

Fruit set of sour cherry cultivars grown in Latvia

**Daina Feldmane¹, Silvija Ruisa¹, Valentīna Pole¹,
Madalina Butac², Madalina Militaru²**

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

²*Research Institute for Fruit Growing
Pitesti, OP1, CP73, 110006, Arges, Romania*

Fruit set is crucial stage in the process of yield formation, which is influenced by environmental factors, growing technologies and peculiarities of genotype. The aim of the study was to evaluate fruit set of sour cherry cultivars in different growing conditions. The research was carried out at Institute of Horticulture (Latvia University of Agriculture) from 2009 to 2016 for two local cultivars — ‘Latvijas Zemais’ and ‘Zentenes’, and three introduced cultivars — ‘Orlica’, ‘Shokoladnica’ and ‘Bulatnikovskaya’. The influence of weather conditions during the flowering time and soil moisture treatments (woodchip mulch, drip irrigation and without treatment as control) on fruit set was characterised.

Comparatively low fruit set was detected for the cultivar ‘Zentenes’ — 5.5 %. The effect of the hives with buff-tailed bumblebees (*Bombus terrestris*) was tested for ‘Zentenes’ (in 2014 and 2015) and it led to higher fruit set — 17 %. Cultivars ‘Latvijas Zemais’, ‘Orlica’ and ‘Shokoladnica’ showed variable fruit set depending on growing season and soil moisture treatment — from 0.0 to 46.3 %. Less variable fruit set was observed for the cultivar ‘Bulatnikovskaya’ — from 9.1 to 37.9 %. Drip irrigation improved fruit set of ‘Orlica’.

Keywords: drip irrigation, *Prunus cerasus*, woodchip mulch