

Structure of agricultural holdings

Bulgaria 2003

Statistics in focus

AGRICULTURE AND FISHERIES

48/2005

Agriculture

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A farm structure survey was carried out in all EU Member States in 2003 (2002 in Poland). Apart from detailed results for the Member States, corresponding data are now also available for Bulgaria, Romania (2002) and Norway. This "Statistics in focus" is part of a series of country-specific publications on these results, all following the same structure.

* * *

In Bulgaria in 2003, about 157 300 agricultural holdings had an economic size of at least 1 ESU (European Size Unit)*.

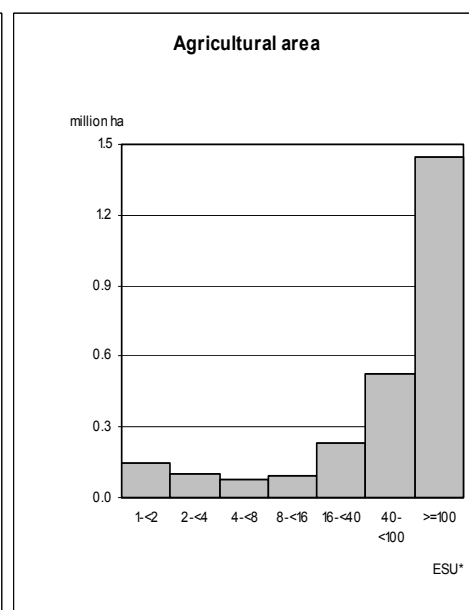
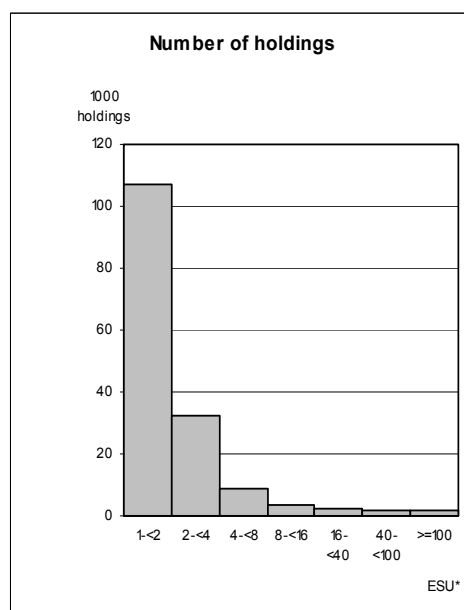
- These holdings employed 311 300 AWUs (annual work units), the equivalent of 311 300 persons working full time;
- they made use of about 2.6 million ha of agricultural area, which is on average 16.7 hectare per holding.

Amongst these 157 300 agricultural holdings

- 21% made use of less than one AWU, while 34% made use of 2 or more AWUs;
- 87% used less than 5 ha, while 3% used 100 ha or more;
- 51% were mixed holdings, while 49% were specialised: for field cropping 12%, horticulture 8% (of which 9% under glass), sheep, goats and other grazing livestock 7%, dairies 7%, pigs and poultry 7%, cereals, oilseeds and protein crops 5%, various permanent crops 2% and various cattle farming 1%.

Amongst the 153 700 sole holders

- 12% were women;
- 54% were aged 55 or more, and only 7% younger than 35 years;
- 20% had another gainful activity as major occupation.

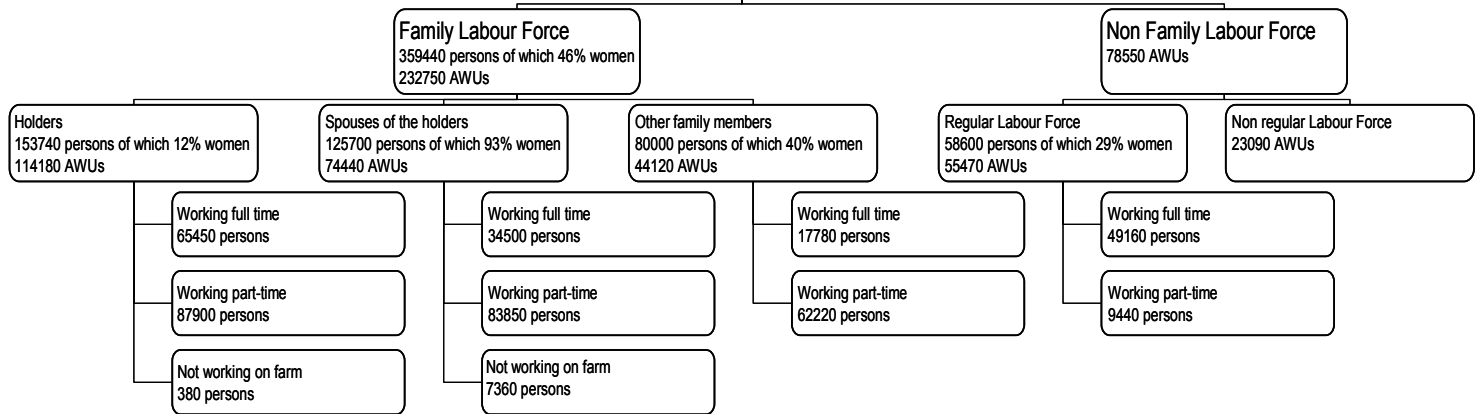


* ESU measures the economic size of the holdings (see methodological notes).

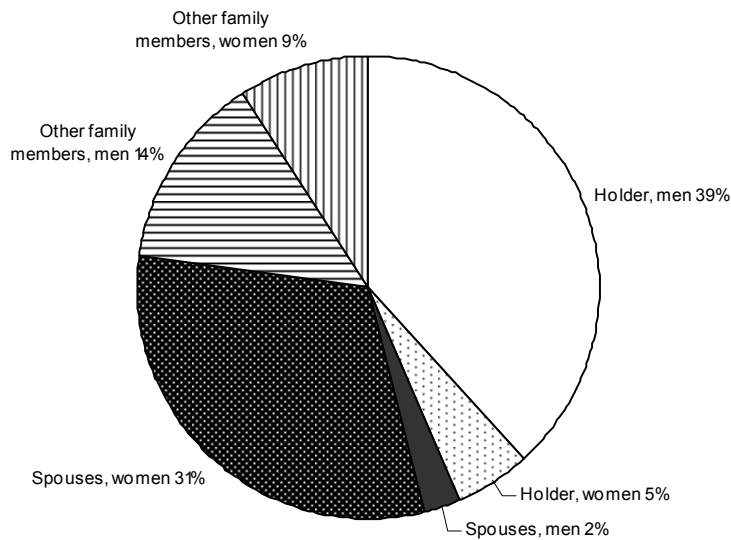


Bulgaria 2003 – Holdings of at least 1 ESU

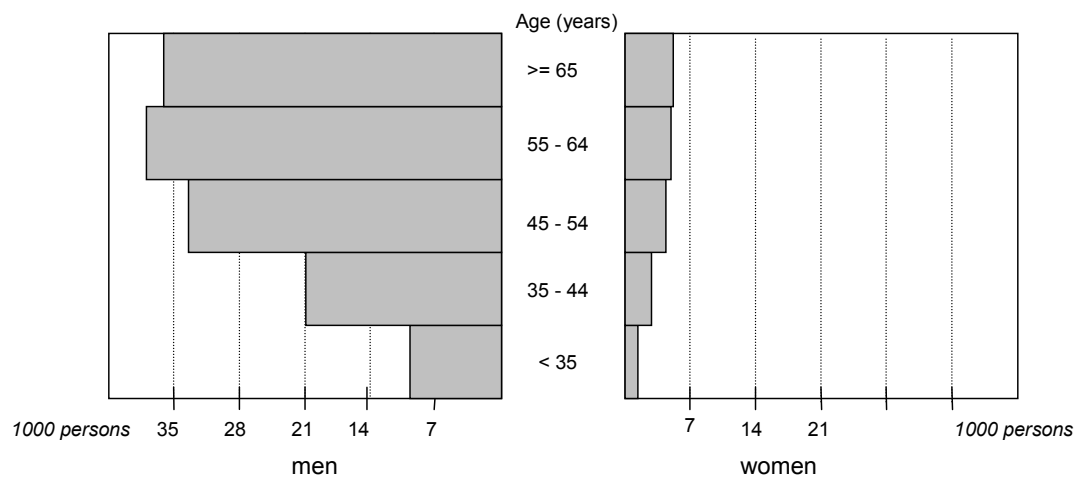
Agricultural Labour Force



Family labour force by gender and status



Farm managers



Symbols : not available 0 less than half of the unit or nil

Economic size (ESU)	<1	>=1	1-<2	2-<4	4-<8	8-<16	16-<40	40-<100	>=100
Total labour force									
1000 annual work units	480.3	311.3	155.7	57.6	18.5	9.8	10.5	14.7	44.3
Family labour force									
1000 persons	969.7	359.4	244.0	80.4	21.7	7.3	3.8	1.6	0.7
1000 annual work units	477.5	232.7	153.6	54.7	15.1	5.1	2.6	1.2	0.6
Non-family labour regularly employed									
1000 persons	0.9	58.6	0.6	1.2	1.8	2.7	5.3	10.9	36.1
1000 annual work units	0.7	55.5	0.5	1.0	1.6	2.5	4.9	10.3	34.5
Non regular non family labour force									
1000 annual work units	2.0	23.1	1.6	2.0	1.8	2.3	3.0	3.3	9.2
Holding managers (1000)	508.2	157.3	107.0	32.4	9.0	3.4	2.3	1.6	1.6
- women (%)	19.9	12.0	12.9	10.5	8.4	8.5	9.7	12.6	12.3
- part-time - under 50 % (%)	47.4	23.3	26.3	19.2	15.9	14.0	11.2	6.5	4.3
- 50 % and over (%)	30.4	33.1	35.0	31.8	28.5	25.7	20.5	14.9	7.6
Sole/main holders (1000)	508.0	153.7	106.9	32.2	8.7	3.1	1.7	0.8	0.4
- women (%)	19.6	11.9	12.8	10.4	8.2	7.2	7.6	11.2	8.7
- distribution by age (%)									
- under 35 years	4.5	7.1	6.2	8.1	11.3	12.0	14.0	12.4	12.2
- from 35 to 44 years	9.1	15.0	13.2	16.8	21.3	25.4	28.1	31.2	28.0
- from 45 to 54 years	16.5	23.8	22.2	26.2	28.7	31.7	29.2	33.6	39.7
- from 55 to 64 years	24.9	27.3	28.0	26.7	24.8	21.7	21.0	18.4	16.0
- 65 years and over	45.1	26.9	30.4	22.2	13.9	9.2	7.7	4.5	4.1
- part-time - under 50 % (%)	47.2	23.6	26.2	19.1	16.0	14.4	12.7	8.3	5.2
- 50 % and over (%)	30.2	33.5	34.9	31.8	28.7	26.9	23.7	21.9	15.2
- with another gainful activity ¹ (%)	25.0	26.1	25.8	25.3	27.9	31.6	33.8	39.3	36.2
- as main occupation	23.2	20.0	21.1	18.2	17.1	17.5	16.0	13.3	8.4
- as a subsidiary occupation	1.8	6.0	4.7	7.1	10.8	14.1	17.8	26.0	27.9
Spouse of sole holder (1000)	342.4	125.7	87.4	26.9	7.1	2.4	1.2	0.5	0.2
- women (%)	92.7	92.7	92.6	92.8	94.0	93.4	93.1	89.3	90.4
- distribution by age (%)									
- under 35 years	6.5	9.1	8.0	10.2	13.7	15.5	17.5	17.2	15.2
- from 35 to 54 years	33.0	44.8	42.0	48.7	54.4	60.0	60.9	64.0	67.4
- 55 years and over	60.5	46.1	50.0	41.1	31.9	24.5	21.5	18.8	17.4
- part-time - under 50 % (%)	54.9	36.2	38.3	32.0	30.4	30.9	29.4	29.5	25.2
- 50 % and over (%)	23.1	30.5	31.0	30.5	29.3	26.0	21.6	18.8	15.7
- with another gainful activity (%)	27.3	29.2	28.3	29.4	33.0	37.5	37.5	41.8	40.0
- as main occupation	25.8	24.7	24.4	24.2	27.1	30.3	29.6	28.7	27.4
- as a subsidiary occupation	1.5	4.5	4.0	5.2	6.0	7.2	7.9	13.2	12.6
Other members of the holder's family working on the holding (1000)	119.3	80.0	49.7	21.3	5.8	1.9	0.9	0.3	0.1
- women (%)	40.9	40.1	41.1	39.7	37.2	34.3	31.1	31.9	29.3
- part-time - under 50 % (%)	69.1	49.1	53.7	43.4	38.6	36.7	35.0	24.9	24.1
- 50 % and over (%)	21.3	28.7	28.0	29.6	31.4	28.9	28.0	29.6	22.6
- with another gainful activity (%)	56.9	48.2	51.3	43.7	41.2	40.9	40.9	46.4	39.1

¹ Only holders being also farm managers.

Symbols : not available 0 less than half of the unit or nil

Economic size (ESU)	<1	>=1	1-<2	2-<4	4-<8	8-<16	16-<40	40-<100	>=100
Holdings									
- total number (1000)	508.2	157.3	107.0	32.4	9.0	3.4	2.3	1.6	1.6
- by legal personality of the holder (%)									
- sole holder	100.0	97.7	99.9	99.5	97.2	90.0	72.9	46.1	23.5
- legal person	0	2.3	0.1	0.5	2.8	10.0	27.1	53.9	76.5
- group holders	0	0	0	0	0	0	0	0	0
- by employed labour force (%)									
- under 1 AWU	53.0	20.5	23.8	15.2	12.8	11.3	8.9	4.6	1.2
- from 1 to less than 2 AWU	37.4	46.0	49.1	44.1	38.7	33.5	25.2	13.0	6.8
- from 2 to less than 3 AWU	8.9	24.3	22.8	29.6	30.6	24.4	19.0	8.7	1.7
- 3 AWU and over	0.7	9.2	4.2	11.1	17.9	30.8	46.9	73.7	90.2
- by agricultural area (%)									
- under 5 ha	99.8	87.1	96.4	81.3	59.0	39.9	22.6	10.6	9.3
- from 5 to less than 20 ha	0.2	8.1	3.6	17.5	25.8	18.9	9.6	4.4	3.1
- from 20 to less than 50 ha	0	1.5	0	1.2	14.0	14.6	7.7	4.6	2.9
- from 50 to less than 100 ha	0	0.8	0	0	1.1	23.3	9.5	2.9	3.1
- 100 ha and over	0	2.5	0	0	0.2	3.3	50.6	77.5	81.7
- by livestock size (%)									
- without livestock	11.0	8.1	4.5	7.0	14.5	28.3	49.3	70.6	64.9
- under 10 LSU ⁺	89.0	84.8	95.2	78.9	43.7	34.4	25.1	12.4	5.5
- from 10 to less than 20 LSU	0	4.6	0.2	13.6	23.9	6.4	3.6	2.1	1.3
- from 20 to less than 50 LSU	0	1.8	0	0.4	17.6	24.4	8.3	3.7	3.8
- from 50 to less than 100 LSU	0	0.4	0	0	0.4	6.4	9.6	3.3	4.5
- 100 LSU and over	0	0.3	0	0	0	0.2	4.0	8.0	19.9
- by farm type (%)									
... specialist cereals, oil seed and protein crops	1.5	5.0	1.5	3.9	11.2	25.1	46.6	65.2	61.4
... general field cropping	6.8	12.4	12.5	13.0	10.8	11.4	10.6	7.7	9.4
... specialist horticulture	1.7	8.4	6.2	11.1	19.5	21.0	15.2	8.5	5.4
... specialist vineyard	4.3	0.6	0.6	0.5	0.8	1.2	1.4	1.3	0.6
... specialist fruit and citrus fruit	1.3	0.5	0.4	0.7	0.9	1.4	1.7	1.5	1.1
... specialist olives	0	0	0	0	0	0	0	0	0
... various permanent crops combined	0.4	0.4	0.2	0.4	0.9	1.6	2.5	2.2	4.7
... specialist dairy farming	7.3	7.0	6.2	8.5	12.9	9.5	2.6	0.3	0.2
... specialist cattle – rearing and fattening	0.1	0.1	0	0.1	0.1	0	0	0	0
... cattle – dairy farming, rearing and fattening combined	0.1	0.4	0.3	0.6	1.0	0.6	0.3	0.1	0
... sheep, goats and other grazing livestock	11.0	7.2	7.6	7.6	7.2	2.9	0.9	0.4	0
... specialist granivores	8.5	6.7	6.6	5.7	8.0	11.1	9.3	5.9	8.2
... mixed cropping	9.2	14.5	15.0	16.5	10.5	5.6	4.1	4.6	7.5
... mixed livestock, mainly grazing livestock	11.6	11.1	12.9	9.7	4.9	1.5	0.7	0.1	0
... mixed livestock, mainly granivores	19.3	11.1	13.5	8.0	3.3	1.5	1.0	0.5	0.1
... field crops – grazing livestock combined	7.1	8.2	9.1	7.8	5.0	3.9	2.4	1.2	0.6
... various crops and livestock combined	9.3	6.3	7.2	5.8	3.0	1.5	0.7	0.4	0.8
- by farming methods (%)									
- organic farming	0	0	0	0	0	0	0	0	0
- irrigating	17.0	26.0	24.1	30.7	33.2	30.3	24.2	18.5	19.0
- with crops under glass	0.4	3.3	2.6	4.5	6.5	5.5	3.7	4.1	2.6
- % in less favoured or mountain area	0	0	0	0	0	0	0	0	0

+ LSU : Livestock Unit

Symbols : not available 0 less than half of the unit or nil

Economic size (ESU)	<1	>=1	1-<2	2-<4	4-<8	8-<16	16-<40	40-<100	>=100
Area (1000 ha)									
• Total area of agricultural holdings	393.6	3012.2	181.7	112.6	90.7	125.1	277.2	593.9	1631.0
• H. Other area	118.4	382.9	33.0	8.5	10.0	30.9	44.1	70.8	185.5
Wooded area	18.3	254.2	13.7	1.1	1.6	19.8	20.1	47.0	151.0
• Agricultural area	275.1	2629.4	148.7	104.0	80.7	94.2	233.1	523.1	1445.5
- D. Arable land	171.6	2503.3	117.6	89.5	72.9	88.5	224.5	508.4	1402.0
Cereals	94.1	1515.8	68.1	51.3	40.6	50.2	131.8	311.3	862.6
<i>Common wheat and spelt</i>	27.0	834.4	23.3	21.1	19.3	27.9	78.5	185.8	478.5
<i>Durum wheat</i>	0.4	22.6	0.6	0.6	0.4	0.7	1.5	5.7	13.2
<i>Rye</i>	1.5	7.1	0.6	0.4	0.4	0.5	0.9	1.7	2.7
<i>Barley</i>	9.3	273.1	9.9	9.2	7.8	9.3	23.2	59.4	154.3
<i>Oats</i>	4.4	33.1	4.1	3.2	2.1	1.6	3.6	5.7	12.7
<i>Grain maize</i>	50.7	312.1	28.8	16.0	9.6	8.9	20.8	46.5	181.5
Dried pulses	2.6	14.1	1.2	0.6	0.3	0.3	0.6	1.6	9.7
Root crops	10.1	9.3	3.8	1.4	0.7	0.5	0.5	0.7	1.6
<i>Potatoes</i>	9.9	7.3	3.6	1.3	0.6	0.4	0.4	0.4	0.5
<i>Sugar beet</i>	0	0.4	0	0	0	0	0.1	0.2	0
<i>Fodder root</i>	0.3	1.7	0.2	0.1	0.1	0.1	0	0.1	1.1
Industrial crops	13.7	771.2	20.4	20.1	18.8	26.9	67.0	160.8	457.2
<i>Tobacco</i>	4.2	23.5	8.1	4.4	1.1	0.6	0.6	1.3	7.5
<i>Hops</i>	0	0.2	0	0	0	0	0	0.2	0.1
<i>Cotton</i>	0	3.1	0	0	0	0.1	0.1	1.0	2.0
<i>Rape and turnip</i>	0	12.7	0	0	0.1	0.1	0.7	2.3	9.4
<i>Sunflower</i>	6.3	649.4	9.1	12.4	14.9	22.3	57.5	140.8	392.4
<i>Soya</i>	0	0.6	0	0	0.1	0	0.1	0.1	0.3
Fresh vegetables, melons,	6.7	23.0	5.7	4.5	2.9	2.0	2.1	2.1	3.9
<i>outside</i>	6.6	22.3	5.6	4.4	2.8	2.0	2.0	1.9	3.6
<i>under glass</i>	0.1	0.7	0.1	0.1	0.1	0	0	0.1	0.2
Flower and ornamental plants	0	0.1	0	0	0	0	0	0	0.1
<i>outside</i>	0	0.1	0	0	0	0	0	0	0.1
<i>under glass</i>	0	0	0	0	0	0	0	0	0
Forage plants	21.7	79.5	13.9	8.0	4.2	2.8	4.0	7.7	38.9
Fallow land	22.6	89.4	4.4	3.6	5.4	5.8	18.3	24.1	27.8
- E. Kitchen garden	15.7	5.3	3.7	1.1	0.3	0.1	0	0	0
- F. Permanent pasture and meadows *	57.3	50.1	17.2	8.2	4.6	2.7	3.4	4.5	9.5
- G. Permanent crops	30.6	70.6	10.2	5.2	3.0	2.9	5.2	10.1	33.9
Fruit and berry plantation	6.5	25.1	2.7	1.9	1.2	1.2	2.1	3.8	12.3
Citrus plantation	0	0	0	0	0	0	0	0	0
Olive trees	0	0	0	0	0	0	0	0	0
Vineyard	24.1	44.4	7.6	3.4	1.8	1.7	3.0	6.2	20.8
Ratios									
Agricultural area per holding (ha)	0.5	16.7	1.4	3.2	9.0	27.7	100.6	318.7	924.2
Agricultural area... (%)									
... own farmed	76.3	14.9	74.6	64.7	38.1	18.9	10.8	8.9	6.4
... in less favoured or mountain area	0	0	0	0	0	0	0	0	0
... organic farmed	0	0	0	0	0	0	0	0	0
... irrigated	5.8	2.4	6.3	6.2	4.8	3.7	2.2	1.6	1.8
... under cover crop protecting soil	0	0	0	0	0	0	0	0	0

* In line with the EU requirements about 2 million ha of permanent pastures and meadows used commonly is not covered by the FSS.

Symbols : not available 0 less than half of the unit or nil

Economic size (ESU)		<1	>=1	1-<2	2-<4	4-<8	8-<16	16-<40	40-<100	>=100
Total livestock	(1000 LSU)	636.1	992.0	338.4	176.0	89.0	49.0	37.9	37.1	264.7
of which grazing	(%)	70.6	56.0	75.2	76.5	73.6	61.9	44.1	31.6	15.8
Grazing livestock	(1000 heads)									
Equidae		179.8	90.2	62.6	19.5	4.8	1.4	0.7	0.4	0.8
Bovine animals										
Under 1 year		66.5	143.7	61.0	35.3	18.3	8.1	4.5	3.1	13.4
From 1 to less than 2 years		15.8	54.2	16.3	12.8	8.6	4.5	2.4	2.0	7.7
Dairy cows		123.2	252.4	107.4	59.9	31.6	16.1	9.2	5.9	22.4
Other cows		1.8	4.8	1.3	1.4	0.7	0.3	0.3	0.2	0.6
Other bovine animals 2 years and older		5.0	24.4	5.6	5.3	4.1	2.6	1.3	1.4	4.3
Sheep		767.4	867.9	409.3	245.9	104.5	35.9	18.2	13.5	40.6
Goats		618.1	238.7	144.7	58.7	22.7	7.3	3.6	0.8	0.9
Granivores										
Pigs	(1000 heads)									
Piglets < 20 kg		56.7	278.1	42.9	33.3	21.5	16.7	11.9	12.5	139.5
Breeding sows		35.6	172.7	29.5	21.4	14.6	11.8	10.6	7.9	76.9
Other pigs		255.7	480.2	93.4	48.2	31.5	21.9	22.7	25.1	237.4
Poultry	(million heads)	6.4	15.4	2.5	0.9	0.4	0.4	0.8	1.1	9.4
Broilers		1.9	7.8	0.8	0.3	0.1	0.2	0.5	0.7	5.3
Laying hens		3.6	5.4	1.1	0.4	0.2	0.1	0.1	0.2	3.2
Other poultry		0.8	2.2	0.6	0.2	0.1	0.1	0.1	0.2	0.9
Rabbits, breeding females	(1000 heads)	120.4	99.9	61.4	24.8	8.0	3.2	1.8	0.3	0.4
Beehives	(1000)	214.3	195.4	119.9	54.8	13.4	4.3	1.5	0.6	0.8
Total livestock per holding with...	(LSU/holding)									
Livestock		1.4	6.9	3.3	5.8	11.6	20.1	32.2	76.7	482.1
Grazing livestock		1.6	5.6	3.5	6.2	12.6	22.4	32.9	61.0	193.4
Bovine animals (cattle)		2.2	6.5	3.9	6.9	14.5	26.9	41.4	77.5	232.2
Cattle, other than cows		2.5	7.2	4.1	7.2	15.2	28.0	44.2	77.0	237.2
Granivores		1.4	6.8	3.4	5.8	11.2	19.4	32.1	82.7	810.0
Pigs		1.7	7.2	3.5	6.2	12.1	21.4	35.2	77.4	761.2
Average size of herds*	(head/holding)									
Equidae		1.0	1.1	1.1	1.1	1.3	1.6	2.5	4.1	7.0
Dairy cows		1.1	2.9	1.7	3.1	7.1	13.7	20.5	33.5	86.3
Other cows		2.0	5.7	2.8	5.8	8.5	13.7	19.7	15.0	51.8
Sheep		4.7	11.8	7.8	15.3	29.6	40.3	49.9	112.5	303.2
Goats		2.8	4.9	4.0	6.3	10.8	14.0	19.2	15.7	47.0
Breeding sows		1.2	6.7	1.9	3.3	6.8	14.7	27.6	50.8	534.0
Other pigs > 20 kg		1.5	7.9	2.2	3.8	8.8	17.7	39.8	125.0	1429.9
Rabbits, breeding females		2.8	4.8	4.2	5.4	7.6	10.2	11.4	6.6	18.1
Laying hens	(1000/holding)	0	0	0	0	0	0.1	0.2	1.2	32.6
Broilers	(1000/holding)	0	0.2	0	0	0	0.3	1.5	5.9	78.7
Beehives	(hive/holding)	8.9	14.4	13.5	16.1	15.9	17.1	13.3	18.0	51.9

* number of animals of a given livestock category per holding with this kind of animals

Symbols : not available 0 less than half of the unit or nil

Economic size (ESU)	<1	>=1	1-<2	2-<4	4-<8	8-<16	16-<40	40-<100	>=100
Holdings with another gainful activity than agricultural production:									
(% all holdings)	2.5	9.3	6.1	11.6	17.5	22.7	26.5	33.3	48.5
Tourism	0	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.3
Handicraft	0	0	0	0	0	0	0	0.1	0.1
Processing of farm products	1.2	4.7	3.6	6.4	8.2	9.2	7.6	5.3	8.1
Wood processing	0	0	0	0	0	0.1	0.3	0.2	0.3
Aquaculture	0.1	0.3	0.2	0.3	0.4	0.9	1.2	1.4	3.6
Renewable energy production	0	0	0	0	0.1	0.1	0	0.1	0.3
Contractual work	0.7	3.9	1.9	4.5	8.7	12.9	17.5	26.1	37.0
Other gainful activities n.a.e	0.4	1.2	0.6	1.0	1.5	2.9	5.1	9.0	22.6

► METHODOLOGICAL NOTES

The survey on the structure of agricultural holdings in Bulgaria was carried out between 1 July and 30 November 2003 on an exhaustive base. This was the first agricultural census in Bulgaria being in compliance with EU requirements. Prior to this census sample FSSs were carried out in 2000 and 2001. The livestock number was recorded on the day of the survey, while the reference period in case of land area, land use and other characteristics was the crop year 2003 (from 1 October 2002 to 30 September 2003).

The target population was all agricultural holdings exceeding at least one of the thresholds determined (0.5 ha UAA, 0.3 ha arable land, 0.1 ha of specialized crops – vegetables, tobacco, hops, cotton, aromatic and medicinal plants, seeds, flowers or permanent crops –, 0.05 ha under greenhouse, 0.2 ha permanent grassland or having 1 cow/female buffalo/mare/sow/reproductive male animal, 2 other bovines/draught animals/breeding goats, 5 pigs/breeding sheep, 50 laying hens, 100 broilers, 10 beehives/10 breeding rabbits) or the agricultural production is exceeding certain physical thresholds. An initial list of units was compiled based on available statistical and administrative sources (e.g. Population Census 2001, business register). During the field survey some of the units were dropped out from the initial list as they were under the threshold, on the other hand the enumerators interviewed some 51 thousands of farms that were not on the lists. The total number of farms meeting the threshold was 665 548.

The data are multi-level checked. The unit non-response was rather low (0.04%), their data were imputed by using administrative

sources. The few missing data (item non-response) were not imputed.

For each activity ('enterprise') on a farm (for instance wheat, dairy cow or vineyard), a **standard gross margin (SGM)** is estimated, based on the area (or the number of heads) and a regional coefficient. The sum of such margins in a farm is its **economic size**, expressed in **European Size Units (ESU)**. 1 ESU is equal to 1200 euros.

Due to differences in the coverage of units of less than 1 ESU across Member States, these data are not comparable between countries. That is why the present analysis and graphs focus on the holdings of at least one ESU.

Each farm is classified in the community typology by its economic size and its **type of farming**, depending on the share of each enterprise in its economic size. For instance, a farm where breeding sows account for more than 2/3 of the economic size is classified as *specialist pig rearing* (type 5011). Depending on the level of aggregation, farms are grouped into 8 to 70 types.

Annual working unit (AWU) means the labour force working yearly like a worker employed on full time basis, it is 1856 hours (232 working days of 8 working hours per day).

► REFERENCE PUBLICATIONS

Website of the Ministry of Agriculture and Forestry of Bulgaria: www.mzgar.government.bg

Further information:

Databases: [EUROSTAT Website/Theme: Agriculture and Fisheries/Data](#)



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