

Possibilities for wider use of *Sorbus* spp. in commercial orchards using the collection of genetic resources available in Latvia

Inese Drudze

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

Although rowans have been planted in some commercial orchards in Latvia, areas are insufficient for demands of processing companies. Since 1999 different *Sorbus* spp. accessions are added to collection orchard of genetic resources at Pūre. In total 257 edible cultivars, wild species and inter-generic hybrids (with *Sorbus*) have been planted for evaluation.

The genus *Sorbus* is taxonomically and morphologically diverse and complex group of plants, and in wild occur large diversity of plants of combined effects of their spontaneous mutations, hybridisation, polyploidy and apomixis.

From 2003 to 2006 series of expeditions were carried out with aim to sample local genetic resources of edible fruit plants, mostly from old orchards and in wild.

The most common in the forests and their edges in Latvia is *Sorbus aucuparia*. Selected accessions V7-2-13 and V7-4-23 — without tannins, accession V7-3-11 — with almost yellow fruit and without tannins. Accessions' having ordinary wild bitterness differs significantly according to yields, periodicity of yielding, ripening time, aromas, colour of fruit, juiciness, tolerance to rust and root initiated by *Monilinia* sp., crone habits. Accessions V8-30-47 (rich aroma), V8-31-39 (more juicy) were selected as suitable for wine-making. Interesting traits have V8-30-42 (large, bright coloured fruit), V8-30-43 (good storability and long shelf life of fruit).

The second ordinary species in western part of Latvia — *Sorbus ×hybrida*, showed less diversity. Only early ripening and late ripening clones were selected. *Sorbus ×meinichii* as natural inter-specific hybrid was collected only for genetic resource collection, including few accessions with unusual leaves. 'Saule', probably originated as inter-generic hybrid, were selected because of tree like habit and large fruit — close in taste and appearance to 'Titan' and 'Granatnaya'.

From 2012 to 2014 were carried out testing for possible use for different needs — marmalades, freezing and candies in sugar coatings. The most suitable cultivars was 'Moravskaya Krupnoplodnaya CGL', 'Moravica', 'Burka', 'Businka', 'Granatnaya', 'Zholtaya', 'Micurinskaya Krasnaya', 'Sorbinika' and 'Conzentra'.

Accessions 'Likyornaya', 'Granatnaya', 'Titan', 'Conzentra', 'Rossica', *Sorbus sambucifolia*, *Sorbus esserteauiana*, *Sorbus discolor* and *Sorbus rufoferruginea* selected for wine-making and juices.

Keywords: non-traditional crops, pome fruits, rowans, wild resources