**Chapter 1**

**Introduction**

In many developing countries such as Bangladesh, female members of rural families do not have opportunities to work in value adding economic activities, except homestead poultry rearing. Women and girls are undervalued, especially in developing countries, and only half a cent of every international development dollar goes towards helping girls (Levine, Lloyd, Greene & Grown, 2008). A rural woman spends her time taking care of her husband, children, elders and other members of her family. Rural women are unable to work outside their home or beyond their homestead because of family restrictions, social and traditional barriers. Therefore, their potential often remains unutilized or underutilized. Most rural families have insufficient food, clothing, shelter, medication etc. Given these difficult circumstances, homestead poultry rearing is considered the best way to utilize the capabilities of women to be productive and add value to the household. Rural women have the opportunity to rear poultry in their homestead because it requires minimum land, small amount of capital and uses traditional technology. The market for poultry products is usually within the vicinity of the homestead. Consequently, home-based poultry is now one of the main sources of income for the rural women of Bangladesh. Poultry also provides meat for the villagers of Bangladesh. Rural women have the discretion to use money earned from the home-based poultry firm. They spend those earnings on the welfare of their children and for special occasions such as, Eid, Puza or Christmas (religious festivals). They buy clothes for their children and for themselves from this income. Profits are often used for educating their children and for buying medicines for family members. This income also helps during family emergencies. Through these traditional poultry rearing practices, rural women are empowered by being involved in the decision making process of their households. The increased involvement in decision results in the improved status of women in relation to the husband and the family. They can spend money for themselves, which gives them independence to take part in making family decisions. Greater financial independence for rural women increases their bargaining capacity, reduces violence against women, and enables them to gain more influence over decision-making in the family (Hadi, 1997 Involving of women in economic activities is increasing in developing countries (McNamara, 2003).

Empowering women through self-employment and entrepreneurship in different socio-economic sectors, results in new opportunities for income generation. According to Murdoch (1999), micro credit is a useful tool for the empowerment of women, for poverty alleviation and a relatively new approach for developing economies to solve women's difficulties in obtaining financing. Micro finance appears to offer a "win-win" solution, where both financial institutions and poor clients, especially rural women in developing countries, will benefit (Mayoux, 2001; Murdoch, 1999). While the benefits of empowerment of rural women are significant, variables associated with empowerment have not been clearly identified. We seek to fill this gap in the literature by identifying the determinants of empowerment of rural women in Bangladesh. The profile of human deprivation (UNDP, 1996) indicated that in 1993, the percentage of people in the country for whom basic human needs are not met is 76%. They are in a state of economic, social and psychological deprivation having insufficient ownership, control or access to resources as required for an acceptable living standard Human Development refers to development of all men, women and children. About 80% of the population of the country live in villages and poverty is higher in rural than in urban areas. Fifty percent of the population are women and poverty is higher among women than among men. Women are comparatively less educated and skilled. According to a report by FAO, 15% of all households in Bangladesh are headed by women who are either widows, divorced or having a disabled husband and according to the same report, 96% of the members of these households are below the poverty line and33% of them belong to the hard core poor who experience chronic food shortage due to their inability to participate in any income earning activities as women's access to employment in Bangladesh is limited. Poverty has forced many of them out of their homes in search of employment even though the female wage rate is 25-30% lower than the male wage rate.The effect of poverty falls most severely on women and girls as they get less food, their calorie intake being 29% lower than men's and boys'. About 93% children under 5 years and 77% of pregnant mothers of this class suffer from protein deficiency and malnutrition, 30-35% newborn babies are below normal weight. Malnutrition affects physical and mental growth, learning capacities and activities of people.

The study focuses on the homestead poultry rearing industry in which a large number of rural women are employed.

**Objectives of the study:**

* To analyse the socio-economic condition of the women.
* To evaluate production performance and profitability of raising duck/chickens in different numbers.
* To know the prospects of duck/chicken rearing in Bangladesh.
* To study the constraints in the backyard poultry practices as listed by rural people and their possible solution.
* To suggest simple low cost practices to enhance sustainable income generation through backyard poultry rearing.

**Table 1-:2 Year-wise Livestock population (in million) during Six year.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Particulars | 2002-03 | 2003-04 | 2004-05 | 2005-2006 | 2005-2007 | 2007-2008 |
| Cattle | 22.53 | 22.60 | 22.67 | 22.69 | 22.72 | 22.9 |
| Buffalo | 1.01 | 1.06 | 1.11 | 1.16 | 1.21 | 1.26 |
| Goat | 17.69 | 18.41 | 19.16 | 19.60 | 20.46 | 21.56 |
| Sheep | 2.29 | 2.38 | 2.47 | 2.62 | 2.71 | 2.78 |
| Chicken | 162.44 | 172.63 | 183.45 | 192.12 | 198.85 | 212.47 |
| Duck | 35.54 | 36.40 | 37.28 | 37.85 | 38.64 | 39.84 |
| Pigeon | .72 | .75 | .82 | .86 | .96 | 1.02 |

**Source: DLS (Annual report-2008)**

**Chapter 2**

**Literature Review**

**2.1 Meaning of Empowerment of Rural Women**

A review of literature on rural women empowerment revealed several relevant models (Amin, Becker & Bayes, 1998; Batliwala, 1994; Friedmann, 1992; Hashemi, Schuler & Riley 1996 ). Friedmann‟s (1992) model of empowerment involves local self-reliance, direct participatory democracy and experiential social learning. He suggests that external agents can play a role in providing „support in ways that encourage the disempowered to free themselves of traditional dependency‟ (Friedmann, 1992: 77). All three kinds of empowerment are seen as relevant to women‟s struggles and form an interconnecting triad. Friedmann (1992: 116) suggests that „when this triad, centered on an individual woman and household, is linked up with others, the result is a social network of empowering relations that, because it is mutually reinforcing, has extraordinary potential for social change‟. This view of empowerment is similar to that of Claridge (1996) and Lather (1991).

Rappaport (1987) defined empowerment as “a process by which people, organizations, and communities gain mastery over issues of concern to them” (p. 122). Zimmerman (1995) presented three areas in the lives of human beings in which empowerment occurs: 1) Psychological empowerment (PE) refers to empowerment at the individual level of analysis, 2) Organizational empowerment (OE) refers to improved organizational effectiveness by effectively competing for resources, networking with other organizations, or expanding its influence (i.e., empowered organization) and 3) At the community level of analysis empowerment refers to individuals working together in an organized fashion to improve their collective lives and linkages among community organizations and agencies that help maintain that quality of life. (pp. 581-582). He further expounded on his theory by distinguishing between empowering processes and empowered outcomes. He defined empowering processes as those “where people create or are given opportunities to control their own destiny and influence the decisions that affect their lives” (p. 583). Shefner-Rogers, Nagesh, Rogers, & Wayangankar (1998) described empowerment as “a communication process designed to change an individual‟s behavior through communication relationships with others” (p. 321). They based their 4 arguments on the work of Freire (1973), who emphasized that “empowerment occurs through a communication process in which the relationships between the oppressed and the oppressor undergo a fundamental change”. In this study, we focus on the psychological empowerment (PE) of women. Psychological empowerment includes beliefs that goals can be achieved, awareness about resources and factors that hinder or enhance one‟s efforts to achieve those goals, and efforts to fulfill the goals. (Zimmerman, 1995: 582). Several researchers have identified self-confidence and self-esteem as essential „first steps‟ to empowerment (Anderson, 1996; Claridge, 1996). Feelings of greater individual control are another important aspect of psychological empowerment (Anderson, 1996).

Several studies have also indicated that women may be empowered in one area of life, while not in others (Malhotra & Mather,1997; Kishor, 1995, 2000a; Hashemi et al., 1996). In this study we take the position that women‟s empowerment can be measured by factors contributing to personal, economic, familial, and political empowerment. We also include household and interfamilial relations as we believe these variables significantly affect women‟s empowerment in Bangladesh.

Taking the perspective of people in households, Friedmann (1992) argues that they potentially have access to three kinds of power: *social, political* and *psychological.* „Social power‟ requires „access to certain “bases” of household production such as information, knowledge and skills, participation in social organisations, and financial resources‟ (Friedmann, 1992: 33). This form of empowerment therefore includes key features of social capital, which has been identified as an essential element of sustainable rural community development (Harrison, 1998). Amin et al (1998) split the concept of women‟s empowerment into three components, each measured separately: Inter-spouse consultation index, which seeks to represent the extent to which husbands consult their wives in household affairs; individual autonomy index which represents women‟s self-reported autonomy of physical movement outside the house and in matters of spending money; and the authority index, which reports on actual decision-making power (which is traditionally in the hands of the patriarch of the family). Comparable components of empowerment are included in the eight indicators by Hashemi (1996), i.e., mobility, economic security, ability to make small purchases, ability to make larger purchases, involvement in major decisions, relative freedom from domination by the family, political and legal awareness, and involvement in political campaigning and protests.

Batliwala‟s (1994) conceptualization of empowerment draws on the experiences in the subcontinent, especially in India. This conceptualization is based on experiments that attempted to enact the process of empowerment on the ground with various marginalized communities, but focused most often on poor rural and urban women. She defines empowerment as a process of transforming the relations of power between individuals and social groups by shifting social power in three critical ways. These methods include (1) challenging the ideologies that justify social inequality (such as gender or caste), (2) changing prevailing patterns of access to and control over economic, natural and intellectual resources, and (3) transforming the institutions and structures that reinforce and sustain existing power structures (such as the family, state, market, education and media).

**2.2Home-based Poultry Rearing in Rural Bangladesh**

Approximately 84% of the total population of Bangladesh lives in rural areas. Agriculture plays a vital role in the economy of the country accounting for about 32% of total GDP. This sector comprises crops, forests, fisheries and livestock. Of the agricultural GDP, crops contribute 71%, forests 10%, fisheries 10% and livestock 9%. The agricultural sector generates about 63% of the total national employment of the country (Ministry of Agriculture website, 2004). Poultry, which is mostly homestead-based, is one of the most important contributors to the agricultural sector.

Since the mid-1900s, public policy sought to develop a modern poultry sector in Bangladesh. In 1954, a company named „Eggs and Hens‟ commenced modern poultry farming practices in the private sector in Bangladesh. After independence, medium sized breeder operations were established with the initiative of the government under the Biman Poultry Complex Program. However, till the late 1980s, this industry experienced slow growth. Since 1990, a large number of private companies started their operations with the financial support of Non-Government Organizations (NGOs). Today, the investment in this sector is between US $1-5 billion and generates employment of 3-5 million. There are about 100,000 small-medium sized commercial poultry farms owned and operated by the people of Bangladesh (Kabir, 2005).

Along with agricultural work, home-based poultry rearing (e.g., roosters, hens, ducks, swans, geese, birds etc.) is a traditional practice for almost every rural family, as it generates extra income for these families. It is an integral part of agro-rearing practices of the village community of Bangladesh. About 89% of the rural house-holds rear poultry and the average number of birds per household is 6.8 (Fattah, 1999). These poultry rearing practices are predominantly operated and managed by rural women on a small scale. About 70% of rural landless women are directly or indirectly involved in poultry rearing activities. Usually, the investment for starting this business is only the cost of 15 to 20 eggs which is about (Taka)1 Tk. 120 to Tk. 160 (less than US $1). These eggs are kept in a neighbor‟s house and the neighbor‟s hen is used to hatch baby chicks or baby ducks. Rural women take care of the chicks till they grow up. The chicks are fed mainly on the husk from rice. Baby ducks feed on snails which are collected from the paddy fields by children. Sometimes ready-made poultry feed is bought from the nearby market. After six months, these hens and ducks are able to produce eggs every day for at least six weeks. The male head of the family sells these eggs at the local market. Sometimes, shop-keepers buy eggs directly from the rural women who live nearby.

Duck rearing is one of the most prospective sector for development. It is a quick returnable enterprise that needs relatively small initial investment. To meet the shortage of protein supply within a shortest possible time, expansion of duck rearing is crying need. The expansion of duck sector depends among other things, on the profitability of duck rearing and egg production at farmers level. Most of the ducks in the country are indigenous type and are reared in the rural areas under scavenging condition with forage in water bodies like ponds, ditches, tanks etc. We know that duck rearing is superior to deshi chicken rearing to some extent because duck provides more eggs than chicken. Not only that duck is more resistant to diseases than chickens. The weight of duck egg is more than that of chicken egg. Moreover’ duck can be reared in flood affected area where chicken rearing is not possible. It has been also found that indigenous ducks are more habituated with the ordinary feeding management provided by the small farmers as well as landless farmers. Traditionally women and children are involved in rural duck keeping which is the most appropriate income generating activity for poor, landless and destitute women and youth. It is roughly estimated that ten rural ducks can provide the same income as a women day laborer (Banergee and Sharma, 1998). In the small scale duck units, which support the landless, production per bird may be low, but distribution of benefits will be more equal and have great effect on human development. Duck rearing is suitable for wide spread implementation as it is of low cost, requires little skills, is highly productive and can be incorporated into the household works (Saleque and Mostafa, 1996). Backyard duck production gives increase economic stability to farm households by serving as cash buffer reserve that can be a key income supplement for the landless and otherwise asset for the poor in Bangladesh. The BRAC-DLS small holder duck model, specially targeted to poor women currently being practiced in a large part of the country has showed that duck can be a vehicle to improve income and food security of the poorest of the poor who cannot afford to maintain large animal due to capital shortage.All of the ducks our indigenous ducks, are mostly prevalent in our country, which may produce 80-150 eggs/year and more resistance to diseases than other breeds (Kamar et. al. 1977). If we enrich small farmer and landless labors families through a more holistic and selfreliant approach not only interims of improvement of income, employment and nutritional status but also in terms of fostering community development, gender empowerment and protection of environment envisaged on the larger canvass of ‘Rural development’, using duck as a tool.

Village chicken production systems are based on the scavenging indigenous domestic fowl (Gallus domesticus), the predominant species in the rural poultry sector in Bangladesh. These local chickens remain predominant in own villages despite the introduction of exotic and crossbred types, because farmers have not been able to afford the high input requirement of introduced breeds (Kaiser, 1990; Safalaoh, 1997). Although the introduction of high-yielding chicken breeds in Bangladesh dates back to the 1920s, village chicken populations comprise from five to 50 local types. In most Asian countries, the chickens have no regular health control programme, may or may not have shelter, and scavenge for most of their nutritional needs. Supporting data in the literature have been provided for Burkina Faso (Bourzat and Saunders, 1990), Ghana (van Veluw, 1987), Mali (Kuit, Traore and Wilson, 1986), the Niger (Abdou and Bell, 1992), Togo (Aklobess, 1990) and the People Republic of Tanzania Bangladesh (Yongolo, 1996).An indigenous and integral part of the farming system, with short life cycles and quick turnovers;low-input production systems with outputs accessible at both inter household and intra household levels; a means of converting low-quality feed into high-quality protein.

Moreover, land is a critical production resource in rural Asia - is not a limiting factor in village chicken production systems. Consequently, disadvantaged groups in the community can be direct beneficiaries of village chicken improvement programmes. For example, chicken production improved the status of landless women in Bangladesh through access to more food, income and labour, as well as increased social status in the rural community (Saleque and Mustafa, 1996). The Bangladesh project was based on a semi-scavenging model for rural poultry that combined technical improvements with institutional and organizational support (Jensen, 1996).

Feeding and watering:Among the respondents about 78% are fed their birds with mixture of boil rice and rice polish as it is available and cheap.Most of the house holds fed their duckling with snail,duck weed,khai etc.92%respondents said that they do not spend money on supplementary feed.Fequency of feed offered to the ducks varied from two to three times in a day.

**Table2 :The ration recommended for Native chicken (age basis) by BLRI**

|  |  |  |  |
| --- | --- | --- | --- |
| ingredients | 0-6/8 weeks(kg) | 6- 16/17 weeks(kg) | 16-72 weeks(kg) |
| Maize | 50 | 55 | 55 |
| Rice polish | 16 | 13 | 12 |
| Soybean meal | 25 | 23 | 20.25 |
| Protein conc. | 6 | 5 | 5 |
| Limestone | 1 | 2 | 5 |
| DCP | 1.25 | 1.25 | 2 |
| VM premix | .25 | .25 | .25 |
| Lysine | .1 | .1 | .1 |
| Methionine | .1 | .1 | .1 |
| Salt | .3 | .3 | .3 |
| Total | 100 | 100 | 100 |
| ME(kcal/kg DM) | 2860 | 2862 | 2808.6 |
| CP% | 20.23 | 18.9 | 17.86 |
| Ca% | 1.06 | 1.31 | 3.04 |
| P% | .58 | .54 | .74 |

**Source BLRI 2006**

**2.3 Some disease of backyard duck/ chicken:**

Major diseases of poultry in studied area that have been predominantly identified in scavenging poultry are Duck plague, duckcholera, Newcastle disease (ND),fowl cholera, fowl pox coccidiosis etc.

**2.4 VACCINATION AND MEDICATION:**

Used to slaughter duck when they are sick. They hardly treat the sick duck. 58% farmers express that Duck plague and duck cholera are the main reason for mortality where the rest express that they were not aware of and could not identify the diseases. Due to unavailability Most of the house holds express that in winter season duck are affected mostly and they of vaccine and lack of awareness a considerable number of house holds do not vaccinate regularly to their ducks.

**Table:3 Vaccination schedule for chicken**:

|  |  |  |  |
| --- | --- | --- | --- |
| Name of disease | Name of vaccine | Age of administration | Route of administration |
| Baby Chick Ranikhket Disease | BCRDV | First dose at 4-7 days of age and boostering after 21 days | Eye drop |
| Ranikhet | RDV | First dose at >60 days of age and then every 6 months interval. | Thai muscle |
| Fowl pox | Fowl Pox Vaccine | First dose at >21days no need boostering. | Wing skin by use BP needle. |

**Source LRI 2009**

**2.5 BREEDING AND HATCHING:**

Natural mating is done for rural ducks. Maintenance of standard 1:5 drake and duck ratio was reported by most of the farmers. Most of the farmers said that sexual maturity at deshi breeds of ducks attained between 5.5-6 months and average egg production per year 110 eggs/year. It was also found that egg production reaches peak during winter especially after crop harvesting season. Mortality rate of duck is high in winter, and due to less vaccination mortality varies from place to place. It was found that most of the house holder use natural procedure of hatching by using hen and brooding also by hen itself. But hardly select artificial brooding. Hatchability is near about 74%.

|  |  |  |  |
| --- | --- | --- | --- |
| Age at first laying (Months) | Season of year at peak production | Egg production per/Year | Mortality |
| 6 | Winter | 110 | 19% |

Natural mating is done for rural chicken. Maintenance of standard 1:8 chicken and cock ratio was reported by only 15 of 150 farmers where majority of chicken keepers had been maintaining cock and chicken ratio to be more than 1:8. 55 of 150 farmers said that sexual maturity of deshi breeds of chicken attained between 21 and 23 weeks and 95 reported it to be between 23 and 24 weeks of age. Time of sexual maturity of the local breeds of chicken in the present study agreed with earlier works (Hassan et al. 2003). However the sexual maturity of cross bred chicken was reported to be >24 weeks (Milton et al.1999).

***Chapter 3***

**Materials and Methods:**

The survey was carried out in some selected areas of Bangladesh(6 different villages of Kaharole upazilla under Dinajpur district) using direct interview schedules (Appendix) developed mainly for collection of information on rearing practices, especially on feeds and feeding systems of ducks&chicken at farm level. Farmer do not keeps records and accounts of their operation of farm. For this reason, survey was conducted and collected required data through direct interviewing process and analyzed finally.

**3.1 Duration of the study:**

The study was started from July16’ 12 to 6 september’ 12.

The following steps were taken in conducting the study.

* 1. **Selection of the study area;**

The study area were selected randomly from 6 villages under Kaharole upazilla, Dinajpur district on the basis of availability of duck&chicken.

* 1. **Election of sample and sampling technique:**

A total of 50 households would be selected randomly from 6 villagers. Simple random sampling technique would be followed to collect data.

**3.4 Selection criteria of the farmers:**

Households having at least 10 ducks/chickens reared under scavenging condition was included in the study.

**3.5 Method of data collection:**

Data were collected through direct interview schedule by the researcher herself. The schedule was prepared containing relevant with the objectives of study.

**3.6 Statistical Analysis** :

After collecting the data, they were put on the master sheet. The data were arranged in tabular form and were analyzed as per the objectives of the study. Simple statistical measures like arithmetic mean, percentage etc. were used in this study.

It is however to be noted that for analytical purpose, the cost and returns per bird & per family were estimated. The reason for such estimation is that if cost benefit ratio can be calculated then opinion about sustainability of the backyard poultry rearing will be more meaningful.

**Table4-No. of household having backyard chicken/duck in kaharole Upazilla**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl.No.** | **Name of the villages:** | **Total no. of community house hold**: | **No of house hold having back yard poultr**y: | **No. of families interviewed** | **% of backyard poultry** |
| 01 | Paikpara | 38 | 32 | 10 | 76.19 |
| 02 | Uchitpur | 47 | 34 | 10 | 72.34 |
| 03 | Gopalpur | 42 | 33 | 10 | 78.57 |
| 04 | Nijia | 32 | 21 | 10 | 65.62 |
| 05 | Khosalpur | 40 | 31 | 10 | 77.50 |
| 06 | Sundail | 42 | 29 | 10 | 69 |
|  | Mean | 40.16 | 30.23 |  | 70.52% |

**RESULTS**

**Women’s socio-economical state with poultry picture:**

The socio-economic condition of the women’s family were described by examine general characteristics of the owners family such include the literacy level, yearly income of family, land holding & utilization of land, livestock population that they are rearing.

The socio economic state of the owners are described in below:

**Literacy level of the farm owners:**

The literacy level of the studied poultry rearer is categorized as five groups such as, illiterate, Class (I –V), Class (VI-VIII), Class (VIII – X) and SSC & above. Table-4 shows the literacy level of chicken rearer.

**Table5: Literacy level of the farm owners of the studied area.**

|  |  |  |
| --- | --- | --- |
| **Literacy level** | **No. of house holds (N=50)** | **Percentage** |
| Illiterate | 17 | 34% |
| Primary | 23 | 46% |
| Secondary | 8 | 16% |
| Higher Secondary | 2 | 4% |
| Total | 50 | 100% |

.

**Age Distributions of the Respondents**

Among of the total respondents, 52% were aged between 20 to 30 years (see Table 2). A further 24% are between 30 to 40 years. Only 12% were less than 20 years old while a further 12% were between 40 to 50 years. In Bangladesh, people usually get married at the age of twenty to thirty years. As they start a new family, rural women look for sources of additional income. Poultry rearing is considered one of the most important methods of generating additional income for rural women.

**Table 6: Age Distributions of the Respondents**

|  |  |  |
| --- | --- | --- |
| **Age Distributions** | **Number of Respondents(N=50)** | **Percentage (%)** |
| Less Than 20 Years | 6 | 12.0% |
| 20 – 30 Years | 26 | 52.0% |
| 30 – 40 Years | 12 | 24.o% |
| 40 – 50 Years | 6 | 12.0% |

**Family Property of the Women Respondents**

Rural women in Bangladesh do not usually own land and the title deeds are in the name of their husband. The amount of family property of our respondents is as follows: 64% of the respondents have less than 0.165 acres of land while 20% have more than 0.660 acres of land. Approximately 8% of the respondents have 0.330 acres to 0.495 acres of lands. 4% of respondents have 0.165 to 0.330 acres and a further 4% have 0.495 to 0.660 acres (see Table 6).

**Table7:Family Property of the Respondents**

|  |  |  |
| --- | --- | --- |
| **Size of Land in Acres** | **Number of Respondents(N=50)** | **Percentage of Respondents** |
| Less Than 0.165 | 32 | 64.0% |
| 0.165 – 0.330 | 2 | 4% |
| 0.330 – 0.495 | 4 | 8% |
| 0.495 – 0.660 | 2 | 4% |
| More Than 0.66 Acre | 10 | 20.0% |

**Number of Years of Poultry Rearing Practice**

Among the respondents, 14.7% have less than two years experience in home-based poultry rearing. 30.7% have been involved with poultry rearing as a business for 2 to 4 years while 22.6% have been involved with poultry rearing for 4 to 6 years. 12% of the respondents have between 6 to 8 years experience. Only 20% of the respondents have been involved with poultry rearing for more than 8 years (see Table 7).

**Table 8: Number of Years Involved in Poultry Rearing Practices**

|  |  |  |
| --- | --- | --- |
| **Number of years** | **Number of respondents(N=50)** | **Percentage of respondents** |
| Less Than 2 years | 9 | 18% |
| 2 – 4 Years | 18 | 36% |
| 4 – 6 Years | 7 | 14% |
| 6 – 8 Years | 13 | 26.0% |
| More Than 8 Years | 3 | 6.0% |

**ECONOMICAL ANALYSIS:**

**Table9: Family wise per bird gross return**:

|  |  |
| --- | --- |
| Items | Per bird annual Gross Return(GR) |
| Return from selling eggs | 198.82(average) |
| Return from selling birds | 90.47 |
| Total income | 289.29 |
| Gross cost over GR | 127.84 |
| BCR(Benefit Cost Ratio) | 2.26 |

**Yearly income level of the farmers:**

The yearly income level of the studied duck/chicken rearer is categorized as five groups such as up to Tk. 40,000, Tk. (40000-60000), Tk. (60000-80000), Tk. (80000-100000) and above Tk. 100000. Table-2 shows that maximum house holds lie in income group of Tk. (40000-80000

**Table10:** **Yearly income level of the poultry farmers:**

|  |  |  |
| --- | --- | --- |
| **Income level** | **No. of house holds (N=50)** | **Percentage** |
| Up to Tk. 40000 | 13 | 26% |
| Tk. (40000-60000) | 18 | 36% |
| Tk. (60000-80000) | 9 | 18% |
| Tk. (80000-100000) | 7 | 14% |
| Above Tk. 100000 | 3 | 06% |
| Total | 50 | 100% |

**Discussion**

This study sought to identify the key determinants of empowerment of rural women in Bangladesh. The sample for the study included women engaged in poultry rearing practices. The findings of my report indicate that rural women in Bangladesh are empowered by homestead poultry rearing practices. The interviews with rural women indicated that involvement with poultry rearing projects increased their business acumen. This lead to the improvement in the productivity of poultry, reduced chick mortality and increased net profits. In addition, health and living conditions also improved

Traditionally, rural women of Bangladesh are only involved in household activities. They look after their husband, children, elders and other members of the family. They are usually not involved in making decisions on family matters. Their role is to provide support to the family and to their husband. Women are usually suppressed in rural households. The results of this study indicate that simple poultry rearing practices can change the cultural fabric of rural Bangladesh and improve the status of women. I found that poultry rearing programs empower women by improving their economic condition and enhancing their ability to contribute to their family.

The first significant factor associated with the empowerment of rural women in Bangladesh was independent decision making authority. When women are given the freedom to initiate and run their poultry rearing business, their status in the family improves considerably. Involvement of rural women in poultry production increases their disposable income. These rural women can contribute more to the day-to-day expenses of the family. It also increases their freedom to sell eggs and chicks in the nearby market. The husband’s behavior towards his wife changes when he sees that his wife can earn money and contribute to improving the living standards of the family.

Involvement in family affairs was the second significant factor associated with the empowerment of rural women in Bangladesh. Greater involvement results in women being able to provide financial assistance when buying household assets. Usually, rural women are ignored when decisions are made in rural households. Women are perceived as inferior to their husbands. However, they become more important in the family by earning money and they are asked by their husbands to take part in making family decisions (Mahmud & Sultan, 2010). They can also make decisions on their own for the welfare of their husband, children and extended family. They are able to establish control over the income of the poultry business. Hence, to empower rural women, homestead poultry rearing projects should be encouraged by government and non-government development agencies as it increases independent decision making authority and leads to greater involvement in family affairs, which improves the socio-economic development of rural Bangladesh.This study has some limitations. First, investigation done only home-based poultry rearing practicesOther home-based industries were not included in the sample. Second, it looked at empowerment of rural women only. It did not include women living in urban areas.

**Conclusion**

The study indicates that there are great potentials for the economic empowerments of the rural women and improvement of poultry production in rural Bangladesh. The importance of rural poultry in national economies of developing countries and its role in improving the nutritional status and incomes of many small farmers and landless communities has been recognized by various scholars and rural development agencies. Regular vaccination and use of balance diet can have a positive effect on duck rearing providing quality products for human consumption and reducing nutritional deficiencies and poverty of the country. Training in duck/chicken rearing has come out as felt need by the farm families. The finding of the present study support to express the overall views that the present status of house hold duck/chicken rearing in Kaharole upazilla considered being as standard as other side of the country. In some cases particular production was reported higher than expected. However the introduction of training and imput supply with scientific housing, feeding and breeding management and creating more extended provision of health care and prevention of diseases by undertaking positive initiatives and patronization from both government. and NGO will definitely improve the current status of rearing ducks/chickens with the livelihood of the households of Kaharole upazilla under Dinajpur district in Bangladesh engaged in scavenging duck/chicken rearing.

**Limitation of the study:**

**Interviewer bias**:

Proper data collection by interviewer sometimes was not possible.

**Recall bias:**

Farmers were reported not to have seen equally co-operative and friendly. They sometimes tried to be escaped in the middle of the interviews. Moreover, even, interviewees were not done always with right person who involved with chicken rearing in scavenging system directly. Variables measurements were depended on reporting of the farmers in most of the cases that recall or incorrect information could gather on the way.

**Misclassification.**

Most of the owners of chicken farms thought that the investigator was an agent of Government authority and therefore, they initially did not want to co-operate with the researcher.

Illiteracy of the respondents was a great hindrance of data collection. They could not sometimes answer to questions accurately and to the point.

Since disease diagnosis came from certain clinical sign based on farmers reporting, the results of diagnosis of different diseases might not have done correctly. In some cases, a religious taboo was raised as an important hindering factor for women not to come forward for providing information.

**Data recording**: Farmer were not higher educated & they did not keep any written document of their farm activities. As a result for the accuracy & reliability of data, researcher had to depend care fully upon the memory and sincerity of the farmers. So the possibility of errors could not be ruled out

**Previous duck/chicken rearing record:**

Some farmers were found during study who reared chicken previously but rearing has been stopped for the following reasons:

Chicks/duckling mortality, Feed problem.

Lack of sufficient fund, Disease affection, Stealing of chicken.

**Recommendations:**

To overcome the problems & difficulties in the studied area ,the following may be implemented :

**1.** The GO and NGO should play vital role in making provisions for Duck/chicken’s feed in the country so that the owners of chicken can purchase feed with reasonable price.

**2.** In order to provide necessary veterinary services to the Duck/chicken, the government should establish new veterinary care centers with adequate veterinary technicians, field assistants and modern logistic supports.

**3.** The provision of short-term loan for chicken /Duck business should be made with immediate effect on easy terms and conditions

**4.** Supply of improved indigenous chicken/Duck to the villagers

**5.** The treatment facilities should be extended by arranging effective disease control programs in the country.

**6.** Frequent training should be arranged for the owners of chicken farms.

**7.** Regular supply of electricity should be ensured.

**8.** Price stabilization should be ensured.

**9.** Suitable transportation and communication system should be developed in the study area.

**10.** Provision of financial support to the villagers

**11.** Make sure of availability of feed.

**12.** Supervision of government to this sector.

**13.** Proper marketing system should be ensured.

**14.** Based on this surveillance, The Department of Livestock Services can develop an effective surveillance system.

**15.** Farmers need to be trained on chicken health care and management and concerned local NGO can take this responsibility.

**16.** Young chicken are more susceptible to Baby Chick Ranikhet Disease. Stress and other less infectious diseases aggravate the health condition leading to higher mortality so stress management during the first week of rearing should be maintained and glucose or saline water can be used.

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**APPENDIX**

Status of house-hold poultry rearing system along with productive performance & economic gain in selected area of Bangladesh (Kaharole,).

**Questionnaire that was followed during study:**

**1.** a) Name of the farmer:… … … …

b) Father/husband’s name:… … ………………………………………….........

c) Address:

Village:… … … ….. Union:… … … …

Upazilla:… … … … District:… … … .

b) Occupation: Service/Agriculture/Poultry or dairy farm/Business/ Labour/Others.

**2. Family details:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SL.NO | Name of the member | Relation | Age | Sex | Education | Name of association with which he/she related |
| 1. |  |  |  |  |  |  |
| 2. |  |  |  |  |  |  |
| 3.  4. |  |  |  |  |  |  |

**3. Land (acre):**

a) Residential b) Cultivable c) Non-cultivable

**4. Source of income:**

a) Agriculture b) Service c) Business d) Duck rearing e) Poultry

f) Dairy g) Other

**5.** Total income of family… … … … TK/year.

**6. Presence of electricity:** Yes/No

**7. Number of livestock:** Cattle: Buffaloes: Sheep: Goat: Chicken: Duck: Pigeon

**8. Information on housing:**

1. Elements of house: Bamboo/straw/tin/polyethylene /mud/wood/

bamboo/ others.

1. Place of rearing: Yard/distant from house.
2. Cleaning of house: Yes/no.
3. Type of litter used:
4. If any integrated farming-Yes/no.
5. Integrated duck & poultry rearing in a common place-Yes/no.

**9. Feeding information:**

a) Type of feeding-natural/artificial/both.

b) Name of ingredients in case of natural feed

… … … … … … … … … … … … … …

c) Source of feed:

d) Frequency of feeding:

e) Supplementary feeding:

**10. Presence of marshy land:** Yes/no.

If yes, what type – Dogi / haor / pond / river.

**11.** How many months in a year duck are grazed in marshy land:

1. Name and quantity of artificial feed ingredients

**13.** **Information on disease management of duck:**

a) Regular vaccination-Yes/no

b) If yes type of vaccine:

c) Treatment of diseased duck- Yes/no

d) Govt. help in treatment: Yes/no

e) Name of some disease outbreak-

a) b) c) d)

f) In which season duck/chicken is affected mostly: Summer Rainy Winter

g) Source of duckling/chick: Govt farm NGO Family Personal

**14.** **Information on laying of duck/chicken:**

a) Age at 1st laying

b) Egg production/year

c) Average egg weight

**15. Marketing of eggs:**

a) Where eggs are sold:

b) Approximate selling cost of egg/year:

c) Problems of selling:

d) Bird selling: /year.

**16. Information on cost:**

DOC cost: Medicine:

Housing: Labors:

Vaccine: Feed:

**17. Information on hatching:**

a) Procedure of hatching: Natural/Artificial

b) If natural use of- duck/hen

c) Process of brooding of duckling/chicks

**18.** Source o money for duck/chick rearing- Own/NGO/Govt/Others.

**19.** Duration of duck/chicken rearing-Throughout the year/definite time of a year.

**20.** Problems of duck/chicken rearing:

- -

- -

- -

**21**. What is your future plan about duck/chicken rearing?

**22.** Satisfied about family’s present condition?

**Name of Interviewee Name of Interviewer**

**Date: Date:**

**Signature: Signature:**

**EMPOWERMENT FACTORS OF RURAL WOMEN THROUGH HOMESTEAD POULTRY REARING IN SOME SELECTED AREA OF KAHAROLE UPAZILLA UNDER DINAJPUR DISTRICT**

****

A production report presented in partial fulfillment of the requirement for the degree of DVM (Doctor of Veterinary Medicine

**A production report submitted by**

Roll no : 2007/39

Reg. no : 325

Internship ID : D-35

Session : 2006-2007

**Chittagong Veterinary & Animal SciencesUniversity**

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***A production report submitted as per approved style and content***

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**ABSTRACT**

This study was carried out to assess the status of women income & family poultry in selected area of Kaharole upzilla under Dinajpur district) of Bangladesh. Beside this, socioeconomic condition of the farmers, feeding system and availability of feed for raising poultry, productive performance of scavenging poultry and profitability of raising those were evaluated. Information was collected by direct interview method using a questionnaire from 50 house holds (mostly women) who rear poultry in this locality. 55% farmers had a patch of cultivable land (Average 20 decimal). The average farm size was 7.2 and it always remain variable with the poultry’s loss attributed to different causes. Around 57% of the farmers reared duck with hen. 68% of the farmers housed their poultry in bamboo made cage while the rest of the farmers kept in house made of wood, tin, straw or mud. 89%of the farmers used single or combination of materials (straw, polythene, chat, ash) as liter where the rest of the farmers kept ducks without using any litter. The mature ducks were highest (74.2%) in October –December and lowest (45.2%) in April-June. The mature chicken were highest in March- June and lowest in October- December.Duck reaches first laying at 6 months of age, produces average 110 eggs per year. Egg production reaches peak during winter specially after crop-harvesting season. Duck consumption by the household specially in winter is highest (52.3%) in Kaharole upazilla than other area of Bangladesh . The highest number of duck/chick(32.2%) were consumed by the large farmers while the lowest number of eggs (12.4%) were consumed by the landless farmers. Around 78% of the respondents fed their birds with mixture of boil rice and rice polish as it is available and cheap. 92%respondents said that they do not spend any money on supplementary feed. The mortality rate was 19% and it is highest in winter (27%). Family wise Total annual expenditure and annual income per bird were on an average 127.84Tk. and 289.29Tk. respectively. The result of BCR (Benefit Cost Ratio) was 2.26 .Its indicate that if backyard poultry rearer invest tk.1.0 then they can get tk.2.26. So per bird they get profit Tk. 1.26. Based on the findings of the study some recommendations were suggested for increasing women income along with family poultry production.

**Key words:** Scavenging, Mortality, BCR