**CHAPTER-4**

 **RESULT AND DISCUSSION**

The result of the comparative study of three Birds are presented in following tables and discussed under subheading:

**4.1 Production performances of three Birds in the study area**

 Table-1: Production performances of two birds in the study area:

|  |  |  |
| --- | --- | --- |
| **Particulars** | **Commercial****Broiler(Mean±SD)** | **Sonali****(Mean±SD)**  |
| Flock Size | 2257.143±1139.549 | 2057.143±1102.530 |
| Mortality rate(%) | 3.90$\pm $1.125 | 6.90$\pm $1.436 |
|  **Performance Parameter** |
| Feed Intake (gm/Bird) | 2890±414.442 | 1911.905±102.841 |
| Feed Intake (gm/kg Bird) | 1738.470$\pm $221.222 | 2775.667$\pm $69.432 |
| Body weight (gm) | 1662.381±162.231 | 688.810±102.841 |
| FCR | 1.723±0.130 | 2.775±0.101  |

**4.1.1. Flock Size**

The Table-1 shows that the flock size of Commercial Broiler is2257.143±1139.549 and Sonali is 2057.143±1102.530. The flock sizes of two types of birds are limited into small scale and very few are medium scale. Highest flock size variation found in Commercial Broiler. Lowest flock size is found in Sonali. Probably this Limited at Bogra Large scale farm size is totally absent between two types of  birds. It is due to absence of Poultry Meat Processing Industry and lack of investing tendency of Poultry Industrialist in Commercial Meat Production instead of Commercial chick production. Only one exception found in case of BRAC Farms Group Limited at Bogra. **Saleque (2007)** stated that only 5% of the poultry meat consumed in Bangladesh was processed in a modern slaughter house.

**4.1.1 Mortality rate**

Mortality rate of commercial Broiler and Sonali are 3.90$\pm $1.125 and 6.90$\pm $1.436 respectively at 30-35 days and 60-70 days. **Hoque & Azizul (1983),** reported that the mortality rate in Deshi chicken is 9%.

**4.1. 2. Feed Intake**

Feed intake of Commercial Broiler and Sonali are 2890±414.442 gm and 1911.905±102.841 gm respectively at 30-35 days and 60-70 days. But feed consumption in per kg Broiler and Sonali is1738.470$\pm $221.222 and 2775.667$\pm $69.432 respectively. Here per bird feed consumption in Broiler is highest but lowest in per kg weight gain than Sonali. The feed intake is highest in Commercial Broiler though it is rear only 30-35 days. There are remarkable feed intake difference between Broiler and Sonali. **Ali and Bala (2005)** found in Commercial Broiler at 42 days 3370±49.75 gm in summer season and 3170±25 gm at winter season at Open house system. They also found 3579±34.13 gm in summer season and 3125±30.46 gm at Tunnel house.

**4.1. 3. Body Weight gain**

Body weight gain of Commercial Broiler and Sonali are 1662.381±162.231 gm and 688.810±102.841 gm at 30-35 days 60-70 days respectively. The Body Weight gain is highest in Commercial Broiler though it is rear only 30-35 days. It is found lowest at Sonali. This is due to superior genetic conformation at Commercial Broiler. **Ali and Bala (2005)** found in Commercial Broiler at 42 days 1502±6.45 gm in summer season and1478±15.90 gm at winter season at Open house system. They also found 1759±27.35gm in summer season and 1665±13.23 gm at Tunnel house. **Azharul *et al*. (2005)** found higher meat yield in crossbred RIR×Fayoumi (Sonali) compared with pure Fayoumi breed. **Aktaruzzaman (2002)** reported that the body weight of Sonali is approximately 1.8Kg. at its mature age.

 **Graph-1: Comparative Relation of Feed Intake and Body Weight Gain of Two**

 **Types Bird**

**4.1. 4. Feed Conversion Ratio (FCR)**

Feed Conversion Ratio (FCR) of Commercial Broiler and Sonali are 1.723±0.130 and 2.775±0.101 at 30-35 days and 60-70 days respectively. The superior FCR found in Commercial Broiler due to its superior genetic conformation. Inferior FCR found at Sonali Bird. **Ali and Bala (2005)** Found in Commercial Broiler at 42 days 2.32±0.03 in summer season and 2.22±0.01 in winter season at Open house system. They also found 2.08±0.02 in summer season and 1.93±0.003 in winter season at Tunnel house.

 **Graph-2: Comparison of FCR between Two types Bird**

**4.2: Comparison of per Bird in the study area**

Table-2: Comparison of per bird cost (Tk.) in the study area

|  |  |  |
| --- | --- | --- |
| **Particulars** | **Commercial Broiler** **(Mean± SD)** | **Sonali** **(Mean±SD)** |
| Fixed Inputs(Housing & Instruments) | 12.952±1.224 | 12.095±1.479 |
| Chick Cost  | 71.714±2.194 | 16.042±1.923 |
| Feed Cost | 89.590±12.848 | 57.405±3.154 |
| Feed Cost/Kg Bird | 53.731±4.035 | 83.252±3.305 |
| Other Variables Cost (Medicine, Labor, Litter, Electricity, ect.). | 15.452±1.011 | 20.786±1.855 |
| **Total Production Cost** | 189.709±13.354 | 106.286±3.314 |
| Total Cost/kg Live weight | 114.118±11.435 | 154.485±2.225 |

**4.2. 1. Fixed Input**

There are no significant differences in fixed input among two birds. Because these two types Birds are reared in same type invested house and utensils even in same shade rotation wise according to the season, market demand, availability of chicks and owner’s capability. Is this study highest fixed input is found in Commercial Broiler Tk. 12.952±1.224 and lowest in Sonali Bird Tk. 12.095±1.479

**4.2. 2. Chick Price**

Chick costs of two birds are Tk. 71.714±2.194, and Tk.16.042±1.923 respectively. It is highest in Commercial Broiler and lowest in Sonali. Price of Commercial Broiler chick is the highest because of its highest growth rate and for being developed as meat type poultry strain where as Sonali is a dual type Bird reared for both as egg type and meat type in different pattern of housing system. Both types of chick cost are reduced during winter season and increased in summer season. **Shamsuddoha and Shoel (2008)** reported according to Poultry Business Directory the price of Day Old Broiler Chick is Tk. 25.61 in winter season.

**4.2. 3. Feed Cost**

Per bird highest feed cost Tk. 89.590±12.848 found at Commercial Broiler but per Kg bird lowest feed cost Tk. 83.252±3.305 found at Sonali. Per Kg bird lowest feed cost Tk. 53.731±4.035 found at Commercial Broiler and per bird highest feed cost Tk. 57.405±3.154 in Sonali. It is due to Superior FCR capability at Commercial Broiler and inferior FCR capability at Sonali. There is significance difference in per bird feed cost between Broiler and Sonali.

**4.2. 4. Other Variables Cost**

Lowest other variables cost Tk. 15.452±1.011 found at Commercial Broiler and highest at Sonali TK. 20.786±1.855 But moderate difference found between Broiler and Sonali. For rearing less number of days other variables cost is lowest in Commercial Broiler between two birds and it is more for rearing more days in case Sonali.

**4.2. 5. Total Production Cost**

Highest total production cost per bird Tk. 189.709±13.354 found in Commercial Broiler and lowest found in Sonali between two birds Tk. 106.286±3.314. but total cost for per kg meat production in Broiler Sonali are 114.118$\pm $11.435 and 154.485$\pm $2.225 respectively. **Raihan and Mahmud (2008)** reported by sample survey at Bogra district that production cost of per Kg poultry meat is Tk. 63.10 and before 5 years it was Tk.47.50 and before 10 years it was Tk. 28 only.

**4.3. Comparison of per bird return and profit in the study area**

Table-3: Comparison of per bird return and profit in the study area

|  |  |  |
| --- | --- | --- |
| **Particulars** | **Commercial Broiler****(Mean±SD)** | **Sonali****(Mean±SD)** |
| Total Production Cost | 189.709±13.354 | 106.286±3.314 |
| Total Cost/kg Live weight | 114.118$\pm $11.435 | 154.485$\pm $2.225 |
| Return from Bird | 216.110±21.090 | 117.098±3.968 |
| Total return/kg Bird (TK/kg\*) | 130 | 170 |
| Net Profit/Bird (BDT.) | 26.434±10.798 | 10.812±3.128 |
| Net Profit/kg Bird | 15.882$\pm $5.444 | 15.515$\pm $3.247 |
| BCR | 1.139 | 1.101 |

\*Price is variable, most stable price during survey time has been considered.

**4.3.1. Total Return from Each Bird:**

Per bird sale price is highest in Commercial Broiler though Tk. per Kg sale price is lowest in Commercial Broiler between two birds and it is Tk. 216.110±21.090 and Tk. 130 respectively. Whereas Per bird sale price is lowest in Sonali though Tk. per Kg sale price is highest in Sonali between two birds and it is Tk. 117.098±3.968 and 170 respectively. This is due to somewhat lower bodyweight gain. **Saleque (2007)** demonstrated that dressed broiler price were 75, 85, 105 and 116 BDT/Kg in 2003, 2004, 2005 and 2006 respectively. **Frands Dolberg reported (2008)** that in the market the Sonali goes as a local chicken with the associated premium price.

**4.3.2. Profit**:

The highest per bird profit is Tk. 26.434±10.798 found at Commercial Broiler. Lowest per bird profit Tk.10.812±3.128 found in Sonali. It is due its inferior FCR and body weight gain between two birds. But per kg profit in Broiler Sonali are 15.882$\pm $5.444 and 15.515$\pm $3.247 respectively. There are very small difference. **Raihan and Mahmud (2008)** reported by sample survey at Bogra district that profit of per Kg poultry meat is Tk.10.78 and before 5 years it was Tk. 11.50 and before 10 years it was Tk.21.25

**4.3.3. Benefit Cost Ratio (BCR):**

The Benefit cost ratio (BCR) found in Broiler is 1.139. On the other hand The Benefit cost ratio (BCR) found in Sonali is 1.101. There are less difference between two Birds and it is somewhat high in Broiler. So Broiler is Profitable than Sonali. It means that if a farmer invests Tk.1 for each Bird, he/she will get return Tk. 1.14 and Tk. 1.10 from Sonali. The value of BCR is found greater than 1 for two types of Birds. So, all Birds (Commercial Broiler and Sonali) farming are profitable.

**Graph3:Comparison of BCR of Two Types Bird**