

Methodology of food balances

The main goal of the food balances is to present comprehensive information on the supply of agricultural commodities in the country. The necessity of food balances became evident after the Second World War when interruptions in the production and supply of food caused hunger for large parts of the population. Today, as in the past, food balances are necessary for the complete description of the food security situation in a country for a certain period of time. This enables an assessment of risks related to inadequate nutrition. Food security plays an important role also for economic growth.

Components of the Food Balances

Supply

The supply includes production, imports and resources available at the beginning of the period. Some technical difficulties arise from incomplete information on the resources available at the beginning and end of the reporting period; therefore certain approaches are applied in the food balances for the estimation of these items. The figures on production and imports are obtained from official data of the RA NSS.

Utilization

This component includes the following main indicators: food consumption, feed, seed, exports, losses, other uses and stocks at the end of the reporting period.

Food consumption is one of the key items of the food balances, which shows the amount of a commodity available for human consumption during the reference period. It is calculated as the difference between the supply and all other means of utilization.

Feed is the volume of the food used as animal feed regardless the circumstance whether it is produced in this country or imported.

Losses in all the phases of transportation and storage is the unused volume of food in the sectors from production to consumption. The main reason for the losses is availability of not proper system of realization and storage. Unavoidable losses occurring as a necessary part during the different phases of production, for example losses during wheat grinding and drying, transferring in the field and storing is not included in losses article. Losses section also doesn't include food losses existing in households. Other losses generated during the processing also does not refer to this section.

Losses are calculated based on fixed coefficients recommended by FAO, which may be adjusted depending on circumstances.

Seed is the volume of food used for reproduction, including also the re-sows, stipulated by climate disasters. Seed is calculated based on sowing area and number of sowings.

Export includes the volumes of export of locally produced food as well as the re-export of foreign origin food.

"Other utilization" section reflects the volume of food used for the production of non-food products, for example the use of wheat for production of medical alcohol.

Self-sufficiency ratio

The self-sufficiency ratio, derived from these balances, is calculated by the following formula: $\text{Production} / (\text{Production} + \text{Imports} - \text{Exports})$. It is presented in percents. The latter shows the degree of country's demand satisfaction regarding a certain product at the expense of its own means.

With the help of food balances it is possible to calculate the degree of import dependence, which shows the degree of country's demand satisfaction regarding a certain product at the expense of import and is determined by the formula $(\text{import} / (\text{production} + \text{import} - \text{export}))$ expressed in percents.

Commodity groups

The list of commodity groups included in the food balances includes the commodities which are most consumed in Armenia. Accordingly, every year the food balances are calculated for the following 21 commodities: wheat, rye, barley, oats, maize, rice, other cereals, potatoes, vegetables, fruits (except grapes), leguminous crops, vegetable oil, sugar, egg, milk, beef, pork, mutton and goat meat, poultry, fish and grapes. For the calculation of the food balances of some commodities, conversion coefficients are used to transform all quantities of derived products into units of primary commodities, in particular for the following categories:

Wheat includes data on wheat, as well as of wheat flour, macaroni, ethyl alcohol, pastry and bread and other bakery goods, vodka transformed into equivalent quantities of wheat. Ethyl alcohol data are reflected in the “other uses” part of balance sheet.

Rye includes data on rye, as well as of rye flour, cereals and flakes, transformed into equivalent quantities of rye. Ethyl alcohol data are reflected in the “other uses” part of balance sheet.

Barley includes data on barley, as well as of barley flour, cereals, flakes, barley malt, beer and other worked barley, transformed into equivalent quantities of barley.

Oats includes data on oats, as well as of oats flour, cereals, flakes and other worked oats transformed into equivalent quantities of oats.

Maize includes data on maize, as well as of maize flour, cereals, flakes, other processed maize and starch of maize, transformed into equivalent quantities of maize.

Rice includes data on rice, as well as of rice flour, transformed into equivalent quantities of rice.

Other cereals includes data on sorghum, buckwheat and other cereals, as well as of flour of these cereals, flakes, processed cereals and starch of other cereals, transformed into equivalent quantities of other cereals.

Potato includes data on potato, as well as of potato starch, frozen potato and chips, transformed into equivalent quantities of potato.

Vegetables includes data on fresh, as well as of dry and canned vegetables (cabbage of all types, cucumber, tomatoes, beet, bulb onion, garlic etc.), as well as tomato juice, transformed into equivalent quantities of vegetables.

Fruit includes data on fresh, as well as of dry and canned fruit (drupaceous, stone-fruit, nuts, subtropical, citrus etc.), fruit juice, transformed into equivalent quantities of fruit.

Eggs includes data on eggs in shells, as well as of egg powder transformed into equivalent quantities of eggs.

Milk includes data on fresh milk, as well as of butter, milk powder, matsun, sour cream, cottage cheese, cheese, ice-cream and other milk products, transformed into equivalent quantities of fresh milk.

Beef includes data on slaughter weight of meat, as well as of sausages, canned meat and other meat products, transformed into equivalent quantities of meat in slaughter weight.

Pork includes data on slaughter weight of meat, as well as of sausages, canned meat and other meat products, transformed into equivalent quantities of pork in slaughter weight.

Mutton and goat meat, includes data on slaughter weight of meat, as well as of canned meat and other meat products transformed into equivalent quantities of mutton and goat in slaughter weight.

Poultry includes data on slaughter weight of meat, as well as of sausages, canned meat and other meat products, transformed into equivalent quantities of poultry in slaughter weight.

Fish includes data on fresh, as well as of frozen, dried, salted, smoked, canned, prepared and preserved fish, crustaceans, mollusks and other fish products, stockfish, caviar, transformed into equivalent quantities of fish.

Grape includes data on grapes, as well as of raisins transformed into equivalent quantities of grapes. Grape volume for wine production is reflected in the “other uses” part of balance sheet.

As regards the food balances for **leguminous crops** and **vegetable oil**, they include data on beans, lentils, other beans and soy, peanut, olives, palm, sunflower seed, other oil, correspondingly.