

# Non-wood forest products

North Karelia as a high quality and unique non-wood forest products provider.



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Leverage from  
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**Lingonberries and bilberries growing together in a pine forest in eastern Finland.**

Photo: Michael den Herder

bio-active compounds such as concentrated levels of *Betuline* for which anti-inflammatory, anti-cancer and anti-diabetic properties have been documented in some recent studies (Ma et al. 2013, Kang et al. 2015). Reishi *Ganoderma lucidum* occurs naturally in boreal forests but it can also be cultivated. Its medicinal effects of improving physical strength and immune system have been widely recognized in Southeast Asia, also particularly in China and Japan. Birch sap can be extracted from birch trees during a short period in spring. Birch sap contains numerous minerals and antioxidants, magnesium and manganese, as well as vitamin C. Birch sap can be consumed fresh, and it is also used as an ingredient in the beverage and cosmetics industry.

The region of North Karelia is one of the most forest rich areas in Finland with a forest cover of about 89% of the total land area. Beside the wood product sector, non-wood forest products like berries and mushrooms have been collected and utilized from forests and are important for the local economy. Berries are a seasonal product and lingonberries, crowberries, bilberries, cloudberries, raspberries, cranberries, and sea buckthorn are common commercial berries species. Bilberry is the most common species for the export market.

Besides berries, North Karelian forests yield large amounts of edible mushrooms, and some species have medicinal properties. Chaga *Inonotus obliquus* is a wood-decaying fungus which has been used in traditional medicine for centuries and is well recognized in the Southeast Asian markets, especially in China and Japan. Its perceived health effects are related to high levels of



**Birch sap can be collected during a short period in spring.**

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North Karelian forests currently could provide high quality non-wood forest products such as natural wild berries, medicinal mushrooms such as chaga and reishi, and birch sap. In addition, in response to a growing market demand, there are ongoing efforts to improve the cultivation capacity of chaga and reishi mushrooms in the region.



Chaga is sold fresh, dried, in cubes, as powder, as extracts or as an ingredient of further processed food, beverages, cosmetics or hygiene products.

Photo: Silver Leapers (flickr.com CC BY 2.0).

### Market examples

**Berries:** raw material (frozen berries, dried berries, powder), berry drinks, smoothies, cold pressed juices, liquors, extracts and snacks

**Chaga:** raw material (fresh and dried chaga, cubes, powder), tea, food supplements, extract, (functional health) beverages, cosmetics (skin care) and hygiene (soap and shampoo) products

**Reishi:** raw material, food supplements, extract, powder, coffee

**Birch sap:** raw material, beverages, cosmetics

**Non-wood forests products coming from a pure and natural environment.**

**Many non-wood forest products contain bio-active compounds such as betuline in chaga, vitamins, phenolic acid and anthocyanins in bilberry, and antioxidants in birch sap.**

**Ongoing efforts to increase supply capacity especially on chaga and reishi through active cultivation and establishment of collection network.**

**Established and well-functioning collection network for berries and birch sap.**

**Finland has strict quality control and food safety standards. The origin of raw material can be traced to its source.**

### Further information

The Arctic Flavours Association is a Finnish association for non-wood forest products specialising in wild berries, mushrooms, herbs and special forest products, <https://www.arktisetaromit.fi/>

Business Finland, Information on Finnish Food Products interesting for export market <https://www.businessfinland.fi/en/do-business-with-finland/explore-key-industries/food-and-beverages>

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