

# Traditional practice of *Paan* Jhum cultivation among Khasia community in Barak valley, Assam

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## Abstract

The Betel is the deep green heart shaped leaves of betel vine (*Piper betel*), which are popularly known as *paan* in India. Betel leaf has enormous market around the world, and the crop, worth billions of Indian Rupees, is exported from India. This clearly indicates the profitability of the crop, which can be further exploited. Present paper attempts to explore traditional knowledge involve in the cultivation of *paan* among the Khasi community in Cachar district of Barak valley. Various steps involved in the cultivation of *paan* is described through traditional knowhow and how this cultivation practice can improve the livelihood of Khasi community is discussed.

**Keywords:** *Paan jhum, Khasia community, Livelihood*

## Introduction

The fresh leaves of betel vine are popularly known as *Paan* in India, which are consumed by about 15-20 million people in the country (Guha, 2006). Betel leaves are the most important plant part and are of medicinal, religious and ceremonial value in Southeast Asia. In India, it is customary to serve betel leaf on various social, cultural and religious occasions and is also offered to guests as a mark of respect (referred to as *tambool*) (Guha, 2006). Betel leaf cultivation is a traditional agroforestry system that involves the deliberate growing of betel vine along with the other tree species within the same field. In Northeast India, betel cultivation is performed traditionally and its efficient management system can play an important role towards economic viability and livelihood security of the tribal people of the region in general and Khasia community in particular.

## Methodology

Present study was carried out in a Khasi village, situated near the Rosekandy Tea-Estate, Cachar, Barak valley

and the geographical location of this area is N 24° 41' and E 92° 41'. The Barak valley region, which forms the Southern part of Assam, covers an area of 6922 sq.km. The region shares its border with North-Cachar Hills district and the state of Meghalaya in the north, the state of Manipur in the east, the state of Mizoram in the south and the state of Tripura and the Sylhet district of Bangladesh in the west (Roy and Bezbaruah 2002). Cachar is the largest district of Barak Valley of southern Assam with 58.76% of forest cover (FSI, 2005). Forest vegetation of the district comes under Cachar tropical evergreen and semi-evergreen forest (Champion and Seth, 2005).

For the present work questionnaire was developed incorporating the information required to discover the economic status and traditional practices of *paan* jhum cultivation. During the survey local tribes were interacted and their *paan* jhum areas were visited to recognise and understand the detailed process involved in the traditional management strategy of *paan* jhum cultivation.

## Results

The Khasia community of Rosekandy is known to be practicing the betel leaf cultivation since 35 years. The betel leaf cultivation technique was known to the tribe as the method of cultivation and was passed down from generation to generation. With the advancement of communication and greater demand for betel leaf the local tribe of this area shifted to betel jhum cultivation from shifting cultivation. The traditional method involved in the propagation of betel leaf as practiced by the Khasia tribe of Rosekandy, Cachar is given below:

**First operation:** Forest patch containing thick vegetation were slashed down at the initial stage, leaving only the timber plants and some tall shrubs to be used for the cultivation. The slashed down twigs, leaves and branches are left in the field for enriching the nutritional level of the soil. Both male and female members of the tribe are involved in the operation.

**Method of cultivation:** *Paan* cultivation is a specialised type of agriculture and since the betel plant is a creeper, it needs a compatible tree or a long pole for support (**Figure 1 and 2**). High ground and especially fertile soil are best for betel cultivation and



Fig. 1. Betel vine with nodes



Fig.2. One year old betel plant

growth. The usual cultivation period starts from the month of May and the cultivation can be continued till August, initially taking up the plantation at the beginning of monsoon. At a distance of about 12.5 cm from the supporting tree or pole, the soil is dug well to a depth of about 15-20 cm for plantation of the betel vine. Tools like spade and *dao* (local knife) are used for this purpose. The betel vine is cut in about a half metre containing three nodes for the propagation of the crop and usually the cutting is selected from a healthy vines that are three years or older. These cut betel creeper is then placed in the dug holes. Two nodes of the cut betel creeper falls usually underground and a node above ground. Selection criteria for supporting tree for shade and climbing purpose for betel leaf may be a single species or a mixed tree species but with a minimum bole of 10-15 cm dbh and that stands upright with proper canopy. Some tree species that were utilised for the support of the betel plant are, *Albizia* spp., *Artocarpus heterophyllus*, *Dysoxylum* spp., *Ficus heterophyllus*, *Mangifera sylvatica*, *Parkia timoriana*, etc. Proper shade and irrigation are maintained for the successful cultivation of this crop.

Weeding is done about 2-3 times annually. Betel vine is a fast growing plant. Within a period of two month, it grows to an average height of about 45 cm. The leaves of the plant become ready for plucking after one and half year of planting, reaching to a height of about 2 m and the creeper remains productive for several years from the date of planting.

**Harvest operation:** Harvest is carried out mostly in the month of June, July and August. Due to enough rainfall received during these months, the production of betel leaf is highest as compared to other months when no management strategies are carried out. Plucking of betel leaves is done manually (hand picking) and by using simple instruments such as a knife, baskets and ladders. The harvest of betel leaves carried out year round and plucking is possible every day if production is good being carried out at early hours of the day. A single plant is usually harvested about four or five times a month even during the off-seasons, *i.e.*, November to May. A skilled worker can pluck a minimum of about 3,600 leaves a day. When leaves of betel are on emergent trees, the tribe were able to make their harvest possible by the use their local made ladder (**Figure 3**).



Fig.3: Traditional ladder used



Fig. 4: Storage basket for plucking leaves

**Storage operation:** Freshly plucked leaves are stored in simple storage baskets made out of bamboo (**Figure 4**). Plucked leaves are then re-stored under room temperature for a period of about 4 days. This plucked leaves are sprinkled with water time to time to keep the leaves fresh and is then made ready for sale.

**Marketing Strategy:** The collected leaves are packed in bundles. A bundle contains 360 leafs and is locally called *mora*. These *moras* are then sold to market through a middle man.

### Discussion and Conclusion

Lack of labour, higher economic output and sustainability of the system evolved the betel leaf agroforestry practice. Betel leaf agroforestry has enhanced the supply of socially required betel leaf to the local markets, contributed to price stability, and generated some export revenue (Saha, 2004). Several positive attributes of sustainability in traditional betel leaf agroforestry system has also been reported (Nath and Inoue, 2009; Rahman *et al.* 2009; Nandy and Das, 2013). Such sustainability within the traditional knowledge base system improved the

livelihood security of the many farmers involved in the cultivation system. Further studies are required to be initiated to disseminate scientific research findings to the farmers to enhance maximum production.

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