



SEA BUCKTHORN

(Hippophae rhamnoides)



Global
Facilitation
Unit
for Underutilized
Species

enabling deployment of underutilized species



What is Sea buckthorn and where does it come from?

This plant, native over a wide area across Europe and Asia, is one of the important natural resources growing from Europe to North-West China. It can grow in mountains, sea coast and semi-desert areas, with low rain fall. In West and North Europe it is largely confined to sea coasts where salt spray off the sea prevents other larger plants from out-competing it due to its tolerance to high levels of salinity. Sea buckthorn is dioecious, with separate male and female plants, it produces small flowers and red to yellow berries the size of a pea. Recently it has been extensively planted across much of North China, and in other countries, to prevent soil erosion and to serve as an economic resource for food and medicine products. It has been introduced to Canada and the US where it is now growing as an exotic plant.

A legend tells how the ancient greeks used sea buckthorn leaf in a diet for race horses, hence its botanical name "hippophae" – shiny horse. According to another legend, sea buckthorn leaves were the preferred food of Pegasus – the flying horse – and were allegedly helpful in getting him airborne!

PROPERTIES

For centuries, the people of central and southeastern Asia have used sea buckthorn as an agent of traditional medicine to prevent and treat various ailments. Today, aside from erosion control, the plant is primarily valued for its fruits, which provide vitamin C, vitamin E, and other nutrients, antioxidants, oils rich in essential fatty acids, and other healthful components. The leaves are also used for making a multi-vitamin herbal beverage. The list of products made with sea buckthorn is long and varied and includes jams, juices, medicinal and cosmetic lotions, nutritional supplements, liquors.

❖ Health

Medicinal uses of sea buckthorn are well documented in Asia and Europe. Clinical tests on medicinal uses were first initiated in Russia during the 1950s. The most important pharmacological functions attributed to sea buckthorn oil are: anti-inflammatory, antimicrobial, pain relief, and promoting regeneration of tissues. More than ten different drugs have been developed from sea buckthorn in Asia and Europe and are available in different forms, such as liquids, powders, plasters, films, pastes, pills, liniments, suppositories and aerosols.

❖ Cosmetics

Sea buckthorn oil extracted from seeds is popular in cosmetic preparations, such as facial cream, hand cream, lip balm, deodorant, and oil for body massage.

❖ Food and Beverages

There are numerous products made from sea buckthorn, such as tea from leaves, multi-vitamin beverages, syrups, jam from fruits, and fermented products from pulp.

❖ Other Uses

Sea buckthorn leaves, pulp and seed residues are used for animal feed.



GROWING

Sea buckthorn is an undemanding, cold resistant plant, which can grow into a beautiful bush or tree depending on the soil, climate and watering. The plant will reward the grower with nature made multivitamins at the age of about 5 years. The plants are easily propagated, yields are relatively high, and production is reliable, with the potential market mainly in Europe at the moment. Most sea buckthorn research has been conducted in Asia and Europe, and Canada has recently increased its research.

HARVESTING

Harvesting is difficult due to the densely thorny nature of the shrubs. A common harvesting technique is to remove the entire branch, though this is destructive to the shrub and reduces future harvests. The branch is then frozen and the berries are easily shaken off. The most effective way to harvest the berries and not damage the branches is by using a berry-shaker which was developed in Estonia. Mechanical harvesting leaves up to 50% in the field and the berries can be harvested only once in two years.

PROCESSING

After cleaning, the berries should be processed as soon as possible, and may be either stored at a low temperature or flash frozen. The shelf life of berries stored at a low temperature can be up to 2 weeks. Young leaves are dried and ground as tea.

SEA BUCKTHORN

Contribution to the protection of the environment

In large areas of Northern China and Mongolia sea buckthorn has been developed into a major environmental resource. Many areas in fact, have become virtually treeless, even though they were once forested. Soil losses have been huge, and several previous attempts to grow various trees to hold down the soil have been unsuccessful. Sea buckthorn has turned out to be useful because it withstands severe weather and grows huge root systems in poor soil (and fixes nitrogen in the soil). For many animal and bird species, sea buckthorn is an important source of food or provides shelter. In Mongolia several wild animal species have found a habitat in the sea buckthorn forest, including pheasant, hare and fox.

Contribution to rural and social development

The planting and maintenance of sea buckthorn is encouraged by local people in Northern China and in Mongolia who can earn income from harvesting the fruits and other parts of the plant. In Nepal a partnership involving an international foundation, university research institutions, local community-based organizations, and practitioners of traditional Tibetan medicine, is working with a hospital and international businesses to build a sustainable programme for the cultivation and sale of sea buckthorn in domestic and international markets. Local women's cooperatives have also been trained to harvest and process wild sea buckthorn berries.



The exhibits on show are just few of many commercial products made from Sea buckthorn:

Sea buckthorn oils

Sea buckthorn suppositories

Sea buckthorn hand cream / deodorant / massage oil

Sea buckthorn juice/syrup

Sea buckthorn herbal tea

Sea buckthorn jam

SOME PRODUCERS / RETAILERS / DISTRIBUTORS

❖ Weleda - www.weleda.com

❖ Lavera - www.lavera.com

❖ Sonnentor - www.sonnentor.com

❖ Lorenz & Lihn Obst-Edl-Erzeugnisse GmbH & Co. - www.lsh-ag.de

❖ Donath-Kelterei - www.hotfrog.de/Firmen/Donath-Kelterei-Co-KG

Photographs by: Paul Bordoni



Global
Facilitation
Unit
for Underutilized
Species

For further information, contact:

GFU for Underutilized Species

Via dei Tre Denari, 472/a

00057 Maccarese, Rome, Italy

TEL: +39-06-6118-292/302

e-mail: underutilized-species@cgiar.org

website: www.underutilized-species.org