



Collecting missions for sweet cherry on territory of the Czech Republic

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Abstract

Archaeological finds in the territory of the Czech Republic prove that the cherries have been grown since prehistoric times. From the point of view of human diet, sweet cherry provides a delicious fruit, which is rich in sugars and minerals. It is also a significant source of polyphenols with antiradical activity. Also today, trees of sweet cherry cultivars represent an integral part of Czech cultural landscape. Because there is a serious threat of losses of indigenous landraces and their diversity, the programme for in situ searching, rescue and long term maintenance of fruit genetic resources in the area of the Czech Republic has been conducted. Regions and environments not affected by the commercial farming and recreation expansion, as are national parks, protected landscape areas, former army areas in border mountain ranges, were selected for collecting missions. Important cherry accessions were localized by Global Positioning System and in situ registered. Found sweet cherries showed high variation in tree and fruit size, productivity, ripening time and fruit quality. Very good adaptability in the areas of their distribution and growing was noted. In Giant Mountains, vigorous and healthy trees of mazzard *Prunus avium* were found at an altitude of 800 – 1 000 m. These more than 100 year old trees were not damaged by frost. Rare landrace 'Ladeho pozdni' was found in Mrklov district in the altitude of 658 m. In the Czech Republic, this cultivar is exceptional from the rest of sweet cherry assortment due to its late ripening. It is the latest known sweet cherry, which ripens 5 weeks later than the last group of sweet cherry cultivars (in the beginning of September). Due to their quality and adaptability, landraces represent the most valuable part of genetic diversity in the territory of the Czech Republic. Grafts were taken from important genotypes and these accessions were transferred to germplasm collections of Research and Breeding Institute of Pomology, Holovousy Ltd. The most important sweet cherry genotypes are described in the presentation. The ripening time is stated in weeks from the earliest ripening variety 'Früheste von dem Mark'.

Descriptions of important sweet cherry cultivars and landraces

'Karesova'

Found in Ostromer near Horice v Podkrkonosi in the early 20th century. One of the earliest-ripening cherries, ready to pick in early June in the Czech Republic. Fruits are medium to big in size, skin is dark red in full ripeness. Flesh is firm. Taste is sweet acidic, spicy, very good. Cultivar has lightly coloured juice. Karesova is not susceptible to cracking. Cultivar bears early and regularly. Trees are resistant to winter frosts.



'Chlumecka'

The original tree arose as a chance seedling in castle garden in Chlumec nad Cidlinou. This sweet cherry became popular and has been widely cultivated in surroundings of Chlumec nad Cidlinou and throughout the Eastern Bohemia from the beginning of nineteenth century. The tree is vigorous with upright growth habit. Lower branches are spreading. Fruits are smaller to medium (5 g), roundish heart shaped. The flesh is crimson red, firm and juicy. The skin is glossy, red to dark red when fully ripe. It is recommended to harvest bright red fruits due to better transportability. Stone is small. Fruits ripen early at the end of first June decade. Fruits are resistant to cracking.



'Ladeho pozdni'

'Ladeho pozdni' is Czech landrace of unknown origin. Fruits are medium large to small roundish oval. Fruit skin is dark red, when fully ripe. The taste is average. Fruits ripen at the second half of August. It is the latest ripening sweet cherry cultivar on the territory of the Czech Republic.



'Doupovska cerna'

Czech landrace from Karlovy Vary region. Black skinned sweet cherry with elongated heart shaped fruits. Medium sized fruits ripen in the 4th cherry week. Flesh is acidic sweet, very good.



'Srdcovka preurodna'

Czech cultivar, which was grown in the surroundings of Prague. Medium large sweet cherry that is yellow in colour with a red blush with sweet taste. This cultivar is prolific bearer.

'Techlovicka' ('Ziklova')

'Techlovicka', a chance seedling discovered at Techlovice near Hradec Kralove at the end of the 19th century, is a large, firm, sweet cherry that exceeds in fruit quality. Tree shape is moderately vigorous with an upright growth habit and becomes spreading as the tree matures. Trees bear fruit early and are very productive. Fruits are very large (8 g), flattened, slightly heart shaped. Mottling (pale spots) is clearly visible on the dark red surface of fruits. Flesh is firm, dark red, acidic sweet, with excellent flavour. Fruits ripen towards the end of June, harvest time starts few days later in colder years.



'Kordia'

Czech cultivar, which was found in sweet cherry orchard in Techlovice as an occasional seedling in the 70ties of the last century. Cultivar was registered in the Czech Republic in 1981. Trees grow vigorously, medium vigorously in full bearing, Crowns are rounded. It is self-sterile and needs a pollination partner nearby. Fruit is big to very big (10 g), flesh is firm, crimson red, sub-acidic sweet, aromatic. Cultivar has deeply coloured juice. Cultivar bears early and regularly. Yields are high. It ripens in the 6th sweet cherry week. It is susceptible to late spring frosts, but highly resistant to cracking. 'Kordia' is dark red sweet cherry with excellent taste for direct consumption and processing.



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