

## Socio-Economic Background of Duck Owners and Status of Duck Rearing in West Bengal

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### ABSTRACT

*The present study was carried out in south 24 parganas and north 24 parganas district, West Bengal. From each of the two districts, three blocks were selected randomly. From each of the selected blocks three Gram panchayets (GP) were also selected randomly to study the socio-economic background of duck owners and status of duck rearing. Three hundred respondents were selected for the purpose of data collection and the direct face to face interview method was followed to collect data. It was found that cultivation was the main occupation followed by labourer among the farmers. The ducks were mostly fed home made feed with foraging facilities. The annual average egg production per duck was very poor and most of the duck owners earned a good amount of subsidiary income from duck rearing. Most of the duck owners belonged to poor, small or marginal income group. Most of duck farmers were literate. Women were mainly involved in duck rearing. The majority of flocks comprised of 6-10 ducks. A few duck of improved varieties was found in north 24 parganas but no improved duck was found in south 24 parganas.*

**Key words :** *Socio economic status; Duck rearing; Cultivation, Egg production.*

**I**ndia is a developing country, predominantly based on agriculture including animal husbandry. Poverty and malnutrition to a large extent can be checked through the advancement and modernization of animal husbandry practices along with other effective measures. To counter malnutrition, improvement in the production of meat, milk, egg and such other edible animal products are necessary. In this regard poultry production both in meat and egg has to be increased. It is thought that domestication of ducks first occurred in China, perhaps as far back as 4000-5000 BC (Bo, 1988). Currently, waterfowl meat constitutes approximately 7% of the world production of all poultry meat type. Between 1995 and 2004, the world production of poultry meat rose by 35% and simultaneously ducks meat production increased by 60%. According to 1987 census, duck population in India is 23.48 million, which is 8.53% of total poultry production. Deshi (local) ducks constitute 92% of total duck population. West Bengal and Andaman have the largest number of duck population. Duck production in India still remains a near traditional enterprise among farming committee. As a source base production system of egg and meat, duck rearing also provide employment to the unemployment youth and rural women. Therefore, survey work was undertaken to conduct study on duck rearing system and socio-economic status of duck farmers.

### METHODOLOGY

A survey was carried out with the objective to

ascertain the status of duck rearing, the nature of traditional feeding practices and availability of different natural feeds for ducks and the production status layer ducks in south (S) and north (N) 24 parganas, West Bengal. The wetlands, shallow and stagnant water sources of most parts of above districts provided excellent quarters for duck raising especially during the rainy months. Two districts were selected namely south (S) and north (N) 24 parganas which constitutes southern part of West Bengal. three blocks were selected from each district on the basis of information given by Block Veterinary Officer which was having maximum duck population. Under each block, 3 gram panchayets (G.P.) were selected and under each G.P., 5 villages were selected. 20 duck owners (respondents) were randomly interviewed from each village who adopted duck rearing to support their family income. Therefore, a total number of 300 duck owners from each block were selected as respondents for the study. The direct face to face interview method was followed for the purpose of data collection.

### RESULTS AND DISCUSSION

Socio-economic background of the duck owners and the status of duck rearing in (N) 24 Parganas district has been presented in Table 1 and Table 2 respectively. In (N) 24 parganas, it was evident that most of the duck owners belong to the scheduled caste (40.89%) and other castes (39.11%) followed by the scheduled tribes (20%).

Table 1. Socio-economic background of duck owners and status of duck rearing

Parameters	Rajarhat % (No.)	Sandeshkhali-1 % (No.)	Minakhan % (No.)	Overall % (No.)
<i>Caste</i>				
SC	47.33 (142)	30 (90)	45.33 (136)	40.89 (368)
ST	16.67 (50)	19.33 (58)	24 (72)	20 (180)
Others	36 (108)	50.67 (152)	30.67 (92)	39.11 (352)
<i>Occupation</i>				
Labour	26 (78)	26.67 (80)	28.67 (86)	27.1 (244)
Cultivation	43.33 (130)	43.33 (130)	46.67 (140)	44.44 (400)
Service	12.67 (38)	16 (48)	10.66 (32)	13.11 (118)
Business	8.67 (26)	8 (24)	6 (18)	7.56 (68)
Others	9.3 (28)	6 (18)	8 (24)	7.78 (70)
<i>Education</i>				
Illiterate	15 (45)	13.33 (40)	15 (45)	14.44 (130)
Primary	25 (75)	26.67 (80)	21.67 (65)	24.44 (220)
Middle	36.67 (110)	36.67 (110)	31.67 (95)	35 (315)
High School	18.33 (55)	16.67 (50)	23.33 (70)	19.44 (175)
Bachelor	5 (15)	6.67 (20)	8.33 (25)	6.67 (60)
<i>Land holding</i>				
Land less	29.33 (88)	26 (78)	32 (96)	28.89 (260)
Small	41.33 (124)	46.67 (140)	49.33 (148)	45.78 (412)
Marginal	23.33 (70)	20 (60)	12 (36)	18.67 (168)
Medium-large	6 (18)	7.33 (22)	6.67 (20)	6.67 (60)
<i>Sex involved in duck farming</i>				
Male	20.67 (62)	13.33 (40)	16.67 (50)	16.89 (152)
Female	79.33 (238)	86.67 (260)	83.33 (250)	83.11 (748)
<i>Flock size (No.)</i>				
1 - 5	30 (90)	36.67 (110)	25.33 (76)	30.67 (276)
6 - 10	30 (90)	34 (102)	38 (114)	34 (306)
11 - 20	26.67 (80)	24 (72)	24 (72)	24.89 (224)
>20	13.33 (40)	5.33 (16)	12.67 (38)	10.44 (94)
<i>System of housing</i>				
Organized	1.33 (4)	1 (3)	2 (6)	1.44 (13)
Night shelter	75.33 (226)	81 (243)	84.67 (254)	80.33 (723)
No house	23.33 (70)	18 (54)	13.33 (40)	18.22 (164)
<i>Feeding practices</i>				
Home made	-	-	-	-
Home made + range	80.67 (242)	88.67 (266)	89.33 (268)	86.22 (776)
Only range	19.33 (58)	11.33 (34)	10.67 (32)	13.78(124)
<i>Sex of duck</i>				
Male	22.28 (466)	19.13 (448)	18.31 (618)	19.41 (1512)
Female	77.72 (1626)	80.87 (1894)	81.69 (2758)	80.59 (6278)
<i>Breed of duck</i>				
Deshi	95.60 (2000)	96.77 (2247)	97.75 (3300)	96.88 (7547)
Khaki Campbell	1.91 (40)	1.94 (45)	1.18 (40)	1.60 (125)
Cross	2.49 (52)	1.29 (30)	1.07 (36)	1.51 (118)
Egg/duck/year	90.3	78.7	85.9	85.0
<i>Subsidiary income/annum from duck farming (Rs.)</i>				
=1,000	60 (180)	73.33 (220)	66.67 (200)	66.67 (600)
1,001-2,500	30 (90)	20 (60)	33.33 (88)	26.44 (238)
2,501-5,000	8.33 (25)	5.67 (17)	3 (9)	5.67 (51)
>5,000	1.67 (5)	1 (3)	1 (3)	1.22 (11)

Most of the duck owners were cultivators (44.44%) followed by labourers (27.11%), service class (13.11%), business class (7.56%) and others (7.78%). Educational standard of most of the duck owners found to be up to middle school (35%) whereas a considerable numbers of duck owners having education up to primary level

(24.44%) and high school level (19.44%). It was also found that a considerable number of farmers were illiterate (14.44%). Duck farmers were mostly small land holder (45.78%) followed by landless farmers (27.33%), marginal farmers (18.67%) and medium large land holding farmers (6.67%). Ducks were mostly reared by females

(83.11%) in compared to males (16.89%). Maji, 1995 was also observed that females were mostly in duck rearing in Sundarbans. The flock size was consisting of 6-10 ducks (34%), 1-5 ducks (30.67%), 11-20 ducks (24.89%) and >20 ducks (10.44%). The ducks were mostly kept at night in a small constructed shelter

(80.33%). 18.22% farmers did not possess any permanent shelter and kept their ducks under some bamboo basket and only 1.44% farmers provided organized shelter to their ducks. 86.22% farmers used to provide partial feeding to their ducks with available ingredients besides ranging. Desi variety of ducks were most common

Table 2. Socio-economic background of duck owners and status of duck rearing

Parameters	Kakdwip % (No.)	Namkhana % (No.)	Gosaba % (No.)	Overall % (No.)
<i>Caste</i>				
SC	42 (126)	38 (114)	54 (162)	44.67 (402)
ST	4.67 (14)	11.33 (34)	9.33 (28)	8.44 (76)
Others	53.33 (160)	50.67 (152)	36.67 (110)	46.89 (422)
<i>Occupation</i>				
Labour	24.67 (74)	26 (78)	27.33 (82)	26 (234)
Cultivation	346.7 (104)	38.67 (116)	38.67 (116)	37.33 (336)
Service	20 (60)	126.7 (38)	14.67 (44)	15.78 (142)
Business	10.66 (32)	10.66 (32)	8.66 (26)	10 (90)
Others	10 (30)	12 (36)	10.67 (32)	10.89 (98)
<i>Education</i>				
Illiterate	17.33 (52)	16.67 (50)	14.67 (44)	16.22 (146)
Primary	30 (90)	32 (96)	25.33 (76)	29.11 (262)
Middle	26.67 (80)	23.33 (70)	33.33 (100)	27.78 (250)
High School	16.67 (50)	21.67 (65)	21.67 (65)	20 (180)
Bachelor	9.33 (28)	6.33 (19)	5 (15)	6.89 (62)
<i>Land holding</i>				
Land less	16.67 (50)	27.3 (51)	16 (48)	16.56 (149)
Small	50 (150)	41.67(125)	53.33 (160)	48.33 (435)
Marginal	26.67 (80)	26 (105)	23.33 (70)	28.33 (255)
Medium - Large	6.67 (20)	6 (19)	7.33 (22)	6.78 (61)
<i>Sex involved in duck farming</i>				
Male	20 (60)	21.67 (65)	20 (60)	20.56 (185)
Female	80(240)	78.33 (235)	80 (240)	79.44 (715)
<i>Flock size (No.)</i>				
1 - 5	28.33 (85)	25 (75)	32.67 (98)	28.67 (258)
6 - 10	48.33(145)	46.67 (140)	36.67 (110)	43.89 (395)
11 - 20	20 (60)	27 (81)	26.33 (79)	24.44 (220)
>20	3.33(10)	1.33 (4)	4.33 (13)	3 (27)
<i>System of housing</i>				
Organized shelter	-	-	-	-
Night shelter	73.33 (250)	74 (222)	76 (228)	77.78 (700)
No house	16.67 (50)	26 (78)	24 (72)	22.22 (200)
<i>Feeding practices</i>				
Home made	-	-	-	-
Home made + range	79.33 (238)	79.33 (238)	71.33 (214)	76.67 (690)
Only range	20.67 (62)	20.67 (62)	28.67 (86)	23.33 (210)
<i>Sex of duck</i>				
Male	26.22 (646)	25.78 (638)	27.22 (760)	26.44(2044)
Female	73.78 (1824)	74.22 (1836)	72.78 (2038)	73.56(5698)
<i>Breed of duck</i>				
Deshi	100 (2470)	100 (2474)	100 (2798)	100 (7742)
Khaki Campbell	-	-	-	-
Cross	-	-	-	-
Egg /duck/ year	101.3	95.5	91.9	96.2
<i>Subsidiary income / annum from duck farming (Rs.)</i>				
=1,000	56.67 (170)	50 (150)	62.67 (188)	56.44 (508)
1,001-2,500	36.67 (110)	45(135)	29.33 (88)	37 (333)
2,501-5,000	5 (15)	4 (12)	5 (15)	4.67 (42)
>5,000	1.67 (5)	1 (3)	3 (9)	1.89 (17)

(96.88%) whereas a few Khaki Campbell variety (1.60%) and cross variety (1.51%) found in some isolated pockets. About 66.67%, 26.44%, 5.67% and 1.22% of the duck rearers earned a subsidiary income of Rs. ₹ 1,000, Rs. 1,001 - 2,500, Rs. 2501-5000 and Rs. >5000 per annum respectively from duck rearing.

From the Table 2, it was evident that in 24 Parganas (South) district, duck rearing was mostly practiced by the other caste (46.89%), which was just followed by scheduled caste (44.67%) and least among the scheduled tribes (8.44%). Cultivation was the most common occupation (37.33%) amongst the duck rearers followed by labourers (26%), service (15.78%), others occupation (10.89%) and business class (10%). Most of the duck owners were less educated that is up to primary level (29.11%) just followed by middle school level (27.78%) having mostly small land holding size (48.33%). Mostly female members (79.44%) of the family looked after duck rearing. Most of the duck owners had a flock size of 6-10 ducks (43.89%) followed by 1-5 ducks (28.67%), 11-20 ducks (24.44%) and whereas only 3% farmers kept above 20 numbers of duck. 77.78% duck owners provided night shelter for their ducks and 76.67% farmers used to provide supplemental feeds besides ranging. Most of the ducks were female (73.56%) kept for laying purposes and no improved varieties of ducks were found in those regions. Average egg production per annum per duck was 96.2 with a subsidiary earning up to Rs. ₹1000 by 56.44% farmers followed by Rs. 1,001-2,500 by 37% farmers, Rs. 2501-5000 by 4.67% farmers and Rs. > 5000 by 1.89% farmers of the duck rearers. More interestingly no improved duck breed was found in (S) 24 parganas.

From the above results in both (N) and (S) 24 parganas, it was found that most of the duck farmers earned a subsidiary income of Rs. ₹1000 by duck rearing and a considerable number of owners also earned slightly higher amount of subsidiary income 1,001-2,500 annually. This finding is corroborated with the findings of Islam *et al.*, 2002. It was also seen in both districts that ducks were mainly reared by scheduled caste and scheduled tribe people and females were mostly associated with duck rearing. Haque *et al.*, 2004 was observed similar findings in Sylhet basin of Bangladesh. But Rithamber *et al.*, 1986 observed that backward class and scheduled tribes with poor social and economic status were mainly involved in duck rearing. In (N) and (S) 24 parganas, the economic background of duck farmers in general was not sound enough to maintain their families. The present

findings also corroborated well with the findings of some other scientists (Gajendran *et al.*, 1992). Most of the duck farmers in (N) and (S) 24 district having mostly literate person which did not correlate with the findings of several scientists (Maji, 1995 and Haque *et al.*, 2004) who stated that literate people were mainly involved in duck rearing. The primary sources of feeding for adult ducks were post-harvested paddy fields for grains, ponds and water logging areas for fish, snails and insects. This was in agreement with the observations of Ravindran, 1983 and Reddy, 1987. Flock size about 6-10 in number was very common in these area. This findings were dissimilar to the findings of Islam *et al.*, 2002, to the findings of Gajendran *et al.*, 1992 in Tamil Nadu, to the findings of Nind and Tu, 1998 in South Vietnam and to the findings of Mahanta *et al.*, 2001 in Lakhimpur and Dhemaji districts of Assam. A few Khaki Campbell duck (1.39%) and Khaki Campbell x Deshi cross (0.69%) found in the surveyed area. These findings were supported with the findings of Mahanta *et al.*, 2001 in Lakhimpur and Dhemaji districts of Assam. Similarly, Jalil *et al.*, 1993 found that primarily the farmers in Bangladesh reared 'Desi' and non-descript ducks. The egg production data corroborated with the findings of Islam *et al.*, 2002 in Assam and also similar to the observations of Mahanta *et al.*, 2001 in ducks in Kerala and Assam, respectively, while it contradicted with the findings of Ravindran *et al.*, 1984 who stated an average egg production of 130-140 eggs per duck per annum in Kerala state.

## CONCLUSION

Lastly, it can be concluded that cultivation was the main occupation followed by labourer among the duck farmers in (N) and (S) 24 parganas. The ducks were mostly fed home made feed with foraging facilities. Most of the farmers provided supplementary feeding to their ducks in the form of crushed snails, rice paste and kitchen refusals etc. in the surveyed area, it was found that the annual average egg production per duck was very poor and most of the duck owners earned a good amount of subsidiary income from duck rearing. Most of the duck owners belonged to very poor, small or marginal income group. Most of the duck farmers in these localities were literate people. In the present survey, mostly women duck farmers were involved in duck rearing. A few improved varieties are found here. The majority of flocks comprised of 6-10 ducks.

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