Goat Husbandry and Milk Production in Bangladesh

Presented by:
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Location of Bangladesh
Back Ground Introduction of Bangladesh

- Area: 1,47,570 square km
- Population: 16.94 million
- Cultivated land: 7.80 million ha
- Agro-ecological zones: 30
- Rain fall: 1500 to 5500 mm
- Relative humidity: 36% to 95%
Black Bengal Goat
<table>
<thead>
<tr>
<th><strong>Breed Name</strong></th>
<th>Black Bengal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Origin</strong></td>
<td>Bangladesh</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td>All over Bangladesh</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>27 million</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Goat meat production</td>
</tr>
<tr>
<td><strong>Physical Characteristics:</strong></td>
<td></td>
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<tr>
<td>Size: Small (Dwarf type)</td>
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<tr>
<td>Mature age: 4-6 months</td>
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<tr>
<td>Male: 25 - 30 kg</td>
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<tr>
<td>Female: 15-20 kg</td>
<td></td>
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<tr>
<td>Kidding rate: 2.80</td>
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</table>
Purpose for rearing goat in Bangladesh
Advantage of Goat Rearing

• The goat is a multipurpose animal it is known as poor man’s cow

• High production at 14 months two times they parturition

• Goat milk is finer than cow milk-easily digestible and TB free

• Goat milk is used as medicine- asthma, cough and diabetes

• Goat milk has a higher content of B-complex vitamins

• Goat meat has less fat and tasty
Advantage of Goat Rearing

• Goat give more production per unit of investment

• Goat require less feed, investment and place

• Woman and children easily can rear

• Most goat rears landless, marginal farmer

• Goat manure is 2.5 times higher in nitrogen, phosphoric acid
Black Bengal Goat Highly Prolific

Litter size: $2.07\pm0.08$ for 2\textsuperscript{nd} parity and $2.43\pm0.12$ for 3\textsuperscript{rd} parity. Two to three kids are common. Sometimes 4 to 6 kids.
# High Quality Meat

<table>
<thead>
<tr>
<th></th>
<th>Dry matter (%)</th>
<th>Ash (%)</th>
<th>Crude protein (%) (Fresh basis)</th>
<th>Ether Extract (%) (Fresh basis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goat meat</td>
<td>22.64</td>
<td>1.15</td>
<td>22.76</td>
<td>1.25</td>
</tr>
<tr>
<td>Beef</td>
<td>25-27</td>
<td>1.05-1.9</td>
<td>20-22</td>
<td>3-4</td>
</tr>
<tr>
<td>Pork</td>
<td>26-27</td>
<td></td>
<td>20-21</td>
<td>4-5</td>
</tr>
</tbody>
</table>
Goat Population of different year in Bangladesh

Goat Population

- 2018: 256
- 2019: 260
- 2020: 264
- 2021: 268
- 2022: 270
Goat Breed

- Black Bengal (95%)
- Jamunapari
- Boer
- Betal
BLACK BENGAL GOAT – 7 COAT COLOUR
Grazing in poor quality pasture
Feeding

- Green Grass
- Leaves
- Concentrate
Ration Formulation

- Wheat Bran - 53 Kg
- Soybean meal - 20 kg
- Maize crushed - 12 kg
- Rice bran - 10 kg
- Sugar/Molasses - 2.5 kg
- Limestone - 2.4 kg
- Black Cumin - 100 gm

Total - 100 kg

NB: It contains 10MJME & 200 gm CP per kg

- Strategic supplementation
- @ 150 gm to fattening kids, 50 gm /day to breeder does
Goat Rearing System

• Family goat rearing
• Extensive
• Semi intensive
• Intensive
Floor Space of Goat

- Kid 0.3 sm
- Adult Goat 1.50 sm
- Pregnant Goat 1.90 sm
- Buck 2.80 sm
Goat Housing
### Performances of Black Bengal Traits

<table>
<thead>
<tr>
<th>Traits</th>
<th>Performance</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live weight, adult (kg)</td>
<td>♀: 16</td>
<td>Altab &amp; Siddik 1989</td>
</tr>
<tr>
<td></td>
<td>♂: 24</td>
<td></td>
</tr>
<tr>
<td>Weight at first kidding (kg)</td>
<td>12.92</td>
<td>Husain et al. 1998</td>
</tr>
<tr>
<td>Birth weight (kg)</td>
<td>0.98 ± 0.01</td>
<td>Husain et al. 1998</td>
</tr>
<tr>
<td></td>
<td>1.1 ± 0.02</td>
<td>Jalil et al. 2003</td>
</tr>
<tr>
<td>Twinning %</td>
<td>67 - 90%</td>
<td>Altab &amp; Siddik 1989</td>
</tr>
<tr>
<td>Litter size</td>
<td>1.95 ± 0.05</td>
<td>Husain et al. 1998</td>
</tr>
<tr>
<td>Kidding rate</td>
<td>2.8</td>
<td>Altab &amp; Siddik 1989</td>
</tr>
<tr>
<td>Traits</td>
<td>Performance</td>
<td>References</td>
</tr>
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<td>------------------------</td>
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<tr>
<td>Growth rate (g /d)</td>
<td>43 ~ 23 (1d ~ 12M) 39 ~ 15 (6M ~ 18M) 35 ~ 48 (1d ~ 12M)</td>
<td>Husain et al. 1998</td>
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<tr>
<td></td>
<td></td>
<td>Jalal, 2001</td>
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<tr>
<td></td>
<td></td>
<td>Jalil et al. 2003</td>
</tr>
<tr>
<td>Lactation period (d)</td>
<td>32.2 ± 00.58 84.4 ± 25.35</td>
<td>Husain et al. 1998</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jalil et al. 2003</td>
</tr>
<tr>
<td>Lactation yield</td>
<td>244.11 ± 5.52 (ml/d) 226.90 ± 9.00 (ml/d)</td>
<td>Husain et al. 1998</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jalil et al. 2003</td>
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</tbody>
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The only breed of dairy goat in Bangladesh is the Jamunapari. This breed is often reared for both milk and meat (dual purpose). Jamunapari is well adapted in the hot and dry climate of the northern Bangladesh. Performance of Jamunapari goat is quite satisfactory in semi-intensive condition.
Jamunapari-goat
Dairy Characteristics of Jamunapari:

The udder of the female is rather well developed, round in shape with large conical teats.

Average milk production is 1.5 – 2 liters per day.

Average yield is 200 liters per lactation.

Average lactation length is 100 days.

Lactation length is around 145 days in does suckling single kid and 150 days for does suckling two kids.

The highest milk yield is attained by 2nd month of lactation and the lowest during the 5th month after kidding.
Milk Quality of Jamunapari:

Goat milk is considered to be better suitable for infants as compared to cow milk in our society.

Goat milk is comparable to cow milk in protein and mineral contents.

The milk of Jamunapari is widely regarded as very tasty and creamy (5-6% fat).

Goat milk supply is rather limited in the structured market; most of the milk is sold in the local market.

Despite a high demand of goat milk cheese in the niche market in Bangladesh, there is no visible initiative for value addition of goat milk.
Goat Diseases

1. PPR
    Goats are mostly registrant to diseases but PPR is most susceptible.
2. Anthrax
3. Foot and Mouth Disease
Role of DLS in the Development of Dairy Goat Production:

We are currently operating 7 (seven) goat development farms in different regions of the country with nucleus flocks and buck stations.

Free vaccination service and deworming campaign are carried out each year as preventive measure.

We have established ‘free veterinary medical camps’ throughout the country.

Cutting of high-yielding grass like Napier, German etc. are distributed free of cost from our local offices free of cost.

We arrange hands-on training for goat farmers both at our regional offices and at yard meetings throughout the year.

Our officers also provide all sorts of consultation to encourage farmers for rearing dairy goat.

Our office also provide online veterinary consultation to goat farmers through mobile SMS.
We take special care in developing market linkage and value chain development to help goat farmers getting proper prices of goat milk and meat.

**Loans with minimal interest rate**, even some grants, have been offered to encourage farmers to establish dairy goat farms.

Initiative has been taken to establish ‘**Smart livestock villages’** in every districts where dairy goat rearing is also included.

We are currently implementing Livestock and Dairy Development Program (LDDP) where dairy goat development is an important component.

Livestock sector is closely linked to attaining **SDGs**, and dairy goat rearing is an integral part of this endeavor.
Goat keepers of the Country
THANK YOU