Crop 14

**Blackgram**

*Vigna mungo*

- *V. mungo,*
  - syn: *Phaseolus mungo, Azukia mungo,*
- Urd bean
- Another short duration pulse crop
  - Grown in many parts of India
  - It is a mixed crop, catch crop, also sole crop
    - Sole crop after rice,
    - Sole crop before other seasonal crop
  - Like greengram rich in protein (25-26%)
- It is a crop of Indian origin
  - Later spread to other countries
  - Cultivated and consumed mostly where it is produced
- Grown in India, Pak, Sri Lanka, Myanmar
  - Also in some other countries of East Asia, Africa & America

### Area production, productivity in India

<table>
<thead>
<tr>
<th>Zone</th>
<th>State</th>
<th>Million ha</th>
<th>Million t</th>
<th>t / ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>UP</td>
<td>0.28</td>
<td>0.12</td>
<td>0.44</td>
</tr>
<tr>
<td>West</td>
<td>Maharastra</td>
<td>0.51</td>
<td>0.23</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>MP</td>
<td>0.51</td>
<td>0.18</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>Rajasthan</td>
<td>0.15</td>
<td>0.06</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td>Gujarat</td>
<td>0.01</td>
<td>0.06</td>
<td>0.51</td>
</tr>
<tr>
<td>South</td>
<td>AP</td>
<td>0.53</td>
<td>0.28</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>TN</td>
<td>0.34</td>
<td>0.14</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>Karnataka</td>
<td>0.13</td>
<td>0.10</td>
<td>0.77</td>
</tr>
<tr>
<td>East</td>
<td>Orissa</td>
<td>0.50</td>
<td>0.32</td>
<td>0.64</td>
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<td></td>
<td>All India</td>
<td>3.30</td>
<td>1.60</td>
<td>0.49</td>
</tr>
</tbody>
</table>

- Climatic requirement
  - Tropical crop
  - Tolerates high temp
  - Also cultivated in summer season
  - Short day plant to day neutral cultivars available
  - Optimum temp between 25 & 35°C
  - It can tolerate 42°C
- Plant
  - Like greengram, short, erect
  - Flowers are borne in clusters of 5-6 on a short hairy peduncle in auxiliary racemes
- Pods are short, brown black in color, hairy with stout hooked beak
- 6-10 seeds
- Weight 40-50mg (40g/1000grain)

• Varieties for TN
  - T9 - 65-70d
  - CO 4 - 70d
  - CO 5 - 70-75d
  - KM 2 - 60-65d
  - VBN 1 – 60-65
  - ADT 3 – 70-75d
  - ADT 5 – 65 d

• Soil, seed bed preparation
  - As that of greengram

• Season
  - Warm weather with irrigation
  - Sowing during winter faces low temp

• Seed rate
  - 20 to 25 kg /ha

• Seed treatment

• Spacing &

• Method of sowing

• Manuring and

• Weeding as that of greengram

• Irrigation
  - As GG but
  - IW / CPE ratio of 0.6 to 0.9 in summer was found good

• Cropping systems
  - Intercropped with PP, Sorghum, maize, pearl millet, oilseeds
  - Sequential cropping
    - Rice-rice-blackgram
    - Rice – wheat – blackgram
    - Blackgram – barley
    - Blackgram – wheat
    - Blackgram – rice - groundnut

• Harvest
  - As Greengram
  - But staggered harvesting not a prerequisite since, not a shattering type
  - Second flesh is possible in this crop
    - Varieties should be short statured
    - For this add additional fertilizer at flowering and give two more irrigation
    - Growth is extended by 15 days
    - Grain yield enhanced
  - When pods turn black and hard entire plant may be uprooted and kept upside down for few days
• After drying & volume reduced transport to threshing floor dry and thresh
• Dry to 8-10% moisture and store