Cultivation of Pakuri (*Inonotus obliquus*) –Potential for new income source for forest owners.

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JOHDANTO

Pakuri (*Inonotus obliquus*) (Hymenochaetaceae) is a pathogen living on broadleaved trees. In Finland it occurs mainly on birch (Betula sp.), but as well on other trees belonging to Betulaceae, and on aspen (*Populus tremula*) (Salicaceae). In Finland it infects trees that are damaged by frost or mechanical damage.

In Finland Pakuri is known from Tikka-tea which is made out of a sterile conk (Picture 1.) which pakuri forms on a tree. The tradition of using Tikka-tea ceased in Finland for several decades among wider public, but it is now experiencing a growing trend in Finland. In Asia and Russia where pakuri is known as Chaga, the use as tea and folk remedy has long traditions which never ceased.

Although being an effective pathogen in forests managed for timber, plywood and pulp production, its value can exceed almost tenfold the value of the tree which it grows on if sold as a raw material for nutriceuticals, for example. There is a growing interest among forest owners to cultivate Pakuri. Therefore MTT and UEF launched a project that aims to develop methods for cultivation.

AIMS OF THE PROJECT

- Develop methods to for large scale cultivation of Pakuri
- Promote the use of low yielding forests for nature product production
- Do an estimate of prospective profit of the cultivation
- Aid forest owners in marketing the products by networking producers, refiners and markets
- Produce information and manual for forest owners and nature product producers how to cultivate and refine Pakuri.

Picture 1. Pakuri, a sterile conk of *Inonotus obliquus*. Photographer: Kai Pulkkinen.

MULTIPLE USE OF FORESTS

The cultivation of Pakuri is especially suited for areas which are low yielding in terms of forestry. These are areas where tree growth on average is at least 0.1 m3/ha, but not more than 0.9-1 m3/ha. Such forests are abundant especially in eastern and northern parts of Finland. In Lapland there are 4 171 000 hectares of such forests and in Eastern Finland (Kainuu and North Karelia) 438 000 hectares.

- In Finland the price of birch pulpwood has been 11,5 €/m^3 at lowest and 17,5 €/m^3 at highest between 1995 and 2011. For saw timber 34,0 €/m^3 at lowest and 52 €/m^3 at highest (MTK 2011)
- The price of dried Pakuri has varied between 50 to 100 €/kg. By simple refining, drying and grinding for tea use its price can vary from 130 to 320 € /kg
- Birch infected with *Inonotus obliquus* can produce several sterile conks.
- In theory with the use of efficient cultivation methods, a single birch could produce several kilograms of Pakuri.

IN BRIEF

Even organized collection of Pakuri from forests would bring extra income for natural product producers, but it would be difficult to build stable production chain relying on scarce resource.

Developing methods for Pakuri cultivation and success in it would offer both prominent way to use low yielding forests to production and stable resource for refiners of Pakuri. It would create new business to NTFP (Non-Timber Forest Product)-sector in Finland.

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