**TECHNICAL NOTES**

**Food Balance Sheets (FBS) of the Philippines**

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| 1. **The Introduction**
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This report presents a comprehensive picture of the country’s food supply during a specified reference period. It gives an indication of the adequacy of food supply relative to the nutritional requirement of the population. It is a useful tool in designing, planning, and assessment of policies and programs related to food security and nutrition. The report contains the (1) Per Capita Supply of Food, Calories, Proteins and Fats, (2) Percentage Distribution of Calories, Proteins and Fats, and Import Dependency and Self-Sufficiency Ratios.

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| 1. **Data Collection and Registration System**
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The compilation of the FBS requires basic data on production, stocks, foreign trade, domestic utilization, nutrient values, dietary allowances, and population which were obtained from the results of censuses, household and establishment surveys, administrative reports of government agencies, and special studies conducted by various research institutions.

1. Production

1.1 Crops

The production data of palay and corn were obtained from the quarterly Palay Production Survey (PPS) and Corn Production Survey (CPS) of the PSA. Data for other crops were sourced from the Crops Production Survey (CrPS).

The Sugar Regulatory Administration (SRA) provides data on centrifugal sugar.

1.2 Livestock and Poultry

For livestock and poultry animals, production data including the production of milk and eggs were taken from the Backyard Livestock and Poultry Survey (BLPS) and Commercial Livestock and Poultry Survey (CLPS) of the PSA. Data used include the inventory of animals and production of milk and eggs which were disaggregated for all types of animals such as carabao, cattle, hogs, goat, chicken, and ducks.

1.3 Fish

For fisheries, production data were sourced from the quarterly fishery surveys of the PSA such as the Quarterly Aquaculture Survey (QAqS), Quarterly Commercial Fisheries Survey (QCFS), Quarterly Municipal Fisheries Survey (QMFS), and Quarterly Inland Fisheries Survey (QIFS).

1.4 Processed Food Commodities

Data for processed food commodities used the Technical Conversion Factors for Agricultural Commodities sourced from the FAO’s publication which was published in August 2000.

2. Stocks

Stock data on rice and corn were obtained from monthly rice and corn stocks inventory which are generated from three sectors namely: household, commercial, and government stocks (National Food Authority). The household and commercial stocks are taken from the Rice and Corn Stocks Survey (RCSS): Households, and RCSS: Commercial of the PSA. The government stocks are monitored from NFA warehouses/depositories.

3. Foreign Trade

Data on the volume of exports and imports of each food commodity were obtained from the Foreign Trade Statistics (FTS) compiled by the PSA.

4. Domestic Utilization

Data on domestic utilization such as feeds, seeds, waste, and processed for food and non-food for selected primary commodities were obtained from the parameters being used in the compilation of Supply Utilization Accounts (SUA) for Selected Agricultural Commodities.

5. Balancing Item

The balancing item for the 78 food commodities covered in the SUA for Selected Agricultural Commodities was adopted. For the other remaining commodities, the FAO’s recommended balancing item was employed.

6. Nutrient Values

The nutrient values in terms of energy, proteins, and fats for each food item were obtained from the 1997 Food Composition Table (FCT) on Per Capita Food Intake published by the Department of Science and Technology-Food and Nutrition Research Institute (DOST-FNRI), and from the FAO and World Standard Nutritional Values.

7. Population

The mid-year population estimates of the PSA based on the 2015 Census of Population were used for the estimation of the per capita food supply and the per capita food nutrient.

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| 1. **Methodology**
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**1. Total Domestic Supply (TDS)**

$$TDS=Production-Changes in Stocks+Net Imports^{}$$

This represents the quantity of food supplies available before disposal to non-food and food uses. It is obtained by adding the change in stocks, if the sign is minus and subtracting it, if the sign is plus, from production, plus net imports (i.e., imports less exports).

**1.1 Production**

1.1.1 Unprocessed Food Commodities

All production data in the PSA data system were accounted for in the compilation of the FBS.

1.1.2 Processed Food Commodities

Production estimates of the processed food commodities were derived by applying appropriate parameters taken from FAO’s publication of Technical Conversion Factors for Agricultural Commodities.

**1.2 Changes in Stocks**

$$Changes in Stocks=Ending Stocks-Beginning Stocks^{}$$

* 1. **Net Imports**

$$Net Imports=Total Imports-Total Exports^{}$$

Data on exports and imports of commodities in terms of quantity (in net kilo equivalent) were sourced from the Foreign Trade Statistics of the PSA. Trade commodities were matched with the FBS commodities using the Philippine Standard Commodity Classification (PSCC) codes.

**2. Total Domestic Utilization (TDU)**

$$TDU=Net available food supply+non-food utilization+processed for food^{}$$

The net available food supply represents the total amount of food available for consumption while non-food utilization refers to a part of total domestic utilization which is used for seed, feed, processed for non-food including the amount wasted.

**2.1 Net Available Food Supply**

The net available food supply was obtained by deducting from the total domestic supply of food commodities the total amount for allowances for non-food utilization and processed for food. The amount derived represents the actual quantity of food in the retail stage or "as purchased basis".

**2.2 Non-Food Utilization**

Estimates of non-food utilization such as seed, feed, processed for non-food and waste made use of the parameters from SUA for Selected Agricultural Commodities and FAO’s publication of Technical Conversion Factors for Agricultural Commodities.

2.2.1 Feed, which refers to the amount of food for animals, was estimated by applying appropriate parameters to the reported total production of certain food crops;

2.2.2 Seed, which refers to the quantity of food crops used as seeds or planting materials, was estimated by applying the recommended seeding allowance per hectare by type of crop;

2.2.3 Processed for non-food, which refers to the quantity of food crops converted into non-food commodities for industrial and manufacturing purposes was estimated using the available parameters as shown in; and

2.2.4 Waste, which refers to the amount of losses that occur during harvesting, infestations, spoilage, storage, distribution, etc., was estimated by applying the required wastage parameters to the total estimate of production or total domestic supply.

**2.3 Food Utilization**

Processed for Food refers to the quantity of food crops which are further processed into other form of food commodities.

**3. Per Capita Food Supply**

3.1 Annual Per Capita Food Supply (in kilograms)

The annual per capita food supply in kilograms was estimated by dividing the net available food supply by the estimated mid-year population multiplied by 1,000.

3.2 Daily Per Capita Food Supply (in grams)

The daily per capita food supply in grams was estimated by dividing the annual per capita food supply by 365 days multiplied by 1,000.

**4. Nutrient Supply**

The nutrient equivalent of the food supply in terms of energy, proteins and fats were computed by multiplying the daily per capita food supply in grams by the corresponding nutrient values per 100 grams.

**5. Self-Sufficiency Ratio (SSR) and Import Dependency Ratio (IDR)**

Self-Sufficiency Ratio (SSR) shows the extent to which country relies on its own production resources or the extent of sufficiency of domestic production in relation to domestic consumption. It is the ratio of production to the sum of production plus import minus export and multiplied by 100.

A ratio of less than 100 percent indicates inadequacy of food production to cope with the demand of the population; equal to 100 percent indicates that food production capacity of the sector is just enough to support the food needs of the population; ratio of greater than 100 percent indicates that domestic production is more than enough to support the domestic requirements, the higher the ratio the greater the self-sufficiency.

$$SSR=\frac{Production}{Production+Import-Export} x 100$$

Import dependency ratio (IDR) is the extent of dependency on importation in relation to domestic consumption. It is the ratio of quantity imported to the sum of production plus import minus export and multiplied by 100. The higher ratio implies greater dependency on importation.

$$IDR=\frac{Import}{Production+Import-Export} x 100$$

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| 1. **Concepts and Definition of Terms**
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**Total Domestic Supply** - This represents the quantity of food supplies available before disposal to non-food and food uses.

**Net available food supply** - represents the total amount of food available for consumption while non-food utilization refers to a part of total domestic utilization which is used for seed, feed, processed for non-food including the amount wasted.

**Feed** - which refers to the amount of food for animals, was estimated by applying appropriate parameters to the reported total production of certain food crops;

**Seed** - which refers to the quantity of food crops used as seeds or planting materials, was estimated by applying the recommended seeding allowance per hectare by type of crop;

**Processed for non-food** - which refers to the quantity of food crops converted into non-food commodities for industrial and manufacturing purposes.

**Waste** - which refers to the amount of losses that occur during harvesting, infestations, spoilage, storage, distribution, etc., was estimated by applying the required wastage parameters to the total estimate of production or total domestic supply.

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| 1. **Dissemination of Results**
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| **Title** | **Schedule of Release** |
| Food Balance Sheets (FBS) of the Philippines | June of the Current Year |

Press release, statistical tables, infographics, and modular report are included in the web release.

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| 1. **Citation**
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Philippine Statistics Authority. (2022). *Technical Notes on Food Balance Sheets of the Philippines*. https://psa.gov.ph/technical-notes/\_\_\_\_\_

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