

## 10. The machines and equipment available to the holdings

The occurrence of agricultural machines and equipment is influenced by both the income of the agricultural holdings and by the condition of the soil or the animal welfare. In the Czech Republic, the average number of machines per holding is low when compared with the European Union. One of the reasons is the high concentration of production in large agricultural holdings enabling the distribution of the fixed costs.

The Farm Structure Survey 2007 shows that Czech farmers have just under 84 thousand tractors with differing outputs available. Machines with an output of 40 - 59 kW, of which a total of 30,719 were recorded, were predominant in almost all of the holding size categories according to the area of agricultural land. The holdings with a high area of arable land most often use tractors with a high output (from 40 kW up to 100 kW). In the case of holdings with an area of up to 1 ha of arable land, however, tractors with a small output (up to 20 kW and 21 - 39 kW) are the most widespread.

Despite the fact that "small" holdings farming up to 10 ha of arable land account for approximately two thirds, their agricultural equipment and technology is minimal. The machines are concentrated in large holdings farming the decisive share of the arable land. Holdings which farm 500 – 1 000 ha of arable land have on average 5 tractors with an output of 40 – 59 kW and 3 tractors with an output of 60 – 99 kW and over 100 kW. Despite the fact that these numbers are higher in the largest holdings farming over 1,000 ha of arable land (on average 12 tractors in the 40-59 kW category and 7 tractors in the category of 60 – 99 kW and above 100 kW per agricultural holding), Czech farmers can be seen to be far behind their counterparts in the European Union with regard to their machines and equipment when this is calculated in relation to the number of hectares per machine. In comparison with the previous structure surveys in agriculture, the number of tractors which farmers have available per hectare of farmed land has fallen. Whereas there was an average 26 tractors per 1,000 ha of agricultural land in 2000, the number was 24 tractors in 2007. This can be explained by the number of the most powerful machines; in 2007, there were 4 tractors with an output of more than 100 kW per 1,000 ha of agricultural land, which is approximately 1 machine more per thousand ha of land than in 2000. On the other hand, the fact that 84.3% of the tractors are older than 10 years old is alarming. This involves 58.7% of the powerful tractors from the category with an output above 100 kW.

Among the machines used to work and cultivate the land, there are an average of 5 ploughs, 4 cultivators or hoeing machines and 4 reapers per agricultural holding with an area of arable land greater than 1,000 ha.

In 2007, the Structure Survey in agriculture discovered over 11 thousand fertilizers spreaders and over 12 thousand manure spreaders. The key property of the spreaders is their payload. In the monitored year, the average payload for the manure spreaders was 5 tons and it was 2 tons for fertilizer spreaders.

Of the 7,588 lorries recorded at the agricultural holdings in 2007, half (51.7%) were owned by large holdings with an area of arable land in excess of 1,000 ha.

27.1% of the holdings are equipped with a personal computer for the needs of the holding. This is only 0.2 percentage points less than in 2005. The number of holdings connected to the internet has also not changed significantly: it rose from 20.7% of holdings in 2005 to 21.4% of holdings in 2007. 17.2% of holdings of natural persons and 72.7% of holdings of legal persons had a connection to the internet in 2007.

It is mainly the holdings of legal persons which are equipped with computer technology. 78.9% of them use a computer in the holding. This number is only 22.9% in holdings of natural persons. Most of the holdings owning a PC also use a connection to the internet. 75.3% of holdings of natural persons and 92.2% of holdings of legal persons owning a computer have an internet connection.

On average, there are 4 computers for every holding of legal person. There are, however, differences in the PC equipment between the individual legal forms. On average, there are 2 computers per limited liability company, 8 computers per joint stock company and 6 computers per co-operative.