Livistona Jenkinsiana Griff.
(Tokow)

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

Livistona jenkinsiana Griff.

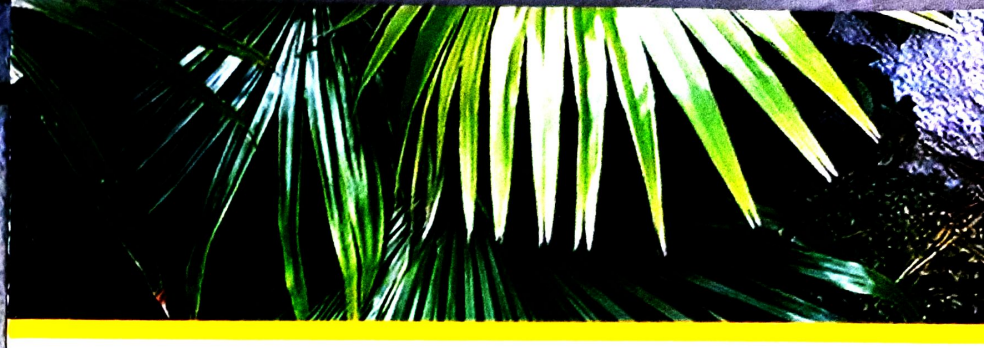
Common name: Himalayan Fan Palm
Local name: Tokow (Assamese), Tankau (Khampti)
Family: Arecaceae
Life cycle: Annual

INTRODUCTION

It is a palm tree with large fan-shaped leaves on spiny petioles. This beautiful endemic palm is only found in northeast region of India. It is also native to Myanmar, China, Thailand and Bangladesh. It mainly grows in open forest, and it is also commonly planted in villages or other disturbed areas; at elevations from 100 - 2,500 m.

CULTIVATION

Planting is done when seedlings are about 18 months old at a spacing of 4m x 4m during May-June with the beginning of rainy season. Seed propagation is easy and germination rate is almost cent percent. The seeds are sown in the month of February, March and April. Good germination rate of seed has been seen when seed is sown at 2 to 3 inches under the soil. Usually clearance of forest is not necessary to sow the seed. This tree is suitable for multiple cropping and also planted on boundary to demarcate the boundary.



PLANTATION & DISEASE MANAGEMENT

The plantation of the plant can be done by natural regeneration and artificial regeneration.

- **Natural Regeneration:** The natural seeds fallen from the tree are carried over by birds, or squirrel or dropped on soil during winter season start germinating in good habitat with pre monsoon showers in April-May and establish to grow the plants. Profuse regeneration can also be seen in the vicinity of mature fruiting trees along partially open moist slopes

- **Artificial Regeneration:** Propagation by seeds is the most easy, cheap and conventional method. Seeds can be gathered during November-December when they are fully ripe. Freshly harvested seeds are used for sowing. The seeds are extracted from fleshy fruits by de-pulping, or removing the peel. This can be done manually or fruits can be kept in water or in soak-pits for a couple of days by which time slight rotting of fruit peel takes place and then it becomes easy to remove the peels by gentle mashing and washing.(Singh, et al. 2010)

HARVESTING

The fan shaped leaves are harvested from mature tree while harvesting, only 2-3 leaves are left in the palm excluding the tender leaves. The leaves are harvested every alternate year (Singh et al, 2010).

AGROFORESTRY

Tokow can also be planted as an agroforestry or shade/nursery tree species with other crops. It does not produce much shade as the stem is branchless and leaves occur at the top only. Therefore, seasonal crops and vegetables can easily be grown below Toko plantation in agroforesty system (Singh et al, 2010).

VALUE ADDITION AND USES

Japis (traditional hats) can be prepared from the leaves; ropes can also be made from rachis by peeling. The seeds are eaten as a substitute for betel nut. The leaves are commonly used for thatching. The leaves are woven into mats, hats etc. Different size of Japis and hats are available in the market made from the leaves. From rachis, mats, baskets and hats can be prepared. The remaining white portion of the rachis can be used in for compost making.

MARKET POTENTIAL

The leaves can be sold in bundles. Japis (hats) can be made of juvenile leaves and can be sold to the Japi makers. The mature leaves can be also used as roofing material in tribal households. The harvested leaves are bundled and traded in raw. Generally, each bundle has 40 leaves and sold or bartered for other materials with neighboring tribes. There is a variation in price of Toko leaves. In the remote villages, 40 Toko leaves are sold for Rs 200-300 @ Rs. 5 or 6 per leaf, however, the same can be sold in Pasighat market for Rs 250-400. According to the market survey, the leaves are recorded to be sold @ Rs 5 per leaf. Similar observation was also reported in Itanagar (state capital) by Singh et al, 2010.

ECONOMIC IMPORTANCE

A good harvest can be obtained up to 35-40 yrs. On an average, 10 leaves appeare from January to December. It is found that after 5 yrs, on an average 10 leaves can be harvested per plant/year. In ideal situation, from 625 plant/ha, a total of 6,250 leaves can be harvested @ 10 leaves from each plant. (Singh et al, 2010). Thus a farmer can earn Rs. 31,250 per year from 625 tokow plants.
Household involvement for preparation of japi, hat, mat etc may be a viable option for livelihood.

Second year onwards of planting, one could harvest almost 3960 number of leaves which can used to make 1320 number japis. The rate of sale of one japi is Rs. 250 in local market, and in turn, one can earn Rs.3,30,000 per annum. Apart from making japis, the rachis of harvested 3960 numbers of leaves may also be utilized for preparation of mats and hats of different sizes.

FOR FURTHER READING:

1. Singh, R.K., Srivastava, R.C., Adi Community & Mukherjee, T.K. 2010. Toko-Patta (*Livistona jenkinsiana* Griff.): Adi community and conservation of culturally important endangered tree species in eastern Himalaya. Indian Journal of Traditional Knowledge, 9(2): 231-241.

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