

Brahmi

BACOPA MONNIERI (L) PENNEL FAMILY - SCROPHULARIACEAE

A creeping succulent herb branches profusely and rooting at the nodes. The succulent leaves are sessile, opposite decussate, obovate-oblongate in shape, 1.0-2.5 cm x 0.4-1.0 cm in size. It is found in damp or marshy areas near streams or on the border of ponds, throughout India.

COMMON NAMES: Brambhi, Safed Kammi, Jal-Nim & Bрами.

LOCATION: Uttar Pradesh, Punjab, Haryana, Bihar, Bengal, Tamil Nadu, Kerala, Karnataka, Foot hills of Himachal Pradesh & Uttaranchal.

PART USED: Whole plant

CULTIVATION:

SOIL AND CLIMATE

The plant is known to grow under varying soil and climatic conditions. It grows exceptionally well in poorly drained soils and waterlogged areas under sub-tropical conditions. The plants grow faster at high temperatures (33-40⁰ C) and humidity (65-80%) and should be cultivated as summer-rainy season crop.

LAND PREPARATION

The field should be ploughed thoroughly and made free of weeds. The land should be irrigated a day before planting for successful establishment of plant cuttings.

TRANSPLANTING

Plant cuttings about 4-5 cm long, each containing a few leaves, nodes and roots are ideal planting materials. These can be obtained by cutting mother plants into small pieces with roots. The cuttings are transplanted in wet soil at spacing of 40 cm x 40 cm. Flood irrigation is provided immediately after planting. Ideally, the plants should be transplanted in March-June and allowed to grow and proliferate through hot and humid months of monsoon till September after which harvesting should be done. The plants can also be maintained in a perennial state with two harvests in a year, the first one in June and the other one after monsoon, in October.

MANURES, FERTILISERS AND PESTICIDES

The medicinal plants have to be grown without chemical fertilizers and use of pesticides. Organic manures like, Farm Yard Manure (FYM), Vermi-Compost, Green Manure etc. may be used as per requirement of the species. To prevent diseases, bio-pesticides could be prepared (either single or mixture) from Neem (kernel, seeds & leaves), Chitrakmool, Dhatura, Cow's urine etc.

IRRIGATION

Irrigation immediately after transplanting is essential for the successful survival of the plants. Subsequently, the fields are irrigated by flooding as per requirement usually every 7-8 days. There is no need for irrigation during the monsoon.

WEEDING

Initially hand weeding is required every 5-20 days. Later as the plant proliferate and forms a dense mat of vegetation, weeding may be required sporadically.

HARVESTING/POST-HARVESTING

The plants should be harvested between October-November, after that there is loss of plant biomass and bacoside yield. The plant can be ideally harvested by ratooning so that the upper portions of the stem 4-5 cms from the base are removed and the rest left for subsequent regeneration.

The plants can be dried in a conventional manner by spreading on the ground under shade at room temperature. Alternatively, they can be treated at 80⁰ C in oven for 30 minutes immediately after harvest for a two-fold more retention of bacoside-A content of dried herb. After treatment they can be further air dried by spreading on the ground at room temperature or in the oven at 37⁰ C. The material is to be cleaned free of any external matter. The dry material should be stored in a cool dry room packed in bags/boxes having concrete flooring, away from walls. Precautions also need to be taken to avoid infestation with fungi and insects

YIELD

The fresh and dry herb yields of Brahmi go upto 300q/ha and 60/q/ha, respectively, when harvested after September while bacoside-A yield can be as much as 85kg/ha. After the first harvest, 40q dry herb yield from the June harvest, totalling to 100 q dry herb yield in a year will be obtainable.

ECONOMICS

Expenditure per hectare Rs.35,000/-
Gross return @Rs.20/kg of dry
matter yield Rs.2,00,000/-
Net income Rs.1,65,000/- (YEAR-2001)

Note: Market for medicinal plants is volatile and the economics may vary.

INSTITUTE TO BE CONTACTED:

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INSTITUTE,
JOGINDER NAGAR, (GOVT OF H.P.) SHIMLA.**

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