

Food Composition Tables/Database INFOOD/FAO

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Food Composition Tables (FCD)/Database (FCDB)

Describe food in term of:

- Nutrient (Macro-Micronutrient) values
- Energy content
- Non nutrient (Phytochemical, anti-nutrient)

FCT/FCDB

FCT: Printed books or PDF files with nutrient values of important food (index, documentation)

FCDB: Multidimensional computerized format of data which allow comprehensive data documentation (food and nutrient description, food-group, methodology, calculation etc.)

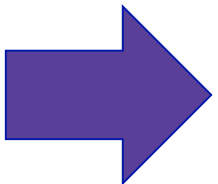
FCT/FCDB

- Data is presented per 100 gram edible portion
- Standardized Food identification
- Precise identification of food (Food nomenclature i.e. Food name, Food description, Food code, Food group)

Nutrient Values Variation

Nutrient values of the same food may vary due:

- Genetic
- Season, climate
- Feed, soil, growing condition, storage
- Fortification, processing
- Nutrient description
- Chemical methodology



The need for National and Regional FCT/FCDB

Types of FC Data

Direct method

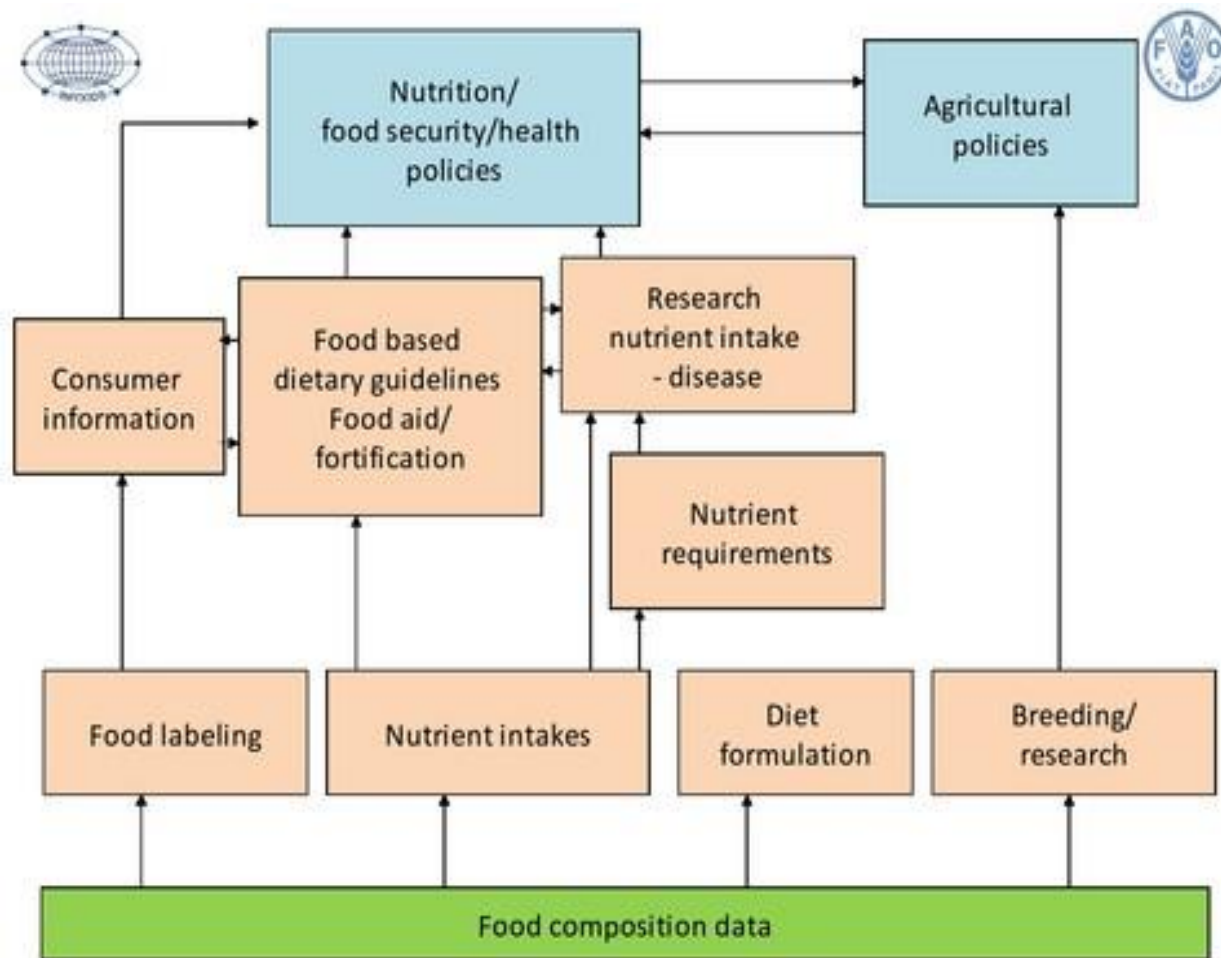
- Original analytical data

Indirect method

- Imputed data (data of similar food)
- Calculated data (recipes, carbs by difference)
- Borrowed data
- Presumed or assumed data (DF in lean meat)

Importance of FCT/FCDB

- Establish dietary requirement(Dietary assessment)
- Food Labeling
- Formulation of therapeutic diets and balanced diet
- Nutrition Research(epidemiology researches)
- Promote plants and animal with good nutrient profile
- Consumer education for better food choices
- Setting food policy and prevention measures for nutrition-diet related diseases



Source: U. Ruth Charrondiere

Food composition data - The Base for a Multitude of Nutrition Activities

Criteria of Good Food Composition Data

- Comprehensive (Cover core food and key nutrient)
- Represent the food pattern and food habit (Updated every five years)
- Data based on high analytical quality (Implementing international standard tools, solid knowledge of FCT, Data documentation)
- Meet user requirements (e.g. interest in TFA, salt, sugar etc..)

Criteria for Good FCDB

- FCT/FCDB should be easy to use and access.
- Different published FCT/FCDB should be compatible with each other in terms of nutrient definitions, coding etc.
- Minimal missing data.

Criteria for Good FCDB

- Data should be representative of the foods consumed in the country.
- Coverage of foods should be comprehensive.
- Coverage of nutrients should be comprehensive.
- Food descriptions should be clear.
- Data should be consistently and clearly expressed.

Limitations of FCT/FCDB

- Provide average values of nutrient
- Nutrient value variation
- Missing data
- Low quality data
- Lack of data documentation
- Data may not be comparable across countries

The Need to Update FCT

- Change of consumption pattern and food habits.
- Better analytical method.
- New food.
- New interest in certain nutrient.
- Use international standard guidelines.

Preparation and Establishment of FCT/FCDB

- Establish steering committee (user, compilers, donors, Universities, government organizations) and national coordinator.
- Selection of food(core food)
- Selection of nutrient (key nutrient)
- Update the knowledge on FC of the collaborators(Training)
- Collect available analytical data within the country (**Data source**)

Preparation of FCT/FCDB

- Compile the existing data into **Archival database** of software (e.g. FAO/INFOOD Compilation tool)
- Complete missing values in the dataset in the **reference database**, through indirect methods according to international standards (INFOOD standards and guidelines)

Preparation of FCT/FCDB

- Check the quality of data using international guidelines (FAO/INFOODS Guidelines for checking food composition data prior to publication of a user table/database)
- Get the database to be reviewed by peer reviewer (e.g. FAO or INFOODS expert)

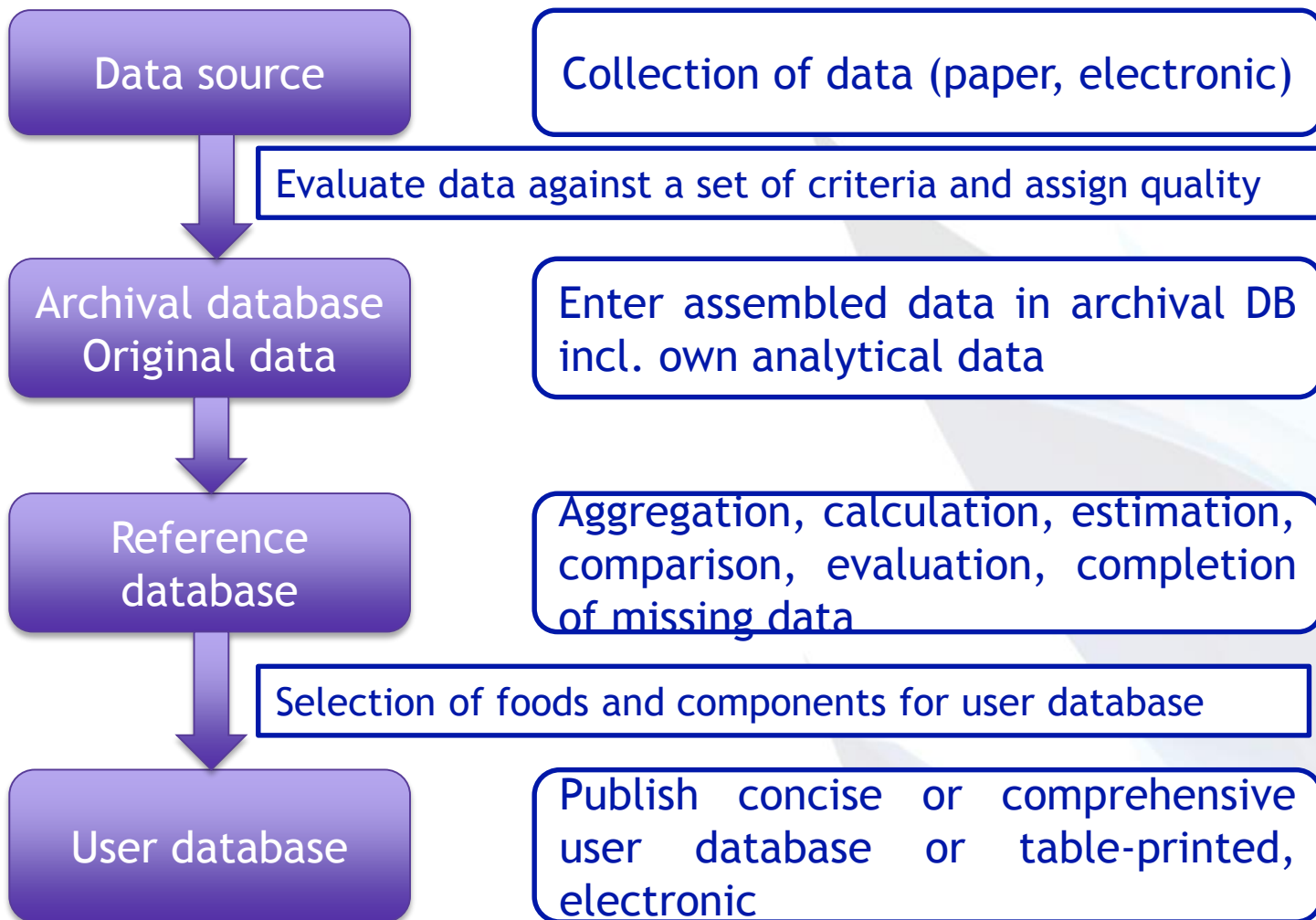
Preparation of FCT/FCDB

- Select the data to be published in previously designed format with introduction, index and necessary annexes (**User database**).

Stages in Food Data Management

- **Data source** (Collect available data from different sources)
- **Archival database**
- **Reference database**
- **User database**

Data Flow in Food Composition Database



Different stages in food composition data DB management (Charrondiere, 2012)

FAO/INFOODS Food Composition Databases

<http://www.fao.org/infoods/infoods/tables-and-databases/faoinfoods-databases/en/>

Reference

- **FAO/INFOODS e-learning Course on Food Composition Data.**
- **Food Composition Data, Production, Management, and Use H.Greenfield and D.Southgate.Second edition 2003.**
- **INFOODS web page**

Thank you

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