

## Large-fruited Black Chokeberry (*Aronia Melanocarpa*)

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The black chokeberry [*Aronia melanocarpa* (Michx.) Elliott], usually a small shrub native to eastern North America, grows wild from Nova Scotia to Florida and in the west to Michigan. A typical shrub is only 0.5-1 m tall, but there are some more vigorous (to 3m) varieties with larger fruits, with a diameter up to 1 cm. they have lustrous dark green leaves, attractive white flowers in spring and shining black fruits in fall turning blazing red in autumn.

The large-fruited black chokeberry is of economic importance mainly in the Soviet Union. The principal Russian name for black chokeberry is black-fruited mountain-ash but recently is often referred to as "aronia."

In the Soviet Union aronia were being cultivated on 17,800 hectares according to fruit tree census in 1984. It is a very adaptable species to different climates, soils, and conditions, as shown by its wide distribution from the Baltic region up to the Sakhalin. The main regions of its cultivation are Siberia and Ural with 2,300 ha being cultivated in the Ukraine. Aronia is one of the most common garden shrubs in central and northern regions of the European Russia.

Black chokeberry has been grown in the botanical gardens of the St. Petersburg (now Leningrad) a century and a half ago (1834) and it was known in Riga (in the Baltic) almost at the same time. But the famous Russian breeder Ivan Michurin, first propagated aronia for fruit producing, introduced the seeds from Germany. I. Michurin bred a cultivar 'Likernaya'

in 1905 hybridizing European mountain-ash with *Aronia melanocarpa*. This hybrid plant has leaves intermediate between its parents and the fruit is not better than that of aronia.

The extensive cultivation of aronia in the Soviet Union is a result of Dr. M. Lisavenko, Director of the Altaj Experimental Station. In 1935 he planted aronia and it became a commercial crop shortly after World War II. Aronia is propagated primarily by seeds but rooting softwood cuttings under mist is promising. In Siberia aronia is not winter hardy and branches are bent down and covered with snow to protect them. Normally aronia is planted in the fall 4 by 2 m. Experiments at the Leningrad Agricultural Institute have shown that the cutting back to about 1 m of all branches every 4-5 years is the preferred pruning practice after the plants are 8-10 years old. Harvest begins in late August. Aronia fruit hang on the bushes well and are not perishable. Average yield at the 6 best state farms was 5.3 to 7.7 tons per hectare.

Aronia fruit contains about 7.5% sugar, 0.7-1.2% acids, more than 0.5% pectic substances, and 40 m% vitamin C in average. But vitamin C is very variable from year to year: it may be only 17 m % in one year and 68 m % in another year. The fruit is made into juice and wine, compote and pickles. Juice is most popular, especially mixed with the apple juice.

The aronia industry began in Finland and East European countries in the last decades. Aronia breeding in Finland was started in early 1970's with germplasm from Estonian SSR.

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