

Documenting Traditional knowledge on Chyura (*Diploknemabutyracea*): A Socio-Economically Important tree in Uttarakhand

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Degradation of natural forests is a global problem. Ruthless exploitation of vegetation from steep hills slopes of Uttarakhand has adversely affected environment and living condition of the people in the state. There is a growing awareness that woody perennial can play a major role not only in meeting farm based fodder and fuel wood needs but also in creating an income generating system at the village level in hilly parts of the state. A number of multipurpose trees are found in Uttarakhand, which are under exploited and lesser known. *Diploknema butyracea* Roxb. commonly known as Chyura is one such under exploited and lesser-known multipurpose tree species that occurs in the eastern part of the state.



. It is also called “Indian Butter Tree” as fruits/seeds of chyura being rich in oils. The trees found chiefly along the sides of ravines of hills and in shady valleys. It is found in the elevation range between 300 to 1500 masl. The tree is medium to small size in Kumaun and attains 3m girth.s. Flowers are white and contain a sweet, sticky and fragrant substance collected by bees. Ripe fruits pulp is juicy and sweet, villagers compare it to milk (yellow white in colour). It contains sugary pericarp and 1 to 2 kernels. A good tree of *chyura* can yield approximately 360 to 500 kg fruit/tree while the seed yield can range between 61 and 75 kg/tree. The seed and kernel oil percent of *chyura* range between 45-49% and 60-65% respectively.

Diploknema butyracea

A case study was carried out in Uttarakhand to document the *chyura* in all its forms. This includes its distribution, scientific knowledge, linkages with the communities and their livelihoods and traditional knowledge. The communities residing in the surveyed villages represent diverse section of society including weaker class, women and different age groups. Chyura is integral part of the communities and has been narrated as family tree by them. Chyura provides two options of livelihood i.e. chyura ghee and chyura honey and these two vital edible produce are not needed to be procured by the communities from market. In fact, more than being useful as food, these products are also used during worship and cultural events.

The availability of produce helps in saving money by fulfilling their requirement and also provides them additional option of income by selling the surplus products (contributes 5-20% in their annual income). The honey and ghee is sold in the Pithoragarh townships since last 3 decades and to some extent in surrounding areas and districts. The outreach has increased due to easy access through metal roads and use of machine instead of manual practice to extract ghee, thus enhancing the capacity of extraction in a day. Although traditional method is also alive and for purpose manual method is used as it has its own importance and emotional consequences.

The villagers still collect wood and the leaves from chyura tree and used as fuel and green fodder, however the awareness has increased among them and now they are willing to reduce the collection of wood and exploitation of chyura tree for its conservation and restoration. Villagers have developed the rules and guidelines to protect the chyura forests and forced some fine since last 10-12 years but implementation of rules is still tedious due to limitations of forest department and social causes. Fine is not paid specially by the poorest families thus sense of ownership is the best way to avoid degradation of forests.

The case reflects difference in usage pattern of chyura tree as usage and production of ghee (butter) is highly influenced by the availability of chyura trees and proximity of the village to the town. The affect of wild animals, abrupt climatic conditions and scarcity of water is well visible in context of sustainability of chyura and traditional uses/knowledge. Still the technical support need is felt for propagation and management of chyura with focus on changing climate, soil conditions and social aspects.

In all, chyura tree has an ecological sustainability because it adapts itself in slopes, barren land in comparatively less fertile soils. Moreover, considering slow growth of the tree the economic and environmental benefits can be reaped only after 6-8 years and could lend a hand future generations and also supplement the life in rural mountains.

The study indicates that the shift from traditional practices to modern is very slow and even though after awareness and introduction of modern appropriate technologies the large proportion of the community is still conserving the traditional knowledge and practices. The traditional uses of chyura are continued with diversification to an extent for better income and improvised livelihoods. The awareness level of communities has increased and approach to conserve *chyura* is well taken up by them.