

Indexing Foods in European Food Composition Databases with the LanguaL Food Description Thesaurus

Jayne Ireland¹ and Anders Møller²

¹French Food Safety Agency (AFSSA), Maisons -Alfort, France, jireland@afssa.fr

²Danish Food Information (DFI), Roskilde, Denmark, am@danfood.info

Aims:

EuroFIR, the world-leading European Network of Excellence on Food Composition Databank systems, aims to develop and integrate a comprehensive, coherent and validated databank providing a single, authoritative source of food composition data in Europe.

Systematic food description is essential to compare and retrieve information from different databases. However, a questionnaire on nutrient databases in Europe revealed great differences in food identification: food names in different languages, in-house food classification methods, and incomplete taxonomic information. In order to have a uniform way of describing foods despite language and cultural barriers, it was decided to use LanguaL to link foods in the databases.

Methods:

Originally developed in the US, LanguaL is a multilingual, faceted thesaurus for describing foods. Information about the international LanguaL thesaurus can be obtained at the website: www.langual.org.

In order to facilitate food indexing, the EuroFIR project has developed a **Food Product Indexer** software incorporating the LanguaL thesaurus and a number of already indexed data sets. Easy to use, all information is available on one screen. The software also allows descriptions to be copied from one food to another. In November 2005, the LanguaL thesaurus and FPI software were presented at a two-day food indexing course, attended by food composition data compilers from 20 countries.

Table 1. Indexed food sets

20 national data sets	
Belgium_NUBEL	Italy_INRAN
Bulgaria_NCH	Netherlands_NEVO
Denmark_DFVF	Norway_UiO
Finland_FINELI	Poland_NFNI
France_AFSSA	Portugal_INSA
Germany_BFEL_BLS	Slovakia_FRI
Greece_NKUA	Spain_CESNID-INYTA
Iceland_ISGEM	Sweden_NFA
Israel_BGU	Turkey_TUBITAK
Italy_CSPO	United Kingdom_IFR
Specialized data sets	
EuroFIR BASIS (bioactive substances in foods)	
INFORMALL (information on allergenic foods)	
GEMS/Foods (WHO/FAO Global Environmental Monitoring System)	

Figure 1. How is food described with LanguaL?

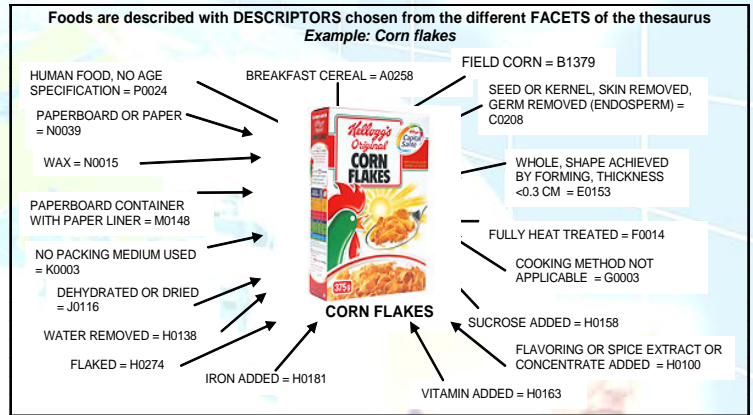
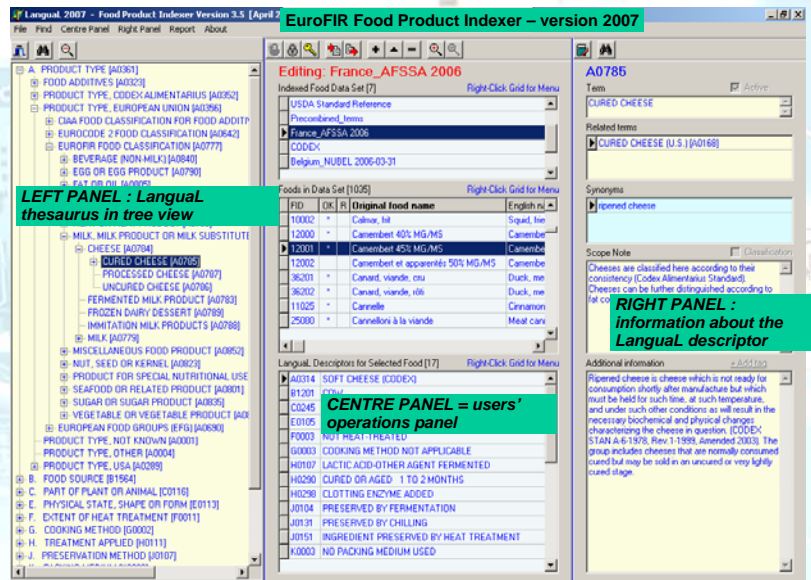


Figure 2. Food Product Indexer



Results:

By the end of 2006, 20 compilers in the EuroFIR network had delivered indexed food sets, with an average of 1000 indexed foods per national database (see Table 1). The result of the food indexing was thus a set of about 21,000 indexed foods able to be searched in the EuroFIR network. Specialized data sets were also indexed. A second food indexing course in March 2007 extended the indexing with 7 new European countries.

Conclusions:

Standardized food description allows foods to be linked and compared across borders and language barriers. EuroFIR's LanguaL-based search system demonstrates the benefits of using standardized systems for linking food composition data from all over the world.