

# Methodological notes

Regular data collection of the Hungarian Central Statistical Office (HCSO) regarding agricultural production covers agricultural enterprises and private holdings involved in agricultural production. Agricultural enterprises are surveyed on full scope, while private holdings are observed on a representative basis.

## Sources of data:

In case of land area, crop and livestock production the following regular data collections are implemented means of questionnaires by HCSO defined in the National Programme of Statistical Data Collection (NPSDC):

Land area and sown area, 31 May (NPSDC/1082); Livestock of agricultural enterprises, 1 December (NPSDC/1087); Annual data of agricultural enterprises (NPSDC/2128); June survey of the private holdings (NPSDC/2218); December survey of the private holdings (NPSDC/2219)

One part of the data in 2010 are the results of the Agricultural Census 2010, in 2005 and in 2007 are the results of the Farm Structure Surveys.

The source of procurement statistics is the Survey on agricultural product procurement (NPSDC/1097), which covers economic organisations buying agricultural products from the producers for processing or resale.

The sources of market price statistics are the following data collections: Livestock market supply (NPSDC/1107); Market prices and stocks (NPSDC/1108)..

The main data collections used for the calculation of input price index are the following: Sales price of animal feedingstuffs (NPSDC/1824); Sales price of fertilisers (NPSDC/1825), [from 2009 data obtained survey Sales of fertilizers (NPSDC/1282)]; Sales price of plant protection products and pesticides (NPSDC/1826); Sales price of veterinary products (NPSDC/1827); The price indexes of energy, machinery, maintenance of buildings and other inputs are produced taking into consideration industrial, construction and consumer price (partial) indexes.

The estimation of production and value of output is based on data collection Annual data of agricultural enterprises (NPSDC/2128).

Data collections used for the estimation of intermediate consumption are the followings: Expenditures of agricultural producers (NPSDC/1758) and Farm Accountancy Data Network (FADN) operated by the Rural Development Ministry.

Sources of data are data collections of the Hungarian Central Statistical Office if there is no other reference indicated.

Within the review definitions in alphabetical order and other information have been linked with data sources. References to tables serve better orientation by chapter.

## Agriculture

(Tables 1.5.–1.22., 2.1.–2.9., 3.1.–3.123., 4.1.–4.25., 5.1–5.13., 9.1.–9.24.)

**Agricultural area:** cultivated arable land, kitchen gardens, orchards, vineyards and grassland.

**Agricultural labour input:** to take into consideration the part-time and seasonal labour input, the agricultural employment is measured in Annual Working Unit (AWU). One AWU represents the labour input of one person who worked full time in the year on the agricultural holding. (1 AWU = 1800 working hours = 225 working days). A distinction is drawn between non-salaried and salaried AWUs, which together make up total AWUs. The value of salaried AWUs is equal with the compensation of employees in Economic Accounts of Agriculture. Results based on general agricultural census, the institutional labour data collection system and the labour force survey.

**Animals for slaughter:** livestock to be slaughtered for public, farm or other purposes, as well as livestock for exports, irrespective of breed, age, sex or weight (the weight of livestock for slaughter refers always to live weight).

**Application of manure and fertilizers, irrigation:** the size of land area is taken into account once, irrespective of the frequency of fertilization and irrigation.

Applied manure includes solid and liquid manure.

**Average market price:** the most frequent (modus) price weighted with the actual quantity of products brought to markets and fairs.

**Average procurement price:** the quotient of the total amount paid for procured products without VAT and the quantity belonging to it. The survey covers 168 products.

**Agricultural land prices:** the price of one hectare of agricultural land purchased for agricultural use is proposed as the observation unit. The field of observation should include the main land use categories purchased from private owners or agricultural enterprises who sell land for agricultural use and should exclude transactions for non-agricultural purposes (lifestyle buyers, construction sites etc.) and transactions of land between relatives.

**Average yield:** arable crops and vegetables: the quantity of crops harvested from one hectare of arable land. In case of grapes and fruits the harvested quantity calculated for one hectare of productive land (for land-unit of yielding vineyard or orchard), but in 2005 the harvested quantity calculated for one hectare of total land area.

**Bony meat:** total amount of meat obtained from slaughtered cattle, pigs, horses and sheep (fats, offal and other by-products are excluded).

**Budgetary subsidies:** the amounts transferred as subsidies contain such institutional expenses and expenses associated with the transfer which cannot be separated on the basis of accounts, or are financed by the so-called own payment liabilities, i. e. cannot be considered as subsidies in the general sense. Up to 1995, for investment projects financed from the Agricultural Development Fund, participants received only refundable subsidies in the form of interest free loans, financed by the central budget as well as by revenues of privatisation.

**Capital transfers (EAA):** are those unrequited payments that are received by producers for especially gross capital formation (like subsidies on agricultural investments). Data include only capital transfers received by agricultural producers.

**Cereals:** wheat (winter, spring, spelt, einkorn), durum wheat, rye, barley (winter and spring), oats, maize, triticale, meslin, rice, and other cereals (indian rice, millet, canary seed, sorghum and buckwheat).

**Compensation of employees** (EAA): is defined as the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period. It consists of two parts:

- wages and salaries
- employers' social contributions.

**Consumption of fixed capital** (EAA): the value of foreseeable wear and tear and obsolescence of fixed capital over the calendar year. It is calculated on the basis of current market value and total service life of the assets.

**Consumption from own production:** the value of goods consumed by private farmers either from production or received in kind from economic organizations.

**Cow's milk: milk production per cow** is calculated by average stock of dairy and dual-purpose cow. (1 litre milk = 1.027 kg milk)

**Greenhouse gas emission of agriculture:** data calculated according to the methodology of Eurostat. Term of greenhouse gas includes six gases: carbon-dioxide, methane, dinitrogen oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

**Farm rents:** are weighted average values of amounts paid by farmers to the land owners. The area of rented lands is used as weights for the calculation of average rent.

**Fertilizer supply:** direct sales of agricultural wholesalers (AGROKER, AGRITEK and others) to agricultural producers.

Source of data: Research Institute for Agricultural Economics.

**Forest area:** land area over 1500 m<sup>2</sup> covered with forest trees, bushes and used for silvicultural purposes irrespective of land use category with tree species excluding the clear cutting area, forestation area, shrubberies.

**Gross agricultural output:** equals to the sum of intra - unit consumption (excluding own-produced products used for the same activity), processing by producers, own final consumption, sales, own - account produced fixed capital goods and change in stocks. The data of Production Account of Economic Accounts of Agriculture is calculated at basic prices, by the methodology of EUROSTAT.

**Gross fixed capital formation** (EAA): comprises the purchase and production of new tangible assets, the increase in the value of used tangible assets, and contribution in kind from abroad, as well as the value of tangible assets procured in financial leasing constructions. Data may differ from the similar data by branches published by HCSO.

**Gross production (agricultural products):** the gross production value of agricultural products produced (the sum of gross output, intermediate consumption from own production, work-in-progress and fish production). From 1999 milk for feeding suckling lambs and goats excluded.

**Hen's eggs:** 1 kg eggs = 18 pieces of eggs.

**Input price index:** quarterly data on purchase price of fertilizers, pesticides, feedingstuffs and veterinary products are collected from retailers and wholesalers. Monthly data are collected from consumer, industrial and construction price indices. In case of seasonal products (e.g. pesticides) the weighted average price index is calculated using the distribution of the value of purchases during the year. The indices have been calculated by the Laspeyres type formula.

**Intermediate consumption:** the value of goods and services of agricultural and industrial origin and service charges used as inputs in the process of production. EAA data does not include value of own produced seed, milk for feeding, hatching and fodder egg.

**Land area:** data by land use, taken into consideration either owned,-or leased land areas.

**Live-born animals:** the new-born animals, living at least 24 hours following their birth.

**Livestock:** up to 1995 livestock on 31 December. From 1996 livestock is observed on 1 December according to the methodology of the European Union in force. Livestock in tables containing international data refers to stock at the beginning of the year.

**Mature poultry:** laying hens, cocks (ganders, drakes) and other poultry exceeding three months of age.

**Meat production:** net meat production: The total amount of meat of slaughtered cattle, pigs, horses, sheep, poultry and other animals including offal, in carcass weight, irrespectively of their origin, whether indigenous or foreign. The meat production of pig does not cover slaughter grease. In Chapter (International Data) 10, data on meat production of Hungary – according to the methodology used by international organisations – do not cover offal but include the pig slaughter grease. (Pig slaughter grease x 0,87 = pig fat.)

**Mixed income** (EAA): is the income of unincorporated enterprises owned by households to which the owner(s) may contribute with his (their) unpaid labour inputs that cannot be separated from the operating surplus which covers the income on fixed assets. It covers production of household for own final use, as well.

**Net fixed capital formation** (EAA): the difference between gross fixed capital formation and consumption of fixed capital. It includes GFCF but excludes CFC on animals.

**Net meat production:** the total amount of meat – including offal –, in carcass weight of slaughtered cattle, pigs, horses, sheep, poultry and other animals, irrespective of their origin, whether indigenous or foreign.

**Nutrient balances (nitrogen, phosphorous):** difference between the quantity of nitrogen (N) and phosphorous (P) inputs (fertilization, manure application, atmospheric deposition, etc) and outputs (crops and by-products). Balances calculated using coefficients of Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences and 2008/59 regulation of the Ministry of Agriculture and Rural Development.

**Poultry:** includes all chickens, guinea-fowls, geese, ducks and turkeys, irrespective of age, sex and weight.

**Operating surplus:**

- + gross value added
- consumption of fixed capital
- compensation of employees
- other taxes on production
- + other subsidies on production

**Population trend of farmland birds:** monitoring of farmland birds has been carried out by MME Monitoring Centre since 1999. The applied survey methodology is based on the recommendations of the European Bird Census Council (EBCC), and monitoring covers the population of 16 bird species occurring in Hungary. Index value reflects the changes in the population of farmland birds compared to 1999.

**Procurement of agricultural products:** the procurement of agricultural products from the producers for processing or resale. The survey covers 168 products.

**Producer price index of agricultural products:** it reflects changes (compared to annual average prices of base year) in prices paid to producers for agricultural products procured for processing or further sale, or sold directly to households for consumption (on market), excluding price changes of intermediate sales of agricultural products (young animals for breeding). Indices have been calculated by the Laspeyres type formula.

**Productive land area:** sum of agricultural land area, forest, reed and fishpond.

**Subsidies:** (EAA): subsidies are current unrequited payments which general government or the institutions of the European Union make to resident producers, with the objective of influencing their levels of production, their prices or the remuneration of the factors of production. Subsidies are classified into: subsidies on products: (1. import subsidies; 2. other subsidies on products); other subsidies on production.

**Taxes on production and imports** (EAA): taxes on production and imports consist of compulsory unrequited payments in cash or in kind, which are levied by general government or the institutions of the European Union in respect of the production and imports of goods and services, the employment of labour, the ownership or use of land, buildings or other assets used in production. These taxes are payable whether or not profits are made. Taxes on production and imports are divided into: taxes on products: (1. value-added type taxes (VAT), 2. taxes and duties on imports, excluding VAT, 3. taxes on products, except VAT and import taxes); other taxes on production.

**Terms of trade:** is calculated by dividing the producer price index by the input price index.

**Total harvested production:** total production of main, inter-, border and edge plants and plants harvested as secondary crop produced on the arable land, including the crop grown in other cultivation methods such as kitchen gardens

**Uncultivated land area:** uncultivated land is the total of area of unused agricultural areas and other areas such as buildings and structures, farm yards, parks and ornamental gardens, roads and the associated ditches, ponds, quarries, waste land, etc. required for the operation of the holding.

**Use of fuels in agriculture:** data in table 1.23. refer to the enterprises in agriculture. Data on energy use of forestry, fishing and aquaculture are also involved.

**Utilization of organic and chemical fertilizer:** the size of land area is taken into account once, irrespective of the frequency of fertilization.

The utilized organic fertilizer includes manure and semi-liquid manure.

**Value added:** see Gross domestic product (National accounts).

**Vegetables:** up to 1995 green peas were registered in shell weight, since 1996 in grain weight (100 kgs in shell weight = 40 kgs in grain weight).

**Procurement volume indices of agricultural products:** chain indices calculated using the fixed price basis applied for national accounts. From 2000 the volume indices are weighted with the prices 2 years before the reference year.

**Quantity of sold fertilizers and pesticides:** quantity of products, reported by wholesalers and traders, that is sold directly to agricultural and forestry producers.

Source of data: Research Institute for Agricultural Economics.

## External trade

(Tables 1.2., 1.22., 3.1.–3.61., 4.1.–4.14., 7.1.–7.7.)

External trade of Hungary covers both its trade inside and outside the EU.

**Source of data:** data on trade within the EU are reported directly by traders, while information on trade outside the EU comes from the Hungarian Customs and Finance Guard, collected along the customs procedures. Responsibility for production and dissemination of external trade statistics lies with the Hungarian Central Statistical Office. In order to reduce the burden on intra-EU traders, some three quarters of them, providing less than 3-5% of the total trade value, are exempted from their information providing obligation. Adjustments are made for this under-threshold trade and non responses as well.

**Commodity pattern** of external trade basically is published according to the product classification of external trade of the UNO (Standard International Trade Classification, Rev. 4.; further SITC Rev. 4.).

Product information is collected by the Combined Nomenclature of the EU.

External trade data of chapter 3 comprise only fresh or chilled vegetables and fruits and do not contain frozen, dried or other preserved ones.

In the external trade data of chapter 3 and 4 the content of CN codes at 4 digit level differs from that of at 6 or 8 digits. While the data at CN-4 level include the estimated turnover as well, those at 6 or 8 digit level do not, they were compiled only from collected figures.

Value data on external trade in the case of imports are expressed in terms of c.i.f., while in case data on exports in terms of f.o.b., the meanings are as follows:

**c.i.f.:** the market value of imported goods at the Hungarian customs frontier including all costs connected with transport and insurance in the course of transport, both up to the customs frontier.

**f.o.b.:** the market value of exported goods at the Hungarian customs frontier including all costs emerging in the course of transport until the customs frontier.

**Values** are collected in the national currency. Conversion of other currencies into Hungarian forint (HUF) in case of trade within the EU is based on the official medium exchange rate of the bank named in the accounting policy of the given

enterprise on the day of arrival/dispatch or, failing that, when the contract was fulfilled. Concerning trade outside the EU the exchange rate is the official rate of the National Bank of Hungary (NBH) valid on the second-last Wednesday of the month preceding the customs clearance of goods.

Conversion into euros and dollars of statistical data expressed in HUF is based, in case of trade within the EU, on the monthly average exchange rates of the NBH valid for the reference month, while for trade outside the EU the official rate of the NBH valid on the second-last Wednesday of the month preceding the customs clearance of goods.

**Balance of external trade** is the difference between the value of exports and that of imports.

**Groups of countries:** in the tables of external trade by groups of countries are as follows:

**EU-28:** Austria, Belgium, Bulgaria, Cyprus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Malta, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Romania, United Kingdom

**Extra-EU countries of Europe:** EFTA-countries: Iceland, Liechtenstein, Norway and Switzerland; furthermore, Albania, Andorra, Belarus, Bosnia and Herzegovina, Croatia, Faeroe Islands, Gibraltar, Kosovo, the Former Yugoslav Republic of Macedonia, Moldova, Monaco, Montenegro, Russia, San Marino, Serbia, Turkey, Ukraine, Holy See and the European off-shore centres of the United Kingdom

**Partner country:** export figures are broken down by countries of destination and in case of import data by country of consignment.

## Labour data

(Tables 1.4., 2.2., 2.3., 2.4., 6.2., 6.3.)

In employment statistics due to the difference in data sources, accounting methods and the surveyed population, the same phenomenon can be described by numerically different figures, therefore **information deriving from various sources cannot be used as substitutes**. The source of data is indicated separately in case of labour tables and methodological notes, because of the determinant character of the concerned data-source.

## Institutional labour data collection system

(Tables 2.3., 2.4., 6.2., 6.3)

**Employees:** Persons who are in employment relationship with the employer and are obliged to work against wages and salaries on the basis of a labour contract or agreement for at least 60 hours on monthly average (in case of labour contracts for less than one month, working hours are converted to full month's work). The average statistical staff number is the monthly or annual average of people working full-time or part-time but with a labour contract for at least 60 working hours on monthly average.

**Earnings:** are remuneration (wage, salary, emolument) based on legal labour relationship and paid in cash or in kind to the employee. Payments as remuneration of personal contribution for the members of economic partnerships also belong here. Payments, constituting the category of earnings detailed below, correspond to the term "accounting wage and salary costs" at enterprises, and in case of budgetary institutions they appear in the accounts among personal remuneration. Composition of earnings: basic wage and salary = direct remuneration, (mostly workplace) bonuses, allowances payments for time not worked, premium, (non-regular) bonuses, premiums wage and salary for the 13th and further months.

**Average earnings:** are computed by dividing the total sum of earnings for the reference period (hour, month, year,) by the average number of employees in the same period. If no alternative reference is indicated, data of average earnings presented in various publications refer to full-time employees.

**Gross earnings:** The sum of basic wage containing personal income tax, health and pension contributions as well as labour market contribution and wage elements paid under other titles (wage supplement, additional salary, bonuses, premiums, 13th and further months salary).

Data providers: enterprises with more than 4 employees, observed non-profit organisations and all public and social security.

## Labour force survey

(Tables 1.4., 2.2.,)

The Labour Force Survey (LFS) is a representative household survey, which provides quarterly information on the economic activity of the non-institutional population aged 15-74.

**Employed:** persons who during the reference week (the week running from Monday to Sunday) worked one hour or more for pay, profit or payment in kind in a job or business (including farm); or worked one hour or more without payment in a family business or on a farm (i.e. unpaid family workers); or had a job from which they were temporarily absent during the survey week. Persons being on child-care leave (child-care allowance, child-care benefit or child-care support) have been determined by their activity done during the reference week.

## National accounts

(Tables 1.1., 1.2.)

The system of national accounts is a comprehensive macroeconomic statistical accounting system of the economic activity of the country, which describes sources and uses of the economy.

The member countries of the European Union compile national accounts according to a revised methodology from September 2014. The Hungarian Central Statistical Office (HCSO) made the calculations in line with the new methodology, in compliance with the Regulation of the European Parliament and of the Council, adopted in May 2013.

**ESA2010:** The methodological requirements of ESA2010 (European System of Accounts) replace the formerly applied, ESA95 system. The new methodology follows up changes in economic environment, takes into consideration new results in research activities and new needs of users.

The new methodology leaves the most important characteristics and basic features of the system of national accounts untouched, at the same time reflects changes in economic life in the past twenty years. It takes into account the spread of information and communication technologies in production processes, the increasing role of intangible assets and intellectual property products and the strengthening of globalisation.

The new methodological requirements are in harmony with SNA2008, the methodology of national accounts published by the UN, adopted and applied all over the world, thus ensuring the global comparability of macro-statistical indicators. The new system is also consistent with the balance of payments statistics (BPM6) of the International Monetary Fund (IMF).

This system is enforced by law for the EU member countries since September 2014.

**Gross output** consists of goods and services that are produced within an institutional unit to be purchased by other institutional units and of those that are produced for own final use. It is valued at basic prices in the national accounts.

**Gross domestic product:** gross domestic product is a concept of value added. It is the sum of gross value added of all resident producers (institutional sectors or industries) measured at basic prices, plus the balance of taxes and subsidies on products, which cannot be divided among industries or sectors. So GDP is an aggregate value at market prices. GDP can be defined from three approaches:

- by production approach it is: + the sum of gross value added at basic prices + taxes on products - subsidies on products
- by expenditure approach it is: + final consumption expenditure of households + final consumption expenditure of government + final consumption expenditure of non-profit institutions serving households + gross fixed capital formation + changes in inventories + export - import
- by income approach it is: + wages and salaries + employers' social contributions - other subsidies on production + other taxes on production + gross operating surplus and mixed income + taxes on products - subsidies on products

**Gross value added:** see term Gross domestic product.

**Taxes less subsidies on products** is the difference between taxes and subsidies connected with the acquisition, sale and any other transfers of goods and services (i.e. customs duties, consumption tax, value added tax, producer price subsidy and consumer price subsidy).

## International data

(Tables 10.1– 10.24.)

Source of data is the Food and Agriculture Organization of the United Nations (FAO). Whole area and production data of the Russian Federation are included in the European data.