

## Clonal diversity and genetic relatedness of the seabuckthorn germplasm grown in Latvia

**Gunārs Lācis, Irita Kota-Dombrovska,  
Toms Bartulsons, Arturs Stalažs**

*Institute of Horticulture, Latvia University of Agriculture  
Graudu iela 1, Ceriņi, Krimūnu pag., Dobeles nov., LV-3701, Latvia,  
email: gunars.lacis@llu.lv*

The common seabuckthorn (*Hippophae rhamnoides* L.) is known and used by humans for centuries in medicine, cosmetics and food. Crop cultivation is rapidly increasing in Europe due to the demand for its berries rich in specific valuable oils, high content of different vitamins, minerals, phenolics and essential oils. The targeted introduction and breeding of seabuckthorn for intensive production is relatively new in comparison with traditional fruit crops, grown in Europe for centuries. Currently diverse plant material is cultivated and used in further breeding. Due to fragmented introduction and breeding efforts, there is limited information on available seabuckthorn germplasm, its level of characterization is low, incorrect identification and misnaming of introduced plant material is quite frequent. It limits use of proper plant material in the cultivation practices and breeding. Therefore more than 150 seabuckthorn samples from 56 sites throughout Latvia were collected to evaluate genetic diversity available in the country, widely grown cultivar identity and uniformity. Collected germplasm was analysed using previously tested SSR and cpSSR molecular markers. Applied markers allowed complete discrimination of the tested seabuckthorn cultivars and wild samples, determination of genetic similarity and relatedness, as well as evaluation of cultivar genetic uniformity, important for plant material reproduction.

**Keywords:** cpSSR, diversity, germplasm, microsatellites