

# Ministry of Agriculture, Food and Forestry



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#### Census of agricultural holdings in 2020 Grant No 2019.0191

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### **Preliminary results**

The agricultural census in Bulgaria was conducted from September 1 to December 18, 2020. This is the largest census in agriculture, conducted every 10 years on the recommendation of the Food and Agriculture Organization of the United Nations (FAO). The rules for its conduct are established by Regulation (EU) 2018/1091 of the European Parliament and of the Council and by the Agricultural Census Law in the Republic of Bulgaria 2020.

The Ministry of Agriculture, Food and Forestry, its regional and municipal structures conducted an agricultural census in 2003, 2010 and 2020 and sample structural surveys in 2005, 2007, 2013 and 2016 in accordance with the EU rules and requirements.



The overall decrease in the number of agricultural holdings is accompanied by an increase in the utilized agricultural area (UAA) and the average size of the UAA, as well as an increase in the average number of animals kept on the holdings. The reduction in the number of agricultural holdings and their consolidation is a process observed in all EU Member States.

## Results and analyzes

#### **Agricultural holdings**

According to the preliminary 2020 census data, the number of agricultural holdings above the threshold set out in the Agricultural Census Law of the Republic of Bulgaria in 2020 was 132 400 (Figure 1), which is 64% less than their number reported during the 2010 census.

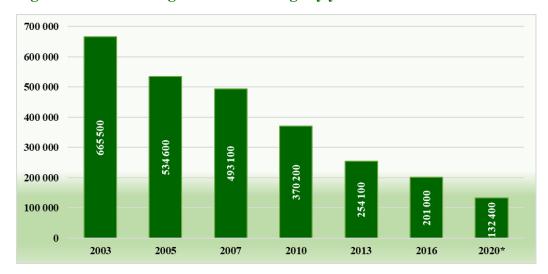
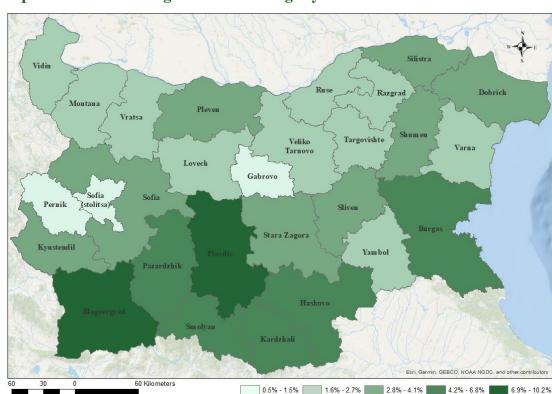


Figure 1. Number of agricultural holdings by years

Blagoevgrad and Plovdiv are the districts with the largest number of holdings, respectively 10.2% and 8.2% of the total country's holdings in 2020. The smallest number of holdings is in Gabrovo and Sofia districts (capital) - 1.0% and 0.5% respectively. (map 1).



Map 1. Distribution of agricultural holdings by location

<sup>\*</sup> All data for 2020 in the publication is preliminary.

#### Utilized agricultural area (UAA)

In 2020, the utilized agricultural area used by agricultural holdings reached 3 957 thousand ha and increased by 9% compared to 2010 and by 36% compared to 2003. The average UAA of agricultural holdings with land increased to 33 ha, compared to 10 ha reported in 2010 (Figure 2).

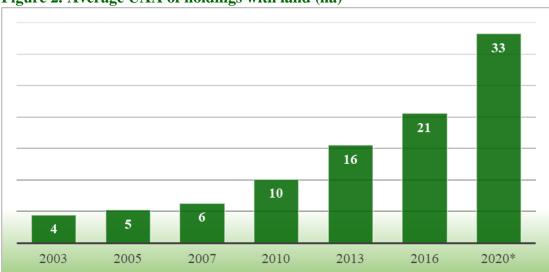
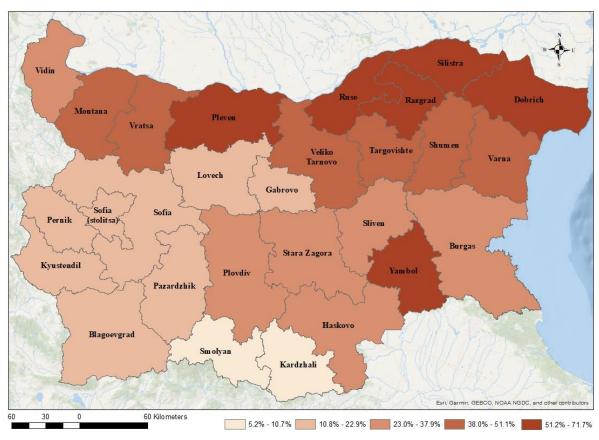
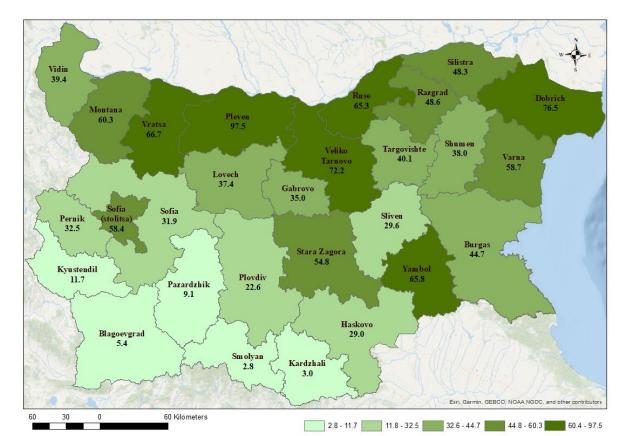


Figure 2. Average UAA of holdings with land (ha)

Map 2. UAA\* relative share in the total district area 2020



<sup>\*</sup> Distribution by area location



Map 3. Average UAA of holdings with land (ha) in 2020

The number of holdings with UAA below 10 ha decreased significantly compared to 2010. The largest decrease (80%) was in holdings with UAA up to 1 ha. About 9% of the holdings (with 50 ha and more) managed 85% of the UAA. Their number increased by 28% compared to the 2010 census (Table 1).

Table 1. Distribution of UAA by area size

Year	UAA									
	>0 ha and <1 ha		>=1 ha and <2 ha		>=2 ha and <10 ha		>=10 ha and <50 ha		>=50 ha	
	Holdings- number	UAA (ha)								
2003	501 700	192 600	90 000	120 200	51 600	185 900	6 400	126 900	5 100	2 278 900
2010	248 000	81 600	46 900	62 600	41 100	163 100	12 800	278 600	8 200	3 031 000
2020	49 900	16 300	15 400	21 100	25 100	115 500	18 100	438 100	10 500	3 366 200

In 2020, the outdoor arable land relative share was 84% of the outdoor UAA, the permanent grassland was 14%, perennial crops - over 2% (Figure 3). The relative share of permanent grassland increased by about 3% compared to 2010.

<sup>\*</sup> Distribution by agricultural holdings location

In 2020, the outdoor arable land was 3 318 600 ha (Figure 3). Cereals accounted for 60% of the outdoor arable land and industrial crops for 31% (Figure 4). The tendency to increase the area under cereals was maintained and in 2020 it was 11% more than in 2010 and 24% more than in 2003. Of the cereals, the largest remained the relative share of wheat, and of the industrial crops - the relative share of sunflower.

Figure 3. Outdoor UAA by years

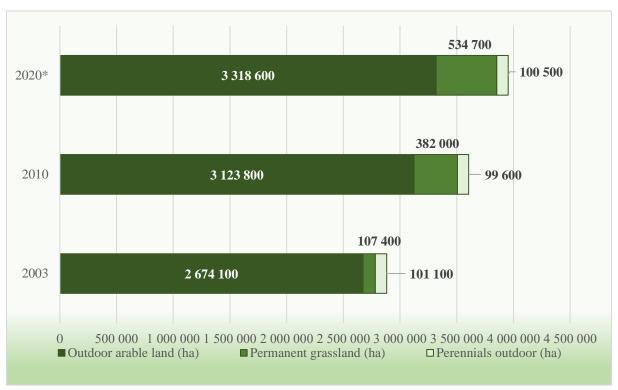
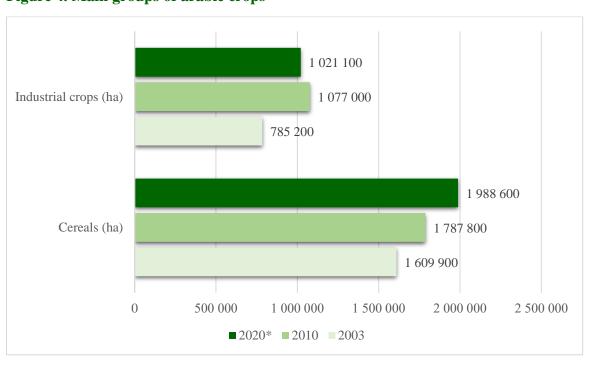


Figure 4. Main groups of arable crops



#### **Livestock breeding**

In 2020, there were about 71 500 livestock holdings with livestock, poultry and bee families. About 31 000 holdings raised 608 600 cattle, 12 000 holdings - 244 000 goats, 22 000 holdings - 1 276 800 sheep and just over 3 000 holdings raised 642 000 pigs. The number of cattle increased by 6% in 2020 compared to 2010. In 2020, the average number of livestock on the holdings was significantly higher than in previous periods. The average number of cattle raised reached 20 in a cattle holding, goats up to 21, sheep up to 58, and pigs up to 190 (Chart 5).

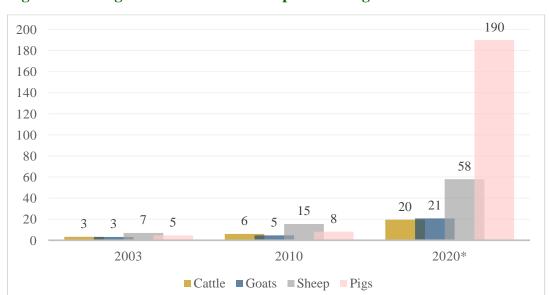


Figure 5. Average number of animals kept in holdings

Figure 6. Cattle in 2020 according to the UAA size of the holdings on which they are kept

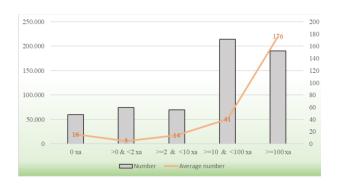


Figure 7. Pigs in 2020 according to the UAA size of the holdings on which they are kept

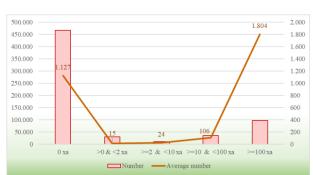


Figure 8. Sheep in 2020 according to the UAA size of the holdings on which they are kept

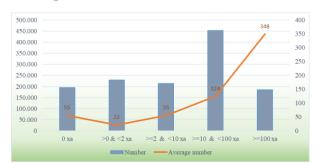
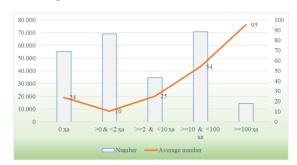
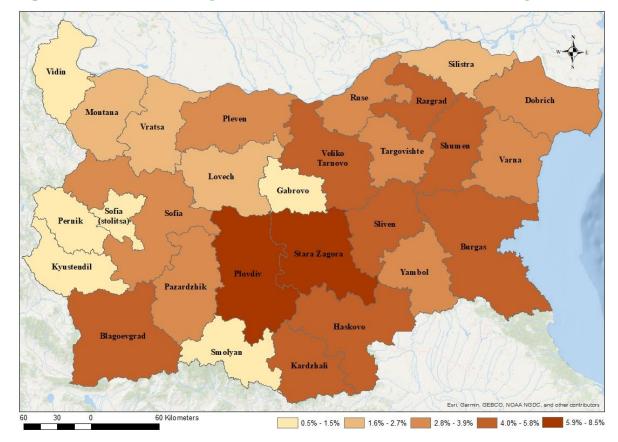


Figure 9. Goats in 2020 according to the UAA size of the holdings on which they are kept



Map 4. Distribution according to the relative share of animal units in the region in 2020\*



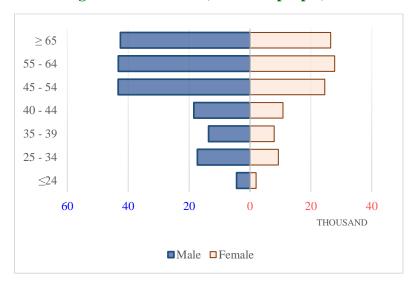
<sup>\*</sup> Distribution by agricultural holdings location

In the period between the last two censuses, the structure of livestock holdings was influenced by the appearance of highly infectious animal diseases. The spread of African swine fever (ASF) had a significant impact on the development of pig farming, necessitating the liquidation of a large number of small holdings and the destruction of pigs in specialized pig holdings. The sheep and goat population was affected by sheep and goat plague.

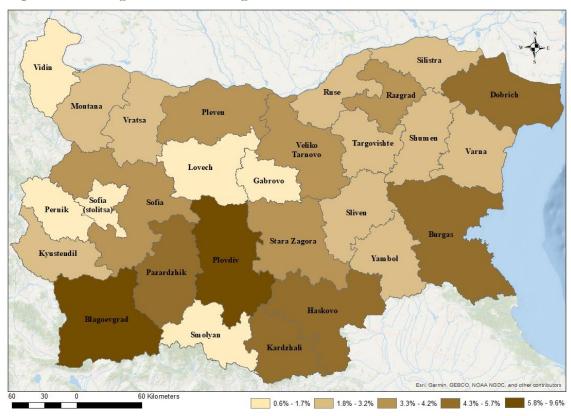
#### Labour force in agriculture

In 2020, the labour input in agriculture as family and non-family labour force and seasonal workers was 177 000 annual work units (AWU). The family labour force and the permanent employees in agriculture amounted to 292 000 people. The relative share of unpaid family labour was 79%.

Figure 10. Age structure of the permanently employed (family and non-family) labour force in agriculture in 2020 (thousand people)



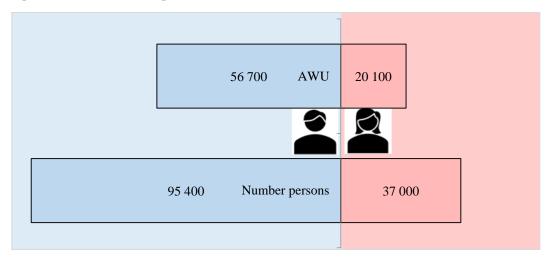
Map 5. AWU in agricultural holdings\*



<sup>\*</sup> Distribution by agricultural holdings location

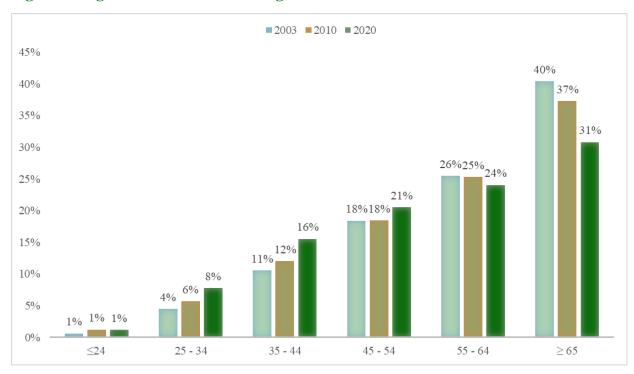
Female holding managers in 2020 accounted for 28%, an increase of 5% compared to 2010 (Figure 11).

Figure 11. Farm managers in 2020



In 2020, there was a positive trend for an increase in the number of managers aged between 25 and 54, which was at the expense of a decrease in the relative share of managers aged over 55 (Figure 12). The relative share of persons employed in the management of agricultural holdings aged 24 and under remained unchanged compared to 2010.

Figure 12. Age structure of farm managers



#### **Definitions**

**Agricultural holding** – a single unit, both technically and economically, that has a single management and that undertakes economic activities in agriculture or to the 'maintenance of agricultural land, no longer used for production purposes, in good agricultural and environmental condition', and other activities within the meaning of Art. 2, letter "a" of Regulation (EU) 2018/1091. The holding has to meet at least one of the threshold criteria set out in the Law on Census of Agricultural Holdings in the Republic of Bulgaria in 2020.

Location of the holding – the settlement in which the main production means of the holding are located, i.e. the main buildings of the holding (stables, granaries, warehouses, refrigeration base, machinery). If the holding does not have buildings, the location is the settlement in which most of its agricultural lands are located – fields, perennials, etc. according to their area size or economic size. As a last criterion, it is permissible for the holding location to be determined by the farmer's premises in case they are within 5 km distance from the agricultural land of the holding. For holdings operating on the territory of more than one region, the one PIN/Bulstat one holding rule is applied, taking as location the location with the buildings or the area with the highest economic value.

**Utilised agricultural area** is the area used by the holding, regardless of its ownership - own or rented, leased or other forms. The UAA includes arable land, perennials, kitchen gardens, permanent grassland used by the observed holding only.

**Arable land** – this is agricultural land, regularly cultivated (plowed or cultivated), annually included in crop rotation. This is the area under annual crops as well as the area under strawberries, artificial meadows (alfalfa, clover, ryegrass), hops, oil rose, lavender, fallow land and the area for production of seeds and planting material.

**Livestock unit** – a standard measurement unit that allows for the aggregation of the various categories of livestock in order for them to be compared. The livestock units are determined on the basis of the feed requirements for the individual categories of animals (Annex I to Regulation (EU) 2018/1091 of the European Parliament and of the Council).

Annual Work Unit – The volume of labour input is calculated in AWU. This indicator should not be equated with the number of people employed in agriculture. According to the definition of the European Union, 1 AWU is equal to the hours worked by one worker in full-time within one year. In Bulgaria, it is accepted that 1 AWU is equal to 1 856 hours worked per year or 232 man-days. If the person has worked 1 856 man-hours or more, his work is considered 1 AWU. If the person has worked less than 1 856 man-hours, his work is calculated as a share of 1 AWU. The man-days worked by seasonal workers are divided into 232 days to turn them into AWU.

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