

Family Poultry for Poverty Alleviation and Gender Equality Promotion in Coastal Bangladesh: A Food and Nutritional Security Study

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Abstract

Family poultry rearing has been practiced for many years in developing countries, since it has been proven as an appropriate tool to supply high-quality protein to fast growing population, providing extra income to poor farmers, especially women. This study was conducted at SLOPB project areas of Patuakhali, a coastal district of Bangladesh to observe the effect of family poultry on poverty alleviation, equality of gender promotion and food security at household level. A total of 583 women beneficiaries of 28 village organizations (VO) were given training and technical support on improved poultry management system, after baseline survey on their socioeconomic status, to uphold their opportunity, to earning and hence reducing poverty, food and nutritional security status at household as well as social status. It was observed that, both in VO and individual level, their income became significantly increased and hence better food and nutritional security in their household, and the women were self-employed, empowered, and more esteemed to their family members as well as society than ever before.

Keywords: family poultry, income, women empowerment, food security

1. Introduction

Lowering poverty and malnutrition cannot be achieved by one single intervention. However, livestock, especially poultry species, have seen to provide an effective first step (Mack, Hoffmann, & Otte, 2005). Therefore, the role of family poultry in poverty alleviation, food security and the promotion of gender equality in developing countries, where nearly all families at the village level, even the poor and landless, are owners of poultry, and mainly owned and managed by women (Upton, 2004), and, it specially acts as an income source and employment of women (Gujit, 1994; Alders, 1996; Fattah, 2000; Guèye, 2002b). Bangladesh, where about 89% of the rural households keep poultry (Fattah, 2000), contributes 7% of the total meat, and 27% animal protein of the country (Hai, Mahiuddin, Howlider & Yeasmin, 2008), is a good example of how poultry can have an impact on the empowerment of the poorest women and on poverty reduction (Nielsen, 1998). Therefore, this concept developed in Bangladesh is currently in an adaptation process to conditions in Malawi (Jensen, 2001; Gondwe, 2001) and Southern Africa (Mack, Hoffmann, & Otte, 2005).

Food security includes food availability and access, ensuring adequate diet of all members of household, achieved either by production or purchase. So, family poultry, relating to food security, must address both food availability and earning money (IDRC, 1994). Poultry farming relating to nutritional status and income of poor has been repeatedly demonstrated (FAO, 1982). The Bangladesh Rural Poultry Development Program clearly showed that families without poultry were poorer than those with poultry (Jensen, 1996). The technological changes of crop and animal farming must be based on socio-economic condition of low income food deficit countries (Sonaiya, 2000), and, only low cost technology is needed to improve production considerably (Upton, 2004).

It was proven that, family poultry is accessible to the poorest of the poor. Considering the facts and knowledge, the study was undertaken to observe the effect of family poultry on household level regarding increased income, increased food production and security, and promotion of gender equality.

2. Materials and Methods

2.1 Selection of Target Women

A total of 583 beneficiaries were selected from different areas of Bauphul Thana of Patuakhali, a coastal district of Bangladesh from 28 Village Organizations (VO).

2.2 Baseline Survey

A base line survey was conducted in terms of demographic, socio-economic status and monthly income from family poultry before starting the intervention.

2.3 Training and Information Dissemination

To increase their income, different activities like participatory needs assessment and planning, weekly group meetings, training on poultry rearing, arrangement of vaccines and feed, create linkage with markets for availability of poultry feeds were done during the study period.

2.4 Data Collection

Data on income from family poultry, both at individual beneficiaries and VO level were collected through a structured questionnaire in every month during the project period.

2.5 Data Analysis

The measure of central location average was used to calculate mean income in different years, one sample t test was used to test significantly increase in income and one way ANOVA or F test was used to test significant difference income in different years.

3. Results

In this study, among 583 beneficiaries, the number of beneficiaries coming into income in different years, yearly average income, increasing income from preceding years and from baseline were observed both in individual and VO level.

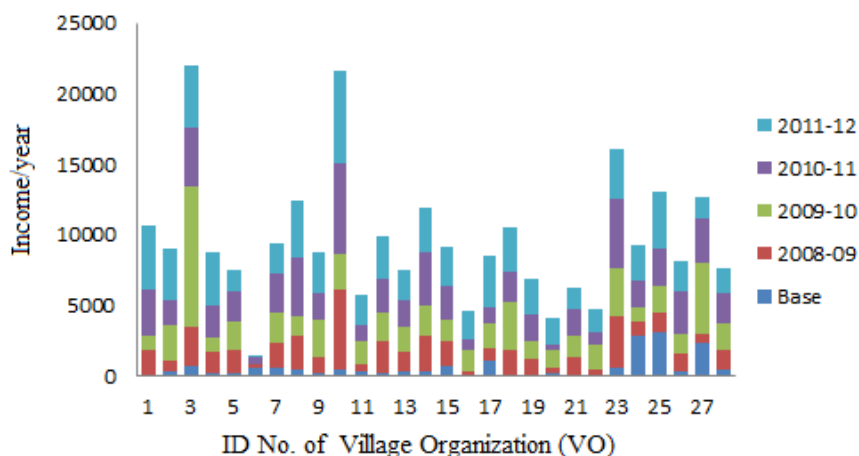


Figure 1. Average yearly income of village organizations (VO)

Figure 1 portrays that, the total number of VO was 28, with average number beneficiaries of 20, wherein increasing the income from baselines were calculated in the last year for 26. There was a drop in group income for 9 VOs were observed both for 2009-2010 and 2010-2011. In baseline, about 43% beneficiaries got income from poultry after making up the family demand for consumption which increased at 63.7, 60, 69.9 and 62.6 in the successive years.

Table 1. Increasing income of different VO of study area

	Base	2008-2009	2009-2010	2010-2011	2011-2012
Average	12780.14	31895.41	44664.00	49539.46	57110.01
per day	35.01	87.38	122.3700	135.7200	156.47
Euro/day	0.35	0.87	1.2200	1.3600	1.56
% increase per year		149.57	40.03	10.96	15.28
% increase from baseline		149.57	249.48	287.63	346.86

Table 1 describes the average income of VO where it was Bangladesh (BD) Taka (Tk.) 12780.14 (0.35 Euro/day) and increased significantly ($F=5.042$, P -value < 0.05) in 2008-09, 2009-10, 2010-11 and 2011-12 at BD Tk. 31895.41 (0.87 Euro/day), 44664.00 (1.22 Euro/day), 49539.46 (1.36 Euro/day) and 57110.01 (1.56 Euro/day) and; yearly increased percentages were BD Tk. 149.57, 40.033, 10.96 and 15.28; and increased from baseline were significant ($t = 6.236$, P -value < 0.05) at BD Tk. 149.57, 249.48, 287.63 and 346.86 percent respectively.

Table 2. Frequency of beneficiaries in different years with income level

Income level	Baseline	2008-2009	2009-2010	2010-2011	2011-2012
0-10,000	577	545	562	537	549
10,001-20,000	3	3	8	4	19
20,001-30,000	0	2	0	3	1
30,001-40,000	3	3	1	2	1
Above 40,000	0	0	2	2	1
% household above 10,000	1.03	1.35	1.92	2.01	3.85
Missing	1	31	11	36	13

Categorizing beneficiaries according to income, given in Table 2, varying from baseline to other years, and household income greater than 10,000 was significantly increased ($t=4.15$; P -value < 0.05) from baseline makes up 1.03 percent to final year representing 3.85 percent.

Table 3. Increasing income at beneficiary level at study area

	Baseline	2008-2009	2009-2010	2010-2011	2011-2012
Yearly income	613.80	1542.66	2147.902	2444.042	2738.264
BDT/day	1.7	4.23	5.88	6.7	7.5
Euro/day	0.02	0.04	0.06	0.07	0.075
%Yearly increase		138.3975	44.26925	9.021424	16.73211
% Increase from baseline		151.3304	243.9342	274.962	337.7011

Increasing income at individual level illustrates in table 3, where average yearly income became highly significantly increased ($F=20.81$; P value < 0.01) from baseline BD Tk. 613.80 (or 0.02 Euro/day) to 1542.66 (or 0.04 Euro/day), 2147.902 (or 0.06 Euro/day), 2444.042 (0.07 Euro/day) and 2738.264 (0.075 Euro/day) at the end four years whereas yearly increased from baseline were significantly increased ($t= 6.49$; P -value < 0.05) to 151.33, 243.93, 274.96 and 337.70% and, increasing from preceding years were 138.40, 44.27, 9.02 and 16.73% respectively.

4. Discussion

From this study, it is evident that, poultry farming is a tool to improve the socioeconomic and food security status of women and hence empowered them in their family and society. Income of individual beneficiaries and as a group as VO increase significantly from baseline. This is in agreement with Mack et al. (2005) who stated that

poultry farming have seen to provide an effective first step lowering poverty and malnutrition and, It is acts as an income source and employment of women (Gujit, 1994; Alders, 1996; Fattah, 2000; Guèye, 2002b). It was further stated by IDRC (1994) that food security ensures adequate diet of all members of household, achieved either by production or purchase and family poultry addresses both food availability and earning money. Jensen (1996) reported that, families without poultry were poorer than those with poultry.

5. Conclusion

The nutrition intake of the beneficiary households could be increased through household production of eggs and meat and unemployment reduced through creating the self-employment in poultry sector. Family poultry makes an important contribution to poverty alleviation and should be considered in any strategy aimed at improving rural livelihoods. With the right policies and investment, there is ample evidence that well designed and participative development programs can overcome the constraints faced by the smallholder poultry producer with significant economic and social benefits.

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