Study of the antioxidants and nutrients in cloudberry (*Rubus chamaemorus* L.) in Latvia

Short communication

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Abstract: Cloudberry (*Rubus chamaemorus* L.) is an economically important plant that is already cultivated. The aim of the study is to create and analyze a collection of cloudberry samples representing Latvian population.

Key words: antioxidants, phenolic compounds, macro- and microelements

Cloudberry (*Rubus chamaemorus* L.) is a herb species of the boreal zone with a distribution areal in the northern hemisphere. In Latvia cloudberry localities are close to the southern distribution area of the species in Europe (Thiem, 2003; Auniņš, 2013). It is an economically important plant that is already cultivated in Fennoscandia. Fresh cloudberry fruits and compounds derived from fruits and leaves contain several health-promoting substances: vitamins, flavonoids and phenolic acids with antioxidant properties (tannins, quercetin, naringenin). The most valuable components are those with antioxidant properties, such as ascorbic acid, carotenoids, and polyphenolic compounds (Jaakkola et al., 2012; Whaley et al., 2021).

The aim of the study is to create and analyze a collection of cloudberry samples representing Latvian population. Processed cloudberry seeds will be further used as breeding material for establishment of agricultural culture adapted to regional climatic and ground conditions.

Cloudberry samples from eight deposits in Latvia were analyzed. Presence of antioxidants including ascorbic acid, β-carotene, xanthophylls and total phenols were determined in the berries. Macroelements – N, P, K, Ca, Mg, S and microelements – Fe, Mn, Zn, Cu, Mo, B were determined in the leaves.

Level of all detected antioxidants found in berries harvested in bogs Baltais and Zaļezers was higher in comparison to samples representing Nītaure and Lielais un Pemme bog. Highest content of all identified macro- and microelements was found in the leaves harvested in Lauga and Pelečāre bogs.

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