## 3 AGRICULTURAL LAND AND CROP PRODUCTION

## Agricultural land

In 2010 agricultural land covered 3483500 ha, i.e. $44.2 \%$ of the area of the Czech Republic. A loss of 1.5 percentage point was recorded during the last ten years to the benefit of artificial area and wooded land. Acreage of utilised agricultural area went down by $3.4 \%$ (i.e. by 120900 ha) and acreage of arable land even by $8.2 \%$ (i.e. by 224504 ha). The share of arable land decreased during the period 2000-2010 from $76.0 \%$ to $72.2 \%$. A certain part of arable land was grassed on the basis of subsidies provided by the European Union and from this reason the acreage of permanent grasslands rose since 2000 by $13.0 \%$, i.e. by 107061 ha. Policy on subsidies significantly influenced also vineyard area (+35.6\%): the wine and vine sector benefitted from subsidies for vineyard planting and renovation in the period until entry of the Czech Republic into the EU. On the contrary, orchard acreage decreased by 7.4\%.

Arable land covered almost three quarters (72.2\%) of total 3.5 million hectares of utilised agricultural area; more than one quarter (26.7\%) was comprised by permanent grasslands. Other permanent crops as hop-gardens, vineyards, orchards and kitchen gardens represented only $1.2 \%$ share in UAA. This pattern changed only slightly since 2000: share of arable land decreased by 3.8 p. p. to the benefit of permanent grasslands which rose by 3.9 p. p. The shares of particular crops were stable especially in joint stock companies and cooperatives. The largest share of arable land was reached by joint stock companies (82.1\%) while the smallest one was recorded for agricultural entrepreneurs - natural persons (62.0\%).

Graph 3 - Share of arable land, permanent grasslands and permanent crops, by size group


Despite the fact that permanent crops cover only small portion of arable land, they form a considerable part of the agricultural production in small-size holdings. In holdings of natural persons with less than 3 ha UAA, out of their acreage $39.9 \%$ consisted of vineyards and $15.1 \%$ of orchards. In holdings of legal persons these shares were $33.2 \%$ and $11.8 \%$, respectively. On the contrary, large agricultural holdings focused mainly on arable land crops: arable land represented $67.6 \%$ of acreage in holdings of natural persons and $78.3 \%$ of acreage in holdings of legal persons in the size group of 500 ha of UAA and more. Permanent grasslands were typical for holdings with 3-20 ha of UAA where they shared more than one half of their agricultural land, namely $53.4 \%$ in holdings of natural persons and $54.7 \%$ in holdings of legal persons.

Table 3 - Utilised agricultural area

|  | Year | Agricultural holdings, total | in holdings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | of natural persons, total | of which agricultural entrepreneurs - natural persons | of legal persons, total | of which |  |  |  |
|  |  |  |  |  |  | Business companies \& partnerships | of which |  | Cooperatives |
|  |  |  |  |  |  |  | Limited <br> liability <br> compa- <br> nies | Joint <br> stock <br> compa- <br> nies |  |
| Agricultural holdings | 2010 | 22864 | 19781 | 15329 | 3083 | 2432 | 1751 | 649 | 527 |
|  | 2000 | 26539 | 23714 | 19746 | 2825 | 1948 | 1310 | 602 | 740 |
| Utilised agricultural area (ha) | 2010 | 3483500 | 1013303 | 950892 | 2470197 | 1706264 | 802631 | 891479 | 733798 |
|  | 2000 | 3604400 | 923775 | 842044 | 2680625 | 1578841 | 783686 | 779696 | 1059447 |
| Arable land (ha) | 2010 | 2513846 | 619254 | 589474 | 1894591 | 1278820 | 538756 | 731676 | 597946 |
|  | 2000 | 2738350 | 633402 | 581846 | 2104948 | 1211058 | 560555 | 639882 | 863284 |
| Hop-gardens (ha) | 2010 | 5748 | 801 | 772 | 4947 | 3662 | 2506 | 1156 | 1251 |
|  | 2000 | 6966 | 1245 | 1048 | 5721 | 3853 | 2717 | 977 | 1788 |
| Vineyards, total (ha) | 2010 | 14347 | 5172 | 4107 | 9175 | 7758 | 3993 | 3713 | 1187 |
|  | 2000 | 10581 | 2852 | 2077 | 7729 | 6031 | 2518 | 3267 | 1349 |
| Kitchen gardens (ha) | 2010 | 242 | 113 | 87 | 129 | 26 | 14 | 12 | 15 |
|  | 2000 | 4617 | 2999 | 2344 | 1618 | 734 | 396 | 328 | 514 |
| Orchards (ha) | 2010 | 20499 | 7161 | 6406 | 13339 | 10586 | 6489 | 4008 | 2534 |
|  | 2000 | 22130 | 6062 | 5268 | 16068 | 11155 | 5317 | 5707 | 4581 |
| Permanent grassland, total (ha) | 2010 | 928818 | 380803 | 350046 | 548015 | 405412 | 250874 | 150913 | 130865 |
|  | 2000 | 821756 | 277215 | 249461 | 544541 | 346010 | 212183 | 129535 | 187930 |

Organic production methods were applied predominantly on permanent grasslands, which formed $86.4 \%$ of the total acreage of organically utilised agricultural area. Out of the total acreage of permanent grasslands, $37.1 \%$ were utilised organically. Organic production was practised also in fruit orchards (18.6\% of their acreage) while for the remaining crops, the proportion of organically utilised area accounted for less than $5 \%$.

Graph 4 - Share of particular crops on organically utilised agricultural area


## Areas under crops

In 2010 agricultural holdings utilised 2513846 ha of arable land; the largest share comprised of cereals (57.7\%). The prevalent one was wheat with more than one half (57.3\%) of cereals' acreage followed by barley planted on more than one quarter (26.4\%) of their acreage. In comparison with 2000 the most remarkable finding is that areas of maize for grain increased more than twofold while barley areas declined by $14 \%$.

Compared to 2000, areas of technical crops grew by 71 thousand ha (+16.7\%). The most distinct increment of 39 thousand ha (+11.9\%) was recorded for rape; it shared $12.0 \%$ of sown areas in 2000 compared with $14.6 \%$ in 2010. This increase was caused by growing demand for rape seed for production of fatty acid methyl ester - basic compound of biofuels. On the contrary, potatoes are an example of a crop whose acreages declined by one third due to combination of lowered consumption and increased import. Areas of forage plants on arable land decreased by 30.2\% during the same period; it was caused mainly by a decline in cattle number. A decrement was recorded also e. g. for vegetables (28.0\%) and pulses for grain (13.8\%).

Shares of arable land crops in particular legal forms were similar with only rare exceptions (differing by few percentage points). On the other hand, there are distinct dissimilarities among size groups of holdings due to their different specialisation. Growing of cereals is the most frequent production type in all types of holdings. However, in holdings of natural persons utilising less than 3 ha of UAA there is only approximately one third (29.4\%) of arable land used for cereals, while in other size groups this share accounts for approximately two thirds. Even more significant difference was found among holdings of legal persons: none of 63 holdings with less than 3 ha dealt with growing of cereals but the greater were the holdings the larger was their share of cereals; it grew continuously from one third to more than one half. Holdings of natural persons with less than 3 ha dealt mainly with growing of vegetables (21.9\% of their acreage), potatoes (15.0\%), or flowers and ornamental plants (13.7\%). Holdings of legal persons focused on growing of flowers and ornamental plants (56.1\% of their acreage) and strawberries (19.1\%). Among crops whose acreages rose with increasing UAA acreage belonged for example rape (17.3\% of acreage in holdings of natural persons with more than 500 ha and $14.9 \%$ in holdings of legal persons of the same size) or green maize (7.8\% in holdings of natural persons with more than 2000 ha and $9.1 \%$ in holdings of legal persons of the same size).

Table 4 - Shares of selected crops on arable land

| Utilised <br> agricultural area <br> (ha) | Agricultural <br> holdings | Arable land, <br> total <br> (ha) | Cereals, <br> total <br> (\%) | Potatoes <br> (\%) | Rape and <br> turnip <br> rape <br> (\%) | Green <br> maize <br> (\%) | Vegeta- <br> bles <br> (\%) | Straw- <br> berries <br> (\%) | Flowers and <br> ornamental <br> plants <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total | 22578 | 2513846 | 57.7 | 1.0 | $\mathbf{1 4 . 6}$ | $\mathbf{7 . 2}$ | 0.3 | 0.0 | 0.0 |
| $<0-<3$ | 2551 | 538 | 28.0 | 14.4 | 0.2 | 0.5 | 21.4 | 2.5 | 15.7 |
| $3-<10$ | 4877 | 11710 | 68.0 | 5.7 | 3.7 | 0.6 | 2.0 | 0.5 | 0.5 |
| $10-<20$ | 3947 | 24530 | 71.0 | 3.3 | 5.4 | 1.3 | 1.3 | 0.3 | 0.5 |
| $20-<30$ | 2058 | 25056 | 68.7 | 2.5 | 8.1 | 1.7 | 1.2 | 0.2 | 0.1 |
| $30-<50$ | 2308 | 47618 | 67.4 | 2.4 | 8.9 | 2.2 | 1.0 | 0.0 | 0.0 |
| $50-<100$ | 2421 | 100097 | 62.0 | 1.9 | 12.0 | 3.0 | 0.6 | 0.1 | 0.0 |
| $100-<500$ | 2620 | 366461 | 60.0 | 1.1 | 15.2 | 3.5 | 0.5 | 0.0 | 0.0 |
| $500-<2000$ | 1459 | 1095581 | 57.0 | 0.8 | 15.4 | 7.9 | 0.3 | 0.0 | 0.0 |
| $\geq 2000$ | 337 | 842255 | 55.8 | 0.8 | 14.7 | 9.1 | 0.1 | 0.0 | - |

