



THE RUSSIAN FEDERATION – 2016 Agricultural Census – Metadata review

1. Historical outline

The first agricultural census (AC) in Russia was conducted in 1916, followed by ACs carried out in 1917 and 1920.¹ The 2006 All-Russia Agricultural Census was the first comprehensive AC conducted in the country. The second All-Russia Agricultural Census, to which these metadata review and data refer, was conducted in 2016.

2. Legal basis and organization

Legal framework

The agricultural census legislation consisted of:

- Resolution of the Government of the Russian Federation of 10 April 2013, No. 316 “On the organization of the All-Russian Agricultural Census 2016”.
- Resolution of the Government of the Russian Federation of July 25 2015, No. 763 “On the provision of subventions from the federal budget to the entities of the Russian Federation to exercise the powers on the preparation and conduct of the All-Russia Agricultural Census 2016”.
- Regulations of the Federal State Statistics Service (Rosstat).
- Regulations of the authorities of the entities of the Russian Federation on the organization of the AC 2016.

Institutional framework and international collaboration

The main institution responsible for carrying out of the ACs in the country is the Rosstat. The AC 2016 was conducted in collaboration with other organizations and ministries, which provided assistance to Rosstat in matters related to their area of competence.

Census staff

In total, more than 50 000 temporary census staff (enumerators, instructors, supervisors, etc.) participated in data collection.² Data processing activities involved 2 209 specialists (at the regional level) in 2016 and 143 experts in 2017.

3. Reference date and period

Reference day: 1 July 2016 for data on land use, land tenure, livestock numbers, permanent crops, labour resources by sex and age groups, number of machinery and equipment, etc.; and 1 September 2016 for livestock in the remote and difficult access areas (see also section 4).

Reference period:

- agricultural year 2016 (from 1 January to 31 December 2016), for sown areas of temporary crops, use of fertilizers, pesticides, soil improvement procedures, etc;
- from 1 January to 30 June 2016 for economic activities of the enterprise, peasant farm or individual entrepreneur;
- from 1 January to 31 December 2015 for items on agricultural activity of the unit, labour resources , sales of agricultural production, loans, subsidies, etc.

4. Enumeration period

The enumeration was carried out in the country from 1 July to 15 August 2016, except for the remote and difficult to access areas (Far North and equated areas), where the census data were collected from 15 September to 15 November 2016.

¹ Further specialized agricultural censuses were carried out, among which: livestock censuses, agricultural machinery and equipment, crop sown areas, fruit and berry plantations and vineyards censuses.

² For the organization of the fieldwork, approximately 42109 EAs, 7061 instructor areas and 2415 census areas were created.

5. Scope of the census and definition of the statistical unit

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

The **statistical unit** (enumeration unit) for the AC 2016 was defined as “a legal or natural person that owns, uses or rents land designated or used for agricultural production, or raise livestock.”

The following four main types of enumeration units were distinguished: (i) agricultural enterprises (including agricultural enterprises of non-agricultural organizations); (ii) peasant farms and individual entrepreneurs; (iii) households engaged in crop and livestock production; and (iv) horticultural, kitchen-garden and *dacha* (country house) non-profit associations of citizens.³

Community-level data

Community-level data were collected (according to Form no. 1 for agricultural enterprises) for the tribal communities registered as legal entities in the form of an agricultural production cooperative or non-profit organization. The results for agricultural organizations that include tribal communities were obtained at the municipal level.

6. Census coverage

Geographic coverage

The census covered the entire territory of the country.

Cut-off threshold and other exclusions

For subsidiary agricultural enterprises of non-agricultural organizations⁴, the following minimum size limits were applied: (i) 50 ha of sown areas of agricultural crops, or (ii) ten head of cattle or horses, or (iii) five head of cows, or (iv) 20 head of pigs, or (v) 15 head of sheep and goats, or (vi) more than 100 head of poultry.

For citizens who have land plot for individual housing construction engaged in agricultural production, a threshold for the area of the plot of 4 Ares (0.04 ha) and more was established.

7. Methodology

Methodological modality for conducting the census.

The census applied the classical approach for conducting the AC 2016.

Relation to other censuses

The AC used the lists of households in urban settlements compiled for the Census of Population (CP) 2010 to clarify the frame.

Frame

The creation of the census frame (lists of enumeration units) was a major pre-census activity. The sources of the list were: the Statistical Business Register of Rosstat, the State Land Register formed in the bodies of the Federal Service for State Registration, Cadastre and Cartography (Rosreestr), the Household Books (Registers) in the village administrations, the State Register of Real Estate Rights and Transactions, records of the Technical Inventory Bureaus, records of the Federal Veterinary and Phytosanitary Surveillance Service, records from the bodies of the State Technical Supervision Service, the Unified State Register of Urban Development and the lists of households in urban settlements compiled for the 2010 CP.⁵ The basis for the formation of AC 2016 lists for households (rural and urban areas) was the census frames formed at the regional level following the results of the AC 2006 and updated on the basis of household record book and other sources.

³ To obtain information on agricultural activity of the members of horticultural, kitchen-garden or *dacha* non-profit associations (for members without livestock), the operated plot was used as a sampling unit.

⁴ The non-agricultural organizations that have an agriculture code among their non-core activities according to Russian Classification of Economic Activities (OKVED).

⁵ The frame was established using eight types of listing forms, for different categories of enumeration units.

Complete and/or sample enumeration methods

The census was conducted using a combination of complete and sample enumeration:

- Complete enumeration covered agricultural enterprises, peasant farms, individual entrepreneurs, horticultural, kitchen-garden, livestock-growing and *dacha* non-profit associations, households engaged in crop and livestock production in rural settlements, and those in cities and urban settlements with less than 500 households;
- Sample enumeration covered other enumeration units, such as: (i) households engaged in crop and livestock production in cities and urban settlements with 500 households or more, and (ii) households - members of horticultural, kitchen-garden and *dacha* non-profit associations of citizens.⁶

Sample design

In urban settlements with 500 households or more, the households with at least one cattle, pig, sheep and/or goat, and/or large land areas⁷ were singled out into a separate stratum and enumerated completely. For the remaining households, a 20 percent simple random sample was used.

To obtain information on agricultural activity of the members of horticultural, kitchen-garden or *dacha* non-profit associations, a systematic sample was selected within each of them from the list of operated plots.⁸

Data collection method(s)

The AC 2016 used both self-interviewing and face-to-face interviewing methods for data collection, depending on the type of enumeration unit:

- Agricultural enterprises were enumerated using self-interviewing methods: (i) paper questionnaires (Mail-out/Mail-back) and (ii) Computer-Assisted Web-interviewing (CAWI).
- Peasant farms and individual entrepreneurs were enumerated using: (i) Paper and Pen Interviewing (PAPI) and (ii) CAWI.
- Households engaged in crop and livestock production were enumerated using Computer Assisted Personal Interviewing (CAPI) and PAPI methods.
- Horticultural, kitchen-garden and *dacha* non-profit associations were enumerated using PAPI.

Questionnaire(s) and items covered

Census data were collected using six types of detailed questionnaires depending on the category of the enumeration unit.⁹The AC 2016 census questionnaires covered 20 out of the 23 essential items¹⁰ recommended in the WCA 2020.¹¹

8. Use of technology

Census data were collected using CAPI (using tablets) and CAWI methods. Data were captured using scanning technology (Intelligent Character Recognition, ICR). Census results were disseminated and are accessible online.

⁶ The sample included all households-members of horticultural, kitchen-garden and *dacha* non-profit associations with any livestock.

⁷ The threshold for the land size was established individually for each urban settlement.

⁸ The sampling fraction depended on the total number of operated plots in the association of citizens: (i) in kitchen-garden associations, 100 percent for less than ten plots, 20 percent for 10 to 20 plots and 10 percent for more than 20 plots; (ii) in horticultural and *dacha* associations: 100 percent for less than ten plots, 30 percent for 10 to 50 plots and 10 percent for more than 50 plots.

⁹ The six census questionnaires used in the AC 2016 are: Form no. 1: Census questionnaire for agricultural enterprises (excepting micro-enterprises); Form no.1M: Census questionnaire for micro-enterprises and enterprises of non-agricultural organizations; Form no. 2: Census questionnaire for peasant farms and individual entrepreneurs; Form no. 3: Census questionnaire for households engaged in agricultural production; Form no. 4: Census questionnaire for horticultural, kitchen-garden and *dacha* non-profit associations of citizens; Form 4 PR: Census questionnaire for members of horticultural, kitchen-garden and *dacha* non-profit associations of citizens.

¹⁰ The following essential items were not covered: (i) 0501-Type of livestock system; (ii) 0902 - Working time on the holding; (iii) 1201 - Presence of aquaculture on the holding.

¹¹ Some essential items were collected partially or adapted to the national statistical practice. For instance: (i) the data on the household size were collected without desegregation by sex and age; (ii) instead of the item "Area of temporary crops harvested" recommended in the WCA 2020, the AC 2016 collected the data on sown areas (for each temporary crop type); (iii) data on the number of permanent crop trees were collected for both: trees in compact plantations and scattered plantings (in total, for each tree crop).

9. Data processing

The computerized system for the processing of the AC 2016 data included the regional and federal levels. The regional level was a network of regional information-processing centres based at Rosstat regional offices equipped with hardware and software facilities. Data capture using scanning technology (ICR) as well as checking of full coverage of census units was carried out at that level. At the federal level, the Rosstat Computer Centre (CC) completed the data processing of census data.

10. Quality assurance

A great deal of emphasis was placed on data quality throughout the exercise from planning, questionnaire design, training, supervision, data entry and editing, to validation, analysis and dissemination. A comprehensive mechanism for the monitoring and supervision of fieldwork was established. It included supervision of fieldwork at the level of instruction areas and at different subnational levels, regular reporting and analysis of response rates during data collection, field checks, etc.

In 2012, a pilot agricultural census was conducted in order to test the AC methodology, organization of fieldwork and census tools.¹²

A post-enumeration survey (PES) was conducted from 16 to 22 August 2016. The sample supervisory round was carried out at each instructor area. The selection of AC objects for the supervisory round was at least 2 percent of the total number of AC objects of the instructor's area. During the supervisory round, the completeness of the census coverage of all AC objects was checked and the reliability was clarified.

11. Data and metadata archiving

An anonymized microdata base of the AC 2016 was created and access is provided to users from scientific and other organizations upon request basis.

12. Data reconciliation

The census results were used for recalculations of time series of indicators available in the AC, and other related indicators for agriculture, as well as recalculations of balances of food resources and volumes and the index of agricultural production.

13. Dissemination of census results and microdata

First preliminary data on some key census results were released in November 2016 through the Rosstat Website. In addition, two printed publications and two CD-ROMs with preliminary census results on the federal and regional level were disseminated in November 2017.¹³ The final results the AC 2016 were printed in eight volumes and 11 books published during 2018. The publications contain census methodology, legal framework, census instruments, instructions, data tables, diagrams and maps. The census results are available on the Rosstat website.

14. Data sources

Rosstat. 2018. *All–Russia Agricultural Census 2016: The programme, Methodology and Organization: Volume 7.* Moscow, the Russian Federation. (also available at https://rosstat.gov.ru/storage/mediabank/VSXP_2016_T_7_web.pdf)

Rosstat. 2016. *All Russia Agricultural Census 2016.* Moscow, the Russian Federation. [Cited 13 May 2020]. <https://rosstat.gov.ru/519>

¹² The pilot agricultural census was conducted in Liskin Municipal district of Voronezh region and Semikarakorsky district of Rostov region.

¹³ The preliminary census results included data on the number and area (total and average) of agricultural producers covered by the AC 2016, by type of enumeration units. первые оперативные итоги Всероссийской сельскохозяйственной переписи 2016 года, полученные по результатам мониторинга хода переписи в сентябре 2016 г: https://www.gks.ru/free_doc/new_site/business/sx/vsxp2016/VSHP-2016.pdf

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