Brahmi

*Bacopa monneri*

Family: Scrophulariaceae

Brahmi is a reputed intellect promoter, hypotensive and neuropathic sedative drug. Brahmi is a creeping fleshy herb, branches profusely and starts rooting at the nodes. Leaves are simple, opposite, pair of opposite leaves placed one above the other and perpendicular to each other, without petiole, oblong. Flowers are pale blue to whitish, situated at the leaf axis, single.

**Common Names:**

- **Sanskrit**: Brahmi
- **English**: Thyme leaved gratiola
- **Kannada**: Niru Brahmi
- **Hindi**: Brami, Jalnim
- **Tamil**: Nirpirami, Piramiyapundu,

**Distribution**

The plant is commonly found in moist and damp areas on the edges of streams and water trenches and in crop fields up to an altitude of 1300 m. It is distributed throughout India and adjoining countries.

**Threat status: Traded**

**Agroclimatic Requirements**

The plant occurs in a variety of soil types if the habitat provides wet and semi-shade conditions. Near-neutral, clayey loam to clayey soils are best suited for the growth of Brahmi.
PROPAGATION: It can be propagated by vegetative means.

Vegetative Propagation
Whole plant can be cut into small units with 4 to 6 nodes each and used for propagation. The cuttings are soaked in slurry water to hasten rooting. The cuttings can be planted directly in the field. The plantlets sprout and establish readily.

Varieties: Two varieties of *B.monnieri* namely Pragyashakti and Subodhak which have high herb and bacoside-A have been released by CIMAP, Lucknow.

Input:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Materials</th>
<th>Per acre</th>
<th>Per hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seeds (kg)</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>2</td>
<td>Farm Yard Manure (t)</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Fertilizer (kg)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>N</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>P&lt;sub&gt;2&lt;/sub&gt;O&lt;sub&gt;5&lt;/sub&gt;</td>
<td>30</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>K&lt;sub&gt;2&lt;/sub&gt;O</td>
<td>12</td>
<td>30</td>
</tr>
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</table>

Cultivation:
The plant is usually propagated by soft wood stem cuttings. For mass propagation, whole plant is cut into small divisions and planted directly in the sunken beds. The cuttings of about 5-6 cm long, each with a few leaves and nodes are ideal and establish easily. The cuttings are transplanted in wet soil at spacing of 10 x 10 cm to get maximum yield. Irrigation is provided quickly just after planting for the successful survival of plants. The plant grows faster at high temperatures (33-40°C) and humidity (65-80%) and should be cultivated as summer-rainy season crop. The cuttings should be transplanted in the month of July-August to get maximum yield.

Irrigation:
It is very essential to water the field after transplanting for the survival and establishment of the plants. Subsequently, the field should be irrigated at 7-8 days interval. Irrigation should be avoided during rainy season.

Interculture:
Primarily, hand weeding is needed at every 15-20 days interval but later on as plants proliferate and form a dense mat of vegetation, weeding may be done occasionally.
Plant Protection:

   Major insect: Grass hopper
   Major disease: Nil

Schedule: Spay the crop with Neem based insecticide or 0.2% of Nuvocron

Harvesting and yield:

The crop can be harvested 75-90 days after planting. The best time for the harvesting Brahmi is between October-November, during which the maximum biomass is produced. After this month, senescence sets in and there is a loss of plant biomass and bacoside yield. Harvesting can be done by cutting in such a way that the upper portions of the stem 4-5 cm from the base are removed and rest is left for further regeneration. The plants can also be maintained in a perennial state with two harvests in a year, the first in June and the other one after monsoon, in October.

Yield:

On an average, a yield of 300 q/ha of fresh and 60 q/ha dry herbage can be obtained respectively, from a single harvest. After the first harvest, 40 q/ha additional dry herbage yield can obtained

Storage:

Generally, the traditional method is followed to dry the harvested fresh material by spreading on the ground under shade at room temperature. The material should be turned over, alternatively, during drying. Alternatively they can be treated at 80°C in oven for 30min immediately after harvest for a two-fold more retention of bacoside-A of dried herb. The dried material should be stored in a cool dry room packed in bags/boxes. Care should be taken to avoid infestation with insects and other fungi during storage.

Cost of Cultivation: Approximate cost of cultivation comes around Rs.40,000/- per hectare.

Part used: Whole plant

Medicinal uses:

The whole plant of Brahmi is used in the form of juice to treat insanity, epilepsy, paediatric diseases, and pox and as a rejuvenative. To improve memory, in hypertension and neuropathic pain Brahmi preparations are useful. Old ghee processed with brahmi juice, vaca(Acorus calamus), kustha (Saussurea lappa) and sankhapuspi (Convolvulus microphyllus) (10-15 gms) alleviate insanity, inauspiciousness, and epilepsy. Juice of Brahmi or mandukaparni (Centella asiatica) (10-15 ml) are be taken with honey and ghee to promote intellect.