

1. HISTORICAL OUTLINE

The metadata review and data here presented refer to the last agricultural census (AC) in Montenegro, carried out in 2010. Previous agricultural censuses were conducted in 1931 and 1960.

2. LEGAL BASIS AND ORGANIZATION

Legal framework

The legal framework of the AC 2010 includes:

- the Law on Statistics and Statistical System of Montenegro (Official Gazette of the Republic of Montenegro 69/05);
- the Law on Conducting the 2010 AC (Official Gazette of Montenegro 54/09 and 14/10);
- FAO recommendations for the AC, WCA 2010; and
- the relevant EU legislation for implementing the FSS (2010).

Institutional framework and international collaboration

The main bodies involved in the preparation, organization and conducting of the AC were: (i) the Statistical Office of Montenegro (MONSTAT), which had the authority to collect, compile, analyse and publish information for statistical purposes, according to the Law on Statistics and Statistical System of Montenegro; and (ii) the Committee for the AC, established under the Law on Conducting the AC 2010.

Census staff

The AC 2010 field data collection involved 2 170 enumerators and 270 supervisors. For data entry, 30 persons were hired.

3. REFERENCE DATE AND PERIOD

Reference day: 31 May 2010, for land tenure, vineyards, orchards, organic agriculture, livestock, buildings, agricultural machinery and equipment, etc.

Reference periods:

- the crop year (from 1 June 2009 to 31 May 2010), for utilised arable land, irrigated areas, soil conservation, tillage methods, animal housing and labour force, other gainful activities, landscape features, etc.
- the last three years (2008–2010), for rural development support, agricultural services, etc.

4. ENUMERATION PERIOD

Data collection started on 7 June 2010 and ended on 21 June 2010.

5. SCOPE OF THE CENSUS AND DEFINITION OF THE STATISTICAL UNIT

The **census scope** covered agricultural activities (crop and livestock production).

The **statistical unit** was the agricultural holding, defined as a single unit, both technically and economically, which has a single management and which undertakes agricultural activities and meets certain minimum thresholds of activity which are similar to the EU and Council Regulation (EC) No. 1166/2008. Two types of holdings were distinguished in the AC 2010: (i) family agricultural holdings (holdings in the household sector); and (ii) business entities (holdings in the non-household sector).

6. GEOGRAPHIC COVERAGE

The AC 2010 covered the entire country.

7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

A family agricultural holding was covered by the census if, at the moment of registration, it met the following threshold:

- it had at least 1 000 m² of agricultural land; or
- if it had less than 1 000 m², it possessed at least: one cow and one calf; one cow and one heifer; one cow and two adult head of small stock; five adult sheep or goats; three adult pigs; or four adult head of sheep or goats or pigs together; 50 head of adult poultry; or 20 beehives.

Exceptions were households not fulfilling the minimum threshold conditions, but: (i) where agricultural production was the only source of income; or (ii) engaged only in the cultivation of mushrooms in special buildings (cellars or tunnels).

No threshold was applied for business entities.

8. METHODOLOGY

Methodological modality for conducting the census

The classical approach was used in the AC 2010.

Frame

The census frame was established based on a listing operation and using the available information from 2003 Census of Population, Dwellings, and Households. The listing operation helped to enumerate all households, and screen the agricultural production households that met the criteria applicable to holdings.

Complete and/or sample enumeration methods

The AC 2007 was conducted using complete enumeration of the target population.

Sample design (if sampling was used)

Not applicable.

Data collection method(s)

The enumeration of family agricultural holdings was conducted by face-to-face interview, using the “door-to-door”, PAPI method. Business entities were enumerated by self-interviewing, using the mail-out/mail-back (“postal”) method.

Questionnaire(s)

Three data collection forms were used for the AC 2010:

- Form P-1 (Household Listing Form) was a listing of all households, aimed at identifying family agricultural holdings;
- Form P-2 for the enumeration of family agricultural holdings; and
- Form P-3 for the enumeration of business entities.

The census questionnaires covered all 16 core items recommended in the WCA 2010.

9. USE OF TECHNOLOGY

Census results were disseminated and are accessible online.

10. DATA PROCESSING AND ARCHIVING

For data entry, MONSTAT prepared an application called ENTRY. During data entry, statisticians controlled the accuracy of the entire process from the questionnaire on the application. Data entry took one month and a half. After entering, the material was controlled. To control the data in MONSTAT, an application called CONTROL was elaborated; this detected logical and arithmetical errors at questionnaire level. For the updating process, MONSTAT elaborated an application called CORRECTION. The application enabled viewing the errors in the questionnaire, as well as the type of error in the survey. The correction of the material was performed by MONSTAT employees. The complete software was done in the IT department of the MONSTAT. The application was made in Visual Basic 6.0 and the database was SQL Server 2000.

11. CENSUS DATA QUALITY

A PES was conducted immediately after the end of the AC enumeration, from 25 June to 5 July 2010. The PES was an effort to assess data quality and was carried out in EAs and municipalities selected at random. The PES took place using special questionnaires, with a limited number of variables.¹

12. DATA DISSEMINATION

The preliminary results of the AC 2010 were published in July 2010 in the form of a press release (only the number of holdings and UAA for farm agricultural holdings). The final results were published seven months after the release of preliminary results.² The results of the AC 2010 are available in the form of tables and publications on the MONSTAT website.³

13. DATA SOURCES

Eurostat. 2019. Database, Agriculture, forestry and fisheries. In: *European Commission: Eurostat* [online]. Luxembourg. [Cited 26 August 2019]. <https://ec.europa.eu/eurostat/data/database>

FAO. 2017. Regional Roundtable on the World Programme for the Census of Agriculture 2020 (WCA 2020), 3–7 April 2017, Budapest, Hungary. In: *World Programme for the Census of Agriculture* [online]. Rome, Italy. [Cited 9 September 2019]. <http://www.fao.org/world-census-agriculture/events/wca2020budapest/en/>

Statistical Office of Montenegro. 2011. *Agricultural Census 2010, key variables - land and livestock resources, data by municipalities*. Podgorica, Montenegro. (also available at http://www.monstat.org/userfiles/file/popis%20poljoprivrede/knjiga_1%20POLJ%2015.4.pdf).

14. CONTACT

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¹ The results showed that deviations in coverage and data quality collected by the census and PES are statistically insignificant.

² MONSTAT published five publications based on census results: (i) Census key variables; (ii) Land use; (iii) Livestock; (iv) Special interest topics; and (v) Typology of farms.

³ Available at <http://www.monstat.org/eng/page.php?id=58&pageid=58>

MONTENEGRO – AGRICULTURAL CENSUS 2010 – MAIN RESULTS¹

NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS		
	Holdings	Area (ha)
Total	48 870	309 220
Civil persons	48 820	294 400
An individual (sole holder holdings) ²	48 820	294 400
Juridical persons (legal entities)	50	14 820

LAND TENURE		
	Holdings	UAA (ha)
Total	48 870	221 300
Legal ownership and owner-like possession (owned land)	48 220	97 930
Rented from others (land rented)	450	2 220
Other form of tenure (shared farming or other modes)	1 670	121 150

DISTRIBUTION OF UAA, BY LAND SIZE CLASSES		
	Holdings	UAA (ha)
Total	48 870	221 300
Holdings without UAA	590	
Holdings with UAA	48 280	221 300
Less than 2 ha	35 270	23 000
2–4,99 ha	7 630	23 500
5–9,99 ha	2 710	18 540
10–19,99 ha	1 160	15 500
20–29,99 ha	330	7 850
30–49,99 ha	310	12 360
50–99,99 ha	440	31 650
100 ha and over	430	88 900

LAND USE		
	Holdings	Area (ha)
Total	48 870	309 220
UAA	48 280	221 300
Arable land	10 190	4 050
Land temporarily fallow	50	30
Land under permanent crops	5 860	4 650
Permanent meadows and pastures	43 130	210 180
Kitchen garden	37 000	2 410
Other land	47 990	87 920
Wooded area	22 130	43 220
Unutilised agricultural land and other areas	47 540	44 710

MANAGERS BY SEX ³		
	Number	UAA operated (ha)
Total	48 870	221 300
Male	42 580	204 640
Female	6 290	16 660

MEMBERS OF HOLDER'S HOUSEHOLD, BY SEX ⁴	
	Number
Total engaged in agricultural activities on the holding	49 380
Male	16 790
Female	32 590

LABOUR FORCE OF THE HOLDING	
	Number
Total	98 960
Male	59 800
Female	39 170
Family labour force	98 210
Male	59 330
Female	38 880
Regular non-family labour force	760
Male	470
Female	290

MANAGERS BY SEX AND AGE ³	
	Number
Total	48 870
Male	42 580
Female	6 290
Less than 35 years	2 740
Male	2 540
Female	200
35–44 years	6 000
Male	5 550
Female	450
45–54 years	11 700
Male	10 790
Female	910
55–64 years	12 210
Male	10 670
Female	1 540
65 years and over	16 230
Male	13 040
Female	3 190

LIVESTOCK		
	Holdings	Head
Total holdings with livestock	33 530	
Cattle	24 620	80 210
Sheep	6 090	229 040
Goats	3 580	35 760
Pigs/swine	13 470	47 670
Equines (Equidae)	3 120	4 400
Poultry (1 000 head)	n.a.	n.a.
Broilers	550	130
Laying hens	15 800	490
Others	570	10
Other animals		
Rabbits (breeding females)	150	1 090
Insects		
Bees (hives)	2 530	50 020

METHODS OF IRRIGATION		
	Holdings	Irrigable area (ha)
Total holdings with irrigable area	8 470	5 050
Holdings with irrigated area⁵	8 470	5 050
Surface	6 460	n.a.
Sprinkler	2 580	n.a.
Localized irrigation (drop irrigation)	800	n.a.

¹ Data source – Eurostat database, available at: <https://ec.europa.eu/eurostat/web/agriculture/data/database>

² The categories in brackets are presented as indicated in the Eurostat database (if different from the WCA 2010).

³ According to Eurostat, managers include holders that manage the holding themselves, and managers that are not holders, including of legal units

⁴ Data are presented without holders.

⁵ Excluding kitchen garden and area under glass.