

General Overview of the 2006 All-Russia Agricultural Census

Procedure, Design and Content

Dr. Konstantin Laykam
Federal State Statistics Service
39, Myasnitskaya Str.
Moscow, 107450, Russia
E:mail: laikam@gks.ru

In accordance with the federal law and Russian government resolution, the All-Russia Agricultural Census was conducted in July 2006. For remote and not-easily-accessible areas, data collection activities took place within the period of September 15 through November 15, 2006. The most recent census of agriculture was organized in Russia in 1920.

Totally, about 30 million questionnaires were completed. To collect data on the census population across Russia, 4 different types of questionnaires were used. Approximately, 225 million pages were scanned.

The general concept for the All-Russia Agricultural Census content and procedure was developed based on the recommendations of FAO and other international organizations. An in-depth study of experience gained in U.S., Germany, Poland, Lithuania, and Estonia, was undertaken as part of the census planning and designing process.

The census content included the following items: general characteristics of the census list units; labor force and employment in the agricultural sector; land resources; land in agricultural crops and perennial plants; livestock inventory; agricultural machinery and equipment, buildings and constructions; types of farm-related activities.

Preliminary agricultural census data have been released beginning December 2006, when the first volume "Agricultural Enterprises and Private Farms" was issued, followed by the second volume "Horticulture, Kitchen-Garden, Livestock and Dacha Non-Profit Citizens' Associations" in March 2007. The publication of preliminary census results will be completed in November 2007; full agricultural census release (9 volumes) is scheduled for 2008

1. The rationale for the All-Russian Agricultural Census taken

The last such large-scale measure was organized in 1920. Later efforts to that effect, undertaken on a regular basis, were targeted agricultural censuses, such as censuses of acreage under farm crops, of fruit plantations and vineyards on farms of all categories, and of household livestock, to name but a few. But virtually all of them were taken before the launch of market reforms in the

agricultural sector.

In recent years, the agricultural sector in our country has undergone a large-scale restructuring. It involves improvements in the land law, establishment of mixed economy, resurgence of private sector and demerging of agricultural enterprises.

The major producers in the agricultural sector before the '90s of the last century were large agricultural enterprises, which accounted for three-quarters of output.

Later on, their share went down, to average some 40% across Russia to date, with the family farms claiming more than a half of the total output of agricultural produce. There has come into being a new category of producers: private farms, which account for over 6% of agricultural output.

With new economic relations on the rise, the system of statistical surveys of the agricultural sector was overhauled. The ongoing monitoring approach, traditionally used by the government statistical service, became inadequate for a number of external reasons, not least because of its high cost.

The Russian agricultural statistics put together a system of sample surveys, which have been used in organizing government statistical monitoring of the agricultural activities of family farms and private farmers for 10 years now.

International experience shows that statistical sampling fails unless the agricultural surveys list frames are updated. This being the case, the new economic conditions made it imperative to take the All-Russian Agricultural Census.

2. The scale of the All-Russian Agricultural Census

In the Russian Federation, the census covered:

- 1) 59,200 agricultural enterprises and businesses, including households;
- 2) 253,300 private farms;
- 3) 31,800 individual entrepreneurs;
- 4) 22.8 mln private households and other individual farm operations;
- 5) 80,300 fruit-garden, kitchen garden, livestock and dacha non-profit associations of citizens (13.8 mln plots of land).

The census was supported by some 200,000 temporary census workers. This involved:

- 1) 136,300 enumerators;
- 2) 23,400 supervising enumerators;
- 3) 3,600 data collection coordinators.

Government agencies and municipalities in the Russian Federation regions made available

premises for census offices, with telephone communications, furniture, motor vehicles and security provided for the census offices.

3. Regulatory support for the All-Russian Agricultural Census

The census was taken within a secure legal environment, based on the Federal Law "On the All-Russian Agricultural Census" and four resolutions of the Government of the Russian Federation:

3.1 The Federal Law of July 21, 2005, No. 108-FZ "On the All-Russian Agricultural Census", provides a legislative framework for the regulation of relations between entities, persons, Russian Federation central and regional government agencies, local self-government agencies as regards organization and implementation of Agricultural Census, as well as publication of its results. The Law identifies the following aspects of statutory regulation:

- 1) basic concepts, census respondents;
- 2) list of information items on the persons and entities targeted by the census;
- 3) powers of the Government of the Russian Federation and of the government agencies of the political entities of the Russian Federation as regards preparations for the census to be taken;
- 4) arrangements to ensure the confidentiality of the information submitted, and the liability of civil servants for unauthorized disclosure thereof.

3.2 The resolution of the Government of the Russian Federation of October 31, 2005, No. 651 "On the Organization of the All-Russian Agricultural Census"

- 1) set the date and time frame for the census to be taken;
- 2) instructed the Russian Federation Government Commission for Agroindustrial and Fishery Complex to arrange coordination of activities of federal government agencies in preparing and taking the census;
- 3) designated the Rosstat (Federal State Statistics Service) as the agency in charge of its taking, financial and procedural support, enacting the forms for the census questionnaire and other paperwork, providing security arrangements and rules for the processing of confidential information, processing of data on the census respondents, releasing, publishing and archiving thereof, as well as ensuring the integrity of census questionnaires and other paperwork;
- 4) gave such instructions as were necessary to the federal agencies involved and recommendations to the government agencies of Russian Federation regions and local authorities.

3.3 The resolution of the Government of the Russian Federation of November 25, 2005, No. 701 "On approving the procedure for distributing in 2006 subventions from the Federal Compensation Fund among the Russian Federation regions for the government agencies of

Russian Federation regions to perform the functions of preparing and taking the All-Russian Agricultural Census"

- enacted the procedure for estimating the total amount of subventions for the Russian Federation regions to perform their functions as regards financial backing for the provision of premises with telephone communication, security and transport arrangements in place for the Rosstat regional offices.

3.4 The resolution of the Government of the Russian Federation of May 27, 2006, No. 316 "On Approving the rules for the allocation in 2006 from the federal budget of subventions to the budgets of Russian Federation regions for the government agencies of Russian Federation regions to perform their functions of preparing and taking the All-Russian Agricultural Census"

- enacted the procedure for granting, transferring and documenting subventions to the budgets of Russian Federation regions to perform the functions of preparing and taking the All-Russian Agricultural Census.

3.5 The resolution of the Government of the Russian Federation of March 20, 2006 No. 152 "On Approving the Rules for Release and Dissemination Procedure of the All-Russian Agricultural Census"

- established the procedure for agricultural census release; decreed that the federal information resources of the 2006 All-Russian Agricultural Census shall be managed by the Federal Government Statistical Service, which shall arrange for official publication of the census data, and that the data release shall be performed in two stages: interim results (4th quarter of 2007) and final results (4th quarter of 2008).

3.6 The census regulatory framework also includes the regulations of the Rosstat and the regulations of Russian Federation regions and municipal entities that cover the All-Russian Agricultural Census.

4. Guidelines for the All-Russian Agricultural Census

The framework of the All-Russian Agricultural Census, its programme and methodology were developed based on the recommendations of UN FAO and other international organisations. The pre-census activities included an in-depth study of practices in the USA, Hungary, Poland, and Lithuania. The study made allowances for Russia's specifics, such as its geographical location, natural environment, climate, demographic situation, institutional, social and economic patterns and agriculture. The list of the programmes and methodologies developed is headed by the Basic Methodological and Organizational Guidelines for Preparing and Taking the All-Russian Agricultural Census". The guidelines define:

- 1) the scope and objectives of the census;
- 2) the date and timeframe for taking it;
- 3) the respondents of the agricultural census;
- 4) the programme of the census;

- 5) the ways and means of sourcing information from various categories of census respondents.

The scope of the All-Russian Agricultural Census is as follows:

- 1) to set up federal information resources to feature information on the condition and structure of the agricultural sector, as well as on the availability and usage of its resource potential;
- 2) to generate data on municipal entities;
- 3) to improve the system of statistical service in agriculture;
- 4) to obtain comprehensive data on the agricultural sector, to be used as benchmarks for generating statistics in the intercensal period;
- 5) to update the frame lists for a variety of sample surveys to be taken in the intercensal period.
- 6) The census results will be of great importance for the development of effective agroindustrial policies and generation of comprehensive information on the food system in the country.

Under the Federal Law on the All-Russian Agricultural Census, the agricultural census respondents are understood to mean the entities and persons that own, use, possess or hold on lease such land plots as are intended or used for the production of agricultural produce, or keep livestock.

In accordance with the Procedural Guidelines for Compiling Lists of the 2006 All-Russian Agricultural Census respondents, 8 lists were produced of:

- 1) large and medium-size agricultural enterprises;
- 2) small agricultural enterprises;
- 3) private farms;
- 4) individual entrepreneurs;
- 5) institutional farms;
- 6) fruit-garden, kitchen-garden, livestock, and dacha non-profit associations of citizens;
- 7) private households and other individual farm operations (in rural and urban areas);

The lists were produced using the following sources of information:

- 1) the statistical register of economic agents (Statregistr of Rosstat);
- 2) the unified state register of lands maintained by Rosnedvizhmost (Federal Agency for the Cadastre of Real Properties of Russia) offices;
- 3) information from the Rosselkhozadzor (Federal Service for Veterinarian and Vegetation Sanitary Supervision of Russia);
- 4) information from Russia's Gostekhnadzor (State Technical Oversight Authority);

- 5) per-household records of rural administrations;
- 6) the state register of taxpayers;
- 7) the unified state register of rights to immovable property and transactions therewith;
- 8) information from the Technical Inventory Bureau;
- 9) the unified state register of urban development projects;
- 10) lists of houses/blocks of flats in urban-type settlements, generated for the 2002 All-Russian Population Census, etc.

The lists of census respondents were produced using computer systems AgroRegistr1 and AgroRegistr2, with software-enabled interfacing with information systems of different agencies, first of all, Rosstat and Rosnedvizhimost.

In order to ensure identification of such census respondents, as had no surnames or addresses listed in the census questionnaires, a temporary referencing system was developed, with unique reference numbers assigned to each census respondent. The temporary reference number was featured on all forms of census questionnaires and comprised 12 digits:

- 1) the reference number of the area as per the All-Russian Classifier of Subnational Entities (two digits);
- 2) the reference number of the district as per the All-Russian Classifier of Subnational Entities (three digits);
- 3) the number of the census target list (one digit);
- 4) the reference number of an additional characteristic of target (one digit);
- 5) The item number of census target on the district list of a Russian Federation region (five digits).

The mixed economy of Russia's agricultural sector, the presence of numerous small-size census respondents necessitated a multi-pronged approach in using information gathering procedures:

- 1) for agricultural enterprises — a self-reporting procedure;
- 2) for private farms, individual entrepreneurs, rural settlement residents with land plots for gardening, private housing development, such other land plots as are not part of associations, or with livestock— complete enumeration procedure;
- 3) for fruit-garden, kitchen-garden, and dacha non-profit associations of citizens — a survey of association regions using statistical sampling procedures;
- 4) for agricultural census respondents that are persons resident in towns and urban-type settlements numbering 500 households or more – sampling procedures were used; in those with fewer than 500 households – complete enumeration.

The census programme monitored the following indicators:

- 1) general description of census respondent;

- 2) human resources and employment in the agricultural sector;
- 3) land resources;
- 4) the acreage under crops and perennial plantations;
- 5) livestock number;
- 6) machines and equipment, buildings and others facilities;
- 7) types of farming activities.

The information on census respondents was gathered using census questionnaires of 4 types, as well as census questionnaire inserts and appendices:

- 1) "Census questionnaire for agricultural enterprises" — form No. 1;
- 2) "Census questionnaire for private farms and individual entrepreneurs" — form No. 2;
- 3) "Census questionnaire for private households and other agricultural operations" — form No. 3;
- 4) "Census questionnaire for fruit-garden, kitchen-garden, livestock and dacha non-profit associations of citizens" — form No. 4.

The inserts into census questionnaire forms Nos 1 and 2 were developed for the purposes of generating results by municipal entity for the census respondents (agricultural enterprises and private farms, as well as individual entrepreneurs) based in the territory of two or more municipal entities.

The appendices to census questionnaire forms Nos 1, 2, and 3 were developed with a view to probing distinctive features of northern regions in Russia and were completed for the census respondents engaged in northern deer and horse herd farming.

5. Organisational support for the All-Russian Agricultural Census

The Census was organized under the Schedule for the activities planned for 2004—2008 to prepare and take the All-Russian Agricultural Census, process its data and publish the results. The Schedule was used by Rosstat regional offices to develop and enact schedules for the activities involved in preparing and taking the Census in a republic, krai, oblast. For the purposes of seamless organization of the Census, a four-tier system was set up, to comprise a federal, regional, district, and field levels of control.

At the **federal** level, the Rosstat arranged:

- 1) development and enactment of relevant statutes and regulations;
- 2) organisational and procedural guidance for the efforts to prepare and take the Census, process its data using computer-based procedures, and publish the results;
- 3) financial and logistical support of the Census;
- 4) liaison with state authorities on Census issues;
- 5) data release, design of templates for tables to be published, publication and archiving of census results, analysis of the Census data and results of computer processing of its data.

The **regional** level covered:

- 1) coordination of the activities of state and municipal authorities in the political entities of the Russian Federation, development and enactment of relevant statutes and regulations at the level of political entity of the Russian Federation in respect to the Census;
- 2) organization of efforts to compile lists of Agricultural Census respondents, to develop action plans to prepare and take the Census in the administrative divisions of Russian Federation regions;
- 3) gathering and review of Census data from the persons engaged in gathering information on Agricultural Census respondents at district level and delivery thereof to Rosstat regional offices;
- 4) computer-aided processing of data at the regional level and forwarding of data to the federal level;
- 5) review of Census results at the regional level and provision of executive authorities of the political entities of the Russian Federation and governing bodies of agroindustrial complex with statistics based on the results of the Agricultural Census.

The **district** level covered:

- 1) coordination of efforts by government agencies and municipalities to perform their functions;
- 2) compilation of lists of Agricultural Census respondents in administrative divisions, and generation of action plans to prepare and take the Census in administrative divisions of Russian Federation regions using the lists and maps;
- 3) recruitment and training of enumerators;
- 4) selection of premises with telephone communications facilities and furniture to support the activities of Census field personnel and to store the census questionnaires and other paperwork of Agricultural Census, as well as motor vehicles; execution of contracts and certificates of work completed and services rendered;
- 5) collection of census questionnaires from agricultural enterprises and Agricultural Census field personnel;
- 6) review and forwarding of input data to higher authorities.

The **field** level covered:

- 1) updating by registrars of Agricultural Census respondents lists;
- 2) collection of information on census respondents, completion of census questionnaires and census paperwork, and forwarding of Census progress reports on to the district level;
- 3) coordination of certificates of work completed and services rendered.

The preparation and taking of the Census was planned under relevant action plans for Russia, for each of the Russian Federation regions, administrative division, city. The action plans were

produced by political entities of the Russian Federation using:

- 1) Census respondents lists compiled for each administrative division;
- 2) performance respondents for Census field personnel;
- 3) maps (e-maps of rural and urban population centres, as well as of agricultural holdings by district).

The action plans were developed based on division of territory into enumeration, instructor, coordinator districts, with their boundaries marked out on the maps, the distances and transport links between them established using the available transport system.

The action plan was used to estimate the requirements for human resources needed to take the Census at all levels, to plan their training, preliminary and inspection rounds, questioning of respondents.

6. Public-awareness campaign during preparation and taking of the All-Russian Agricultural Census

The public-awareness campaign was aimed at achieving the objectives set for informing the public about the upcoming Census, addressing the existing concerns, instilling and upholding a positive attitude to contributing to the Census and reporting reliable data on the household situation.

The Rosstat developed a large-scale programme for information support at all stages of the Census. It oversaw the implementation of events such as:

- 1) thematic press conferences, briefings and round tables,
- 2) children's drawing competition in the regions,
- 3) production and airing of advertisements on radio and television,
- 4) publication of articles, radio and television broadcasts to cover the Census,
- 5) liaison with regional government agencies to support the public-awareness efforts, and other measures.

A special census hot-line and mobile census advocacy posts were established during the census enumeration period. A motor rally aimed at advertising the agricultural census was organized and successfully travelled along many Russia's regions.

A new web-site www.perepis2006.ru was created.

The above resulted in a high scale of respondent contribution to the Census. By and large, the respondents welcomed census takers, readily volunteered information sought in the census questionnaires: the percentage of refusals across Russia was under 0.3% of the **total number of** census respondents.

7. Computer processing of the All-Russian Agricultural Census data

The computerized system for the processing of the All-Russian Agricultural Census data covers the regional and federal levels. **The regional level** is a network of regional information-processing centres based at Rosstat regional offices equipped with hardware and software facilities. This level had the following responsibilities:

- 1) to input data from machine-readable documents;
- 2) to perform optical characters recognition on machine-readable documents;

- 3) to proof-read machine-readable documents after OCR;
- 4) to make sure that the packages have the blank forms required;
- 5) to assign reference numbers to the input data;
- 6) to check the information for technical and logical faults;
- 7) to save the information onto external media.

The Rosstat regional offices began computer-aided processing of Census data on August 16, 2006 and processed a total of 225 mln forms of census questionnaire.

In order to obtain interim Census results as soon as possible, the Rosstat developed a Schedule for Phased Processing of Census data, i.e., for specific census questionnaire forms to be processed in the following order of precedence: forms No. 1, No. 2, No. 4, No. 3.

At the **federal level**, the Rosstat Computer Centre implemented the following measures to process the Census data:

- 1) receipt of data from the regional level;
- 2) automatic correction of data in accordance with economic description;
- 3) saving of corrected data in the database for raw data;
- 4) imputation of Census data;
- 5) design and generation of tables in accordance with economic description;
- 6) support of raw-data database in the post-census period;
- 7) maintenance of regulatory-reference information database for all stages of processing.

The processed final data of the Census were made available to Rosstat regional offices. Third-party users will be granted authorized access to information resources at the federal and regional levels.

8. Results of the All-Russian Agricultural Census

In compliance with the resolution of the Government of the Russian Federation "On the Organization of the All-Russian Agricultural Census", a deadline is set for finalizing the interim census results — 4th quarter of 2007, and the final results — 4th quarter of 2008.

Aware as it is of the importance of producing Census results as soon as possible, the Rosstat made arrangements to produce a short version of interim results of Agricultural Census. The interim results were published starting December 2006: December 2006 saw the release of a digest called "Agricultural enterprises, private farms"; March 2007, "Fruit-garden, kitchen-garden, livestock and dacha non-profit associations of citizens". In July, a summary of data on all categories of farmers was prepared for publication.

The plan for the publication of final results covers a broad range of agricultural producers as the Census is designed to give a picture of institutional changes in the agricultural sector of the Russian economy. The Census results will be presented:

- 1) for Russia as a whole;
- 2) by the Russian Federation regions;

- 3) by territory classified as the Extreme North and equivalent area.

In addition, regional offices of statistical service will present the All-Russian Agricultural Census results broken down by administrative division and municipal entity.

The tables with results to be published are divided into nine volumes:

- 1) number of census respondents by category of farms;
- 2) description of human resources;
- 3) availability and use of land resources;
- 4) acreage by crop in a broad range;
- 5) acreage under perennial plants and small-fruit crops;
- 6) number of livestock by sex and age;
- 7) distribution of agricultural produce;
- 8) infrastructure, facilities, premises, etc.

A separate volume to be published will present the main statutes and regulations, procedural and organizational provisions for the 2006 All-Russian Agricultural Census, model machine-readable blank form of census questionnaires for each category of agricultural producers.

The published results will also feature groups of agricultural producers by farmland acreage, planted acreage under different crops, number of livestock, use of machinery, as well as maps to visualize the results of the All-Russian Agricultural Census by political entities of the Russian Federation and overall in Russia.

The official results of the All-Russian Agricultural Census are planned to be released in hard copy and electronic media, as well as in the Internet. The Census results will be open to all users, such as government agencies, political parties, NGOs, businessmen, researchers, and media.