Strengths and weaknesses of existing food classification systems

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What is a classification system?

- **Dictionary**: a listing of words and phrases giving information, e.g. definitions, usage, origin, equivalents in other languages

- **Classification/taxonomy**: a structure that organizes concepts into a hierarchy, possibly in a scheme of facets
  - **Facet**: clearly defined, mutually exclusive, and collectively exhaustive aspects, properties or characteristics of a class or specific subject

- **Thesaurus**: a structure that manages the complexities of terminology and provides conceptual relationships, through classification/ontology
  - Descriptors authorized for indexing and searching form a controlled vocabulary (index language)

- **Ontology**: a system of entities with the relationships between them explicitly defined, with a system grammar (or syntax) and an inference engine

*Source: D. Soergel (2002), Thesauri in Digital Libraries, JCDL 2002, Portland, OR, USA*
Food Classifications
The point of view is important

Classification is a point of view

Source:
Danish Food Hygiene campaign,
Danish Food Agency 1994

EFSA Scientific Colloquium on Food Classification, June 2010
Existing food classification systems

Specific international food classification systems

- Food additives (CIAA, Codex Alimentarius GSFA)
- Pesticides (Codex Classification of Foods and Feeds, CCPR)
- Contaminants (Codex Classification for Contaminants and Toxins, GSC)
- EC Common Nomenclature, PRODCOM (Eurostat), World Trade Organisation, ...
- Global Product Classification (GS1 GPC, GSDN Food and Beverage Extension)
- European Food Groups (Cost Action 99/EFCOSUM) and EFSA Food Categorisation (Concise European Food Consumption Database)
- Food Composition Databases (EuroFIR classification)
- ...

and many, many different national food classifications
Important questions to ask about Food Classification Systems

Food classification systems are reporting level and purpose specific:

• At what level are the foods recorded?
• What is the purpose of the classification?
• What do we want to classify?
  Foods as consumed, ingredients, commodities, pre-packed foods, or ...?
Food Classifications
The point of view is important

At what level are the foods recorded in the food classification system?

Source:
Danish Food Hygiene campaign, Danish Food Agency 1994
## Food Classification Systems

At which reporting level?

<table>
<thead>
<tr>
<th>Survey Type</th>
<th>Foods as eaten/prepared</th>
<th>Foods as ingredients/purchased/raw</th>
<th>Foods as commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>X</td>
<td>X**</td>
<td>X</td>
</tr>
<tr>
<td>Household Budget Survey</td>
<td></td>
<td>X</td>
<td>X**</td>
</tr>
<tr>
<td>Food Balance Sheets</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

* obtained by disaggregating food intake into ingredient
** obtained by disaggregating ingredients into commodities
## The impact of reporting level

*European food consumption survey method (EFCOSUM)*

<table>
<thead>
<tr>
<th>EFG g/day</th>
<th>Intake level</th>
<th>Ingr. level</th>
<th>EFG g/day</th>
<th>Intake level</th>
<th>Ingr. level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bread and rolls</strong></td>
<td>142</td>
<td>162</td>
<td><strong>Fruits and fruit products</strong></td>
<td>108</td>
<td>113</td>
</tr>
<tr>
<td><strong>Breakfast cereals</strong></td>
<td>34</td>
<td>14</td>
<td><strong>excl. fruit juices</strong></td>
<td>156</td>
<td>73</td>
</tr>
<tr>
<td><strong>Flour</strong></td>
<td>17</td>
<td>8</td>
<td><strong>Non-alcoholic beverages</strong></td>
<td>587</td>
<td>734</td>
</tr>
<tr>
<td><strong>Pasta</strong></td>
<td>108</td>
<td>113</td>
<td><strong>Coffee, tea, cocoa powder</strong></td>
<td>815</td>
<td>815</td>
</tr>
<tr>
<td><strong>Bakery products</strong></td>
<td>34</td>
<td>14</td>
<td><strong>Beer</strong></td>
<td>187</td>
<td>187</td>
</tr>
<tr>
<td><strong>Rice and other c.p.</strong></td>
<td>89</td>
<td>111</td>
<td><strong>Wine</strong></td>
<td>187</td>
<td>187</td>
</tr>
<tr>
<td><strong>Sugar</strong></td>
<td>15</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Sugar products excl. chocolate</strong></td>
<td>3</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chocolate</strong></td>
<td>7</td>
<td>7</td>
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<td></td>
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<tr>
<td><strong>Vegetable oils</strong></td>
<td>16</td>
<td>33</td>
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<td></td>
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<tr>
<td><strong>Margarine and lipids of mixed origin</strong></td>
<td>15</td>
<td>19</td>
<td></td>
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</tr>
<tr>
<td><strong>Butter and animal fats</strong></td>
<td>2</td>
<td>2</td>
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<tr>
<td><strong>Nuts and nut products</strong></td>
<td>4</td>
<td>8</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Pulses and pulse products</strong></td>
<td>80</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vegetables excl. potatoes</strong></td>
<td>110</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Starchy roots and potatoes</strong></td>
<td>190</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Dietary habits of the Danes, 1995
Food Classification Systems
defined by reporting level (1)

- **Intake level (food as consumed)**
  - National food classifications for consumption surveys (DK, SE, UK, etc.)
  - International food classification for consumption surveys (EPIC)
  - Food classifications for food composition databases (EuroFIR food classification, USDA, etc.)
Food Classification Systems
defined by reporting level (2)

- Ingredient level (pre-packed foods, foods as purchased, raw foods)
  - Classification systems for food composition databases
  - International food classifications for comparing consumption surveys
    - European Food Grouping (Cost Action 99/EFCOSUM)
    - Eurocode2
  - CIAA Food Categorization System/Codex Food Categorization System for food additives (GSFA)
  - Global Product Classification (GS1 GPC, GSDN Food and Beverage Extension)
  - ...

EFSA Scientific Colloquium on Food Classification, June 2010
Food Classification Systems
defined by reporting level (3)

- **Commodity level**
  - Harmonized Commodity Description and Coding System (WTO)
  - Codex Classification of Foods and Animal Feeds (Codex CCPR)
  - Codex General Standard for Contaminants and Toxins in Foods (CCFAC)
  - Food Balance Sheets “Presumptive diet”
  - other classifications of commodities (PRODCOM, etc.)
Food Classifications
The point of view is important

What is the purpose of the classification system?

Source: Danish Food Hygiene campaign, Danish Food Agency 1994
**Food Classification Systems**

International systems for exposure studies

- **Based on commodities’ similar potential for pesticide residues or contaminants**
  - Codex Classification of Food and Animal Feed Commodities (CCPR)
  - Codex General Standard for Contaminants and Toxins in Foods (GSC)
    - [https://apps.who.int/fsf/Codex/GENERALSTANDARDCONTAMINANTSANDTOXINSINFOODS.pdf](https://apps.who.int/fsf/Codex/GENERALSTANDARDCONTAMINANTSANDTOXINSINFOODS.pdf)
  - EC Classification of Products of Plant and Animal Origin

**CLASSIFICATION OF FOOD AND FEED COMMODITIES (CODEX ALIMENTARIUS) [A0643]**

- **A. PRIMARY FOOD COMMODITIES OF PLANT ORIGIN (CCPR) [A0644]**
  - 01 FRUITS (CCPR) [A0649]
  - 02 VEGETABLES (CCPR) [A0650]
  - 03 GRASSES (CCPR) [A0651]
  - 04 NUTS AND SEEDS (CCPR) [A0652]
  - 05 HERBS AND SPICES (CCPR) [A0653]
- **B. PRIMARY FOOD COMMODITIES OF ANIMAL ORIGIN (CCPR) [A0645]**
  - 06 MAMMALIAN PRODUCTS (CCPR) [A0654]
  - 07 POULTRY PRODUCTS (CCPR) [A0655]
  - 08 AQUATIC ANIMAL PRODUCTS (CCPR) [A0656]
  - 09 AMPHIBIANS AND REPTILES (CCPR) [A0657]
  - 10 INVERTEBRATE ANIMALS (CCPR) [A0658]
- **C. PRIMARY FEED COMMODITIES (CCPR) [A0646]**
  - 11 PRIMARY FOOD COMMODITIES OF PLANT ORIGIN (CCPR) [A0659]
- **D. PROCESSED FOOD OF PLANT ORIGIN (CCPR) [A0647]**
  - 12 SECONDARY FOOD COMMODITIES OF PLANT ORIGIN (CCPR) [A0660]
  - 13 DERIVED PRODUCTS OF PLANT ORIGIN (CCPR) [A0661]
  - 14 MANUFACTURED FOODS (SINGLE INGREDIENT) OF PLANT ORIGIN (CCPR)
  - 15 MANUFACTURED FOODS (MULTI-INGREDIENT) OF PLANT ORIGIN (CCPR)
- **E. PROCESSED FOOD OF ANIMAL ORIGIN (CCPR) [A0648]**
  - 16 SECONDARY FOOD COMMODITIES OF ANIMAL ORIGIN (CCPR) [A0664]
  - 17 DERIVED EDIBLE PRODUCTS OF ANIMAL ORIGIN (CCPR) [A0665]
  - 18 MANUFACTURED FOOD (SINGLE-INGREDIENT) OF ANIMAL ORIGIN (CCPR)
  - 19 MANUFACTURED FOOD (MULTI-INGREDIENT) OF ANIMAL ORIGIN (CCPR)
Food Classification Systems
International systems for exposure studies

Allocation tools for food additives
- CIAA Food Categorization System
- Codex Food Categorization System for food additives
  http://www.fao.org/docrep/meeting/005/X7137E/x7137e1v.htm
- Ingredient level (products)

FOOD CLASSIFICATION FOR FOOD ADDITIVES (CODEX ALIMENTARIUS) [A0355]
- BAKERY WARES (CCFAC) [A0632]
- BEVERAGES, EXCLUDING DAIRY PRODUCTS (CCFAC) [A0639]
- CEREALS AND CEREAL PRODUCTS (CCFAC) [A0631]
- COMPOSITE FOODS (CCFAC) [A0641]
- CONFECTIONARY (CCFAC) [A0630]
- DAIRY PRODUCTS, EXCLUDING FATS AND OILS, FAT EMULSIONS (CCFAC) [A0626]
- EDIBLE ICES, INCLUDING SHERBET AND SORBET (CCFAC) [A0628]
- EGG AND EGG PRODUCTS (CCFAC) [A0635]
- FATS AND OILS, AND FAT EMULSIONS (TYPE WATER-IN-OIL) (CCFAC) [A0627]
- FISH AND FISH PRODUCTS (CCFAC) [A0634]
- FOODSTUFFS INTENDED FOR PARTICULAR NUTRITIONAL USES (CCFAC) [A0638]
- FRUITS AND VEGETABLES (CCFAC) [A0629]
- MEAT AND MEAT PRODUCTS (CCFAC) [A0633]
- READY-TO-EAT SAVORIES (CCFAC) [A0640]
- SALTS AND SPICES, SOUPS, SAUCES AND SALADS, PROTEIN PRODUCTS ETC. (CCFAC)
- SWEETENERS (CCFAC) [A0636]

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**Global Product Classification (GS1 GPC)**

http://www.gs1.org/productssolutions/gdsn/gpc/

- **Data synchronisation between manufacturers and distributors**
- **Ingredient level (products)**
- **Support logistics**
- **Reflects potential for microbiological contaminants: shelf life, origin**

### Global Product Classification (GS1 GPC)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5010000</td>
<td>FRUITS/VEGETABLES/NUTS/SEEDS (GS1 GPC) [A0987]</td>
</tr>
<tr>
<td>5011000</td>
<td>MEAT/Poultry/GAME/BATRACHIAN (GS1 GPC) [A1015]</td>
</tr>
<tr>
<td>5012000</td>
<td>SEAFOOD (GS1 GPC) [A1124]</td>
</tr>
<tr>
<td>5013000</td>
<td>MILK/BUTTER/CREAM/YOGHURTS/ CHEESE/EGGS/SUBSTITUTES (GS1 GPC) [A1025]</td>
</tr>
<tr>
<td>5013100</td>
<td>MILK/MILK SUBSTITUTES (GS1 GPC) [A1042]</td>
</tr>
<tr>
<td>5013105</td>
<td>MILK/MILK SUBSTITUTES (PERISHABLE) (GS1 GPC) [A1044]</td>
</tr>
<tr>
<td>5013110</td>
<td>MILK/MILK SUBSTITUTES (SHELF STABLE) (GS1 GPC) [A1045]</td>
</tr>
<tr>
<td>5013120</td>
<td>MILK/MILK SUBSTITUTES (FROZEN) (GS1 GPC) [A1043]</td>
</tr>
<tr>
<td>5013130</td>
<td>CHAFEF/CHAFEF SUBSTITUTES (GS1 GPC) [A1030]</td>
</tr>
<tr>
<td>5013140</td>
<td>BUTTER/BUTTER SUBSTITUTES (GS1 GPC) [A1026]</td>
</tr>
<tr>
<td>5013200</td>
<td>CREAM/CREAM SUBSTITUTES (GS1 GPC) [A1034]</td>
</tr>
<tr>
<td>5013210</td>
<td>YOGHURT/YOGHURT SUBSTITUTES (GS1 GPC) [A1046]</td>
</tr>
<tr>
<td>5013220</td>
<td>MILK/BUTTER/CREAM/YOGHURTS/ CHEESE/EGGS/SUBSTITUTES VARIETY PACKS (GS1 GPC)</td>
</tr>
<tr>
<td>5015000</td>
<td>OILS/FATS EDIBLE (GS1 GPC) [A1051]</td>
</tr>
<tr>
<td>5016000</td>
<td>CONFECTIONERY/SUGAR SWEETENING PRODUCTS (GS1 GPC) [A0976]</td>
</tr>
<tr>
<td>5017000</td>
<td>SEASONINGS/PRESERVATIVES/EXTRACTS (GS1 GPC) [A1155]</td>
</tr>
<tr>
<td>5018000</td>
<td>BREAD/BAKERY PRODUCTS (GS1 GPC) [A0927]</td>
</tr>
<tr>
<td>5019000</td>
<td>PREPARED/PRESERVED FOODS (GS1 GPC) [A1061]</td>
</tr>
<tr>
<td>5020000</td>
<td>BEVERAGES (GS1 GPC) [A0875]</td>
</tr>
<tr>
<td>5022000</td>
<td>CEREAL/GRAIN/PULSE PRODUCTS (GS1 GPC) [A0960]</td>
</tr>
</tbody>
</table>

**EFSA Scientific Colloquium on Food Classification, June 2010**
### European Prospective Investigation into Cancer and Nutrition (EPIC)

- **10 countries** (DK, FR, DE, GR, IT, NL, NO, ES, SW, UK)
- **EPIC SOFT software**
- **Consumption level**

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Potatoes and other Tubers</td>
</tr>
<tr>
<td>2</td>
<td>Vegetables</td>
</tr>
<tr>
<td>02 01</td>
<td>Leafy Vegetables (Except Cabbages)</td>
</tr>
<tr>
<td>02 02</td>
<td>Fruiting Vegetables</td>
</tr>
<tr>
<td>02 03</td>
<td>Root Vegetables</td>
</tr>
<tr>
<td>02 04</td>
<td>Cabbages</td>
</tr>
<tr>
<td>02 05</td>
<td>Mushrooms</td>
</tr>
<tr>
<td>02 06</td>
<td>Grain and Pod Vegetables</td>
</tr>
<tr>
<td>02 07</td>
<td>Onion, Garlic</td>
</tr>
<tr>
<td>02 08</td>
<td>Stalk Vegetables, Sprouts</td>
</tr>
<tr>
<td>02 09</td>
<td>Mixed Salad, Mixed Vegetables</td>
</tr>
<tr>
<td>3</td>
<td>Legumes</td>
</tr>
<tr>
<td>4</td>
<td>Fruits and nuts</td>
</tr>
<tr>
<td>5</td>
<td>Dairy Products</td>
</tr>
<tr>
<td>6</td>
<td>Cereals and Cereal Products</td>
</tr>
<tr>
<td>7</td>
<td>Meat and Meat Products</td>
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<tr>
<td>8</td>
<td>Fish and Shellfish</td>
</tr>
<tr>
<td>9</td>
<td>Eggs and Egg Products</td>
</tr>
<tr>
<td>10</td>
<td>Fat</td>
</tr>
<tr>
<td>11</td>
<td>Sugar and Confectionery</td>
</tr>
<tr>
<td>12</td>
<td>Cakes</td>
</tr>
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<td>13</td>
<td>Non Alcoholic Beverages</td>
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<tr>
<td>14</td>
<td>Alcoholic Beverages</td>
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<tr>
<td>15</td>
<td>Condiments and Sauces</td>
</tr>
<tr>
<td>16</td>
<td>Soups, Bouillon</td>
</tr>
<tr>
<td>17</td>
<td>Miscellaneous</td>
</tr>
</tbody>
</table>

Food Classification Systems

Dietary surveys

- **EFG European Food Grouping**
  - EU Cost Action 99/Eurofoods & EFCOSUM
  - Classification for international comparisons of food consumption & food availability surveys
  - Ingredient level


- **Eurocode 2**
  - FLAIRE Eurofoods-Enfant & COST Action 99
  - Classification of foods according to groups and subgroups useful in dietary studies

http://www.ianunwin.demon.co.uk/eurocode/docmn/ec99/ecmgintr.htm

EUROCODE 2 FOOD CLASSIFICATION [A0642]
- 01 MILK AND MILK PRODUCTS [EUROCODE2][A0724]
- 02 EGG AND EGG PRODUCTS [EUROCODE2][A0725]
- 03 MEAT AND MEAT PRODUCTS [EUROCODE2][A0726]
- 04 FISH AND FISH PRODUCTS [EUROCODE2][A0727]
- 05 FATS AND OILS [EUROCODE2][A0728]
- 06 GRAINS AND GRAIN PRODUCTS [EUROCODE2][A0729]
- 07 PULSES, SEEDS, KERNELS, NUTS AND PRODUCTS [EUROCODE2][A0730]
- 08 VEGETABLES AND VEGETABLE PRODUCTS [EUROCODE2][A0731]
- 09 FRUIT AND FRUIT PRODUCTS [EUROCODE2][A0732]
- 10 SUGAR, CHOCOLATE AND RELATED PRODUCTS [EUROCODE2][A0733]
- 11 BEVERAGES (NON-MILK) [EUROCODE2][A0734]
- 12 MISCELLANEOUS FOODS [EUROCODE2][A0735]
- 13 PRODUCTS FOR SPECIAL NUTRITIONAL USE [EUROCODE2][A0736]

EUROPEAN FOOD GROUPS [EFG][A0690]
- 01 BREAD AND ROLLS [EFG][A0691]
- 02 BREAKFAST CEREALS [EFG][A0692]
- 03 FLOUR [EFG][A0693]
- 04 PASTA [EFG][A0694]
- 05 BAKERY PRODUCTS [EFG][A0695]
- 06 RICE AND OTHER CEREAL PRODUCTS [EFG][A0696]
- 07 SUGAR [EFG][A0697]
- 08 SUGAR PRODUCTS, EXCLUDING CHOCOLATE [EFG][A0698]
- 09 CHOCOLATE [EFG][A0699]
- 10 VEGETABLE OILS [EFG][A0700]
- 11 MARGARINE AND LIPIDS OF MIXED ORIGIN [EFG][A0701]
- 12 BUTTER AND ANIMAL FATS [EFG][A0702]
- 13 NUTS [EFG][A0703]
- 14 PULSES [EFG][A0704]
- 15 VEGETABLES, EXCLUDING POTATOES [EFG][A0705]
- 16 STARCHY ROOTS AND POTATOES [EFG][A0706]
- 17 FRUITS [EFG][A0707]
- 18 FRUIT JUICES [EFG][A0708]
- 19 NON-ALCOHOLIC BEVERAGES [EFG][A0709]
- 20 COFFEE, TEA, COCOA POWDER [EFG][A0710]
- 21 BEER [EFG][A0711]
- 22 WINE [EFG][A0712]
- 23 OTHER ALCOHOLIC BEVERAGES [EFG][A0713]
- 24 RED MEAT AND MEAT PRODUCTS [EFG][A0714]
- 25 POULTRY AND POULTRY PRODUCTS [EFG][A0715]
- 26 OFFALS [EFG][A0716]
- 27 FISH AND SEAFOOD [EFG][A0717]
- 28 EGGS [EFG][A0718]
- 29 MILK [EFG][A0719]
- 30 CHEESE [EFG][A0720]
- 31 OTHER MILK PRODUCTS [EFG][A0721]
- 32 MISCELLANEOUS FOODS [EFG][A0722]
- 33 PRODUCTS FOR SPECIAL NUTRITIONAL USE [EFG][A0723]

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Food Classification Systems

Dietary supplements

- CEN/TC387 Project Committee: “Food Data” (SIS/NFA, 2008)
  - Requirements on data structure of FCDBs and interchange of food composition data
  - Identification, description, classification & labelling of foods and ingredients

- Databases on dietary supplements
  - Europe: Finland, the Netherlands, France, Denmark, Ireland
  - US: Office of Dietary Supplements
Food Classification Systems
Dietary supplements - DRAFT

- Proposed classification for Dietary Supplements (Language facet A)
  - AMINO ACID OR PROTEIN SUPPLEMENT
  - BOTANICAL OR HERBAL SUPPLEMENT
  - MINERAL SUPPLEMENT
    - MULTI MINERAL SUPPLEMENT
    - SINGLE MINERAL SUPPLEMENT
  - METABOLITE, EXTRACT OR ISOLATE SUPPLEMENT
    - FATTY ACID OR FAT SUPPLEMENT
    - ENZYME SUPPLEMENT
    - PHYTOESTROGEN SUPPLEMENT
  - VITAMIN SUPPLEMENT
    - MULTIVITAMIN SUPPLEMENT
    - SINGLE VITAMIN SUPPLEMENT
  - DIETARY SUPPLEMENT, COMBINATION
    - VITAMIN-MINERAL COMBINATION SUPPLEMENT
      - MULTIVITAMIN/MINERAL SUPPLEMENT
      - SINGLE VITAMIN/SINGLE MINERAL SUPPLEMENT
    - BOTANICAL SUPPLEMENT WITH VITAMINS OR MINERALS
    - MULTI VITAMIN-MINERAL AND AMINO ACID COMBINATION SUPPLEMENT
    - MULTI VITAMIN-MINERAL AND FATTY ACID COMBINATION SUPPLEMENT
    - VITAMIN- FATTY ACID COMBINATION SUPPLEMENT
  - DIETARY SUPPLEMENT, OTHER
    - CARBOHYDRATE SUPPLEMENT
    - FIBER SUPPLEMENT
    - ELECTROLYTE SUPPLEMENT
  - DIETARY SUPPLEMENT TYPE UNKNOWN
Food Classification Systems

Purpose and food level specific

- **Food classification systems are purpose specific** (reflect specific characteristics, e.g. from legislation) and must exist in parallel.

- A food (and food group) can exist on all reporting levels, but the **characteristics of the food change from level to level**.

- **Food classification systems are food level specific** (for exposure assessment, a classification system cannot cover several food levels at the same time).

- **Food classification systems are related**, but not necessarily (i.e. almost never) compatible.
Food Classifications
The point of view is important

If classification systems are so different, how can information be retrieved?

How can data be compared?

Source:
Danish Food Hygiene campaign, Danish Food Agency 1994
Solution: Mapping between classification systems

- Create links between food identification systems, by “mapping” one system to another.
- Architecture for code translation systems:

  - Linear or sequential architecture
  - Master-code architecture

Example: CARE Food Safety Project

Food classification in the LanguaL thesaurus

LanguaL (http://www.langual.org) includes important food classifications in parallel in Facet A, and provides Related Terms for the different classifications.

Classification for Dietary Supplements and EFSA Main Food Categories are proposed for inclusion in LanguaL 2010.
Food classification in the LanguaL thesaurus

Multiple facets and languages make the LanguaL thesaurus a good choice for “Master Code” for mapping classification systems

<table>
<thead>
<tr>
<th>PRODUCT TYPE [A0361]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOOD ADDITIVES [A0323]</td>
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<tr>
<td>PRODUCT TYPE, EUROPEAN UNION [A0356]</td>
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<td>PRODUCT TYPE, INTERNATIONAL [A0352]</td>
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<td>PRODUCT TYPE, NOT KNOWN [A0001]</td>
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<td>PRODUCT TYPE, OTHER [A0004]</td>
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<td>PRODUCT TYPE, USA [A0289]</td>
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<td>FOOD SOURCE [B1564]</td>
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<tr>
<td>PART OF PLANT OR ANIMAL [C0116]</td>
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<tr>
<td>PHYSICAL STATE, SHAPE OR FORM [E0113]</td>
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<td>EXTENT OF HEAT TREATMENT [F0011]</td>
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<td>COOKING METHOD [G0002]</td>
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<td>TREATMENT APPLIED [H0111]</td>
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<td>PRESERVATION METHOD [J0107]</td>
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<td>PACKING MEDIUM [K0020]</td>
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<td>CONTAINER OR WRAPPING [M0100]</td>
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<td>FOOD CONTACT SURFACE [N0010]</td>
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<td>CONSUMER GROUP/DIETARY USE/LABEL CLAIM [P0032]</td>
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<tr>
<td>GEOGRAPHIC PLACES AND REGIONS [R0010]</td>
</tr>
<tr>
<td>ADJUNCT CHARACTERISTICS OF FOOD [Z0005]</td>
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Conclusions

- **All classifications are purpose driven**
  - Created for a specific purpose/use
  - Fit for purpose

- **This is both a strength and a weakness**
  - A classification system often cannot be used for another purpose than the one it was designed for
  - A classification system cannot be used for foods at all levels (foods as eaten, ingredients, commodities)
  - Mono-hierarchical classifications lack flexibility, both for indexing and for retrieval

- **Mapping is necessary**
  - A facetted classification or thesaurus can be used as “Master code” to map between classification systems
  - Recipe/processing factors

*EFSA Scientific Colloquium on Food Classification, June 2010*
Food classifications depend on the point of view

Thank you for your attention!

Source: Danish Food Hygiene campaign, Danish Food Agency 1994