoption of Improved Strain of BYP

The major reason expressed by the respondents (65.3%) for rearing improved strain of birds was the requirement of eggs for home consumption, whereas 23.1 per cent of the respondents were rearing them for income purpose (Table.4). Very few respondents were rearing these birds as a hobby.

Table 4.
Reasons for Adoption of Improved Strain of BYP

Sl. No.	Contents	f	%	N
1.	No.of Respondents adopting at present	26	27.1	96
2.	<i>Reasons for adoption</i>			
	i) Eggs for household consumption.	17	65.4	
	ii) Income	06	23.1	26
	iii) Colour of plumage	03	11.5	

c. Reasons for Discontinuing Improved Strain of BYP

Nearly half of the respondents (47.9%) had discontinued the practice of rearing improved strain of backyard poultry for several reasons (Table.5). The important reasons for discontinuing were disease outbreak (32.6%) and predators (26.1%). There were 10 respondents who

could not get chicks again for rearing after they slaughtered and used the birds for home consumption. Apart from these, most of the respondents did not develop bond with these birds since they got these birds at an age of more than six weeks and they reared them basically for meat purpose rather than allowing them to grow upto egg laying stage.

Table 5.
Reasons for Discontinuing Improved Strain of BYP

Sl. No.	Contents	f	%	N
1.	No.of Respondents discontinued	46	47.9	96
2.	<i>Reasons for discontinuing</i>			
	i) Susceptibility to Disease	15	32.6	46
	ii) Predators	12	26.1	
	iii) Slaughtered & consumed	10	21.7	
	iv) Difficult to rear	4	8.7	
	v) Non availability of chicks	5	10.9	

d. Reasons for Non Adoption of Improved Strain of BYP

It could be inferred from the table that 25 per cent of the respondents though aware of the improved strain of backyard poultry did not adopt it

for various reasons. One third of them (33.3%) did not adopt because of disease outbreaks. Some of the respondents (25%) expressed the difficulty in rearing the improved strain of birds which need special care and protection from predators.

Table 6.
Reasons for Non adoption of Improved Strain of BYP

Sl. No.	Contents	f	%	N
1.	No.of non adopters	24	25.0	96
2.	<i>Reasons for non adoption</i>			
	i) Susceptibility to Disease	8	33.3	24
	ii) Difficult to rear	6	25.0	
	iii) No interest	4	16.7	
	iv) Non availability of chicks	3	12.5	
	v) Predators	3	12.5	

CONCLUSION

Almost all the respondents were aware of the improved strains of backyard poultry and had experience of rearing Giriraja chicks purchased mostly from vendors and veterinary dispensaries at the age of 6 weeks. Most of the 120 respondents disposed Giriraja birds at a very young age without allowing them to reach egg laying stage probably due to lack of their attachment to the birds.

Except few, most of them had discontinued rearing improved strain of backyard poultry mainly due to their susceptibility to diseases and attack by predators.

Therefore, the animal husbandry sector should not only stop with supply

of hybrid strain of birds but it also should aid the supportive services like vaccination, feeding, housing, marketing of these birds in order to encourage backyard poultry farmers. Thus, the extension activities should be intensified to efficiently transfer the technology from the lab to the farmer's doorstep.

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