

## 11. The regional evaluation of the results of the Farm Structure Survey 2007

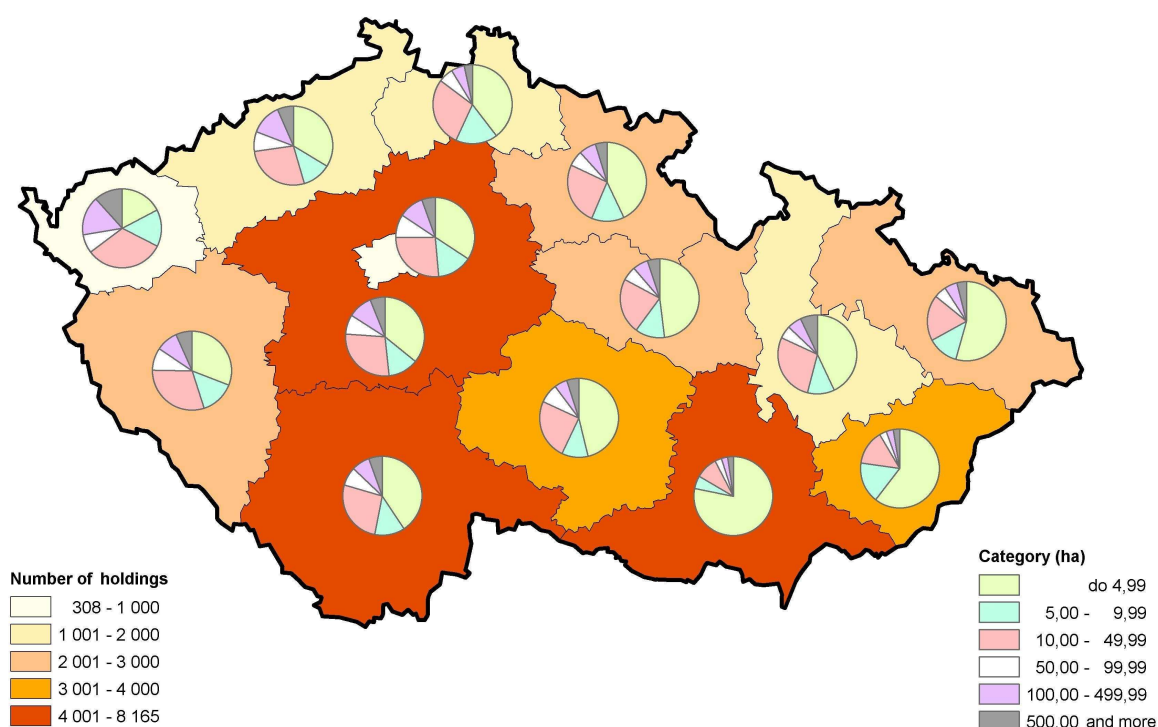
As has been said, 39,396 subjects farm agricultural land with an area of 3,518,073 ha in the Czech Republic; as such, there are 89.3 ha of agricultural land per subject. In the regions, the average holding area ranges from 44.5 ha to 196.3 ha. Whereas 1 holding in the Karlovarský region farms on average more than twice the national average area of agricultural land, the situation is the opposite in the Jihomoravský region. With regard to the highest number of holdings, the average area of utilised agricultural area per holding reaches only 44.5 ha. Out of a total number of 8,165 subjects, not quite four fifths farm agricultural land with an area of up to 4.99 ha and of that almost three fifths farm agricultural land with a size of up to 1 ha. Subjects with an area of up to 1 ha inclusive farm a total of 1,611 ha of agricultural land, whereby they grow grapes on 54.6% of the area and arable land accounts for just under one third of the area.

Holdings of natural persons, which outnumber holdings of legal persons at the national level by 12.4 times, account for slightly less than one third (29.4%) of the area of agricultural land. The exception to this involves the holdings of natural persons in the Ústecký region; their numbers are admittedly 10 times higher, but on the other hand they farm an area of agricultural land comparable to the holdings of legal persons. The largest average area among holdings of natural persons is in the Karlovarský region (91.6 ha) and the Ústecký region (64.9 ha).

Holdings of legal persons make up only 7.5% of the total number of agricultural subjects, but they farm more than 70% of the agricultural land. The average area per holding of legal person amounts to 844.4 ha of agricultural land; co-operatives traditionally have the largest area (1,412.3 ha). In the Pardubický region, co-operatives have land at a size of 2,008.0 ha, while the co-operatives in the Karlovarský region are in second place with an average area of 1,661.5 ha and third place goes to co-operatives in the Středočeský region, including those in Prague, with an average area of 1,567.2 ha.

The survey shows that the largest group of subjects with an area of agricultural land up to 4.99 ha is located in the Jihomoravský, Zlínský and Moravskoslezský region. When moving to the west (the Karlovarský and Plzeňský region), holdings with an area of agricultural land ranging from 10.00 to 49.99 ha have the decisive share in the total number of holdings in the given region.

### Number of holdings and their share in size categories: by UAA



The FSS 2007 survey has shown that, despite the constantly changing situation in the branch, most agricultural holdings do not undertake gainful activities which would compensate for these fluctuations. Only 4,366 (i.e. 11.4%) holdings have one other gainful activity alongside agriculture and only 386 holdings reported several non-agricultural activities. The most frequently represented non-agricultural activities are commerce, transport, construction activities and energy production (39.1%), the processing of agricultural products is in second place with 18.8%, while tourism is in third place with 13.0%. The largest range of agrotourism, accommodation and sports activities on farms is offered by holdings in the Královéhradecký region (95 holdings, i.e. 13.9%) and the Jihočeský region (93 holdings, i.e. 13.60%). The processing of agricultural products is most widespread in the Jihomoravský region (774 holdings, i.e. 78.3%), where grapes are traditionally processed.

A total of 243,180 people worked in agriculture, of whom 78.9% were regularly employed workers who undertook agricultural work in a holding in the period from October 2006 to September 2007. Out of the total number of 191,940 workers, 17.7% work in the Jihomoravský region, 12.9% are employed by holdings in the Středočeský region, including Prague, and Vysočina region is in the third place with a share of 11.9%. The Liberecký and Karlovarský regions have the lowest numbers of workers; the share of the Liberecký region in the number of regularly employed workers is 2.9% and the share of the Karlovarský region is half that.

During the work peak periods, during the period of the vegetable and fruit harvest, the gathering of potatoes or grape picking, the holdings take on extra individuals working upon the basis of agreements governing work undertaken outside employment; they account for almost one fifth of all the workers in agriculture, i.e. 47,840 people. A single worker working upon the basis of such an agreement worked an average of 126 hours. The results of the survey confirmed that most of the workers working upon the basis of an agreement work in areas involving vegetable cultivation and in areas with developed fruit or grape cultivation. Holdings in Jihomoravský region concluded the most agreements (a total of 8,627), second were the holdings in the Ústecký region with 7,666 agreements (the share of the total number: 16.0%) and third place went to the holdings in the Středočeský region, including Prague, with 7,087 agreements. The least number of workers with an agreement appeared in the Karlovarský and Liberecký regions.

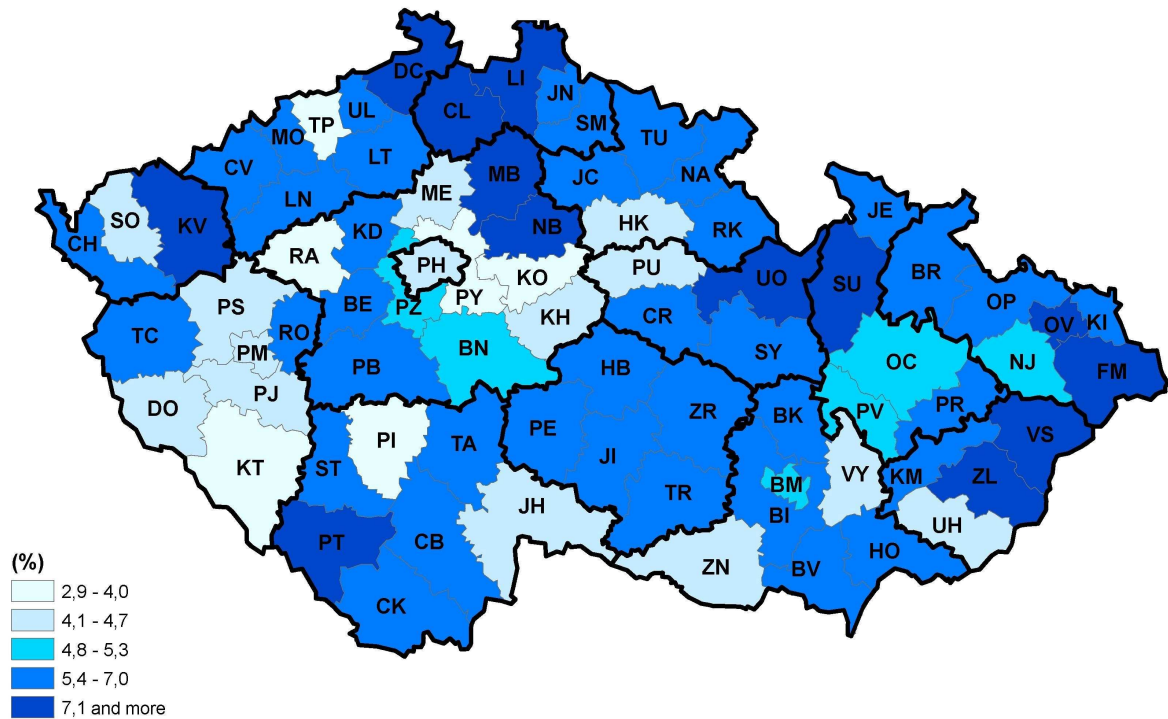
The survey showed that agricultural holdings also hire the labour force in the form of services. In these cases, the workers are not the direct employees of the agricultural holding and this either involves self-employed individuals (1,054 people) or people assigned to the work by an employment agency, of whom there were 2,346. On average, the individuals assigned to a holding by an employment agency worked 242 hours and the self-employed individuals worked an average of 815 hours. Holdings in the Ústecký region made the most use of the option of hiring workers via an employment agency; the share of the total number of agency workers amounted to 41.8%. The holdings in the Středočeský region, including Prague, were only 3.8 percentage points behind. The survey shows that the agency workers are hired for shorter work periods. On average, agency workers in the Ústecký region worked 104 hours, which ranks in last place in the number of worked hours; the number of hours was more than double in the Středočeský region, including Prague. Whereas the holdings in the Jihočeský region are in fifth place with 51 workers, they are in first place in the evaluation of the worked hours (on average, each worker worked 1,251 hours).

It is no surprise that, as in the neighbouring countries with a tradition of family farms, Czech holdings of natural persons also secure the agricultural work mainly with the help of the farmer's family members, of whom there are over 80 thousand. They mostly help on the farms for shorter periods and predominantly during the harvest period. More than one third of the family members work only 449 hours a year. Only 9.0% of employees work in holdings of natural persons, of which more than two thirds work there full time. The large number of family members thus increases the number of workers in agriculture; if they are converted into full-time employees, their physical number is reduced by 1.8 times to 138,105 workers.

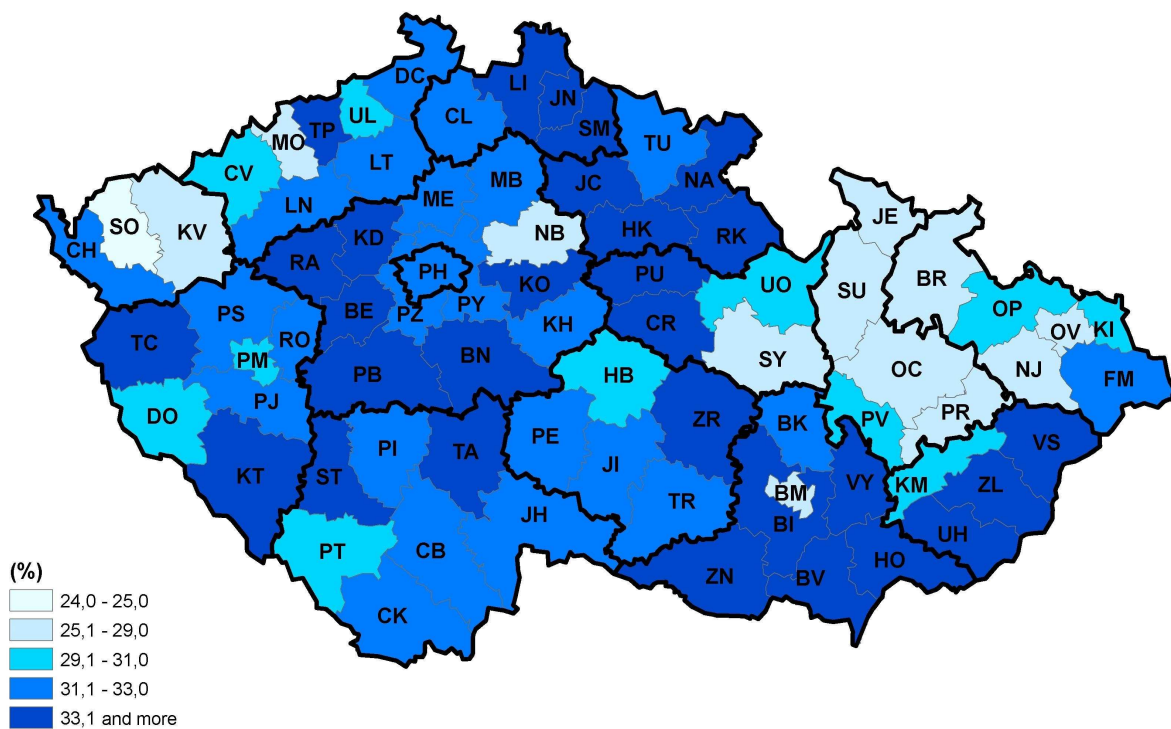
The age structure of the workers in agriculture is not overly favourable, as is clear from the results of the survey. Almost one third of the farmers are in the age group of 55 or older and of that 7.8% of the workers are older than 65. About one fifth of workers in agriculture are young in the age group of up to 34: of that 5.9% are aged up to 24. In comparison with 2005, the share of workers in the age group above 55 increased by 2 percentage points and by 0.8 of a percentage point in the age group up to 34, while the increase in the numbers of young workers in agriculture was exclusively contributed to by workers younger than 24. The age structure of the workers in the individual regions more or less copies the national average with some exceptions. For example, the greatest share of workers over 65 is in the Zlínský (10.4%) and the Jihomoravský region (10.0%). On the other hand, the situation is the most favourable in the Olomoucký region; workers aged over 65 account for 4.8% of the workers and over half the workers are aged 35 to 54. In comparison with 2005, the number of districts, in which the share of workers aged over 55 represented one third or more (category 33.1% to 42.3%) of all workers, has increased from 10 to 29. The largest share of the workers aged 55 is in the Kolín district (42.3%) and the lowest share has been recorded in the holdings in the Sokolov district (24.0%). The number of districts, in which workers in the age of up to 24 reach a share of 7.1 and more rose from 7 to 13 in comparison with 2005. The greatest share of young

people work in holdings in Karlovy Vary district (9.4%). On the other hand, the smallest share was achieved in the Rakovník district (2.9%) and the Kolín district (3.0%).

### Share of workers up to 24 years in the total number of workers in agriculture



### Share of workers aged 55+ in the total number of workers in agriculture



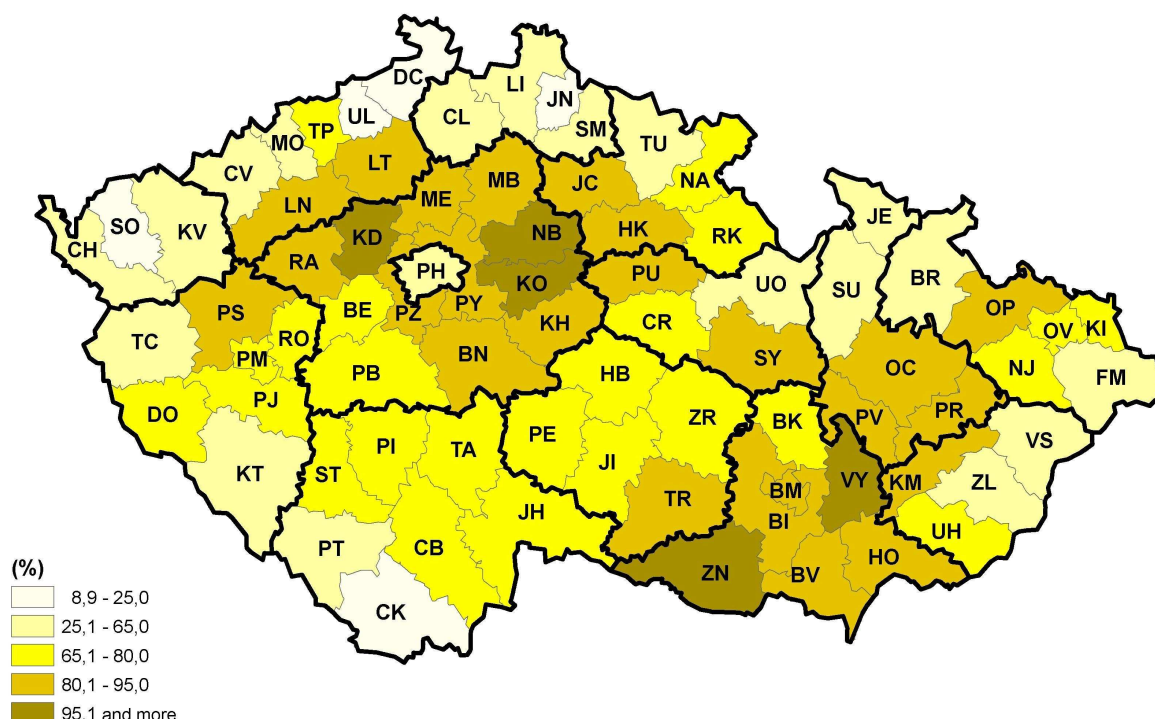
Crop production is realised on agricultural land which takes up 44.6% of the area of the Czech Republic. Of the total area of utilised agricultural area, 73.0% is arable land and 25.8% is permanent grassland. Hop gardens and vineyards together take up less than one percent of the agricultural land.

The average share of arable land in the Czech Republic is above 70 percent; in comparison with 2005, there has been a slight reduction by 1.1 of a percentage point. Not only the Elbe plain, but also the plains in the south of Moravia are home to some of the most fertile areas in our republic. It is therefore no surprise that the highest share of arable land is in the Jihomoravský and Středočeský region, including Prague (89.6% and 86.4% respectively). On the other hand, the lowest share of arable land occurs in the districts of Ústí nad Labem (13.1%) and Děčín (8.9%).

The structure of the crops in arable land does not differ significantly in the regions; deviations against the national average only appear exceptionally. For example, areas of fodder crops take up 16.0% of the arable land, whereas 22.9% or 22.2% of the arable land have been sown in Vysočina or the Pardubický region respectively. On the other hand, the Jihomoravský and Liberecký regions are behind the national average by 6.1 and 6.8 percentage points respectively.

In the Czech Republic, cereals are grown on 60.2% of arable land, of which nearly one third is wheat and 19.0% barley. The least abundant cereal is rye (1.6%). The situation in the regions is documented by the following numbers. Most cereal fields – almost one fifth – are located in Středočeský region, including Prague, second place is held by the Jihomoravský region with a 14.5% share and third place is held by the Jihočeský and Vysočina region, which both have a 10.2% share. Root crops take up 3.4% of the arable land; more than one quarter of the root crops were planted in the Středočeský region, including Prague, holdings in Vysočina region are in second place with 13.7% and third place is held by the farmers in the Královéhradecký region with a 12.1% share. Given the very good climatic conditions, one third of the area of vegetables is located in Středočeský region, including Prague, more than one quarter of the area is in Jihomoravský region and vegetable growers in the Ústecký region farm 12.1% of the area of vegetables.

## Share of arable land



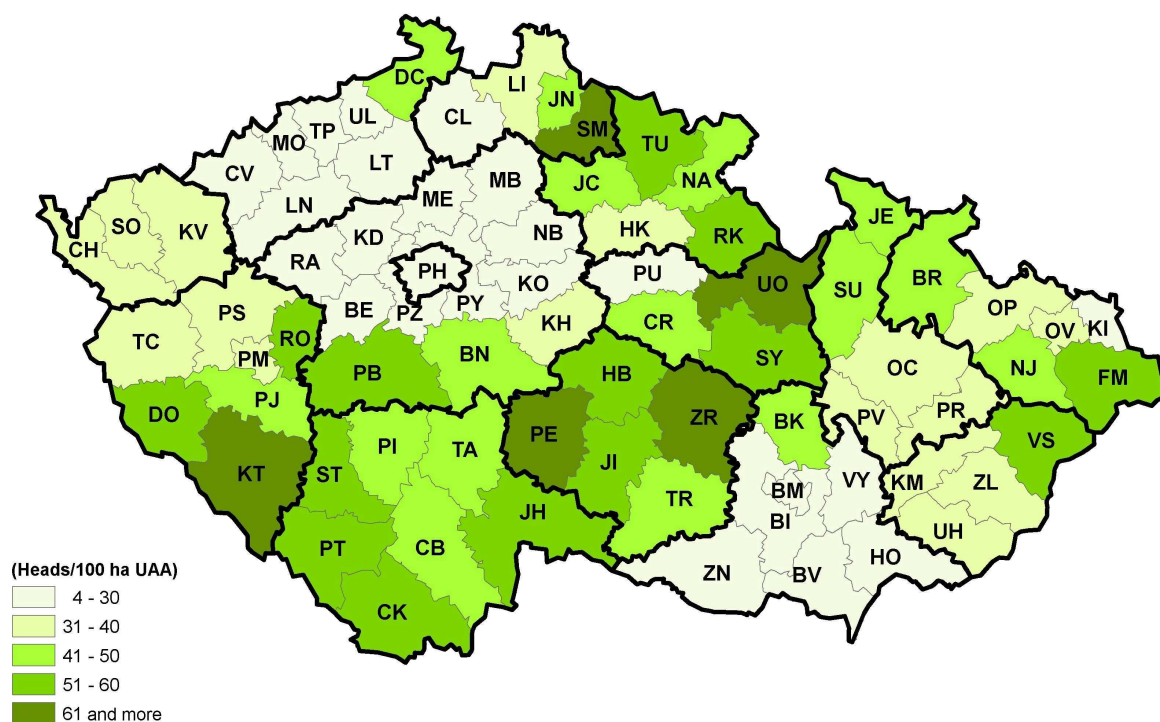
In the Czech Republic, 13,962 subjects are involved in breeding cattle with a total number of 1,419,007 animals; the average number of animals per holding is therefore 102. In comparison with 2005, the number of holdings breeding cattle fell by 8.4%. The most breeders are located in the Jihočeský region (15.1%) and in Vysočina region (13.3%); together, they account for almost one third of all animals. The holdings in the

Karlovarský region with the highest average number of animals per holding (152) finished in last place with a share of 2.6% of the total number of cattle.

In the Czech Republic, holdings with up to 10 animals are predominant among the breeders, but the decisive numbers of cattle (590,751 animals, 41.6%) are concentrated in holdings with herds of 1,001 to 5,000 animals, with the exception of three regions. In the Karlovarský and Ústecký regions, holdings with 101 to 500 animals are predominant (more than two fifths of the cattle bred in the given region), second place belongs to holdings with 501 to 1,000 animals and third place is held by holdings with 1,001 to 5,000 animals, the shares of which are 17.2% and 13.3% respectively. In the Liberecký region, the predominant holdings are those with 501 to 1,000 animals, in which almost one third of the total number of animals are bred; out of the total number of 42,444 head of cattle, 29.8% are in herds of 101 to 500 animals and 16.2% are in herds of 1,001 to 5,000 animals.

The intensity of cattle breeding (the number of animals per 100 ha of agricultural land) has not changed at a national level in comparison with 2005; it remains at the level of 40 animals per 100 ha of agricultural land. Whereas the same number of districts was included in the highest category of 61 animals and more in comparison with 2005, there were minute shifts in the other categories. The number of the districts with a cattle intensity of 31 to 40 animals (from 15 to 17) and in the size category of 51 to 60 animals (from 12 to 14) rose. On the other hand, the number of districts in the remaining categories fell. The highest intensity of cattle breeding is achieved by holdings in the Ústí nad Orlicí district (74 animals/100 ha of agricultural land), the district of Žďár nad Sázavou (71 animals/100 ha) and the Semily district (70 animals/100 ha). On the other hand, the lowest intensity of cattle breeding is in the districts of Mělník (11 animals/100 ha) and Teplice (7 animals/100 ha).

## Cattle breeding intensity



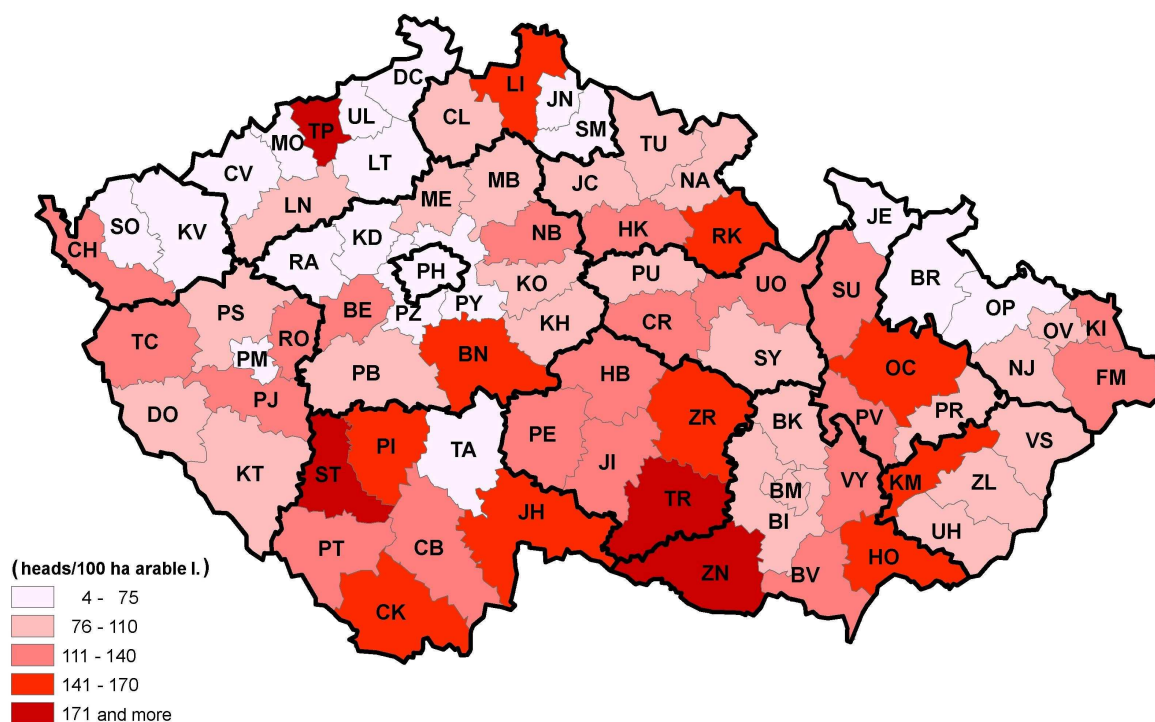
In the Czech Republic, 11,391 holdings were involved in pig breeding and they bred a total of 2.9 million pigs; the average number of animals per holding is therefore 252. The number of breeders has fallen by 23.3% in comparison with 2005. 45.1% of the total numbers of pigs come from holdings in the Středočeský region, including Prague, the Jihomoravský region and in Vysočina region. Holdings in the Karlovarský region admittedly have the highest average number of pigs per holding (441 animals), but they contribute to the total number of pigs in the Czech Republic by less than one percent.

An interesting fact is that a mere 1.0% of the breeders in the size group of 5,000 and more animals care for more than half (53.7%) of all pigs. One third of pigs are found in groups of 1,001 to 5,000 animals. More than two thirds of holdings breed pigs in groups of 1 to 10 animals; they contribute to the total numbers with less than one percent. The situation in the regions is similar, with one or two exceptions. For example, the

share of the two biggest size groups in the Královéhradecký region in the total numbers of pigs is almost equal; holdings with 1,001 to 5,000 animals even have 3.4 percent more pigs than holdings with 5,000 and more animals. In the Moravskoslezský region, holdings breeding 1,001 to 5,000 pigs have the decisive share (54.2%) of the total number of 100,647 animals; slightly less than one quarter of the pigs are bred in the largest size group, i.e. 5,000 and more animals.

The fall in the numbers by 4.7% in comparison with 2005 manifested itself only slightly in the intensity of pig breeding (the number of animals/100 ha of arable land); the number fell from 114 to 112. The number of districts in the individual categories has remained more or less unchanged in comparison with 2005; there were increases of one district in the categories of 76 to 110 animals and 111 to 140 animals, but there was a decrease of one district in the categories of 141 to 170 animals and 171 and more animals. The highest intensity has been achieved by holdings in the Teplice district (345 animals/100 ha of arable land), second place is held by holdings from the Znojmo district with an intensity of 181 animals and third place belongs to holdings from the district of Třebíč (179 animals/100 ha of arable land). Whereas in 2005 fourth place belonged to holdings in the Karviná district (207 animals/100 ha of arable land), 2007 saw them fall by two categories (136 animals/100 ha of arable land). The lowest breeding intensity was recorded in the district of Rakovník (17 animals/100 ha of arable land), Most (13 animals/100 ha of arable land) and Karlovy Vary district (4 animals/100 ha of arable land).

## Pigs breeding intensity



The numbers of sheep and goats in the Czech Republic increased in comparison with 2005; the numbers of sheep increased by 15.9% and the numbers of goats increased by 12.0%. Whereas 2,348 of holdings were involved in goat breeding in 2007, the number of sheep breeders was 2.4 times higher. In the Czech Republic, there are an average of 31 sheep and 7 goats per holding. The exception is Karlovarský region, where there flocks of 108 sheep or 16 goats per holding. The holdings in Jihočeský region contribute to the total numbers of sheep with 12.5%, holdings in the Zlínský region have an 11.5% share and holdings in Plzeňský region have 10.6%. The Jihočeský region contributes to the total number of goats with 12.5%. Second place is held by holdings in the Středočeský region, including Prague; they contribute to the total numbers of goats with 11.7% Third place is held by holdings in the Ústecký region with 11.0%. The most substantial increase in the numbers of sheep in comparison with 2005 occurred in the Liberecký region (index 152.7%) and the Jihomoravský region (index 137.7%). On the other hand, the numbers of sheep fell in the Moravskoslezský region (index 97.9%). In the Zlínský region, the numbers of goats rose by 25.0% in comparison with 2005, which was the greatest increase among the regions. The second largest increase in the numbers of goats was noted by the holdings in Vysočina region (index 124.9%). Slight reductions in the numbers of goats occurred in the Pardubický, Moravskoslezský and Olomoucký regions.

The survey also paid attention to non-traditional breeding programs, such as the breeding of ostriches or fur animals or the breeding of hoofed game. The interest in ostrich breeding is constantly increasing, which the survey results have born out. There is an average number of 39 animals per breeder. Out of the total number of 4,023 animals, 26.2% are bred in the Ústecký region and 19.6% are bred in the Jihomoravský region. The lowest share of the number of ostriches is in the Karlovarský region (0.1%).

There are 76 holdings breeding fur animals (mink, nutria, chinchillas and so on). One holding has an average of 362 animals. First place in fur animal breeding goes to the Jihočeský region; they account for more than one fifth (21.2%) of the total number of animals. Holdings in the Moravskoslezský region are in second place with a 20.4% share of the total number of animals. Third place goes to holdings from Vysočina region with 3.3 percentage points less.

190 holdings are involved in breeding hoofed game; out of a total number of 8,074 hoofed game animals, just under one third are bred in herds of 100 and more animals. The most hoofed game animals are bred on farms in Vysočina region (1,438 animals, 17.8%), in the Pardubický region (1,425 animals, 17.6%) and in the Jihočeský region (1,358 animals, 16.8%). First place as far as the average number of animals per farm is concerned goes to the holdings in Pardubický region; they exceed the national average by 3.4 times. Herds of 100 and more animals predominate and more than four fifths of the hoofed game animals in the Pardubický region are bred in such groups. Farms in the Zlínský region are in last place with regard to the breeding of hoofed game animals; they contribute to the total numbers with less than one percent.

The irrigation and technical equipment of the holdings was a further indicator which was monitored within the framework of the survey. The share of the potentially irrigated areas in the total farmed land is 1.1%. The largest areas with agricultural irrigation technology are in the Jihomoravský region (39.5%), the Středočeský region, including Prague (28.2%) and the Ústecký region (14.2%). Out of the total number of 83,813 tractors, 84.3% are more than 10 years old. None of the regions stands out from the average. The largest share of tractors which are more than 10 years old is used in the Plzeňský region (86.9%) and the Ústecký region (86.7%); on the other hand, the lowest share is in the Středočeský region, including Prague, and the Moravskoslezský region.