

Bhumi Amalaki

**PHYLLANTHUS AMARUS SCHUM AND THONN. FAMILY - EUPHORBIACEAE**

The plant grows abundantly throughout India up to 700 m altitude during rainy season, however, with less frequency in southern part of the country. Small erect annual herb 10-60 cm tall. Leaves small elliptic-oblong; flowers, whitish-green & minute.

**COMMON NAMES:** Tamalaki, Hazardana, Jarmala & Jangli Amala

**LOCATION:** Uttar Pradesh, Haryana, Punjab, Maharashtra, Tamil Nadu, Kerala, Andhra Pradesh, Karnataka, Bihar, Orissa and Bengal

**PART USED:** Whole plant

The bio-mass morphologically resembling species *Phyllanthus fraterus* Webster and *P. niruri* L. is also used as Bhumi amalaki; Their cultivation techniques are also almost similar.

**CULTIVATION:**

**SOIL AND CLIMATE**

Bhumi Amalaki is found to be well adapted to variety of soils, at soil pH ranging from alkaline to natural and acidic soil. Plants have also shown preference for calcareous well drained and light textured soils. *Phyllanthus amarus* is a circum-tropical weed, it grows well under to tropical conditions. It, however rarely survives under dry or very low temperature conditions but water logging does not show any lethal effects

**NURSERY RAISING & TRANSPLANTING**

The plants are propagated through seeds. About 1 kg of seeds are sufficient for seedlings for transplanting in one hectare of land. For raising the seedlings, the seeds are sown in well prepared nursery beds. Well decomposed farm yard manure should be mixed with top layer of the soil while preparing the beds. Being minute, the seeds are mixed with dry soil or sand to allow uniform distribution of seeds on the nursery bed. Later a thin layer of soil is spread to cover the nursery beds. Appropriate moisture is maintained in the beds till the seeds have germinated. In north Indian plains, the month of April-May was found very good for sowing for higher rate of germination of seeds and good herb yield.

Approximately 15-30 days old seedlings, which are about 10 cm tall, are transplanted in the field at horizontal and vertical spacing of 15 cm each. A proper irrigation just after transplanting ensures establishment of seedlings. The crop raised by transplanting of seedlings gives improved yield of herbage

**WEEDING**

The field should be kept absolutely free from weeds for which regular hand weeding in every month is required. Spraying of commercial herbicides are not desirable, since, these cause deterioration to the crop and also to avoid residual effect in the crude drug.

### **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**

In southern parts of country, where there is frequent rainfall during rainy season, no irrigation may be required. However, in Northern plains, where there is infrequent rainfall, one irrigation per fortnight is required. Waterlogging, fortunately is not a problem for this plant.

### **HARVESTING/POST-HARVESTING**

Plant are harvested when the rainy season is over, when they are still green and herbaceous. Since the active constituents of *P. amarus* are concentrate more in the leaves, production of higher leaf mass is desired for the extraction. Plant in September contain highest amount of leaves and found to be suitable time for harvesting.

### **ECONOMICS**

Expenditure per hectare Rs.5000/-

Return per hectare Rs.20000/-

Net income Rs.15000/- (YEAR-2001)

**Note:** Market for medicinal plants is volatile an economics may vary.

### **INSTITUTE TO BE CONTACTED:**

**CENTRE FOR ADVANCE STUDIES IN BOTANY,  
UNIVERSITY OF MADRAS GUINDY CAMPUS,  
CHENNAI & LUCKNOW**