

Qualitative properties of the fruit of blackcurrant genotypes in conventional and organic growing

**Ave Kikas, Kersti Kahu,
Liina Arus, Hedi Kaldmäe, Reelika Rätsep,
Asta-Virve Libek**

*Polli Horticultural Research Centre,
Institute of Agricultural and Environmental Sciences,
Estonian University of Life Sciences,
Kreutzwaldi 1, Tartu 51014, Estonia,
email: ave.kikas@emu.ee*

The aim of the research was to evaluate the effect of genotype and growing conditions on blackcurrants fruit weight and biochemical composition. The trial was carried out during the years 2011 and 2012 in South-Estonia, with two cultivation methods (traditional and organic) and eight genotypes of different genetic background, including eight cultivars — two Scottish ('Ben Alder' and 'Ben Lomond'), two Swedish ('Intercontinental' and 'Titania'), one Belorussian 'Pamyaty Vavilova', and three recently selected from the Estonian blackcurrant breeding program 'Karri', 'Asker' and 'Mairi'. From each genotype and in both cultivation sites 500 g at fully maturity stage berries were collected in three replications. Fruit weight, °Brix, sugars, organic acids, sugar/acid ratio and ascorbic acid (AsA) content were determined. Berries from organic cultivation site were smaller and contained more soluble solids and sugars, they also had higher sugar / acid ratio than traditionally grown ones. Organic acids and AsA were higher in berries from traditional cultivation systems compared to the organic ones. 'Karri' had the highest °Brix, sugar content and sugar/acid ratio and lowest content of acids on average over the years and cultivation methods. The highest AsA content had 'Asker'.

Keywords: ascorbic acid, °Brix, fruit weight, organic acids, *Ribes* sect. *Botrycarpum*, sugars