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# **Webinar on the Operational Guidelines of the World Programme for the Census of Agriculture 2020**

Virtual Meeting, 25 - 29 October 2021

## **Data collection methods and use of technologies during conducting of All-Russian Agricultural census in 2016 and micro-census of agriculture in 2021 in Russian Federation**

Technical Session 6. Census enumeration

***Natalya Shashlova***

Head of Agricultural and Environmental Statistics Division of Rosstat

E-mail: [Shashlova@gks.ru](mailto:Shashlova@gks.ru)



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## All-Russian Agricultural Census 2016

### Data collection methods



**Agricultural Enterprises  
(AE), Peasant-Farmer  
Holdings (PFH) and  
Individual Entrepreneurs  
(IE)**

Complete enumeration



**Holdings of the  
population**

**Individual ancillary holdings in  
rural settlements – complete  
enumeration**

**Individual ancillary holdings in в  
городах urban settlements  
(sampling – 20 %)**

**Non-commercial partnerships  
complete enumeration  
Parcel owners in non-  
commercial partnerships  
(sampling – 10 %)**



## Enumeration methods



AE, PFH and IE:



Individual ancillary  
holdings and non-  
commercial  
partnerships:



AE – self-filling of  
questionnaires on Machine-  
Readable Forms (MRF) or in  
electronic form through  
Rosstat's web-collection  
system.  
Interviewing PFH and IE by  
enumerators on MRF



Interviewing of respondents  
by enumerators using tablets  
and MRF



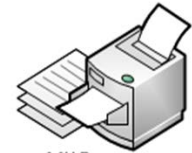


## Variety of data collection mechanisms:

- Interview by enumerator:
  - Data entry into tablet – more than **20 000** enumerators, validation of the entered data using more than **250** rules immediately during data collection;
  - Filling machine-readable questionnaires with subsequent automatic recognition using high-productive scanners (**120** two-sided sheets per minutes) and integrated data checking.
- Self-filling of the questionnaires by the respondent (AE, PFH and IE).
- 82 regional data collection and summarization centers
- 1 center at the federal level



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МЧД



Самостоятельное заполнение  
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## Enumerator's equipment

- Light-reflecting waistcoat
- Visor
- Briefcase
- Dog Repeller

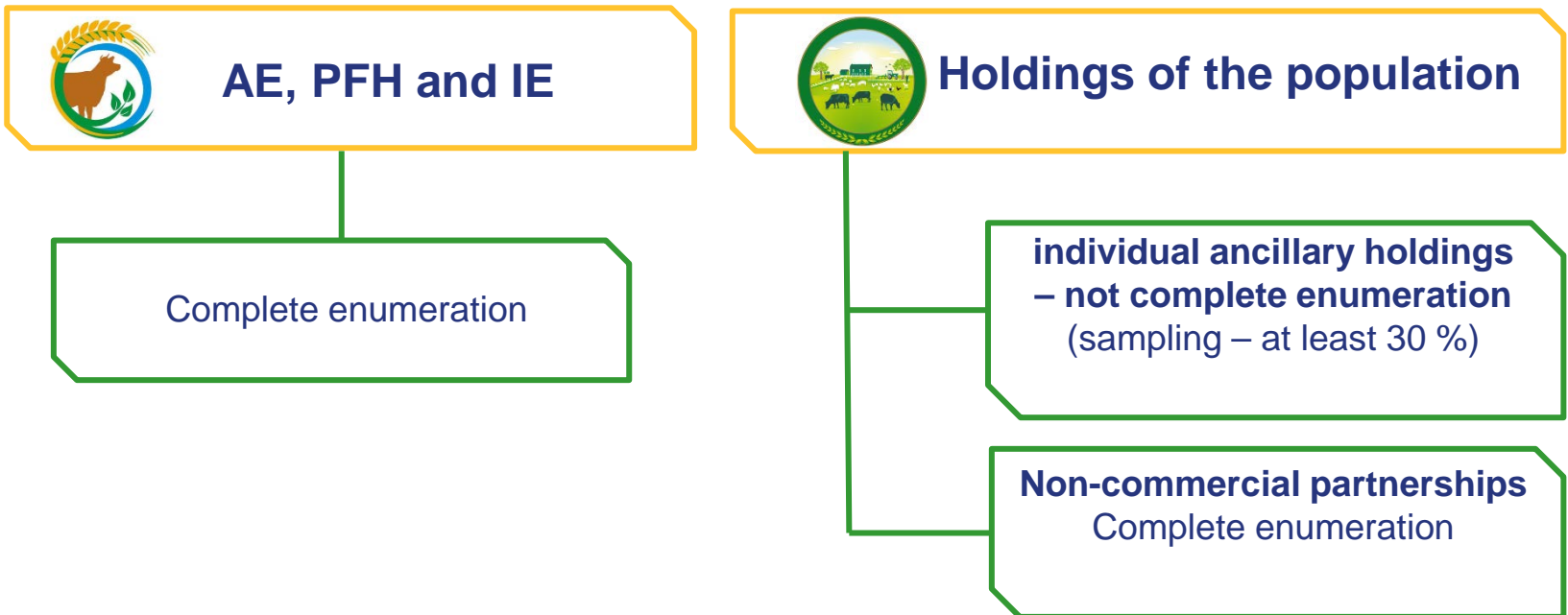




## Micro-census of Agriculture 2021

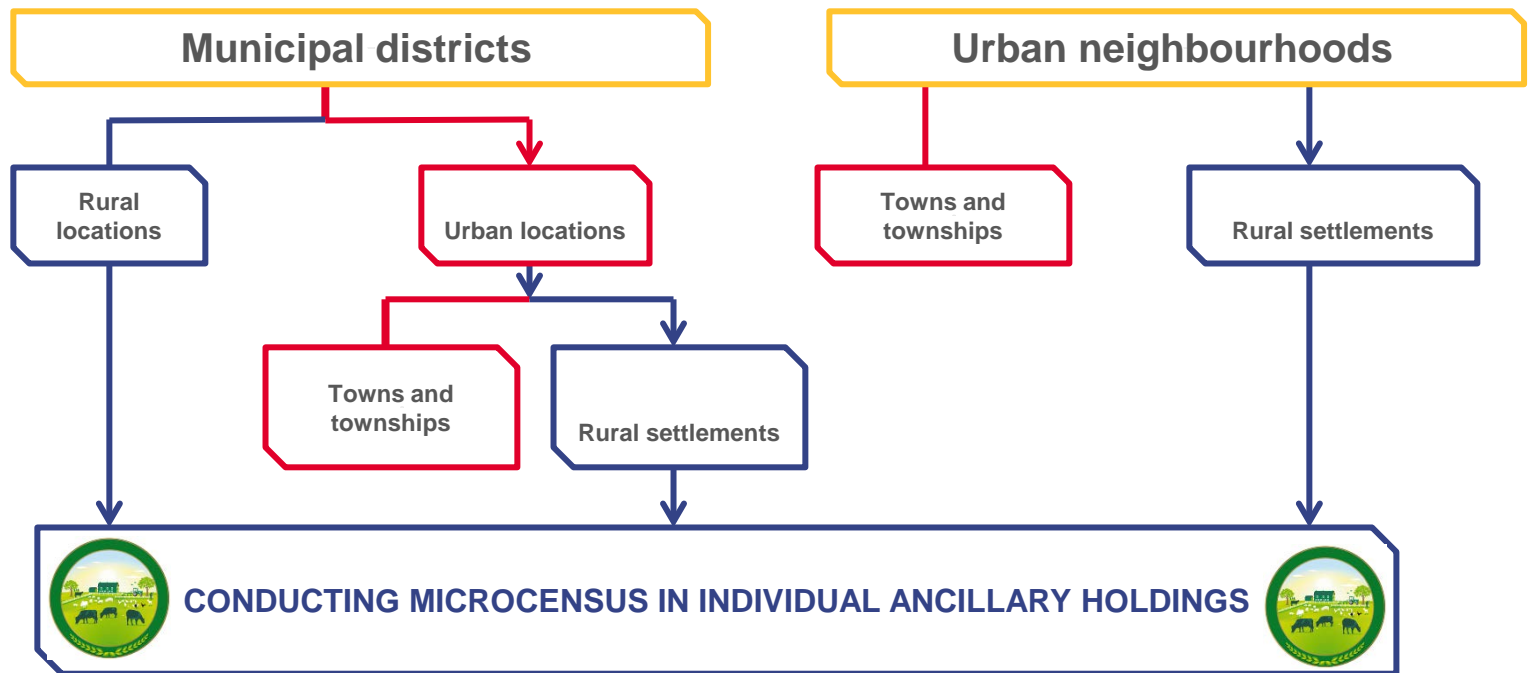
Paragraph 2 of Article 5 of Federal Law “On agricultural Census” – “ Between agricultural censuses, but not later that 5 years after the last agricultural census, there should be conducted a federal sample survey of units of agricultural census based on a sample of not less than 30% of the agricultural census units”

### Data collection methods





## The scheme of conduction of the micro-census of individual ancillary holdings at the municipal entities' level







## Enumeration methods



AE, PFH and IE:



Self-filling of paper  
questionnaires or electronically  
through Rosstat's web-  
collection system



Individual ancillary  
holdings and non-  
commercial  
partnerships:



Interviewing of respondents  
by enumerators using tablets



## Variety of data collection mechanisms:

- Interview by enumerator :
  - Data entry in the tablet – more than **34 ТЫСЯЧ** enumerators, validation of the entered data using more than **200** rules immediately during data collection;
  - In separate cases – using paper questionnaires
- Independent filling of questionnaires by the respondent (AE, PFH and IE).
- 82 regional data collection and summarization centers
- 1 center at the federal level



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## Use of modern technologies

### Data collection



**WEB**



**Tablets**

### Objective control



**Satellite monitoring**



**Using Unmanned aerial  
Vehicles (UAV)** (testing in 6  
subjects of the Russian Federation)



## LIST OF INFORMATION WORKING WITH WHICH IS ENSURED BY TECHNOLOGY OF SATELLITE MONITORING CONTROL

- Data of the micro-census of agriculture 2021;
- Data of the agricultural censuses 2016 and 2016;
- Data of the current agriculture statistics;
- Satellite data and results of their processing
- Data obtained based on satellite monitoring:
- Maps of cultivated arable land;
- Maps of long fallow land;
- Maps of pastures and meadows;
- Maps of sown areas of winter and spring cereals;
- Maps of areas left fallow
- Report forms (maps, charts, tables) for objective control of the data of the micro-census of agriculture



# SCHEME OF DATA CONTROL OF THE MICRO-CENSUS 2021

- ✓ The data obtained based on satellite information and data of the micro-census are integrated
- ✓ IN the system report forms are automatically generated and the districts are detected with significant discrepancies in areas of agricultural land and sown areas.
- ✓ According to the data where discrepancies are detected, the following actions are taken:
  - additional analysis of the satellite data is conducted in the district where discrepancies were detected. Analysis is conducted by developers in charge of the control technology.
  - additional analysis of the data of the micro-census is conducted in the district where the discrepancies were detected. Analysis is conducted by territorial statistical units of the subject of Russian federation where the district is located, based on the information delivered by the developers in charge of the control technology.
  - Rosstat specialist analyze the conclusions are final decisions are taken about validity of the results of the control technology and satellite observation data



## LIST OF UAV INDICATORS

- Total land area  
(including by types)
- Sown areas of crops  
(including by types)
- Livestock numbers (including by types)



## Enumerator's equipment

- Light-reflecting waistcoat
- Visor cap
- Briefcase
- Dog Repeller
- Headlamp





## Data collection and processing stages of Microcensus of Agriculture 2021

- ✓ Data collection and capture at the regional level from 1 to 30 August
- ✓ Formal logical control at all levels
- ✓ Control tours during the census and after its completion
- ✓ Consolidation of the data obtained from various sources: web collection (offline-module, special operator etc.), tablet, paper
- ✓ Comparison of microcensus data at unit level with the current statistical reporting and All-Russian AC 2016
- ✓ Creation of information stock operative summary data
- ✓ Publication of operative summary data in December 2021 (<https://rosstat.gov.ru>)
- ✓ Deciphering the satellite monitoring data
- ✓ Deciphering the UAV data (testing in 6 subjects of Russian Federation)





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**Thank you for attention**