NATIONAL STATISTICS OFFICE OF MONGOLIA

INDICATORS FOR FOOD SECURITY STATISTICS 2016

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CONTENT

List of Acronyms

GAC	General Administration of Customs
GDP	Gross domestic production
GoM	Government of Mongolia
GASI	Government agency for specialized inspection
HACCP	Hazards anaylsis and critical control points system
HSES	Household Socio-Economic Survey
MASM	Mongolian agency for Standardization and metrology
MFALI	Ministry of Food, Agriculture and Light Industry
MoH	Ministry of Health
NBEA	National bureau of economic analysis
NSC	National Security Council
NSO	National statistics office
SOME	Statistical office for macro economy
UN	United Nations Organization

ONE. FOREWORD

National security concept and the Food security law adopted new legal framework of food security in the county. The concept and the law provide detailed understanding and definition of food security.

The legal framework urged the needs to improve integrated statistical system for food security, re-design methodology to estimate statistical indicators, make analysis on sources of some statistical indicators and raise consumers' awareness on food security issues. In 2013, the working group was established with the single task to draft the amendments to guideline, by the decision of National Security Council. The working group consisted of representative from central public administration authorities for food security. The updated guideline was finally approved by the NSO chairman decree No. A/12 of 2015, January 30.

The establishmet of integrated statistical system and assessment of national food security with greater accuracy, enabled by the use of new guideline, will be expected to provide statistical data crucial for designing and planning of government policies and interventions in public health, food and agriculture sectors, effectively.

The authors of this publication sincerely hope that this guideline will be major source of inspiration and information in future, for designing and planning government interventions, including assessment of food security, availability, accessibility, consumption and sustainability in Mongolia.

Indicators for food security and supply in this guideline are grouped into four areas: 1. food availability; 2. food accessibility; 3. dietary energy and nutrients; 4. food safety.

TWO. INDICATORS FOR FOOD AVAILABILITY

In order to estimate food availability, the national annual food reserve is divided by annual food consumption for standard population.

13 commodity foods groups, identified by Nutrition research center of MoH, are used for the estimation of food supply statistical indicators, including meat and meat products; milk and dairy products; flour and flour products; all types of rice; sugar and sweeteners; potatoes; vegetables; pulses; fruits and berries; egg; edible oil.

1. Standard population

The sedentary population in Mongolia was 3119.9 thousand, and standard population was 2523.6 thousand as of the end of 2016, with increase of 62.1 thousand or 2.0%, and 46.9 thousand or 1.9% against in 2015, respectively.

Number of standard population*

Table 1. POPULATION SIZE

	2013	2014	2015	2016	2016/2015	
	thousand people				difference	%
Number of sedentary population	2 870.9	2 937.9	3 057.8	3 119.9	62.1	102.0
Number of standard population*	2 346.9	2 392.9	2 476.7	2 523.6	46.9	101.9

**estimation by NSO*

2. Annual food demand for standard population. Based on national food consumption of 13 food groups in 2016, the national demand for food in 2016 was estimated at 184.2 thousand tonnes of meat and meat products, 138.3 thousand tonnes of milk, 184.2 thousand tonnes of dairy products, 92.1 thousand tonnes of flour, 202.6 thousand tonnes of flour products, 71.9 thousand tonnes of rice, 21.2 thousand tonnes of sugars and sweeteners, 129.0 thousand tonnes of potatoes, 184.2 thousand tonnes of vegetables, 83.0 thousand tonnes of pulses, 165.8 thousand tonnes of fruits and berries, 17.4 thousand tonnes of egg, 23.0 thousand tonnes of edible oil (Table 2).

Annual food demand for standard population was increased by 0.3-3.8 thousand tonnes compared to previous year. The biggest increase was recorded in demand for meat and meat products, dairy products, vegetables, and flour products at 3.4-3.8 thousand tonnes.

Table 2. ANNUAL FOOD DEMAND FOR STANDARD POPULATION

Food categories	Annual food consumption of standard person*	Annual food consumption of standard population			
		2013	2014	2015	2016
	killogramm	thousand tonnes			
Meat and meat products	73.0	171.3	174.7	180.8	184.2
Milk	54.8	128.6	131.1	135.7	138.3
Dairy products	73.0	171.3	174.7	180.8	184.2
Flour	36.5	85.7	87.3	90.4	92.1
Flour products	80.3	188.5	192.1	198.9	202.6
All types of rice	28.5	66.9	68.2	70.6	71.9
Sugars, sweeteners	8.4	19.7	20.1	20.8	21.2
Potatoes	51.1	119.9	122.3	126.6	129.0
Vegetables	73.0	171.3	174.7	180.8	184.2
Fruits and berries	65.7	154.2	157.2	162.7	165.8
Pulses	32.9	77.2	78.7	81.5	83.0
Egg	6.9	16.2	16.5	17.1	17.4
Edible oil	9.1	21.4	21.8	22.5	23.0

Source: MoH

3. Consumption. In 2016, total of 346.6 thousand tonnes of meat and meat products, 255.5 thousand tonnes of flour and flour products, 166.0 thousand tonnes of potatoes, 149.9 thousand tonnes of vegetables were supplied at national level.

Table 3. CONSUMPTION, BY PHYSICAL AMOUNT

Main food types	Consumption		Domestic production		Net export	
	2015	2016*	2015	2016*	2015	2016*
	thousand tonnes					
Meat and meat products	393.1	346.6	385.6	342.6	7.5	4.0
Flour and flour products	239.4	255.5	206.5	209.7	32.9	45.8
Potatoes	180.8	166.0	163.8	165.3	17.1	0.7
Vegetable	138.2	149.9	72.3	94.4	65.9	55.5

Sources: NSO, GAC
**Preliminary estimation*

4. Level of food supply. The supply of flour, vegetables increased by 3.9-4.9 points against in previous year, while meat and meat products and potatoes supply declined by 14.2-29.3 points.

Table 4. FOOD SUPPLY LEVEL

Main food types	Annual food demand for standard population		Consumption		Supply level	
	2015	2016	2015	2016	2015	2016
	thousand tonnes				percentage	
Meat and meat products	180.8	184.2	393.1	346.6	217.4	188.1
Flour and flour products	289.3	294.8	239.4	255.5	82.8	86.7
Potatoes	126.6	129.0	180.8	166.0	142.9	128.7
Vegetable	180.8	184.2	138.2	149.9	76.5	81.4

In 2016, domestic production was enough to satisfy 96.1% of standard population's annual demand for meat and meat products, 99.6% of potatoes, 82.0% of flour and flour products, 63.0% of vegetables demands.

Table 5. 2016 FOOD SUPPLY LEVEL, BY SOURCES

Main types of food	Consumption			Supply level	
		Domestic production	Import	Domestic production	Import
	thousand tonnes			percentage	
Meat and meat products	346.6	333.2	13.4	96.1	3.9
Flour and flour products	255.5	209.6	45.9	82.0	18.0
Potatoes	166.0	165.3	0.7	99.6	0.4
Vegetable	149.9	94.4	55.5	63.0	37.0

THREE. STATISTICAL INDICATORS FOR FOOD ACCESSIBILITY

Household food supply was estimated by food accessibility at household level. Household food accessibility was measured at urban and rural levels in cold and warm seasons.

1. Actual food intake for standard person

The results from socio-economic survey of households showed that the actual consumption of meat and meat products, milk and dairy products, flour, rice, sugars and sweeteners and plant oil at rural level in summer was higher than the national average, while urban consumption of flour products, potatoes, vegetables and egg was above national average during summer period.

Table 6. NATIONAL AVERAGE OF DAILY FOOD INTAKE FOR STANDARD PERSON IN URBAN AND RURAL AREAS DURING SUMMER PERIOD 2016

Types of food products	National average	Urban	Rural
	grams		
Meat and meat products	312.1	254.9	433.9
Milk	208.7	159.2	314.0
Dairy products	425.0	349.1	586.3
Flour	183.1	125.6	305.2
Flour products	184.9	216.2	118.5
All types of rice	64.2	59.3	74.7
Sugars and sweeteners	61.7	70.0	44.0
Potatoes	85.3	85.9	84.1
Vegetable	72.4	82.1	51.8
Fruits and berries	33.0	35.3	28.3
Pulses	0.1	0.1	0.0
Egg	8.7	11.7	2.5
Vegetable oil	17.9	15.2	23.5

Sources: Household Socio-Economic Survey, NSO

The results from households socio economic survey showed that the actual consumption of meat and meat products, milk and dairy products, flour, plant oil at rural level in winter, was higher than the national average, while urban consumption of flour products, rice, sugars and sweeteners, potatoes, vegetables, fruits and berries and egg was above national average during said period.

Table 7. NATIONAL AVERAGE OF DAILY FOOD INTAKE FOR STANDARD PERSON IN URBAN AND RURAL AREAS DURING WINTER PERIOD 2016

Types of food products	National average	Urban	Rural
	grams		
Meat and meat products	315.4	275.5	397.5
Milk	164.9	143.2	209.7
Dairy products	373.2	342.5	436.3
Flour	186.8	135.1	293.1
Flour products	175.3	212.9	98.1
All types of rice	61.5	58.2	68.3
Sugars and sweeteners	52.2	58.7	38.9
Potatoes	85.5	86.9	82.7
Vegetable	71.5	79.8	54.4
Fruits and berries	29.7	32.2	24.4
Pulses	0.1	0.2	0.0
Egg	8.4	11.2	2.7
Vegetable oil	18.5	15.9	23.8

Sources: Household Socio-Economic Survey, NSO

2. Food accessibility at household level

Household's accessibility to meat and meat products, milk and dairy products, flour, sugars and sweeteners is satisfactory, while accessibility to other foods remain unsatisfactory. The diets of people remain heavily dominated by meat and meat products, milk and flour.

Table 8. FOOD ACCESSIBILITY 2016

Types of food products	Daily food intake for standard person	National average		Accessibility	
		summer	winter	summer	winter
	grams			percentage	
Meat and meat products	200.0	312.1	315.4	156.1	157.7
Milk	150.0	208.7	164.9	139.1	109.9
Dairy products	200.0	425.0	373.2	212.5	186.6
Flour	100.0	183.1	186.8	183.1	186.8
Flour products	220.0	184.9	175.3	84.0	79.7
All types of rice	78.0	64.2	61.5	82.3	78.8
Sugars and sweeteners	23.0	61.7	52.2	268.3	227.0
Potatoes	140.0	85.3	85.5	60.9	61.1
Vegetable	200.0	72.4	71.5	36.2	35.8
Fruits and berries	180.0	33.0	29.7	18.3	16.5
Pulses	90.0	0.1	0.1	0.1	0.1
Egg	19.0	8.7	8.4	45.8	44.2
Vegetable oil	25.0	17.9	18.5	71.6	74.0

Sources: Household Socio-Economic Survey, NSO

FOUR. DIETARY ENERGY AND NUTRIENTS

The daily intake of calories per standard person was estimated in urban and rural areas with seasonal variability. Average national intake was also calculated.

1. In summer

The national average of daily dietary calories intake per standard person in summer was 2709.2 kilocalorie, protein 117.8 grams, fat 84.2 grams, and carbohydrates 366.9 grams, which is 0.5-22.1% higher than the recommended daily calories intake value for standard person.

Table 9. DAILY INTAKE OF DIETARY CALORIES PER STANDARD PERSON DURING SUMMER, IN URBAN AND RURAL AREAS, AND NATIONAL AVERAGE

	Recommended calorie intake for standard person	National average		Urban		Rural	
		2015	2016	2015	2016	2015	2016
Calorie, kilocalorie	2 500.0	2 911.4	2 709.2	2 544.1	2 397.1	3 552.4	3 372.5
Protein, grams	101.0	126.9	117.8	106.1	99.0	163.1	157.9
Fat, grams	69.0	94.7	84.2	77.9	69.8	124.1	114.9
Carbo-hydrates, grams	365.0	384.1	366.9	350.7	339.9	442.2	424.2

Sources: Household Socio-Economic Survey, NSO

The actual daily intake of dietary energy and nutrients for standard person exceeds the reference daily intake of energy and nutrients, as revealed by survey.

However, energy and nutrients intake varies widely from urban centers to rural areas. Intake of dietary calories, protein, fat and carbohydrates in summer season is low among urban population, while calories, protein, fat and carbohydrates intake among rural population exceed the norms.

2. In winter

The national average of daily dietary calories intake per standard person in winter was 2599.8 kilocalorie, protein 115.9 grams, fat 81.2 grams, which is 4.0-16.0% higher than the recommended daily energy intake value for standard person.

Table 10. DAILY INTAKE OF DIETARY CALORIES PER STANDARD PERSON DURING WINTER, IN URBAN AND RURAL AREAS, AND NATIONAL AVERAGE

	Recommended calorie intake for standard person	National average		Urban		Rural	
		2015	2016	2015	2016	2015	2016
Calorie, kilocalorie	2 500.0	2 722.8	2 599.8	2 530.6	2 399.1	3 089.9	3 012.9
Protein, grams	106.0	121.6	115.9	110.3	103.8	143.0	140.8
Fat, grams	70.0	87.1	81.2	77.5	71.8	105.5	100.5
Carbo-hydrates, grams	358.0	359.8	348.5	344.2	331.1	389.5	384.2

Sources: Household Socio-Economic Survey, NSO

Intake of dietary calories, protein, fat and carbohydrates in winter season is low among urban population, while calories, protein, fat and carbohydrates intake among rural population exceed the norms.

FIVE. INDICATORS FOR FOOD SAFETY STATISTICS

1. The level of food contamination, inspected by the accredited food testing laboratories

In 2014, total of 18.4 thousand tonnes and 33.3 thousand tonnes of food products were tested for bacterial and chemical contamination, respectively. The results revealed 0.6 thousand tonnes or 3.5% and 0.8 thousand tonnes or 2.5% of tested foods contaminated with bacteria and chemicals, respectively.

2. Confiscated, returned, removed from shelf and disposed off foods from domestic production, during the inspection

Confiscated, returned, removed from shelf and disposed off foods during inspection by GASI are shown in Table below.

Table 11. Domestic food products that were confiscated, returned, removed from shelf and disposed off

Description	Meas.unit	2014	2015	2016
Confiscated foods	kilograms	3 154.1	3 766.8	654.9
	liter	104.7	2 911.0	544.5
	piece	7324	19 537	82 670
Returned foods	kilograms	1 768.0	1 511.0	313.5
	liter	-	-	115.0
	piece	31	46 250	5 391
Foods removed from shelf	kilograms	181.0	462.0	238.3
	liter	-	336.0	6.4
	piece	120	3 248	12 869
Disposed off foods	kilograms	5 265.2	4 088.9	2 229.7
	liter	1 061.3	1 586.0	648.5
	piece	4 364	18 527	82 530

Source: GASI

3. Number of business entities and individuals whose activities were inspected, suspended, and restored

In total, 4785 business entities, 3072 individuals were inspected by GASI, and business activities of 119 entities and 44 individuals were suspended who have been found guilty of violating the laws, standards and norms. The business activities of 58 business entities and 30 individuals were restored.

Table 12. NUMBER OF ENTITIES AND INDIVIDUALS WHOSE ACTIVITIES WERE INSPECTED, SUSPENDED AND RESTORED

Description	2014		2015		2016	
	Entities	Individuals	Entities	Individuals	Entities	Individuals
Inspected	4 317	2 481	6 897	24 950	4 785	3 072
Activities suspended	68	47	68	66	119	44
Activities restored	63	22	49	32	58	30

Source: GASI

4. Number of violations revealed and corrected during inspection

Total of 27.5 thousand cases of violation were identified during GASI inspection, of which 21.5 thousand violations or 77.6% were eradicated.

Table 13. NUMBER OF VIOLATIONS REPORTED AND ERADICATED

Description of violations	Number of violations reported	Number of violations eradicated
Total	27 488	21 518
Violations of norms and standards for building and facilities	4 992	3 430
Violations of norms and standards for work place, equipment and machineries operation	3 237	2 360
Violations of technological norms and standards	2 516	1 984
Violations of norms and standards for hygiene and sanitary	5 018	4 722
Violations of norms and standards for raw material preparation, quality and safety of final food products	2 898	2 226
Violations of norms and standards for storage and transportation	3 623	2 707
Violations of norms and standards for packaging and labeling	1 984	1 702
Violations of rules and norms for internal control	3 220	2 387

Source: GASI

Violations of norms and standards for building and facilities make up 18.2% of total violations, storage and transportation 13.2%, hygiene and sanitary 18.3%,

workplace, equipment and machineries 11.8%, raw material preparation, quality and safety of final products 10.5%, technology 9.2%, internal control 11.7% and violations of norms for packaging and labeling make up 7.2% of total violations reported. Violation eradication rate was 68.7-94.1%.

5. Number of accredited food testing laboratories:

As of 2016, there were 87 units of accredited food testing laboratories that're operational.

6. National, regional, foreign country's standards and technical regulations effective in Mongolia

In Mongolia, following technical regulations are effective in food sector, as of 2016.

1. Technical regulation for production of alcoholic beverages adopted by Mongolian government resolution No. 159, dated April 30, 2008;
2. Technical regulation for production and sales of milk and dairy products adopted by Mongolian government resolution No. 304, dated October 26, 2011;
3. Technical regulation for production and sales of cakes adopted by Mongolian government resolution No. 304, dated October 26, 2011.

Table 14. NUMBER OF FOOD RELATED NATIONAL STANDARDS

Description	2014	2015	2016
Number of total standards	672	652	600
Number of national standards, that are substantially the same as international, regional and other country's standards	262	249	240
Equivalent standards	410	403	360

Source: Agency for Standardization and metrology

There are 600 national standards effective in Mongolia, of which 240 or 40.0% are substantially the same as international, regional and other country's standards, while 360 or 60.0% are equivalent standards.

7. Number of entities and food products holding Certificate of conformity

There are 165 business entities in food sector, that hold Certificate of conformity, as of 2016, which is 137 entities more or 45.4% lower than in 2015.

Table 15. NUMBER OF ENTITIES AND FOOD PRODUCTS TYPES THAT HOLD CERTIFICATE OF CONFORMITY

Description	2014		2015		2016	
	No of entities	Types of food products	No of entities	Types of food products	No of entities	Types of food products
In total	**240**	**240**	**302**	**215**	**165**	**755**
Certificate of conformity for import products	76	90	86	36	115	335
Certificate of conformity for products from domestic production	157	126	207	165	42	400
"MNS mark" certificate	7	24	9	14	8	20

Source: Agency for Standardization and metrology

There are 755 products that hold certificate of conformity, of which 44.4% hold certificate of conformity for imports, 53.0% hold certificate of conformity for domestic products, and 2.6% holds MNS mark.

8. Number of factories introduced international quality control system

There are 14 business entities that hold **MNS ISO 9001:2010** certificate for quality management standard, by the decision of internationally recognized certification body.

9. Number of factories that introduced good manufacturing practices and hazards analysis and critical control points system

There are 5 business entities, who became certified to GMP and HACCP by designated authority, in Mongolia.

Table 16. NUMBER OF FACTORIES THAT INTRODUCED GOOD MANUFACTURING PRACTICES, HAZARD ANALYSIS AND CRITICAL CONTROL POINT SYSTEM

Description	2014	2015	2016
Total number of factories	3	4	5
Factories that introduced food safety management system ISO22000 standard	2	3	3
Entities that introduced HACCP	1	1	2

Source: Agency for Standardization and metrology

10. Number of factories producing fortified foods, by production types

There are 5 factories that fortify 15.0 tonnes of salt with iodine, annually.

11. Number of population having secure access to safe drinking water

There are 1922.2 thousand people or 72.6% of Mongolian population have secure access to safe drinking water, as shown by the results of population and housing census 2010.

12. Alcohols and alcoholic beverages producing factories

There are 9 alcohol producing factories, 48 vodka producing, 9 wine producing and 19 beer producing factories in Mongolia.

13. Amount of alcohols and alcoholic beverages per capita

Amount of vodka, wine and beer per capita is 8.0 liter, 0.7 liter and 29.6 liter, respectively, as of 2016.

Table 17. AMOUNT OF ALCOHOLIC BEVERAGES PER CAPITA

	2013	2014	2015	2016
	liter			
Vodka	8.7	8.3	7.1	8.0
Wine	0.9	0.9	0.7	0.7
Beer	33.1	29.8	29.7	29.6

Source: NSO

Amount of vodka, wine and beer per adult person aged 15 and above is 9.8 liter, 0.8 liter, 36.6 liter respectively, as of 2016.

Table 18. AMOUNT OF ALCOHOLIC BEVERAGES PER ADULT AGED 15 AND ABOVE

	2013	2014	2015	2016
	liter			
Vodka	12.2	11.9	10.1	9.8
Wine	1.2	1.2	1.1	0.8
Beer	46.6	42.4	42.1	36.6

Source: NSO

14. Number of food borne disease outbreak, number of affected, hospitalized and dead people

Food borne disease outbreak means an incident in which more than two persons experience same illness resulting from ingestion of common food.

In 2016, 12 incidents of food borne disease outbreaks were reported affecting 382 people in total, of which 127 persons or 33.2% of affected people were hospitalized. No case of mortality was reported.

Table 19. NUMBER OF FOOD BORNE DISEASE OUTBREAKS, AFFECTED, HOSPITALIZED AND DEAD PEOPLE

Description	2013	2014	2015	2016
Outbreak of food borne illness	5	11	6	12
Number of affected people	93	766	311	382
Number of patients hospitalized	1	244	33	127
Mortality case	-	-	-	-

Source: Ministry of health

By examining the statistics in 2013-2016, the incidents of outbreak (11) with 766 affected persons in total in 2014 have been much higher than in previous years.

Table 20. MORBIDITY CASES RELATED TO BACTERIAL FOOD POISONING

Description	2013	2014	2015	2016
Number of affected people	238	548	482	430
Urban areas	121	235	375	386
Rural areas	117	313	107	44

Source: Ministry of health

SIX. DATABASE OF FOOD SECURITY STATISTICAL INDICATORS

Food security statistical indicators database was established covering below key and sub indicators, that have been used to alert and indicate food security issues in the country from 2007-2016.

6.1. Main indicators for food security statistics

6.1.1 Food availability and accessibility indicators
6.1.2 Food energy and nutrients indicators
6.1.3 Food safety indicators

- Level of food contamination: Level of chemical and bacterial contamination.
- Amount of imported foods returned, confiscated and disposed off.
- Amount of domestically produced foods confiscated and disposed off.
- Number of business entities and individuals inspected.
- Number of business entities, individuals, whose activities were terminated, temporarily suspended and restored during inspection process.
- Violations revealed and corrected during inspection process: Domestic raw materials and final products' safety level
- Level of conformity of imported foods to food safety requirements.
- Storage and transportation conditions for food raw materials and final products.
- Nationwide number of accredited food testing laboratories.
- Number of domestic standards MNS, CAC, and international standards effective in food sector of Mongolia.
- Number of international, regional, foreign country's standards adopted as domestic standards.
- Number of food products holding certificate of conformity.
- Number of factories that introduced international quality management system, and accredited by designated international body.
- Number of factories that introduced good manufacturing practices and hazards analysis and critical control points in production system.
- Ratio of fortified foods to overall food production, by product types.
- Number of food fortification factories, by product types.
- Number of population having secure access to safe drinking water.
- Number of alcohols and alcoholic beverages producing factories.
- Number of sales points licensed to sell alcoholic beverages per 10,000 populations.
- Amount of alcohols and alcoholic beverages per capita and adult individual.
- Number of food borne illness outbreak, number of people affected and morbidity, mortality cases.

6.1.4 Points of food production and service

- Number of food producing entities, by product type
- Number of grocery stores, supermarkets
- Number of food markets
- Number of food storages and capacity, by product type
- Number of canteens, restaurants, eating places
- Number of factories producing bottled water, alcoholic and nonalcoholic beverages
- Number of sales points licensed to sell alcoholic beverages per 10,000 populations.

6.1.5 Food related health data

- Number of morbidity cases associated with food borne illness, at urban and rural level
- Other data on food related health issues
- Prevalence of stunting among children under 5, at urban and rural level
- Number of patients with food borne diseases and infections caused by bacteria, at urban and rural levels
- Number of patients with food borne diseases and infections caused by chemicals, at urban and rural levels
- Number of morbidity and mortality cases associated with food poisoning and infections, at urban and rural levels

6.2 Other indicators used to estimate food security

6.2.1 Agriculture

- Number of livestock, by types
- Number of dam animal, by types
- Number of animals slaughtered for food, by types
- Meat production
- Dairy production
- Size of agricultural tenure, by hectare
- Size of cultivated area, by types of crop
- Size of harvested area, by types of crop
- Total harvest, by types of crop
- Yield per ha, by types of crop
- Cereals production and cereal producing area to meet the standard population demand for flour, by estimation

6.2.2 Agricultural production

- Livestock
- Agriculture

6.2.3 Agriculture, value added (% of GDP)

- Livestock
- Agriculture

6.2.4 Industry

- Production of food commodities, by physical amount
- Production of alcohols and alcoholic beverages, by types
- Amount of alcohols and alcoholic beverages per capita, adult individual, by physical amount
- Production of bottled water, by physical amount

6.2.5 Foreign trade

- Food commodity import, by physical amount and country of origin
- Food commodity export, by physical amount and country of destination
- Bottled water import, by physical amount and country of origin

6.2.6 Price

- Import price for food commodities
- Export price for food commodities
- Producer's price for food commodities
- Market price for food commodities
- Wholesale price for food commodities

6.2.7 Population size

- Size of sedentary population, by sex and age groups

6.2.8 Number of employees

- Number of employees, by sector
- Number of people employed by livestock sector
- Number of agricultural employees
- Number of households and entities in agriculture

6.2.9 Drinking water

- Number of water kiosks
- Number of water trucks
- Number of population having secure access to safe drinking water
- Level of bacterial and chemical contamination in central water supply system
- Level of bacterial and chemical contamination in non-central water supply systems

6.2.10 Industrial data, by production and commodity types

- Number of factories
- Size of production
- Capacity of production / utilization of capacity/
- Introduction of good manufacturing practices in production system
- Introduction of quality control system in production management

6.2.11 Production of bottled water, alcoholic and non-alcoholic beverages, by types of main products

- Number of factories
- Size of production

- Capacity of production /utilization of capacity/
- Introduction of good manufacturing practices in production system
- Introduction of quality control system in production management

6.2.12 Food sales, by types of products
- Volume
- Installed capacity
- Utilized capacity
- Introduction of good practices
- Introduction of quality control system in management

6.2.13 International trade data on food commodities from 13 food groups and drinking water, by sites of customs clearance
- Volume
- Value in USD

6.2.14 International trade data on alcoholic and non-alcoholic beverages, by sites of customs clearance:
- Volume
- Value in USD

6.2.15 International trading of food commodities, by means of transportation and product types
- Volume
- Value in USD

6.2.16 Storage of for commodities from 13 food groups and drinking water during international trading
- Volume
- Value in USD

6.2.17 Foodservice production, by types
- Number of foodservice distributors
- Installed capacity
- Utilized capacity
- Introduction of good practices
- Introduction of quality control system in management

6.2.18 Data on food aids, by donating countries and product types:
- Types of food products
- Name of donating country
- Quantity
- Value in USD

Annex 1

Table 1. Conversion multipliers for standard person

Age groups	Gender	Line number	Conversion multiplier
A	B	C	1
Upto 1 year	F, M	1	0.38
1-3 years	F	3	0.48
	M	4	0.50
4-6 years	F	5	0.64
	M	6	0.68
7-10 years	F	7	0.72
	M	8	0.87
11-14 years	F	9	0.74
	M	10	0.96
15-18 years	F	11	0.87
	M	12	1.05
19-24 years	F	13	0.82
	M	14	1.04
25-50 years	F	15	0.78
	M	16	0.99
51 and above	F	17	0.72
	M	18	0.81

Table 2. Reference daily, annual intake of foods for standard person, in physical value

Types of food	Line number	Daily intake of food for standard person, in kg	Annual intake of food for standard person, in kg
A	Б	1	2
Meat and meat products	1	0.200	73.0
Milk	2	0.150	54.8
Dairy products	3	0.200	73.0
Flour	4	0.100	36.5
Flour products	5	0.220	80.3
All types of rice	6	0.078	28.5
Sugars	7	0.023	8.4
Potato	8	0.140	51.1
Vegetables	9	0.200	73.0
Fruits and berries	10	0.180	65.7
Pulses	11	0.090	32.9
Egg	12	0.019	6.9
Edible oil	13	0.025	9.1

Table 3. Reference intake of energy for standard person, in summer

		Daily intake of calories for standard person, kcal*	Nutrients (gr)						
			Protein	Origins		Fat	Origins:		Carbo-hydrates
				Animal	Plant		Animal	Plant	
A	B	1	2	3	4	5	6	7	8
Meat and meat products	1	281	28	28	0	19	19	0	0
Milk	2	160	10	10	0	9	9	0	10
Dairy products	3	166	8	8	0	9	9	0	12
Flour	4	325	9	0	9	1	0	1	70
Flour products	5	452	12	0	12	2	0	2	95
All types of rice	6	269	9	0	9	0	0	0	57
Sugars	7	92	0	0	0	0	0	0	23
Potato	8	123	3	0	3	0	0	0	28
Vegetables	9	28	2	0	2	0	0	0	5
Fruits and berries	10	265	17	0	17	2	0	2	45
Pulses	11	84	1	0	1	0	0	0	20
Egg	12	30	2	2	0	2	2	0	0
Edible oil	13	225	0	0	0	25	0	25	0
total	**14**	**2500**	**101**	**48**	**53**	**69**	**39**	**30**	**365**

Table 4. Reference intake of energy for standard person, in cold season

		Daily intake of calories for standard person, kcal*	Nutrients (gr)						
			protein	Origins		Fat	Origins:		Carbo-hydrates
				Animal	Plant		Animal	Plant	
A	B	1	2	3	4	5	6	7	8
Meat and meat products	1	374	38	38	0	25	25	0	0
Milk	2	120	7	7	0	7	7	0	7
Dairy products	3	113	6	6	0	6	6	0	8
Flour	4	325	9	0	9	1	0	1	70
Flour products	5	452	12	0	12	2	0	2	95
All types of rice	6	269	9	0	9	0	0	0	57
Sugars	7	92	0	0	0	0	0	0	23
Potato	8	123	3	0	3	0	0	0	28
Vegetables	9	28	2	0	2	0	0	0	5
Fruits and berries	10	265	17	0	17	2	0	2	45
Pulses	11	84	1	0	1	0	0	0	20
Egg	12	30	2	2	0	2	2	0	0
Edible oil	13	225	0	0	0	25	0	25	0
total	**14**	**2500**	**106**	**53**	**53**	**70**	**40**	**30**	**358**

RATIO OF UNIT PRODUCT INTO MAIN FOOD PRODUCT

Table 5. Ratio of carcass meat to meat and meat products

No	Types of meat	Ratio
1.1	Livestock meat	1.0
1.2	Pork, poultry and fish	1.0
1.3	Wildlife meat	1.0
1.4	Boiled sausage	1.1
1.5	Boiled and smoked sausage	1.4
1.6	Raw smoked sausage	2.6
1.7	Offal	1.4
1.8	Canned meat	1.3
1.9	Dried meat	5.7
1.10	Canned fish	1.57

Table 6. Ratio of liquid milk to milk and dairy products

No	Types of dairy products	Ratio
2.1.	Industrially processed milk and dairy products	
2.1.1.	Drinking milk *	1.0
2.1.2	Powdered milk (fat 25%)	8.6
2.1.3	Condensed milk	2.7
2.1.4	Clabber products* (clabber, kephyr, yogurt, etc)	1.0
2.1.5	Curds (fat 9%)	6.7
2.1.6	Milk cream and sour cream (fat 25%)	7.8
2.1.7	Cheese	8.8
2.1.8	Butter (fat 72%)	22.5
2.1.9	Dried curds	10.0
2.2.	Traditionally processed milk and dairy products	
2.2.1	Fermented products (clabber, koumiss, camel milk)	1.0
2.2.2	Clarified butter	25.0
2.2.3	Clotted milk	16.7
2.2.4	Curds cheese	13.0

Note: * - fat content in raw and processed products is 1:1.

Table 7. Ratio of flour to flour products

No	Types of flour products	Ratio
3.1	Wheat flour	1.0
3.2	Rye flour	1.0
3.3	Flour of other grains	1.0
3.4	All types of breads	0.74
3.5	Boiled flour products	0.65
3.6	Steam boiled flour products	0.60
3.7	Biscuits	0.60
3.8	Wafer	0.25
3.9	Cakes	0.15
3.10	Pastas	1.0

Table 8. Ratio of unit product to all types of rice

No	Types of products	Ratio
4.1	Rice	1.0
4.2	Buckwheat	1.0
4.3	Millet	1.0
4.4	Other rice	1.0

Table 9. Ratio of sugar to sugar products and sweeteners

No	Types of products	Ratio
5.1	Refined sugar	1.0
5.2	Cube sugar	1.0
5.3	Candy	0.96
5.4	Chocolate, sweets, zephyr	0.46
5.5	Fruit jam, syrup	0.46
5.6	Carbonated, non-carbonated soda drinks	0.47

Table 10. Ratio of fresh potato to potato and potato products

No	Types of products	Ratio
6.1	Fresh potato	1.0
6.2	French fries	2.0
6.3	Chips	4.0
6.4	Instant mashed potato (reconstitutable by adding water)	8.5
6.5	Starch and glass noodle	10.0

Table 11. Ratio of fresh vegetable to vegetables

No	Types of products	Ratio
7.1	Root and tubers (carrot, winter radish, radish, beetroot, turnip, mustard, parsnip, leek root, root mustard)	1.0
7.2	Bulb vegetables (onion, chalot, spring onion, salad onion, garlic, etc)	1.0
7.3	Seed bearing vegetables (tomato, eggplant, capsicum, cucumber, pumpkin, sweet melon, watermelon)	1.0
7.4	Leafy greens (lettuce, Chinese cabbage, spinach, salad greens, chives, celery, etc)	1.0
7.5	Flower vegetables (cauliflower, broccoli, artichoke, etc)	1.0
7.6	Leaf vegetables(cabbage, salads, broccoli, round salads)	1.0
7.7	Herbs and spices (dill, coriander, celery, leek)	1.0
7.8	Pickled vegetables	1.3
7.9	Deep-frozen vegetables	1.3
7.10	Dried vegetables, mushroom	9.0
7.11	Ketchup	2.48
7.12	Tomato juice	1.64
7.13	Mushroom	1.0
7.14	Pickled mushroom	1.25

Table 12. Ratio of fresh fruit to fruits

No	Types of products	Ratio
8.1	Seed bearing fruits (apple, pear, hawthorn, ashberry, serviceberry fruit, banana, chaenomeles fruit, Caucasian persimmon, etc)	1.0
8.2	Stone fruits (cherry, prunus fruit, peach, apricot, plum, poppy, etc)	1.0
8.3	Natural (wild) and cultivated berries (sea buckthorn, strawberry, black currant, etc)	1.0
8.4	Citrus (orange, mandarin, lemon, etc)	1.0
8.5	Other fruits	1.0
8.6	Dried fruits and berries	3.23-5.0
8.7	Pickled fruits and berries	0.85
8.8	Fruit juice and nectar	0.7
8.9	Compote	0.68

Table 13. Ratio of unit product to pulses

No	Types of products	Ratio
9.1	Peas, beans, soybean	1.0
9.2	Tofu	0.6
9.3	Pickled peas and beans	1.3

Table 14. Ratio of fresh egg to egg and egg products

No	Types of products	Ratio
10.1	Fresh chicken egg	1.0
10.2	Eggs of other fowls	1.0
10.3	Dry egg	24.84

Table 15. Ratio of unit product to edible oil

No	Types of products	Ratio
11.1	Vegetable oil	1.0
11.2	Butter	1.0
11.3	Grease fat	1.0
11.4	Margarine	0.8
11.5	Clarified butter	1.2