



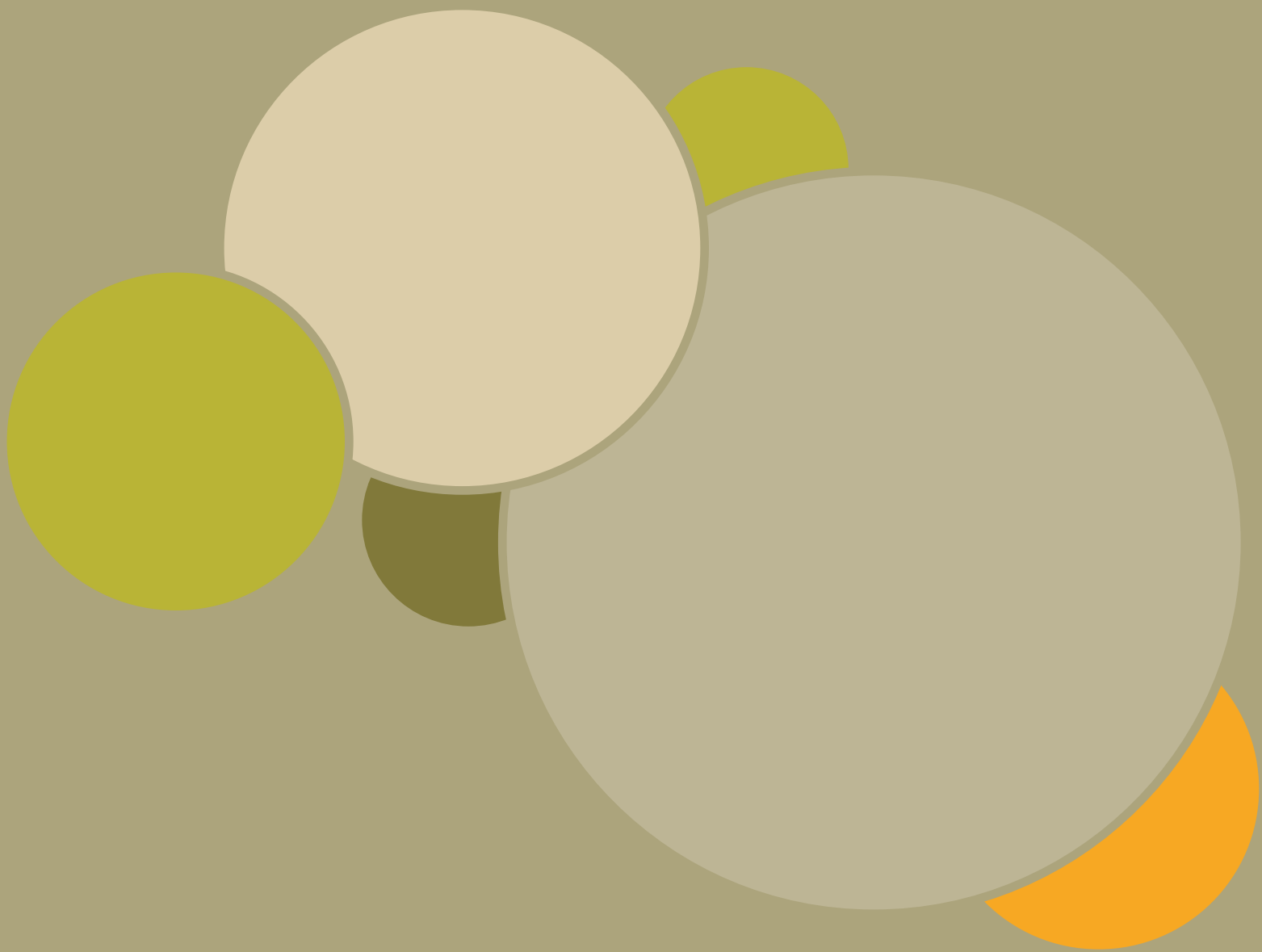
Food and Agriculture Organization  
of the United Nations

# Guidelines for the compilation of Food Balance Sheets



# **Guidelines for the compilation of Food Balance Sheets**

**October 2017**



# Contents

<b>Acronyms</b>	<b>v</b>
<b>Acknowledgements</b>	<b>vii</b>
<b>Preface</b>	<b>ix</b>
<b>CHAPTER 1</b>	
<b>INTRODUCTION</b>	<b>1</b>
1.1. Overview	1
1.2. What is a Food Balance Sheet?	2
1.3. Potential uses of FBS	3
1.4. Caution in interpreting FBS estimates	7
1.5. Fundamental principles of FBS construction	9
1.6. Summary	10
<b>CHAPTER 2</b>	
<b>METHODOLOGICAL PRINCIPLES FOR THE CONSTRUCTION OF COUNTRY-LEVEL FBS</b>	<b>11</b>
2.1. Overview	11
2.2. The basic identity and approach	11
2.2.1. Supply and use variables	13
2.2.2. Additional variables	16
2.3. Linking Supply Utilization Accounts (SUAs) to FBS through standardization using commodity trees	19
2.3.1. Commodity trees	21
2.3.2. Processing shares	23
2.4. The recommended balancing mechanism	25
2.4.1. Approaches to distributing the imbalance at FBS level	28
2.4.2. Constraints on the balancing process	33
2.5. Summary	34
<b>CHAPTER 3</b>	
<b>DATA FOR FBS COMPILATION: CONSIDERATIONS, SOURCES AND IMPUTATION</b>	<b>35</b>
3.1. Overview	35
3.2. Assembling a TWG and assigning roles	36
3.3. Determining product scope	36
3.4. Data assessment and other preliminary considerations	37
3.4.1. Data comparability	37
3.4.2. Data quality, flags and tolerance intervals	41
3.4.3. Data search and assessment	46

3.5.	Suggested data sources and imputation	48
3.5.1.	Production	48
3.5.2.	Trade (imports and exports)	54
3.5.3.	Stocks and stock changes	57
3.5.4.	Food availability	60
3.5.5.	Food processing	64
3.5.6.	Feed	66
3.5.7.	Seed	69
3.5.8.	Tourist food	73
3.5.9.	Industrial use	75
3.5.10.	Loss	76
3.5.11.	Residual and other uses	80
3.5.12.	Additional parameters	80
3.6.	Summary	82
<b>CHAPTER 4</b>		
<b>STEP-BY-STEP GUIDE TO FBS CONSTRUCTION</b>		<b>83</b>
4.1.	Introduction	83
4.2.	Filling in an SUA table	84
4.3.	Balancing SUA accounts for derived commodities	91
4.4.	Standardization and Aggregation	92
4.4.1.	Standardization rules by variable	92
4.4.2.	Standardized and aggregated table	96
4.5.	Balancing	96
4.6.	Nutrient supplies and calorie estimates	101
4.7.	Deriving per capita estimates	103
4.8.	Validation and troubleshooting unfeasible solutions	104
4.9.	Validation through working groups	106
4.10.	Summary	106
<b>CHAPTER 5</b>		
<b>DATA QUALITY CONSIDERATIONS, DISSEMINATION AND FBS INTERPRETATION</b>		<b>107</b>
5.1.	Introduction	107
5.2.	Quality considerations	108
5.3.	Dissemination	111
5.3.1.	The case for wider dissemination of FBS data	111
5.3.2.	Suggested presentation	112
5.3.3.	Metadata	115
5.4.	Interpretation	116
5.5.	Summary	117
<b>REFERENCES</b>		<b>118</b>
<b>ANNEX 1: TOURIST FOOD</b>		<b>123</b>

## TABLES

<b>TABLE 2-1</b>	Sample blank SUA table for paddy rice.	19
<b>TABLE 2-2</b>	Unbalanced sorghum supply and utilization in Country Z.	28
<b>TABLE 2-3</b>	Step 1 – Unbalanced sorghum table with quantified error.	29
<b>TABLE 2-4</b>	Step 2 – Sum individual variable errors to calculate aggregated error.	29
<b>TABLE 2-5</b>	Step 3 – Calculate proportion of aggregated error for each individual variable.	30
<b>TABLE 2-6</b>	Step 4 – Distribute the imbalance proportionally.	31
<b>TABLE 3-1</b>	Sample flags denoting source.	42
<b>TABLE 3-2</b>	Examples of tolerance intervals by variable.	46
<b>TABLE 3-3</b>	Sample data assessment grid.	47
<b>TABLE 3-4</b>	Hypothetical sown area, harvested area and ratiosh for sunflowers in country A.	71
<b>TABLE 4-1</b>	Blank oats SUA table	84
<b>TABLE 4-2</b>	Oats SUA table with official production data added.	85
<b>TABLE 4-3</b>	Oats SUA table with official trade data added.	85
<b>TABLE 4-4</b>	Oats SUA table with imputed stock change data added.	86
<b>TABLE 4-5</b>	Oats SUA table with calculated food processing data added.	87
<b>TABLE 4-6</b>	Oats SUA table with calculated bran of oats production data added.	88
<b>TABLE 4-7</b>	Oats SUA table with imputed food data added.	88
<b>TABLE 4-8</b>	Oats SUA table with official feed data on oats added.	89
<b>TABLE 4-9</b>	Oats SUA table with imputed seed use data added.	89
<b>TABLE 4-10</b>	Oats SUA table with imputed tourist food added.	90
<b>TABLE 4-11</b>	Oats SUA with estimated industrial use added.	90
<b>TABLE 4-12</b>	Oats SUA with imputed loss added.	91
<b>TABLE 4-13</b>	Balance check on SUA accounts for commodities derived from oats.	91
<b>TABLE 4-14</b>	Balanced SUAs for products derived from oats.	92
<b>TABLE 4-15</b>	Standardization of commodities to primary equivalent, and subsequent aggregation.	94
<b>TABLE 4-16</b>	Unbalanced FBS table for oats commodity equivalent.	96
<b>TABLE 4-17</b>	Calculating the imbalance in the unbalanced FBS table.	97
<b>TABLE 4-18</b>	Tolerance interval percentages assigned.	98
<b>TABLE 4-19</b>	Errors quantified and aggregated error calculated.	98
<b>TABLE 4-20</b>	Proportion of aggregated error for each individual variable calculated.	99
<b>TABLE 4-21</b>	Distributing the imbalance proportionally.	100
<b>TABLE 4-22</b>	Food quantities scaled up based on balanced FBS.	101
<b>TABLE 4-23</b>	Converting food quantities into nutrient values.	102
<b>TABLE 4-24</b>	Nutrient values are summed to one another.	102
<b>TABLE 4-25</b>	Per capita nutrients calculated.	103
<b>TABLE 4-26</b>	Balanced FBS table for oats.	104
<b>TABLE 5-1</b>	Sample presentation 1 of data table including flags.	109
<b>TABLE 5-2</b>	Sample presentation 2 of data table detailing sources and tolerance intervals in table footnotes.	109
<b>TABLE 5-3</b>	Sample table layout of FBS data organized by year.	112
<b>TABLE 5-4</b>	Sample table layout of FBS data organized by commodity.	113

## FIGURES

<b>FIGURE 2-1</b>	Mushroom commodity tree.	22
<b>FIGURE 2-2</b>	Olive commodity tree.	22
<b>FIGURE 3-1</b>	Avocado yields in the United States of America, 1961–2013.	51
<b>FIGURE 5-1</b>	Sample visualization of FBS data, illustrating dietary composition by commodity group in a given year.	114
<b>FIGURE 5-2</b>	Sample visualization of FBS data, illustrating changing DES from 1994 to 2013.	115
<b>FIGURE 6-1</b>	Simplified representation of net visitors to country J.	124
<b>FIGURE 6-2</b>	Representation of inbound visitor flows to country J.	126
<b>FIGURE 6-3</b>	Comprehensive representation of net tourism flows for country J.	127

## BOXES

<b>BOX 2-1</b>	Sample exercise on the application of processing shares.	24
<b>BOX 3-1</b>	Example of imputation of loss using a hierarchical approach.	79

# Acronyms

<b>AFZ</b>	Association for Animal Production (Association Française de Zootechnie, France )
<b>AGA</b>	Customs General Administration (Administración General de Aduanas de Mexico, Mexico)
<b>AGMEMOD</b>	Agriculture Member States Modelling (European Union)
<b>AMIS</b>	Agricultural Market Information System
<b>CILSS</b>	Permanent Interstates Committee for Drought Control in the Sahel ( <i>Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel</i> )
<b>CIRAD</b>	Agricultural Research Centre for International Development ( <i>Centre de Coopération Internationale en Recherche Agronomique pour le Développement, France</i> )
<b>CPC</b>	Central Product Classification
<b>DDGS</b>	Distiller's Dried Grains with Solubles
<b>DES</b>	Dietary Energy Supply
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FBS</b>	Food Balance Sheet
<b>FCL</b>	FAOSTAT Commodity List
<b>FEWS NET</b>	Famine Early Warning System Network
<b>FUSIONS</b>	Food Use for Social Innovation by Optimising Waste Prevention Strategies
<b>g</b>	gram
<b>GDP</b>	Gross Domestic Product
<b>GIEWS</b>	Global Information and Early Warning System
<b>GS</b>	Global Strategy to Improve Agricultural and Rural Statistics
<b>ha</b>	hectare
<b>HS</b>	Harmonized System
<b>ICBT</b>	Informal Cross Border Trade
<b>ICEC</b>	Interagency Commodity Estimates Committee
<b>IDR</b>	Import Dependency Ratio
<b>IFPRI</b>	International Food Policy Research Institute
<b>INFOODS</b>	International Network of Food Data Systems
<b>INRA</b>	National Institute for Agricultural Research ( <i>Institut National de la Recherche Agronomique, France</i> )
<b>INTERFAIS</b>	International Food Aid Information System
<b>kcal</b>	Kilocalorie

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_22487](https://www.yunbaogao.cn/report/index/report?reportId=5_22487)

