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**PREPARATION WORKS FOR AGRICULTURAL CENSUS 2002
LINKED TO THE NATIONAL POPULATION AND HOUSING CENSUS 2002**

Supporting paper submitted by Central Statistical Office, Poland**

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PREPARATION WORKS FOR AGRICULTURAL CENSUS 2002 LINKED TO THE NATIONAL POPULATION AND HOUSING CENSUS 2002

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1. INTRODUCTION

Agricultural censuses have a many-years tradition. As early as in 1919, mere one year after regaining Poland's independence, a large part of the projected national census was focused on agriculture. The census was taken in 1921, whereas 1928 saw launching of annual surveys of farmland and crop surface. Survey on livestock was started in 1929.

Agricultural censuses provide the most basic information on agriculture, mostly data on farms, their users, data on the surface of land used, crop surface and livestock, and periodically - depending on the need for information, additional data on farm users, their households and household members, data on land, buildings, means of production etc.

Surveys which investigate farms in a greater detail are called agricultural censuses. We used to distinguish two types of agricultural censuses - investigations taken together with national censuses every ten years and annual traditional-scope June agricultural censuses focused on investigating farmland, crop surface, livestock and additional issues every several years.

Statisticians of many countries aim at organisation of periodically taken agricultural censuses in particular countries, and simultaneous taking of agricultural censuses every ten years. Basic terms, definitions and guidelines relating to this issue are published by the International Food and Agriculture Organisation of the United Nations (FAO).

2. AGRICULTURAL CENSUSES BETWEEN THE WARS

After the end of World War I, as early as in 1921, the first Polish national census was taken. Efficient operations of the newly reborn state required determination of the number of population, human resources, houses and flats, and obtaining basic data on agriculture, which influences global national production. Essential agriculture-related data concerned:

- livestock by species, age and use groups, including the stock of goats, rabbits, poultry, bee hives;
- description of farms with regard to:
 - * land use by type of land,
 - * patchwork of land,
 - * equipment with basic farm machinery,
 - * application of fertilisers and certified seeds.

Annual surveys of farmland surface and sowing area in Poland date back to 1928. Data on crop surface pertaining to earlier years, i.e. 1918/1927 were estimated basing on values obtained from agricultural correspondents, and data on land use from statistical materials of Austria, Prussia and Russia dated prior to 1914.

After the first national „registration” of farm animals subsequent livestock surveys were taken in 1927. Up to 1929, however, this issue was covered by annual agricultural surveys.

Annual livestock surveys launched in 1929 remained unchanged until 1939. Surveys covered all farm animals, both in the country and in the city, namely animals in:

- farmsteads,
- held by landless owners,
- animals owned by farm servants.

Animals kept in farms with total area of 50 ha and over were listed separately.

Survey was taken by interviews using the above mentioned collective sheets (for each village/city).

3. AGRICULTURAL POST-WAR CENSUSES - IN THE YEARS 1945-1988

Annual surveys on the surface and livestock were relaunched in July 1945.

In 1945 the census covered only old land, i.e. territory which was within Poland’s borders before the war, whereas a nation-wide census was taken the following year in 1946. **In June 1946, for the first time agricultural census covered data on the number of fruit trees.**

In June 1946 besides land use, crop land, number of fruit trees and bushes and livestock the agricultural census brought data on the surface of field vegetable crops.

Table 1 The subject of June agricultural censuses between 1946-1988

Subject	Years
1. Land use	1946-1988
2. Surface sown:	
corn by type	1946-1988
total - peas, beans, broad beans and lentil	1946-1988
feed maize	1952-1988
total - field peas, faba beans, vetch	1946-1950, then together with other leguminous and fodder crops
serradela	1946-1951, then together with papilionaceous plants
lupin	1946-1962, then in groups: sweet with leguminous and bitter separately
clover	1946-1951, then in the papilionaceous group
other fodder crops	1946-1962, then in the papilionaceous group
rape and turnip	1946-1988

flax	1946-1962, then together with hemp
hemp	1946-1962
sugar beetroot	1946-1988
other oil plants	1946-1988
other industrial crops	1952-1988
potatoes	1946-1988
root fodder crops	1952-1988
vegetables	1946-1988
strawberries	since 1971
other crops	1946-1988
3. Farm animals	
cattle by age and use groups	1946-1988
pigs by age and use groups	1946-1988
horses by age and use groups	
sheep by age and use groups	1946-1988
goat by age and use groups	1946-1988
poultry: hens	1946-1988
cocks	1946-1950, 1971
chickens	1948-1950
ducks	1948-1950
turkeys	1948-1950
rabbits	1948-1950
bee swarms	1946-1950
4. Number of fruit trees	
	1946-1951, 1956, 1961, 1965, 1971, 1977, 1982
5. Field vegetables cultivated surface	1949
6. Farm electrification	1954-60, 1967, 1970, 1971, 1972, 1973, 1974
7. Farm inhabitants	1957, 1976, 1986
8. Water supply in farms	1962, 1972, 1975, 1986
9. Contracting crops	1962
10. Number of tractors	1964, 1972
11. Greenhouses, hotbeds	1965, 1972
12. Farm buildings	1965, 1967, 1972, 1977, 1980, 1987
13. Farm specialisation	1970, 1972
14. Farm machinery and equipment	1973, 1979, 1987
15. Fertiliser consumption	1974

4. AGRICULTURAL CENSUS IN 1996

Agricultural census in 1996 was taken after an eight-year break since the last census conducted in 1988. The interval witnessed changes in ownership, employment, infrastructure and income of farms. The significance of these changes produced the need for a wide-span identification and description of situation in agriculture. At the same time, sample surveys which replaced agricultural censuses, did not allow for generalisation on the gmina level, therefore the lack of data on the local level halted

decision-making and development of economic programmes. The need to take an agricultural census was also justified by the necessity to launch associating processes with the European Union, which require an up-to-date data base on agriculture which enables for elaboration of analyses used for negotiating and comparative analyses illustrating quantitative and qualitative changes in agriculture, and the right assessment of consequences of association with the European Union.

The following data were obtained as a result of the census in individual farms:

- 1) data on persons holding and using individual farms and persons in their household,
- 2) sources of household income,
- 3) number of hired workers employed on a farm,
- 4) land use,
- 5) livestock by species, age and use groups and number of bee colonies,
- 6) buildings, infrastructure and technical equipment,
- 7) on farm debts ,
- 8) economic activity (agricultural and non-agricultural) conducted by a farm user or a person being a household member of the user;
- 9) major expenditures incurred between 1st July 1995 until 12th June 1996 and projected until 2000,
- 10) projections regarding changes in farm operations until 2000.

As a part of census, interviews with natural persons using agricultural plots also generated the above mentioned data, exclusive of information specified in point 9.

Interviews conducted within the census with livestock owners produced data specified in point 1.4 and 5.

Interviews with legal persons and organisational units with no legal personality carried within the census brought about information specified in points 3-9.

Three specimens of census questionnaires were used in the 1996 agricultural census:

1. for individual farms with farmland below 1 ha,
2. for individual agricultural plots and livestock owners holding no farmland or using land with farmland under 1 ha,
3. for farms of legal persons and organisational units with no legal personality.

Main census results are presented in 13 domestic publications entitled as follows:

- Land use and technical infrastructure,
- Farm animals,
- Land use and land quality,
- Crop surface, orchard, meadow and pasture area,
- Tractors, farm machinery and other means of transport,
- Population engaged in agriculture - part I and II,
- Farm profiles and systematics,
- Non-agricultural farm activity,
- Agricultural transition,

- Selected elements of economic situation of farms and their future plans,
- Agriculture in ecological hazard areas

and in five voivodship publications:

- Land use, crop surface and livestock,
- Buildings, structures, technical infrastructure and agricultural means of production,
- Population involved in agriculture and its economic activity,
- Selected elements of economic situation of farms, its non-agricultural activity and future plans of their users until 2000,
- Farm profiles and systematics.

5. NATIONAL CENSUSES IN 2002

Censuses 2002 cover:

- approximately 40 million of population
- approximately 12 million of households
- approximately 2 million of private agricultural holdings
- approximately 1 million of private agricultural plots

In censuses 2002 will participate:

- approximately 180 thousands of enumerators
- approximately 33 thousands of people employed in 3 thousands of census bureaux
- approximately 2,5 thousands of statisticians involved in the results analysis

The important dates for censuses accomplishment preparations:

- **1.06.2001 – 15.02.2002** preparation of the list of enumeration areas
- **April 2002** trainings (approximately 7,000)
- **21.05.2002– 8.06.2002** local accomplishment of censuses
- **July – December 2002** registration, data checking and analysing
- **2003 – 2004** data generalising and results publishing

Legal basis of National Population and Housing Census (NSP) and Agricultural Census (PSR) 2002:

- Law of September 9, 2000 amending the Law on the national population and housing census of December 2, 1999 (Journal of Laws of 2000, No. 93, item 1028).
- Law of September 9, 2000 on the agricultural census (Journal of Laws of 2000, No. 99, item 1072).

The Laws determine:

Dates of censuses, objective and subjective scope of censuses, population obligation of providing informations, structure of census system, tasks for the organs of governmental administration and self-government of gminas, official statistic services, but also financing principles.

National Population and Housing Census 2002 in Poland will be the first comprehensive statistic survey after 1988, the time of social and economic transformation which took place in 90 - ties.

The last National Population Census (1988) results have become considerably out-of-date. Great transformations regarding economic, ownership and demographic issues, but also modifications of living conditions, labour market and political and administrative system have occurred.

Since the last agricultural census in 1996 the considerable changes have occurred, which recognition is substantial for planning of agricultural development but particularly for the integration process with the European Union.

The essential standing of censuses create them as the undertakings of a great scale of theoretical and methodological activities, because:

- National Population and Housing Census 2002 consists on a great number of subjects (63 basic questions in the census questionnaire), also the accompanying surveys; in the agricultural census there are 14 subject sections, in which 10 to 20 positions need to be fulfilled;
- Agricultural Census 2002 includes information on 14 subject sections on agricultural households and plots, land conditions, crops, breeding of animals, economic outcomes, situation and economic activity of the agricultural population
- Data sets will be:
 - presented through publications, compilations, data basis
 - disseminated on CD-ROMs, diskettes, printings or by an e-mail
 - published in census publications, yearbooks

National Population and Housing Census – 2002 is being prepared with regard to the Economic Commission for Europe (ECE) recommendations worked out in the World-wide Population and Housing Programme 2002 framework according to the Resolution of July 19, 1995 (1995/97) of The Economic and Social Council United Nations Organisation.

Agricultural Census – 2002 is being prepared with regard to Food and Agriculture Organisation recommendations and the European Union standards.

The programme for the World Census of Agriculture 2000 is intended to assist countries by providing definitions, concepts, standards and guidelines for censuses in the decade 1996 – 2005 in order to generate a data base of internationally comparable figures.

National Population and Housing Census and Agricultural Census coincidentally carried out give the opportunity of getting information on agricultural households and plots but also helps to combine information from both censuses for knowledge widening of the population related to agriculture. The total cost of both censuses will be lower than expenses that would be allocated for censuses carrying out separately.

The National Censuses 2002 are the continuation of the only and comprehensive surveys on population, housing and agriculture realised in Poland since 1921. They are components of many years' surveys programmes of official statistics and for the country they are the most important periodical survey.

Realisation of the censuses 2002 is the expression of the Polish statistics harmonisation with the world and the European statistics.

The aim of population and housing census is to collect a great number of data concerning population and dwelling with reference to all units of the territorial division of the country.

Consequently, all the people must come within a census, irrespective of the place of residence, age, sex, profession and occupation. Completeness of the census is crucial for its usefulness. Data achieved from the census will show the most value individual characteristics of the population, including households and families with regard to the terms of living. Exhaustive and reliable responds on the questions from the questionnaire form but also comprising all obliged people are vital for the census completeness.

Census procedures and survey organisation guarantee that with reference to every person that come within census and are obliged to give an exhaustive and reliable responds, the statistical confidentiality is assured.

The statistical confidentiality, its range as well as the substance is implemented and determined by article 10 of the Law on Official Statistics.

Questions wording, collecting of data and generating of data are confidential and subject to protection. According to Article 12 of Law of June 29, 1995 on official statistics (Journal of Laws of 1995, No. 88, item 439) the staff of the official statistical services, the census enumerators, statistical interviewers and other persons performing activities in the name and on behalf of official statistics, having direct access to individual and personal data are obliged to observe without exceptions the statistical confidentiality and are allowed to perform those activities only after delivering an oath in a written form, at a statistical office or other units of official statistical services.

There have never been a case of an illegal dissemination of data collected in census in the history of Polish statistics. Organisation of census procedures as well as principles of data registration for computer processing guarantee that the statistical confidentiality is fully observed.

Theoretical, methodological and organisational basis of Censuses 2002 are based on the international principles of preparing censuses, local realisation, collection, registration, checking of materials and organisation of data processing, but also dissemination of the results (data publishing, making the access to data and publications available and active dissemination by using all technical measures).

The highest professionalism must be assured. To achieve it carefully prepared selection, training and final verification of the local personnel must be conducted. With regards to the principles of censuses accomplishment, the supervision and checking should represent high professional level.

Censuses 2002 are the enormous undertaking:

organisational and technical, because it means:

- recording all that come within census, approximately 40 million, including homeless
- recording all the dwellings (approximately 10,4 million) and collective dwellings-places

- recording all the agricultural households (approximately 2 million) and the plots (approximately 1 million)
- involving of all voivods, presidents of cities, mayors, chiefs of the village (governmental), gmina offices
- employing and training:
 - approximately 33 thousands of persons for the census bureaux functioning
 - approximately 180 thousands enumerators
- printing and sending millions of census questionnaires

computational, because:

for statistics and informatics there will be a lot of different data to be registered, compiled and computed and lots of information to be compiled. The Census organisation is presented on the scheme.

CENSUS SYSTEM ORGANIZATION

General Census Commissioner --- Deputies of General Census Commissioner

**President of Central
Statistical Office**

Central Statistical Office

Census Bureau

Voivodship Census Commissioner -- Deputies of Voivodship Census

Voivod (16)

Commissioner

Voivodship Census Bureau

Directors of Statistical Offices

Gmina Census Commissioner----- Gmina Census Bureau

**President of the city,
Mayor, Chief of the village (governmental)**

Branch Gmina
Census Bureau

Enumerator

**Appointed by director of statistical office,
recommended by gmina census commissioner**

Workflow within the system – specific steps of data processing:

- scanning and transferring of documents into the image server
- recording copies of documents` images and their descriptions on the electronic carriers to enable data recognition several times
- transferring of images to the recognition station in order to obtain ASCII data

- sending ASCII data into the Informix database and recording images in the new location of the image server (from this localisation data are available to all processes which require access to the image)
- the first automatic coding (primary), operating on 'raw' data (before the videocoding)
- videocoding (verification of recognised characters without the satisfactory confidence, correction of unrecognised characters)
- the second automatic coding (secondary), operating on verified data (after the videocoding)
- manual coding
- transferring data into the system of the logical validation
- the logical validation (checking logical coherence of data)
- storing images of documents in archives

Data collected from censuses give a comprehensive profit, because they:

- give the most complete collection of data regarding population, living conditions and agriculture
- give the opportunity to describe the households and the families
- give data for all the units of administrative division of the country
- give data for each groups of people, households and families, agricultural households and their fractions irrespective of their size and concentration
- are the only real source of knowledge of population connected with agriculture, but not only
- give the opportunity to generalise statistical data in structural and correlative configurations, etc.
- are the base for long-term and inter census confrontations
- are the base and the source of data for the international obligations accomplishment, first of all obligations in relation to the UN and its parent bodies, OECD and EU and other international institutions.

Moreover, in statistics alone, census data will be used for:

- population estimating
- population prognosis
- creating sampling frames for different surveys

6. AGRICULTURAL CENSUS IN 2002

In line with the Act dated 9th September 2000 the agricultural census will be taken between 21st May-6th June 2002 as of the 20th May at 24.00 hours covering:

- users of individual farms,
- natural persons using agricultural plots,
- owners of farm animals holding no farmland or holding farmland under 0.1 ha,
- legal persons and organisational units with no legal identity, primary activity of which is farming, market gardening and horticulture, animal breeding and rearing, (exclusive of veterinary services) hunting, game breeding and acquisition, inclusive of related services, and by units, which regardless of the type of primary activity are users of farmland over 1 ha.

Preliminary projects to the 2002 agricultural census based upon experience gained during preparations for census taken in 1996. Projects on development of the scope and subject of census

were based on FAO guidelines (FAO 1995) to the World Agricultural Census 2000 and according to Eurostat recommendations concerning Farm Structure Surveys.

Indexes of individual farms and agricultural plots, livestock owners or persons holding farmland under 1 ha were elaborated by gmina/municipal authorities basing on results of reports from state, co-operative farms and companies, in line with the Act on tasks commissioned to gminas in relation to organisation and taking agricultural censuses, dated 11th May 1994. Calculation balances of land in gmina/city are control sheets for these indexes. Sheets contained items related to the total number of particular land user groups, including farmland situated within a given gmina. Calculation balances verified against agricultural census results allowed for identification and estimation of various land used by units others than farms.

Data on results of the agricultural census, including land use, sowing area and livestock will be presented in two major groups, i.e. **in public and private sector**.

The public sector embraced state farms (owned by the State Treasury and state legal persons), communal farms (owned by gminas) and farms with mixed ownership (companies with a majority public stake).

The private sector is dominated by:

- domestic private ownership, of which:
- individual farms, being individual farms, individual farm plots, individual livestock owners with an extra estimation accounting for units which were not covered by the census, and co-operative and private companies,
- foreign property and mixed ownership.

Results of the agricultural survey are subjected to multifold elaboration. A part of information on land use, sowing area and livestock, as well as general information on population and persons employed on farms, the number of tractors, needed for elaboration of fast reports will be calculated by hand by census district onwards. It should be noted, however, that the focus of tabulations is too extensive what halted the possibility to balance land use and make an additional calculation of census completeness on the preliminary stage.

The second stage involved calculation of several control tables which allow for verification of accuracy of assumptions to programmes for record supervision and data processing and final tables which were the base for then elaborated and calculated publication tables.

Assumptions to elaboration of publication tables incorporated trends of projected census result analyses. The bulk of census-derived data will be grouped by sectors, area groups of total area and farmland, the aim and trends in production, the value of production, type of activity, profiles characterising farm users, employment on farms, the quality of farmland and several detailed features allowing, *inter alia*, for indication of farms with a respective range of farm animals breeding or volume of particular crops.

Despite such a vast and particularly difficult issues featured in the agricultural census 2002 preliminary results on land use, sowing land and livestock will be published as early as in October and November 2002 as signal notes, whereas the next projected publications are planned for 2003.