## Available Berries and Berries used for production in China

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## Summary:

In this presentation, the information of berries grown in China will be given including the plantation area, berry fruit yield and their trend. The sea-buckthorn, goji and blueberry are the main berries grown in China and will be mainly discussed this presentation. In addition, the berry byproduct available in the China market will be presented.

About 2.5-2.8 million hectare of the sea-buckthorn are grown in China in 2011. Since 2001, each year the increasing rate of the sea-buckthorn plantation is about 50000-80000 hectares. Almost 90%-95% sea buckthorn grown in the world is located in China.

Since 1985, with the government financial sponsoring and policy support, the sea Buckthorn has been widely planting in China for soil and water conservation purposes. The World bank has provided the low-interest loan for planting the sea-buckthorn. Many northwest China areas 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). Sea buckthorn has been called as the ecological "vitamins" and has become the most important tree species for water and soil conservation, wind-resistance and sand-fixing in the Yellow River region and the Northwest China. Its planting and maintenance is encouraged by the local people who can earn income from harvesting the fruits (and other parts of the plant). For the specialty of the sea-buckthorn growing environment, most of the sea-buckthorns in China are the organic product.

Except for the new specie introducing from Russia in recent few years, there are a few species of the sea-buckthorn growing in China originally, the Himalayan (or willow-leaved) sea-buckthorn, China sea-buckthorn, Yunnan Sea-buckthorn, etc. Those sea buckthorn plants grow as shrubs or trees which height is up to 22 meters and the diameter of the trunk is as large as 1 m.Since one hectare of the plantation could be harvested about 7500 kilo sea buckthorn fruit, the yield of sea-buckthorn per year in China is very high. There are over 200 processing plants for sea buckthorn in China. The sea-buckthorn products are from the sea-buckthorn oil, sea buckthorn capsule, sea-buckthorn flavonoids soft capsule, sea-buckthorn vineger and juice.

Goji berries is the most well-known and popular berry in China and have been used for 6,000 years by the traditional Chinese Medicine in China for protecting the liver, kidney, improving visionrelated disease and boosting the immune function. Goji berries are rich in antioxidants, particularly carotenoids such as beta-carotene and zeaxanthin. One of zeaxanthin's key roles is to protect the retina of the eye by absorbing blue light and acting as an antioxidant.

The majority of Goji berries produced wolfberries come from the Ningxia and the Xinjiang regions of northwest China where they are grown on plantations. It is estimated that the total Goji berry plantation areas in China is about 165000 hectare with a yield of the dried fruit of 200 million kilo per year. Government releases of the annual goji berry production, premium fruit grades, and export

are based on yields from Ningxia, the region recognized with

- 2011: 50000 hector plantations (30% national plantations), 90 million kilo of the Goji fruit (46% national production).
- 2009: 42000 hector plantation, 77 million kilo of Goji fruit
- 2000: 7300 hector plantation, 16 million kilo of Goji fruit.

From those figures of Ningxia, it can be found that the increasing of the Goji berry production is very fast as the fast increment of the demand on the functional food and healthy life by Chinese, as well as the increasing of the exporting of Goji berry products.

As a food, dried goji berries are traditionally cooked with chicken or pork, vegetables, and other herbs for soup. The berries are quite popular to made a tea with boiled water and daisy flower. currently in China. There are over 200 processing plants for goji berries in China. The goji berry products are from the goji seed oil, goji-oil capsule, goji tea, juice and wine.

Blueberry and its healthy elements just began to be known by the Chinese people a few years ago. Wild blueberry, called bilberry in EU, are growing mainly in the Da-Xin-An Mountain, Xiao-Xin-An Mountain and Chang-Bai Mountain in primitive forest areas. 90% national wild blueberry resource and production are from Da-Xin-An Mountain areas. The large amount of wild blueberry in China are managed by two forest administrations: Da Xin An Mountain Forest dministration of northeast and Ya-Ke-Shi Forest Administration of Inner Mongolia. The output of the wild blueberry resource in Da-Xin-An Mountain may reach 50 million kilos per year, but a small amount of 12 million kilos is harvested per year.

Since 2000, China has introduced the North America blueberry species into fruit plantations. There are four major regions for blueberries production: the Northeast, Shandong Province, the Southeast and the Southwest. The total plantation area was 3500 ha with a yield of 3 million kilo in 2010, while 1300 ha in 2007, with a yield of 400 tons.

A few years ago, it is imaginable that China has become one of the world largest consumers and possibly net importers of blueberries. Currently, demand is highest in the large coastal megacities though interest is quickly spreading to major urban centers throughout the country.