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METHODOLOGICAL PRINCIPLES FOR COMPILING THE PRODUCTION ACCOUNT FOR AGRICULTURE IN RUSSIA AND THEIR CONFORMITY WITH INTERNATIONAL STANDARDS

Prepared by Mrs NATALYA SHASHLOVA, Goskomstat of Russia

In 1992 the Government of the Russian Federation approved the State programme for conversion to the internationally accepted system of accounting and statistics in line with the requirements of a market economy. On this basis Russia began introducing the System of National Accounts (SNA).

In terms of methodology, the Russian SNA has been constructed essentially in the light of the recommendations by international statistical organizations dealing with SNA issues. After the adoption of the revised version of the SNA by the United Nations Statistical Commission in 1993, the Russian Federation's State Statistical Committee (Goskomstat) began the process of adjusting the national SNA methodology to the new recommendations. This work will take several years.

At present the Russian SNA methodology differs in a number of respects from the internationally accepted standards, largely because of the transitional nature of the Russian economy.

This paper sets out the basic methodological principles for the compilation of the production account for agriculture. As distinct from the international standards, the Russian Federation currently uses an industrial classification based on a modified version of the All-Union Classification of Branches of the National Economy.

In this classification agriculture includes crop production, livestock production and agricultural services. Agricultural production does not include the growing of trees (forestry), raw products obtained from fishing or hunting, the collection of wild fruit and berries and other finished natural products, nor does it include products from the slaughter of cattle (meat, hide) or from the processing of raw agricultural products (flour, vegetable and animal oil, etc.). In 1999 the Russian Federation proposes to convert to the All-Russian Classification of Economic Activities, Products and Services, where agriculture, hunting and forestry are combined in a single group. The production boundaries of agriculture will change as a result.

The production account for agriculture determines output, intermediate consumption and gross value added. Gross value added is defined as the difference between output and intermediate consumption.

Agricultural output

Agricultural output includes the output of agricultural producers and the output of agricultural services provided by organizations catering to agriculture.

The output of agricultural produce consists of crop and livestock production.

Crop production includes:

The value of raw products obtained from harvesting during the calendar year;

Expenditures on cultivating young perennial plantations;

Expenditures on the establishment of perennial plantations;

Change in the value of work in progress in crop farming (expenditures on sowing winter crops, winter ploughing and other operations in the accounting year for the next year's crop when measuring the volume of output for the year). This is due to the time difference between incurring expenditures and obtaining the finished product. Measuring change in the value of work in progress makes it possible to take account, in the value of the finished output of crop farming obtained in a given calendar year, of the cost of all resources expended on its production both in that year and in the autumn of the previous year.

The output of livestock production includes:

The value of raw products obtained as a result of the growing and economic use of farm animals including poultry (milk, wool, eggs, etc.);

The value of growing cattle, poultry and other farm animals (value of new offspring, natural growth and weight gain) in the accounting year;

Output of beekeeping;

Output of fish breeding.

The value of agricultural services provided by organizations catering to agricultural production includes:

The value of services for land improvement, the application of agricultural chemicals and other farming operations, protection of plants from diseases and pests;

The value of husbandry and veterinary services;

The value of services of water management organizations in the operation of irrigation and land reclamation systems.

The output of agricultural products is counted for the whole of the period of production and not for the period when the production process is completed (harvesting of crops, slaughter of animals).

Many types of agricultural activity involve a long period of production that extends beyond the accounting period (growing of crops or perennial plantations, growing and fattening of livestock). In these cases, the crops or perennial plantations and livestock are considered as work in progress until they enter the category of finished products, i.e. take on a form suitable for marketing.

The output of agricultural producers is determined by the method of gross turnover, which records the value of all agricultural goods produced, including those used within an enterprise for production purposes during the accounting period — for example, grain produced and used by the enterprise as seed or cattle feed, or eggs for incubation. This method of calculation is allowed in the SNA, since including intra-farm turnover in output and intermediate consumption does not ultimately affect the size of gross value added.

Three main groups of agricultural producers have emerged as a result of the reform of Russia's agrarian sector and these are shown schematically in slide 1.

The sources of information for determining the volume of output of agricultural products by category of farm in physical units are indicated in slide 2.

Full statistical coverage is still being retained for large and medium-sized enterprises; for small enterprises there is a simplified programme of inquiries once a year. In the case of subsidiary, research or experimental and other farms on the balance sheets of non-agricultural enterprises, an adjustment is made using coefficients based on data from the most recent full statistical observation by relating the total volume of output of the main products of all agricultural enterprises engaged in farming to the value of the output of large, medium-sized and small agricultural enterprises.

The volume of agricultural output on holdings belonging to the population is imputed from sample household surveys using information from the farm records of rural administrations for each holding, as well as information from the land resources and land management committees.

The volume of production on such holdings is estimated using data concerning output on citizens' personal subsidiary holdings, individual or collective orchards and vegetable gardens and land allocated for individual residential construction.

Output from the main group of individual producers – citizens' personal subsidiary holdings – is imputed on the basis of a sample survey, applying the data generally to cover the total population.

Crop production from other holdings of the population (individual or collective orchards and vegetable gardens, land allocated for individual residential construction) is determined by economic accounting.

The numbers of cattle and poultry on holdings of the population in urban areas not covered by the sample survey are estimated using data from the latest livestock census and rates of change in livestock numbers obtained from the livestock count in rural areas or from a sample survey of citizens' personal subsidiary holdings.

The results of applying the data of the sample survey of citizens' personal subsidiary holdings and adjustments for the output of individual or collective orchards and vegetable gardens and from land allocated for individual residential construction are used to determine production on the holdings of the population in the region.

Information on agricultural output from the other group of individual producers – peasant (private) farms – is obtained from sample surveys. The sampling network of farms is based on the peasant (private) farm subregister using a stratified sample for areas sown to the main crops and for numbers of livestock by species. Data for the total population are obtained by averaging.

The production boundary also includes output which is concealed (or under-reported) by agricultural enterprises or peasant (private) farms in order to avoid paying taxes and for other

reasons. To estimate concealed production use is made of indirect methods relying on information about individual cases or instances, or on a comparative analysis of data obtained from a variety of sources, such as the balance method. The balances of food resources and their use are compiled by the statistical offices in physical units each year for grain, products derived from grain, potatoes, vegetables and cucurbits, fruit, meat and meat products, milk and dairy products, and eggs, as follows:

Rows	Items
	I. Resources
01	Stocks at beginning of year in agriculture, the food industry, and wholesale and retail trade
02	Output of products in agriculture
03	Imports
04	Total resources (rows 01 + 02 + 03)
	II. Use
05	Consumption by industry (seeds, feed for cattle and poultry, and other non-food items)
06	Losses
07	Exports
08	Own consumption (rows 04 - 05 - 06 - 07 - 09)
09	Stocks at year end in agriculture, the food industry, and wholesale and retail trade

All balance items are analysed in terms of changes in the rates of increase in and pattern of consumption and supply of food products, and are carefully verified and correlated with one another and with the figures obtained from other forms of State statistical observation. The data on food supply, as determined by excluding from all resources that part not used in the accounting year for food (consumption by industry: seeds, animal feed, non-food items, etc.; exports and deliveries outside the region, change in stocks at the beginning and end of the period), with own production accounting for the largest share, are compared with the corresponding household survey figures for consumption. If there is found to be a significant discrepancy in the level and rate of increase or decrease of consumption of food products in the accounting year as compared with the preceding year, an adjustment is made in the data of the balance, including, where necessary, in the figures for production.

Principles of valuation

The output of agricultural producers consists of market output and non-market output, which are valued using different kinds of prices.

The market output of agricultural producers in actual prices is determined by a direct valuation of agricultural production in the accounting year in basic prices, which in agriculture largely correspond to the actual selling prices of agricultural produce, including product subsidies and excluding taxes on products.

Non-market output is valued in the basic prices for similar products sold on the market, provided they are sold in sufficient quantities for reliable calculations of these prices to be made.

When valuing the output of fodder crops and some other types of agricultural production (such as work in progress or products from the growing of perennial plantations) where there is no information on economically significant prices, these are taken as the sum of current inputs per unit of output: intermediate consumption + compensation of employees + other taxes on products (less subsidies) + consumption of fixed capital. This output is valued in practice at cost price.

Sources of information for calculating average prices:

For agricultural enterprises use is made of data from State statistical observation of their sales of agricultural products and of the accounting data of these enterprises;

For holdings of the population use is made of data from sample household surveys;

For peasant (private) farms use is made of data from State statistical inquiries about sales of products by agricultural enterprises.

Changes in the physical volume of output of agricultural producers are determined through a comparative valuation of the previous year by direct counting of the quantity of each kind of agricultural good produced.

The output of services of enterprises catering to agricultural production is determined on the basis of quarterly State statistical observation of these enterprises.

In addition to coverage of the industry as a whole, figures for the production account are provided by sector.

Agricultural enterprises of all forms of ownership and peasant (private) farms operating on commercial accounting principles, i.e. those engaged in the production of agricultural goods for sale on the market, are classified as non-financial corporations. This sector also includes all enterprises providing marketed services for land improvement, the application of agricultural chemicals and other such farming operations, as well as livestock management and veterinary services.

Organizations catering to agriculture, providing mainly non-marketed services and financed from the State budget (organizations operating water management systems) are classified as public corporations.

The household sector includes unincorporated peasant (private) farms, as well as the holdings of the population (citizens' personal subsidiary holdings, individual or collective orchards and vegetable gardens and land allocated for individual residential construction).

Intermediate consumption

The main source of information for evaluating intermediate consumption on the basis of the existing reporting of large and medium-sized agricultural enterprises and organizations providing services for agriculture is their quarterly information regarding production inputs and sales of products (goods or services) and their annual accounting data.

Intermediate consumption is calculated on the basis of statistical reporting data as follows:

Material inputs for production

- Minus expenditures linked to the use of natural raw materials (since these are part of value added in the SNA)
- Plus rentals for buildings and structures
- Plus representational expenses
- Plus payment for services of outside organizations included in cost of production
- Plus other expenditures
- Plus payment of non-material services from profits:
 - above-normal representational expenses
 - payment for services of banks and other financial and credit institutions
 - payment of services of advertising agencies and auditing organizations

Consumption of fixed capital is not included in intermediate consumption. There are no depreciation allowances for livestock. Intermediate consumption in the household sector includes:

- material inputs (excluding depreciation of fixed assets)
- cost of losses of finished agricultural products during storage
- purchases of husbandry and veterinary services
- purchases of other non-material services linked to agricultural production (rentals of buildings, machinery and equipment, payments for banking and insurance services, etc.).

The source of the information is data from household budget surveys and the food balances of resources and use of agricultural products.

Intermediate consumption is valued at purchasers' prices, including trade and transport margins (excluding VAT). It is determined on the basis of the accounting data of agricultural enterprises and household surveys.

Output, intermediate consumption and gross value added in agriculture are calculated in Russia according to the results for the year and by period of the current year (quarters, months).

In current accounting use is made of the statistical reporting of large, medium-sized and small agricultural enterprises on production and current expenditures.

A particular feature of current accounting linked to the seasonality of agricultural production is that, in the monthly or quarterly calculations, work in progress in crop farming is added to the value of the product of the given period as total expenditures less those attributed to the value of the finished output of crop farming obtained in that period. Such calculations are made from January to June, i.e. until the start of large-scale harvesting.

From the second half of the year, in order to avoid double counting, the adjustments made in January-June for each month are subtracted from the value of the finished product obtained.

Slide 2

Sources of information for measuring agricultural output by category of farm in physical units

	Agricultural producers	of which:		
		Agricultural enterprises	Holdings of population	Peasant (private) farms
A	1	2	3	4
Crop production	2 + 3 + 4	<p>Annual reports from large and medium-sized agricultural enterprises on gross crop harvests</p> <p>Annual reports from small agricultural enterprises</p> <p>Adjustment for output from subsidiary, research or experimental and other enterprises on the balance sheet of non-agricultural enterprises</p>	<p>Quarterly sample survey of households</p> <p>Reports of land management service</p> <p>Information from rural administration according to individual farm accounting records</p>	Annual sample survey of areas sown to main crops based on peasant (private) farm subregister
Livestock production	2 + 3 + 4	<p>Annual reports from large and medium-sized agricultural enterprises on output of main livestock products</p> <p>Annual reports from small agricultural enterprises</p> <p>Adjustment for livestock production from subsidiary, research or experimental and other enterprises on the balance sheet of non-agricultural enterprises</p>	<p>Quarterly sample survey of households</p> <p>Count of livestock on holdings of the population</p> <p>Information from rural administration on livestock numbers according to individual farm accounting records</p>	Annual sample survey of livestock by species based on peasant (private) farm subregister

Slide 3

Scheme for the compilation of resources and use tables for the main agricultural products in physical units

Rows	Items
	I. Resources
01	Stocks at beginning of year in agriculture, the food industry, and wholesale and retail trade
02	Output of products in agriculture
03	Imports
04	Total resources (rows 01 + 02 + 03)
	II. Use
05	Consumption by industry (seeds, feed for cattle and poultry, and other non-food items)
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