

## Comments

In total 2 388 fruit producers were included in the Orchard Survey 2012; during the last five years their number decreased by 15.0%. Average size of orchards increased from 7.14 ha to 8.94 ha. Natural persons (86.1% of the holdings) prevailed among fruit producers in 2012; they utilised 40.1% of the orchard area and their average acreage was 4.17 ha. Remaining 13.9% of the holdings were legal persons which kept 59.9% of the area with their average acreage of 38.39 ha.

More than one half of fruit producers had orchards up to 2 ha of acreage; these small fruit growers utilised only 5.2% of the total orchard area. On the contrary, large holdings with their acreage above 100 ha (1.8% of the total number of producers) kept almost 40% of the total area.

In total 21 347 ha of fruit orchards were registered in the Czech Republic. In comparison with the previous survey this area increased by 1 269 ha (+6.3%). The most significant increment of the production area was recorded for pear trees (+43.5%) and plum trees (+43.1%). Area planted with apple trees grew by 6.0% and that of cherry trees by 4.6%. A distinct decrease was recorded for peach trees (-33.7%); certain decrement was noted also in area of apricot orchards (-7.9%) and sour cherry orchards (-7.3%). Area planted with other fruit species surveyed went up by 13.9% during the last five years. Increased acreages were recorded for walnut, raspberry, blackcurrant and hazelnut. On the contrary, acreages of red and white currants decreased.

Apple was the most important fruit species both in 2007 and 2012. In 2012 it was planted on 10 487 ha, i.e. almost half of the total fruit orchard area (49.1%). The second widespread species was plum which was planted on 2 545 ha (11.9% of the total area) followed by sour cherry, apricot, cherry, and pear (8.7%, 7.7%, 6.0%, and 4.8%, respectively, of the total area).

### Apple trees

The most widespread varieties of apple trees belonged to groups Golden Delicious (19.7% of the total apple orchard area), Idared (17.0%) and Jonagold/Jonagored (6.9%). As for their age structure, trees over 25 years prevailed with 42.6% of the total apple orchard area while young trees up to 4 years were planted on 16.9% of the area. Despite increased share of newly planted trees up to 4 years (+6.1 percentage points compared to 2007) the share of over-aged orchards over 25 years decreased only minutely (-0.6 p. p. compared to 2007) and the age structure of apple orchards remained unfavourable. The average density of apple orchards was 1 121 trees per hectare. More than half of the apple orchards belonged to the density class of 1 600–3 199 trees per hectare; orchards newly planted in 2012 were distributed evenly in all three density classes up to 3 199 trees per hectare.

### Pear trees

The most frequently planted varieties of pear trees belonged to groups Conference (21.8% of the total pear orchard area) and William (7.1%). The age structure of pear orchards was found to be favourable. There were 37.1% of pear trees in young plantations up to 4 years (by 6.8% more than in 2007) and old plantations over 25 years shared 23.7% (by 11.1% less than in 2007). Pear orchards were planted with their average density of 891 trees per hectare; their prevailing share (83.3%) belonged to the density class of 1 600 trees/ha. Density up to 400 trees/ha prevailed among orchards up to 4 years newly planted in 2012 while in 2007 orchards of the same age class belonged mainly in the density class of 400–1 599 trees per hectare.

### Peach and nectarine trees

The prevailing share of peach trees belonged to the group of yellow flesh ones, and of medium earliness, i.e. harvested between 16 July and 15 August (71.6% of the total peach orchard area). Frequently planted varieties were Redhaven and Sunhaven. Nectarine trees were planted on the acreage of 35 ha, which represented 4.7% of the total area planted with peach trees. Share of young plantations was negligible (4.3% of peach orchard area; by 2.8 p. p. less than in 2007); peach orchards older than 15 years prevailed (62.9%;

increase by 3.3 p. p. compared to 2007). The majority of the peach orchards (82.2%) belonged to the density class up to 600 trees per hectare and their average density was 452 trees per hectare.

#### Apricot trees

The most frequently planted group were medium apricots, i.e. harvested between 1 July and 31 July (82.8% of the total apricot orchard area). The most widespread variety was 'Velkopavlovická'. The age structure of apricot trees did not change significantly during the last five years. Prevailing share of apricot orchards belonged to the age class over 15 years (66.0%), young plantations shared 10.0%. The average density in apricot orchards was 357 trees per hectare. Prevalent proportion of the orchards (83.4%) was classified in the density class of up to 600 trees/ha.

#### Plum trees, cherry trees, and sour cherry trees

Plums were the second most widespread fruit species planted in the Czech Republic. Plum orchards showed a balanced age structure; their largest share was represented by plantations 5–14 years old (39.9%; increase by 4.2 p. p. compared to 2007) and by new plantations (31.8%; decline by 1.0 p. p. in comparison with 2007) while over-aged plantations over 25 years shared only 12.6% of the total plum orchard area. The average density of plum orchards was 420 trees per hectare.

Prevailing share of sour cherry orchards belonged to the age class of 5–14 years (42.5% of the total sour cherry orchard area) and the age class over 25 years (37.0%); young plantations up to 4 years shared 11.2% of the orchards. Their average density was 437 trees per hectare.

Almost half (46.2%) of cherry trees was planted in old plantations over 25 years, young plantations up to 4 years were represented by 15.7%. The average density of cherry orchards was 350 trees per hectare.

#### Regional classification

The largest shares of the fruit orchards within the Czech Republic were recorded in Jihomoravský kraj (20.9%), Středočeský kraj (19.3%), Ústecký kraj (10.8%), Královéhradecký kraj (10.7%), and Olomoucký kraj (8.0%). The most frequently planted fruit species in all regions was apple. Apple orchards were planted mainly in Středočeský kraj (22.9% of the total apple orchard area). The largest share of pear trees was noted for Ústecký kraj (23.6% of the total pear orchard area), the largest share of plum trees in Zlínský kraj (24.4% of the total plum orchard area), that of peach trees and apricot trees in Jihomoravský kraj (72.3% of the total area of peach orchards and 81.5% of area of apricot orchards), and that of cherry trees and sour cherry trees in Středočeský kraj (25.5% of the total area of cherry orchards and 24.2% of area of sour cherry orchards).

#### Conclusion

The number of fruit producers declined during the last five years; the largest decrease – by approximately one third – was recorded among small fruit growers with their orchard areas up to 1 ha. Average orchard area grew by 25.2% to 8.94 ha. Total orchard area grew by 6.3% to 21 347 ha; increased establishing of new plum, apple, and pear plantations contributed the most to this increment. On the contrary, a significant drop was recorded for peach, sour cherry and apricot trees. New plantations of apple trees were represented mainly by groups Golden Delicious and Jonagold/Jonagored; group Conference prevailed among pear trees; and medium varieties were the most common among peach and apricot trees. Age structure was found to be unfavourable – similarly to 2007 survey – in peach, apricot, sour cherry, and apple orchards; the most favourable one was recorded for plum orchards and pear orchards. Apple orchards together with pear orchards had the highest average planting density out of the species surveyed (approx. 1 100 and 900 trees/ha, respectively); the other fruit species showed a distinctly lower density of about 400 trees per hectare.