Effect of Organic and Inorganic source of N on Cotton Yield

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Status of Cotton in Bangladesh

**Cotton Consumption (million bale)**

- 2010-2011: 5
- 2011-2012: 4.2
- 2012-2013: 4.7
- 2013-2014: 5
- 2014-2015: 5.1

**Cropping year**

- 2009-10
- 2010-11
- 2011-12
- 2012-13
- 2013-14

**Activities of CDB**

- Research
- Training
- Extension
- Credit
- Marketing & Ginning
- Seed production
- Credit

**Area (ha)**

**Production (bale)**

- 2009-10
- 2010-11
- 2011-12
- 2012-13
- 2013-14
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<tr>
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<tbody>
<tr>
<td>Land Preparation &amp; Sowing</td>
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<tr>
<td>Crop Management</td>
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<td>Harvesting</td>
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Cotton and Food Security
Climate Change? Case of Cotton

Study the Performance of Different Genotype of Cotton on Saline Soil in Spring Season at Shonnergacha, Keshobpur, Jessore.
### Vision 2021 - Vertical Expansion of Cotton

<table>
<thead>
<tr>
<th>Land type</th>
<th>Potential area (ha)</th>
<th>Target area (ha)</th>
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<tbody>
<tr>
<td>Drought area</td>
<td>100000</td>
<td>35000</td>
</tr>
<tr>
<td>Char area</td>
<td>100000</td>
<td>20000</td>
</tr>
<tr>
<td>Hill valley</td>
<td>12000</td>
<td>5000</td>
</tr>
<tr>
<td>Hill slope</td>
<td>40000</td>
<td>10000</td>
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<tr>
<td>Saline area</td>
<td>5000</td>
<td>2000</td>
</tr>
<tr>
<td>Cotton based cropping pattern</td>
<td>70000</td>
<td>11000</td>
</tr>
<tr>
<td>Agroforestry system</td>
<td>5000</td>
<td>2000</td>
</tr>
<tr>
<td>Tobacco area</td>
<td>70000</td>
<td>15000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>402000</strong></td>
<td><strong>100000</strong></td>
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</tbody>
</table>

![Map of Cotton Production in Bangladesh](image)
Cotton Research Management

Participatory trial

Annual Research Review

Farmers

Researcher

Extension Personnel

NARS Scientist

University professor
Effect of Organic and Inorganic source of N on Cotton Yield

Objectives:
- To reduce chemical fertilizer application rate
- To improve soil health
- To increase cotton yield

Treatments:
- 100% N from Urea
- 90% N from Urea + 10% N from Poultry Manure
- 80% N from Urea + 20% N from Poultry Manure
- 70% N from Urea + 30% N from Poultry Manure
- 60% N from Urea + 40% N from Poultry Manure

Design: RCBD, Replication: 4
Plot size: 4.5m × 3.6m, Spacing: 90 cm × 45 cm
Cotton variety: CB-12
Location: Sreepur, Sadarpur, Jagadishpur
Conclusion

To sustain the cotton production in Bangladesh, incorporation of organic source of N together with the inorganic fertilizer source i.e. urea is utmost necessary. In this regard, the application of poultry manure as an organic source of N is found to be useful. In our study, we observed that application of 40% N from poultry manure at Sreepur farm and application of 30% N from poultry manure at Sadarpur and Jagadishpur farm were resultant the statistically similar seed cotton yield with 100% of N from urea only.

Reference:
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