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Harmonization of Data Aggregation Procedures for Food Composition Databases within EuroFIR

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INTRODUCTION

To determine the best estimate of a nutrient value of a food item several nutrient data points can be compiled and aggregated for Food Composition Databases (FCDBs). Currently, for calculation of the best estimate there is no harmonized data aggregation procedure available.

OBJECTIVE

To develop a harmonized data aggregation procedure for FCDBs within EuroFIR.

METHODOLOGY

A common definition of data aggregation in regard to FCDBs was developed. Based on this definition MRI and ANSES designed a questionnaire which was sent to all EuroFIR compilers to get an overview of their current data aggregation practices. Answers were collected from 13 FCDBs. To proceed on this topic, a EuroFIR working group Data Aggregation was built. At the EuroFIR Food Forum 2019, the working group conducted a workshop to specify the further work.

MAIN FINDINGS

The definition of data aggregation comprises three successive steps: 1. Selection of nutrient data from available data points based on criteria. These criteria were determined with regard to their impact on the quality of data points such as age of data. According to the results of the questionnaire, similarities in the use of selection criteria were identified such as ranking data sources with analytical data as first choice. 2. Calculation of the best estimate with statistical methods or selection of a single data point according to defined rules. Most compilers prefer the mean or weighted mean for calculation or choose one single data point as best estimate. 3. Consistency checks. The EuroFIR working group has obtained a consensus of priority topics for the further work: Application of common selection criteria and choice of appropriate statistical methods for calculation of the best estimate.

CONCLUSION

The overview of the data aggregation practices of the FCDBs is the basis for further work. The next step of the EuroFIR working group is to focus on the agreed priority topics.

Key words: best estimate, data aggregation, harmonization, selection criteria, statistical methods