Republic of Moldova – National Bureau of Statistics
Project GCP/MOL/003/ROM

Documentation on
Statistical Register of Agricultural Producers in the Republic of Moldova

Table of Contents

Introduction

The *Statistical Register of Agriculture Producers* (SRAP) is a key element for the Agricultural Statistical System, being generally recognized that a good and up-to-date register is the basis for setting-up a coherent system of sample based agricultural statistics.

Agricultural statistical system in the National Bureau of Statistics of the Republic of Moldova (NBS) has only recently entered the harmonisation process with EU requirements and FAO recommendations. The 2011 General Agricultural Census (2011 GAC) is a major milestone in NBS activity.

The creation of the SRAP is the pre-requisite for the development of a sustainable system of surveys in agricultural statistics.

Based on the results of the 2011 GAC, a fully-fledged operational SRAP is to be set-up, ready to serve as a sampling frame for all relevant sample surveys to be carried out in agriculture.

1. Specific objectives uder the project and expected results

The specific objective of the assignment under the project is to establish a Statistical Register of Agricultural Producers (SRAP) in conceptual and technical terms at NBS.

The SRAP fully answer the requirements of standard functions of data bases (storage, query, analysis, administration, etc.). The information which inserted in the SRAP derives from the data collected under the 2011 GAC. The SRAP will be administrated and maintained at the premises of NBS in Chișinău.

The SRAP updating procedures are defined by taking into consideration the system of current statistical surveys conducted in agriculture, but also the possibilities of linkage with other statistical and administrative registers. Under the project there are identified the potentially useful administrative registers, their data availability and the possibility to set up linkages with the SRAP. For each identified source, these links should be reliable and the relevant variables are to be consistent with SRAP requirements.

The SRAP contain the basic elements needed to identify the agricultural holdings and to define the sample frames needed for conducting the regular statistical surveys carried out annual in agriculture, as well as the farm structure surveys carried out in between two censuses . By its core objective of serving as reliable sampling frame, the creation of SRAP answers to the following immediate objectives of NBS:

- Ensuring the necessary backup for the data collected during the 2011 Agricultural Census, as a standpoint for substantiation a more complete and coherent range of statistical agricultural surveys, based on the international norms and standards (recommended both by EU and FAO);

- Providing timely and reliable agricultural statistics needed for the development of agricultural policy in the Republic of Moldova.

The results are:

     o   Construction of SRAP:

- Defining the contents of the SFR based on the 2011 AC questionnaire variables, quality control tools, the unique identification coding of the SRAP units and the relation and connection with existing administrative and other sources.

- Developing a functional SRAP database using IT tools most appropriate for its maintenance and updating.

     o   A well-documented plan for the further maintaining and updating of SRAP information, including the use of other statistical and administrative data sources.

     o   Development of general SRAP knowledge among selected NBS staff categories.

2. Overall Plan of Activities

2.1 Project approach and implementation strategy

For the construction of the SRAP, the Project activities were integrated under the following core modules:

(i)   Methodology for developing SRAP

(ii)   Methodology for operating SRAP

(iii)   Development of IT applications

(iv)   Implementation, testing and eventual corrections after testing

The operational SRAP was such drafted so that to fully answer to the requirements of standard functions of the databases (storage, query, analysis, administration, etc.)

Set up of SRAP was based on data collected in the 2011 GAC.

2.2 Work flow of activities

The overall plan of activities and the strategy for implementation of activities under each module is presented below:

ACTIVITY 1:

Elaboration of a Fact-finding Report comprising general assessment of the situation and description of all phases and activities for establishing the fully-fledged operational SRAP.

Sub-activities	Tasks, description and implementation strategy
1.1 General documentation on setting up the SRAP; updating practices applied in EU Member states.	Overall documentation on use of SFR in EU Member States. Study visit in an EU Member State which has set-up an operational Statistical Farm Register.

1.2 Documentation on preconditions for using administrative data in the updating process (Administrative Farm Register kept by MAFI, Bovine Register, Register in Cadastre Office, etc.).	One major factor that should facilitate the updating of the SFR by the help of administrative data records is the use of unified identification systems across different sources.
	Administrative data are produced on the basis of some administrative processes, and units and variables are defined by way of administrative rules and demands. The definitions may differ from the needs of the official statistics, but the data are usually of good quality for their administrative purposes.
1.3 Analysis of the legal basis for setting up the SRAP in NBS.	Legal basis for setting up the SRAP: it should make possible to transfer data between NBS and Ministry of Agriculture and Food Industry (MAFI) and use data for both statistical and administrative purposes as well as research.
	Data collected only for statistical purposes can certainly not be used for administrative purposes without the consent of the provider of the information. The legal basis would give opportunity for the MAFI to make some research activities.
1.4 Structure and content of the SRAP	The structure and content of the SRAP, including updating principles were decided in close collaboration with NBS experts during the implementation phase, by using the results from the 2011 GAC.
1.5 Analysis of Statistical Business Register kept in NBS	SRAP is to answer to linkage criteria with the Statistical Business Register. Identify statistical metadata of interest.
1.6 Analysis of other administrative registers (Administrative Farm Register, Bovine Register, Register in Cadastre Office, etc.) related with SRAP	Together with regular surveys conducted in agriculture, Farm Register and Bovine Register both kept in MAFI, (other if it will be identified, as well) might be two additional bases used for updating the SRAP. However, administrative registers should be communicable with SRAP. Analyses of the structure, content and links between SRAP and existing administrative registers possible to provide an input for updating SRAP. Analyses were done using the documents delivered by NBS and information delivered in the working sessions with NBS's project team, as well as on site visits to MAFI, or Agricultural Information Center.

ACTIVITY 2:

Definition of the structure and content of the updated SRAP in terms of key principles; Defining the frame and procedure of updating SRAP.

Sub-activities	Tasks, description and implementation strategy

2.1 Definition of statistical metadata for SRAP	Data are meaningless and useless without definitions and information on how the statistics are produced and can be used. Under this activity statistical variables have been defined in accordance with EC requirements, norms and definitions. However, SRAP and the system should be an integrated part of NBS metadata base.
2.2 Analyses of the used classification systems in the above mentioned registers	Identify if there is any common definition (or classification) system; deep analyses have been done to discover possibilities of development a unique ID code for SRAP. The analyses were done based on the used codes and the relations (if any) between definitions.
2.3 Description of links among the registers	Under this activity, experts in close collaboration with NBS staff describe links among registers kept by NBS and the MAFI (and other registers kept by other institutions).
2.4 Delivery of descriptions of metadata for SRAP and links among the registers	The Metadata for Statistical Farm Register has to regulate and describe the ways for update and use of the data contained by the register.

ACTIVITY 3:
Developing an operational SRAP database using IT tools most appropriate for its maintenance and updating

Sub-activities	Tasks, description and implementation strategy
3.1 Workshop on use of Updated SRAP	The workshop was useful to change information collected by the experts with counterparts in NBS and the MAFI.
3.2 Definition of functional components of updating SRAP	Defining the contents of the SRAP to be updated from administrative data sources based on 2011 GAC Agricultural Census questionnaire, variables, quality control tools, the unique identification coding of the SRAP units and the relation and connection with existing administrative and other registers.
3.3 Development of dataflow diagram	Based on the analyses of the interrelation between different administrative registers and SRAP and necessity of their interconnection, the dataflow diagram was drawn and commented with the NBS project team.
3.4 Definition of SRAP architecture	The architecture of the SRAP is a key moment for the overall design of the SRAP.
3.5. Delivery a proposed unique ID Code for SRAP	The analyses for the possibility of establishment of unique coding system in the area of agriculture and especially for agricultural holding was done. As a result from the analyses the unique ID - Fiscal Code - for farms will be created (if possible) with recommendation for common use in all registers.

ACTIVITY 4:
Development of SRAP applications

Sub-activities	Tasks, description and implementation strategy

4.1 Configuration of the SRAP data base structure using GAC indicators	Development and testing of application for Metadata. Development and testing of application for Metadata with test data.
4.2 Import of real data from the GAC database	Development of procedures for importing data from Agricultural Census database. Testing procedures for import data with test data and actual data
4.3 Development of the SFR Modules, established for answering to national requirements and harmonized with UE standards.	Modules (as a draft at this earliest stage) : 1. Query – partial, composed, total, etc. 2. Analysis – standard, after the criteria established by the user, other types. 3. Update – partial for farm registration (administrative indicators), total for all survey indicators, partial for the sample database, etc. 4. Import – total, selective, other criteria 5. Export – total, selective, other criteria 6. Possibility of further development of other modules, at request.
4.4 Testing of modules	Testing of each module and applying eventual corrections.
4.5 Integration of modules	Integration of modules in the final application, functionality testing with test data and operation of eventual corrections.
4.6 SFR implementation	Implementation of SFR integrated application at NBS headquarters, testing with real data, operation eventual corrections and modifications.

ACTIVITY 5:
Recommendations for future maintenance and update of SRAP
Presentation of developed SRAP applications and its functionality

Sub-activities	Tasks, description and implementation strategy
5.1 Development of Instruction for maintaining and updating of SRAP with administrative data.	Recommendation for future maintenance and update of SRAP as well as the connections with other external registers will be included in the Instructions. The Instructions (document) has to define initial generation of SRAP as well as the maintenance and update for the future.
5.2 Final Workshop	Workshop on use of updated SRAP and presentation of the database architecture of the SRAP updated from administrative registers.

3. Construction of the SRAP - Documentation

3.1   Statistical Farm Registers in EU Member States

The most important factors for proper functionality of the SFR are full coverage and quality of variables. Prior to creating the fully-fledged SFR, the quality of administrative data needs to be assessed, including update and checking procedures of such administrative data sources. The first and most important steps in updating the SRAP from administrative data sources are confirming the possible linkages between the agricultural census and the administrative datasets, including confirmation of comparable definitions. For subsequent years the methodology for updating the SFR is required.

The main objectives for creating the fully-fledged SFR are:

- To update the census data in between two censuses;

- To maintain high-quality sampling frames for current statistical surveys conducted in agriculture;

- To ensure an efficient use of existing administrative data for updating the SFR;

- To build in the longer term a more integrated and harmonised EU system of agricultural statistics.

The following four key areas were covered by the country reports:

- Linking SFR to the business register and other administrative sources;

- Extending the information contained in the SFR to facilitate the selection of sample surveys;

- Improving the quality of existing national statistical farm registers;

- Using the SFR for regular statistical reporting.

The main conclusions are summarized below:

3.1.1   Legal framework

There is currently no harmonised legal framework for the establishment of statistical farm registers in the EU, although most Member States already have national farm registers in place. These registers contain the basic elements needed to identify farms and to define sampling frames for statistical surveys, but they vary in the amount of information recorded and in the sources and methods used to update them.

Although the registers are generally used for selecting samples for agricultural surveys, in some countries the registers are also used for statistical analysis or for administration purposes (e.g. sending out circulars and other information to holdings). In most cases the SFR is maintained by the national statistical office, although in a small number of Member States, responsibility rests with another government department such as the Ministry of Agriculture.

3.1.2   Standard content of the registers

For almost all EU countries, a census of agricultural holdings takes place only every 10 years[1]. In these countries, statistical farm registers play an important role, specifically in providing a reliable sampling frame for the system of agricultural statistics.

In most registers, the basic unit is the agricultural holding, defined as "a single unit, both technically and economically, under single management, which produces agricultural products". However, many registers have thresholds that exclude small holdings, such as those generating less than 1% of the total agricultural production. The thresholds are generally based on the size of the land, the numbers of livestock or a combination of these characteristics.

Furthermore, the level of detail held in the register on the land area and livestock of the holding varies from country to country. In some national farm registers the information is very detailed (e.g. relating to individual crop and livestock types) while others contain only summary information (e.g. total utilized agricultural area). Around half of the statistical farm registers in Member States contain some form of geo-reference for the holding and a similar proportion contains details on employment levels.

By countries, the following answers were obtained, out of 22 respondents, with regard to the information included in the SFR:

- Land area (20 respondents)
- Livestock (17 respondents)
- Crops (16 respondents)
- Geo-reference (12 respondents)
- Employment (11 respondents)

In the countries where there is an annual census of agricultural holdings (e.g. Belgium, the Netherlands and Luxembourg), the need to undertake sample surveys using a national farm register as a sampling frame may be small. However, as countries examine ways to reduce both respondent burden and the costs of statistical surveys, the use of farm registers and sample surveys becomes more and more relevant.

3.1.3   Links with other registers

Around half of the national statistical farm registers EU Member States have a link to the national business register in the form of an identification number. Where agricultural holdings are included in the business register, it is generally an incomplete coverage of holdings.

In a number of countries, links have also been established between the SFR and the systems established for the administration and control of Community aid schemes in the agricultural sector (IACS). Because IACS includes a system for the identification of land parcels and the registration of animals, it has the potential to be a source for

regularly updating the content of the farm register. However, experiences in Member States indicate that it can be a complex process to create links to the IACS databases.

Member States have also created links to other relevant national registers such as veterinary registers and registers of slaughtered animals. Around half of the Member States have introduced systems to automatically update the SFR by using the links to other registers and results from agricultural surveys.

By countries, the following answers were obtained with regard to the existing links between SRAP and other registers:

- Business register (11 respondents)

- IACS (14 respondents)

- Other registers (none)

3.1.4 Updating sources

Updating the statistical register can be done by means of administrative data from several sources. Such a procedure may be rather complicated and asks for a very well regulated system and clear arrangements with the administrators involved. Under certain circumstances updating through successive sample surveys is seen as an alternative however, this does not by definition lead to a complete update.

Main sources for updating SFR identified in country reports:

- *Statistical surveys*: Agricultural Census; FSS; Crop production Survey; Livestock survey; Animal Production Survey, etc.

- *Administrative sources*: Ministry of agriculture for databases for:

    - Bovines, sheep, goats;

    - fruit plantations,

    - other.

- *Control procedures*: IACS

However, these administrative registers often do not comprise all the units engaged in a certain activity. At first instance only units that apply for public support tend to be included in the registers concerned. In several EU countries such special registers (e.g. keeping bovine animals, keeping sheep or growing sugar beet) exist but this will inevitably lead to the situation that units will be included in more than one register. Using these registers for lists for statistical surveys is often rather time consuming because of these duplicates but also due to differences that occur in writing names and addresses of the same unit.

Nevertheless, the information about the units in the SFR is only available for statistical research and under no condition for administrative purposes.

3.2 Administrative data – preconditions for being used

Administrative data are produced on the basis of some administrative processes, and units and variables are defined by way of administrative rules and demands. The definitions may differ from the needs of the official statistics, but the data are usually of good quality for their administrative purposes.

In SFR we have the product resulting from the data collection process and we have to compare that product, under the quality requirements for the statistics, with the information existing in administrative registers, to see if the differences resulted are acceptable. The administrative definitions of the target population may not correspond to our needs (ex.: household, but not agricultural holding; keeper but not holder, etc.), the variables are not always defined as in the SFR, and the time references are not always as precise as in the SFR (the time references of the administrative register may not coincide with the "census day" or "period of reference" in specialised surveys of the statistics).

There are certain preconditions that facilitate the use of administrative sources for updating SFR:

3.2.1 Unified identification systems

One major factor that should facilitate the updating of the SFR by the help of administrative data records is the use of unified identification systems across different sources. In some countries, unified personal identity codes (personal identification numbers) are currently present in nearly all registers and as well in the SFR. It may be possible to link different registers even without unified identification codes, but this is certainly more laborious and time consuming.

3.2.2 Requirements to data coming from administrative sources

➢ **Contents**

An important precondition for updating SFR based on administrative registers is that the data contained in administrative registers should cover same variables as in SFR, variables that should have the same definitions.

➢ **Units and identifiers**

Three central units are essential to update the SFR based on administrative registers: (i) agricultural holding, (ii) holder and (iii) location of the holding.

➢ **Time references**

12

The time dimension plays a very important role in statistics, and is therefore vital for statistical usability that reliable time references are contained also in administrative registers.

The most important is the *dates of changes or events*. Among the main events of interest are the "birth" and "death" of units. What is important here is the real point in time at which an event took place bringing about a change in a data item, for instance the date of closure or the date of change of activity for an agricultural holding.

In addition to dates of events there is a need for *registration dates*, i.e. an indication of when the data value in question was entered in the register. The ideal situation therefore is that any item of information in the administrative register should be accompanied by two dates. Registers in reality often deviate significantly from this ideal.

➢ **Stability**

An important characteristic of statistics is to describe a process over time, i.e. to show how a particular magnitude develops from month to month and from year to year. It is of great importance, therefore, that concepts in the administrative registers remain constant over the longer term. Otherwise major problems can arise in securing comparable figures from one period to the next.

➢ **Quality**

The quality requirements imposed by statistical use coincide to some extent with the requirements that must also be met in serving the primary purpose of the administrative registers. Information must be reliable and recorded with sufficient precision.

➢ **Cooperation with register-keepers**

In updating statistics based on administrative data it is not possible to exercise the same control over the content of basic data as in the production of questionnaire-based statistics. We cannot be sure that the registers cover the units of relevance (i.e. agricultural holding or holder) with the same degree of precision or that data are defined in accordance with the updating needs.

3.2.3   Updating the SFR based on administrative registers

A register-based updating system should never be regarded as completed once and for all. As new user needs arise and new administrative registers are established, new information should be integrated in the system.

For updating the SFR, an administrative register should cover the statistical units relevant to a census, respectively the *agricultural holdings*.

All statistical units should fit for being linked to one another by means of the identification systems: holders can be linked to agricultural holdings; animals can be linked to agricultural holdings, etc.

In practice, this does not mean that all variables from an administrative register should link to all variables available in the SFR. When specialised registers are used for updating the SFR, they should be always linked to the

corresponding base register(s). Linking or not between specialised registers, is a matter of appropriateness. For instance, if variables will never be published or otherwise used in combination, there is no need for linking.

3.2.4   Disadvantages

One disadvantage is the fact that the register-based updating has to rely exclusively on the information contents that can be formed on the basis of the registers available. This imposes some restrictions with respect to the phenomena that are available for description, meaning that some topics have to be dropped from the SFR.

Additionally, some restrictions are imposed due to the definitions of statistical units and variables. The agricultural holding, statistical unit in SFR, has different definition and coverage compared with the "Keepers" of animals (statistical unit in Bovine register). The variable, however, is still the same (bovine), but there is a sound difference in definitions and coverage between the **keepers** registered in Bovine register and the **holders** registered in SRAP. Instead of making quality controls of data received from the agricultural holdings that should be registered in the Bovine register, we have to match **keepers** with **holders**. As well, **utilised agricultural area**, from SFR, has other definition and coverage if compared with cadastral information, where land categories are not the same.

4. Statistical Register of Agricultural Producers in NBS

Statistical Register of Agricultural Producers (SRAP) which will be kept in NBS is to be a complete list of agricultural holdings in Moldova.

SRAP will be established on the basis of the 2011 GAC and will include all units engaged in agricultural production covered by the agricultural census, under the core census module (902,214 agricultural holdings): businesses (including entrepreneurs) and family farms.

In SRAP the *basic unit* is the **agricultural holding**, defined as *a technical economic unit (with or without juridical status) having a single management and carrying out agricultural activities by utilizing agricultural land and/or livestock breeding or develops activities related to maintaining agricultural land in good agricultural and environmental conditions, whether as principal activity or as a secondary activity.*

The economic units exclusively involved in the following economic activities were not considered agricultural holdings and hence they were not object of the enumeration activity:

- hunting, race horse raising;

- forestry and forest exploitation

- pisciculture

- providing services in agriculture (mechanization, application of chemicals and phyto-sanitary protection, land reclamation and irrigations).

The SRAP will contain all units surveyed under the core census module (902,214 agricultural holdings) as basic elements needed to define the sample frames for conducting the regular statistical surveys carried out annual in agriculture, as well as the farm structure surveys carried out in between two censuses. Adequate number of variables are essential to be included in the SRAP, having in view the requirements of the complex system of surveys to be carried out in agriculture.

Database management system proposed for SRAP is :

4.1 Structure of SRAP database

4.1.1 The list of variables included in RSPA:

The characteristics included in RSPA are made of two main types:

a. General features, including:

- Identifying characteristics:

name and address of the holding, fiscal code / unique identifier for the unit with legal personality, personal identification number of the holder for individual holding , rayon and region;

- Demographics Characteristics :

information related to the establishment or cessation of agricultural holdings;

- Economic Characteristics:

economic size , legal status.

b. Agricultural characteristics t: utilized agricultural area, total area, land in field , the land next to the house and gardens, arable land, pastures, orchards, nuts, plantations of fruit trees, vineyards, mushroom farms, total permanent crops, livestock (cattle, pigs, sheep, goats, horses, poultry, rabbits, bees, fur animals).

4.1.2 Data structure:

The various components of RSPA records are :

- RSPA unique key identifier consists of statistical code - CUIIO- assigned to each farms.

- Dynamic data is information that make possible the creation, updating and replacing during RSPA management process. Mainly dynamic data coincide with the variable table.

- Relational data consist of a code or key registration - Fiscal code / CUI / CNP, forming a relational system for the RSPA records in connection with other registries.

4.1.3 Structure of a record of RSPA :

- Identification data: 12 indicators.

- Surfaces : 11 indicators.

- Livestock : 9 indicators

- Economic size : 1 indicator

The database structure is as follows:

Indicator	Metadata			
	Name of field	Type	Width	Decimal
Identification data				
- District / municipality	Raion	Character	20	
- Commune / town	Comuna	Character	25	

- Localities	Sat	Character	25	
- Name of the agricultural holding	Deninto	Character	25	
- Name and surname of the head of household	Nume	Character	25	
- Legal address / residence	Adresa	Character	40	
- Identification codes:				
- CUATM	Cuatm	Numeric	7	
- CUIO	Cuio	Numeric	8	
- CFP	Cfp	Numeric	2	
- Legal status of the farm				
- With legal personality	1	Numeric	1	
- Without legal personality:				
- peasant household	2	Numeric	1	
- other type household	3	Numeric	1	

Agricultural area

- Total agricultural area	c12_77_1	Numeric	8	2
- Utilised agricultural area	c10_66_1	Numeric	8	2
- Arable land used	c7_40_1	Numeric	8	2
- Pastures and meadows	c8_41_1	Numeric	8	2
- Permanent crops :				
- Vineyards	c9_53_1	Numeric	8	2
- Orchards	c9_42_1	Numeric	8	2
- nuts plantations	c9_50_1	Numeric	8	2
- fruit shrubs	c9_51_1	Numeric	8	2
- strawberry	c9_52_1	Numeric	8	2
- Agricultural lands in field	c6_04_1	Numeric	8	2
- Agricultural plots in gardens	C6_04_2	Numeric	8	2

Livestock

- cattle	c16_01_1	Numeric	7

- sheep	c18_18_1	Numeric	7	
- goats	c19_21_1	Numeric	7	
- swine	c17_14_1	Numeric	7	
- equines	c20_24_1	Numeric	7	
- poultry	c21_27_1	Numeric	7	
- rabbits	c22_34_1	Numeric	7	
- families of bees	c23_37_1	Numeric	7	
- fur animals	c24_38_1	Numeric	7	

Economic size

- Dimec	dimec	Numeric	12	4

Relation with Digital Agricultural Register

IDNP / IDNO	idnp/idno	Numeric	15

5. Database design and applications to view and update data

The SRAP application is composed of the main screen, which contains basic information about the farm (identification, data on household and/or owner, basic information about agricultural holding and statistical part, in which the data is stored. Homepage consists of two modules: ***Surfaces and Livestock.***

The two modules, surfaces and animals are similar in that: each module have sub-modules: view, various selections, export to ASCII TXT format, export to Excel format, IMPORT - updating from the current surveys and also the sampling mode.

Every function - or module - it was designed as to meet all user requirements.

 Surfaces module:

5.1 View database

Sub-module "View database"

You can view the database, ie the actual data in the register - in grid with vertical and horizontal scrolling - in the order of its masses / indicators in the structure.

5.2. Various queries / selections

Sub-module "Various queries / selections from the database"

The application provides the ability to do different SELECTIONS simple individual indicators - according to several criteria (greater than, less than, equal, different) - and more than that, you can make multiple selections combine several indicators and more logical conditions, click "Other". The condition is correctly to write SQL query.

5.3. Update / Import

This sub module performs the function Update / Import data based on annual surveys conducted in the NBS and 29 and 24 AGR AGR surfaces for animals.

Unique identification key , based on which data updating is done effectively is CUIIO - statistically unique code assigned to each unit recorded.

In the future, with CNP's collection, CUI's and generally TAX CODE site, we can talk about the connection between RSPA and other registers developed by the Ministry of Agriculture - Information Center.

After executing the "Update" application displays the message:
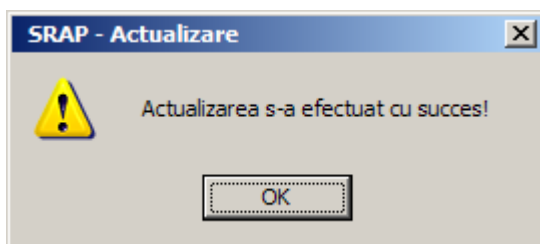
5.4. BD Export in ASCII format (.txt) / Excel (.xls)

This function performs SRAP export the entire database in two different formats, namely ASCII / TXT format - fields delimiter is tab and Excel / XLS format. Reason for the existence of this function is that IT application enabling the user to process the data outside the application, in convenient formats (.txt, .xls) - for example. : Apply different functions and formulas, making graphs, maps, studies, etc.

After you press the "Export" button then appears for information:
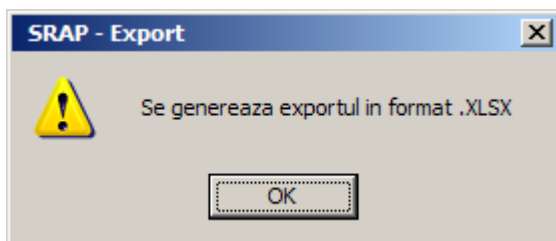
Similar things happen and for export in .txt format:
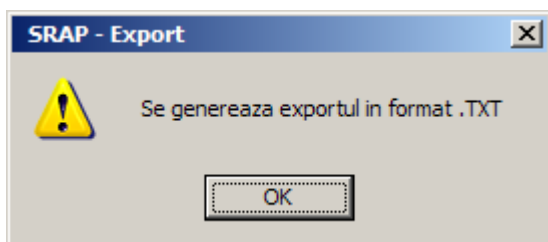
5.5. Stratification / Sampling :

This function is configured to extract representative samples at the district level, the sampling variables is economic size, utilised agricultural area and the number of districts; in this case the number of layers will be given by the intersection of the three crowds, ie 14 clases of economic size* 12 clases of UAA * 35 rayons = 5880 layers .

The sampling algorithm used is Neyman optimal allocation. The units with legal status will be investigated exhaustively.

The sample is approx. 8-10% of all agricultural holdings.

The relative standard error is + -5%.

By clicking "Classes EC / SAU" displays information on size classes of economic size, size classes of utilized agricultural area, number of layers, etc. :

CLASE dimensiune economica	LIMITE EXPRIMATE ÎN EURO
I	mai puţin de 2 000 Euro
II	între 2 000 şi mai puţin de 4 000 Euro
III	între 4 000 şi mai puţin de 8 000 Euro
IV	între 8 000 şi mai puţin de 15 000 Euro
V	între 15 000 şi mai puţin de 25 000 Euro
VI	între 25 000 şi mai puţin de 50 000 Euro
VII	între 50 000 şi mai puţin de 100 000 Euro
VIII	între 100 000 şi mai puţin de 250 000 Euro
IX	între 250 000 şi mai puţin de 500 000 Euro
X	între 500 000 şi mai puţin de 750 000 Euro
XI	între 750 000 şi mai puţin de 1 000 000 Euro
XII	între 1 000 000 şi mai puţin de 1 500 000 Euro
XIII	între 1 500 000 şi mai puţin de 3 000 000 Euro
XIV	egal sau mai mare de 3 000 000 Euro

Numar straturi in esantion: 14 dim.ec * 12 s.a.u. * 35 raioane = 5880

CLASE S.A.U.	LIMITE EXPRIMATE ÎN Ha
I	mai puţin de 0,1
II	între 0,1 şi mai puţin de 0,3
III	între 0,3 şi mai puţin de 0,5
IV	între 0,5 şi mai puţin de 1
V	între 1 şi mai puţin de 2
VI	între 2 şi mai puţin de 5
VII	între 50 şi mai puţin de 10
VIII	între 10 şi mai puţin de 20
IX	între 20 şi mai puţin de 30
X	între 30 şi mai puţin de 50
XI	între 50 şi mai puţin de 100
XII	100 şi peste

Regula intervalelor S.A.U. este : inchis la stinga , deschis la dreapta

Designing a register for statistical purposes (Statistical Register for Agricultural Producers – SRAP) is the core task for a sample-based system of statistical surveys. As well SRAP is a useful instrument for analysis of the structure of the holdings, their evolution across time, for checking the survey results and for producing accurate estimates.

The SRAP IT application behaves absolutely similar in the module "Livestock" - just with different indicators.

23

6. Description of list of variables for SRAP

Designing a *register for statistical purposes* (Statistical Register for Agricultural Producers – SRAP) is the core task for a *sample-based system of statistical surveys*. As well SRAP is a useful instrument for analysis of the structure of the holdings, their evolution across time, for checking the survey results and for producing accurate estimates.

For carrying out a sample survey, the first step is to determine the population and the parameters to be estimated, according to survey requirements. This in turn determines the character of the survey with regard to sample design and estimation. Thus the definitions of the population and parameters are determining the way of the data collection. As a rule one survey at a time is considered, with a limited number of parameters.

Until 2007, national Farm Structure Surveys (FSS) had to be representative of at least 99% of the total SGM produced by agricultural activity in a given Member State[2]. Starting with 2010, the FSS must be representative of at least 98% of the Utilised Agricultural Area (UAA), excluding common land, and 98% of the total number of livestock units3. Although the target population in statistical terms remained the same, i.e. the universe of agricultural holdings, this change has implications for the number of farms selected by a Member State to be included in the survey, which, in turn, again poses a problem of comparability over time. However, many registers have thresholds that exclude small holding and which are generally based on the size of the land, the numbers of livestock or a combination of these characteristics.

Farm selection is also linked to the survey thresholds applied by the Member States. Although the basic thresholds do not change after 1988 (art. 6 of Reg. (EC) No 571/1988 and art.3 of Reg. (EC) No 1166/2008):

- agricultural holdings where the agricultural area utilised for farming is one hectare or more;
- agricultural holdings where the agricultural area utilised for farming is less than one hectare, if those holdings produce a certain proportion for sale or if their production unit exceeds certain physical thresholds,

The 2008 EC regulation introduces the possibility for Member States to raise the threshold for certain utilised agricultural area (arable land, kitchen gardens, permanent

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[2] Council Regulation EEC No 571/88 of 29 February 1988 on the organization of Community surveys on the structure of agricultural holdings, modified by Commission Decision 98/377/EC of 18 May 1998 adapting Annex I to Council Regulation (EEC) No 571/88 in view of the organisation of the Community surveys on the structure of agricultural holdings.

[3] Regulation (EC) No 1166/2008 of the European Parliament and of the Council of 19 November 2008 on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) No 571/88.

grassland and permanent crops) to 5 ha in the 2010 Agricultural Census (Annex II of Reg. (EC) No 1166/2008), as well as indicating additional thresholds that can be applied to various crop types and to livestock.

6.1   Criteria for selection the SRAP variables

Agricultural holding is considered as the *reference unit* for the SRAP.

All agricultural holdings enumerated at the 2011 General Agricultural Census (GAC) will be included in the SRAP.

The variables are the most important part of the SRAP. They represent the characteristics of the reference units[4] kept in the SRAP (e.g., identification, contact address, economical and physical sizes, and main activities). Having in view the main purpose of the SRAP, as sampling frame for all regular surveys carried out in agriculture, they must be of high quality because of their use in stratification, sample selection, data collection, monitoring, data processing, imputation, estimation, quality assessment, analysis and dissemination. Inadequacies in the SRAP such as coverage errors and obsolete characteristics are likely to bias or reduce the reliability of the survey estimates and to increase data collection cost. The variables have to ensure proper information for drawing different samples, as well as accurate and reliable information for other statistical purposes. Following this main rule, a deep analysis was done on the existing methodology approached by NBS for samples design as well as on possibilities for update the data from different external sources.

The level of detail kept in the register on the land area and livestock of the holding varies from country to country. In some national farm registers in EU Member States the information is very detailed (e.g. relating to individual crop and livestock types) while others contain only summary information (e.g. total utilized agricultural area). Around almost half of the farm registers set up in the EU member states contain some form of geo-reference for the holding and a similar proportion contains details on employment levels.

In the countries where there is an annual census of agricultural holdings (e.g. Belgium, the Netherlands and Luxembourg), the need to undertake sample surveys using a national farm register as a sampling frame may be small. However, as countries examine ways to reduce both response burden and the costs of statistical surveys, the use of farm registers and sample surveys becomes more and more relevant.

The main purpose of designing the SRAP is to be used as a frame for sample selection needed for carrying out the current statistical surveys in agriculture, according to Eurostat recommendations, but also coming from national requirements. This is why, at elaboration of the list of the variables for establishment of the SRAP in the Republic of Moldova, there were taken into consideration the number of surveys that are to be carried out according to the regulations foreseen in the EU *"Statistical Requirements*

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[4] Agricultural holdings

Compendium 2014", Priority area 08, Modules 08.04.11-12-13, under the fields of activity covered by the following themes:

    i.   Crop products statistics;

    ii.   Livestock, meat and eggs statistics;

    iii.   Milk and dairy product statistics;

    iv.   Farm Structure Surveys;

    v.   Agricultural accounts and prices;

    vi.   Fishery statistics;

    vii.   Agro-environmental indicators

Additional variables were considered having in view the potential requests for particular surveys with relation to: agro-technical measures, agricultural machinery and equipment, agricultural labour input, other useful activities linked to the holding, etc.

Having in view that *agricultural holding* is considered as the *reference unit* for the SRAP, each record in the SRAP has to be identified with holding/family farm that is to be the same as with the source of the delivered data.

Basic guiding principles took into consideration at the development of SRAP are:

- accurate and distinctive identification of the agricultural holdings;
- identify the geographical location of farms (main office if of legal entities or permanent address of the holder in case of individuals);
- information on the presence and importance of specific operational characteristics;
- possibility to register and classify individual farms based on the above-characteristics.

To select the SFR variables there were taken into account:
- the requirements of the regular sample surveys carried out in agriculture, in terms of key variables for stratification of the holdings to be sampled and,
- the requirements for updating data on the agricultural holdings that should be included in next surveys.

Generally two main types of surveys are usually carried out in agriculture, such as:

- *Regular surveys* (monthly, yearly, etc..) binding to national requirements or EU's survey requirements (according to the Statistical Compendium), and
- *Ad hoc surveys*, requests for surveys not carried out on a regular basis (eg, aquaculture, agro-tourism, environment, multiple activities of the farm, etc..)