

***Schumannianthus dichotomus* (Roxb.) Gagnep.  
(Pati-doi or Shital pati)**



**National Mission on Himalayan Studies**



**Rain Forest Research Institute**  
(Indian Council of Forestry Research and Education)  
Ministry of Environment, Forest and Climate Change  
Government of India

## *Schumannianthus dichotomus* (Roxb.) Gagnep.

Local name : Patidoi (Assamese), Pong (Khampti)

Family : Marantaceae.

Life cycle : Perennial plant.

### INTRODUCTION

Patidoi is a rhizomatous shrub with an erect and glossy green stem attaining a height of 3–5m and a diameter of up to 20mm. The stems are leafy and dichotomously branched. The leaves have leathery leaf blades that are oval. Its flowers are faint pinkish-white with a yellowish staminode, borne on a simple or sometimes branched inflorescence. The fruits are indehiscent and sub-globose.

It is a perennial shrub which grows in swamps and along rivers, often forming thickets. Geographically, it is distributed in India, Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, Peninsular Malaysia, Borneo and the Philippines. In India it is found in Northeast India, West Bengal, and Coromandel Coast. In Assam, it is common in riverine areas like Majuli island and in groves of foot-hills.

### CULTIVATION

Swampy and marshy wastelands are suitable for cultivation. It grows under partial shade and cannot tolerate direct sunlight. Therefore, it is an ideal plant to grow as under storey plant in agroforestry system tolerant in waterlogged condition too. It prefers clayey or clayey-loam soil having stagnant water of 3-10 cm depth. Propagation is either by seeds or using suckers from a previously sown crop or branch cuttings. Fruits ripen in June-July and the fruits are collected when the colour changes from green to light yellow and sown immediately in nursery beds. It is more commonly propagated through rhizome and is preferred, as seed germination is poor and needs intensive management.

The propagules are planted during the months of May–June at 1 x 1 m spacing. The plants take one year to mature when propagated through rhizome and it usually takes 2 to 3 years when they are cultivated by seeds. In the first year after transplanting, each seedling produces many suckers which may be planted in a nursery for producing further propagating material.

### PLANTATION & DISEASE MANAGEMENT

Weed is not a major threat to the plant. However, weeding twice a year is recommended. Soil can also be added or cow dung used as fertilizer. Use of chemical fertilizers is not required. There are no serious pests or diseases in the species.

### HARVESTING

The mature culms have two to three branches and are slightly reddish. Harvesting is done manually using dao (a sharp curved knife) and the stems are harvested under water at a height of 5-7 cm from the base. It is harvested from mid-September to the end of March, almost every year.



Carrying harvested patidoi bundle on his head.

### AGROFORESTRY

Since it grows in marshy areas, it may not fit into the traditional agroforestry systems. In the low-lying areas adjoining habitations, it can be cultivated and harvested for use. Patidoi can be cultivated in poor soil, which are not suitable for any other cultivation/wasteland profitably. It is an inexpensive. In such cases upper story plant species may be water tolerant species i.e. *Salix tetrasperma*, *Bombax cieba*, *Lagerstroemia speciosa*, *Barringtonia acutangula*, *Lagerstroemia parviflora*, *Ficus indica*, *Bischofia javanica*, *Dillenia indica*, *Dillenia pentagyna*, *Diospyros embryopteris*, *Streblus asper*, *Caryota urens* etc.

## UTILISATION

The harvested stem is manually split into strands and the bark of one plant gives 7-8 thin strands. The strands are dried in sun for 2-3 days and processed. Processing of pati is an important part in manufacturing quality mat. A bundle of pati/strips are bound into round roll which is thereafter dipped in water for overnight. The bundle is then boiled for one hour, followed by sun drying for another one hour. This process makes strips soft, supple and glossy. Pati devoid of boiling process remains hard with reddish colour. The mat prepared with such pati is not attractive to consumers, though it is more durable and lasting more than seven years. All the graded pati are segregated once more and then chopped at the end following the standard length to be used for preparation of mat in accordance with respective mat quality. (Mandal et al. 2014)

## VALUE ADDITION

The split strips from the outer portion of the stem are used for making mats, bags, basket and other novel items. The strips from the pith portion are used as binding material. Colourful pati is made through dyeing by mixing of locally available materials used as ingredients based on indigenous knowledge. Ivory colour is obtained by boiling the pati with rice starch, boiled leaves extract of tengamora (*Hibiscus sabdariffa* L.) and leaves extracts of Tetali (*Tamarindus indica* L.). Pati are wrapped with Aam (*Mangifera indica* L.) bark and kept under mud for seven days for obtaining black colour. (Mandal et al, 2014)



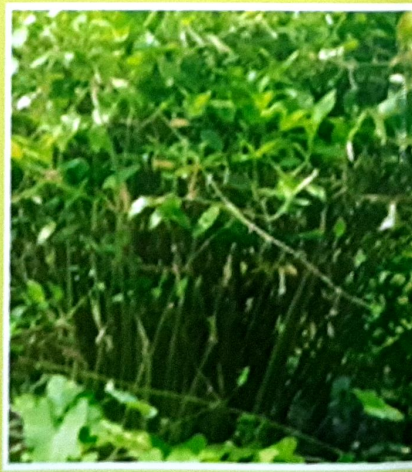
## MARKET POTENTIAL

Patidoi has high demand in market in the form of mats, bed mats, handfans and hand bags. Patidoi are commonly used as fascinating decorative items like wall decor as well as lamp shades in middle and upper class families. Single bed mats are sold at Rs 450 while double bedmats are sold at price of Rs 900-2000/- in local market in Namsai or neighbouring districts. A farmer can earn a good amount of money by selling value added product.

## ECONOMIC IMPORTANCE

It provides additional income for the farmers for their livelihoods. It is an easy growing plant and requires moderate maintenance. Since it is grown on lands not suitable for cultivation of other agricultural crops, it does not do any competition for the food crops or cash crops. It can be a source of additional income, without much effort. When grown along roads, canals, ponds, homesteads and fallow lands, it checks soil erosion, which is one of the major ecological issues in the Brahmaputra valley. The processing and value addition can provide employment to a considerable number of people. In perspective of economy and livelihood, one decorated mat with size of 150 cm x 210 cm requires 10 man days for weaving, costing around Rs 3000. The amount of money earned in relation to man days may be considered moderate income for one household for standard livelihood. (Mandal et al. 2014)





### FOR FURTHER READING:

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