UPDATING THE SPANISH FOOD COMPOSITION DATABASE (BEDCA): IMPLEMENTATION OF VERSION 2.3.

M.A. Martínez Burgos[1,2], A. Moreno Martínez[1], I. Martínez de Victoria Carazo[1], M.D. Yago Torregrosa[1,2], M. Mañas Almendros[1,2], M.B. Olmedilla Alonso[4], G. Ros Berruezo[3], R. Moreno Rojas[5], E. Martínez de Victoria Muñoz[1,2]

[1] Institute of Nutrition and Food Technology "José Matáix", University of Granada;
[2] Department of Physiology, Faculty of Pharmacy, University of Granada;
[3] Department of Food Technology, Nutrition and Food Science, University of Murcia;
[4]Department of Metabolism and Nutrition, Institute of Science and Technology Food and Nutrition, Council for Scientific Research (CSIC);
[5]Departamento of Food Science and Food Technology, Faculty of Veterinary Medicine, University of Córdoba

INTRODUCTION

Food composition databases (FCDB) are important tools for food and nutrition professionals (Pennington, 2007). Food composition data can be obtained from various sources. Different proposals exist to evaluate the quality of these data (Martínez-Victoria, et al., 2015).

METHODS

1. Food description and coding systems:
a) FoodEx2 (FoodEx2 Browser -user's guide, EFSA 2017).
b) LanguaL (2008, version v.3.91).
2. Scientific literature.
3. Excel software (data and metadata).
4. BEDCA (version 2.2).
5. SPSS package (version 22.0).

Figure 1a. FoodEx2 Food Coding (FoodEx2 Browser -user's guide, 2017)

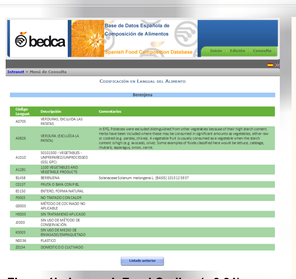

Figure 1b. LanguaL Food Coding (v.3.91)

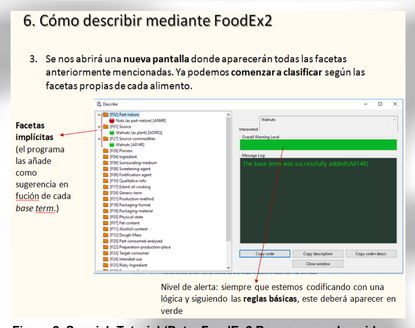

Figure 2. Spanish Tutorial (Data: FoodEx2 Browser -user's guide, 2017)

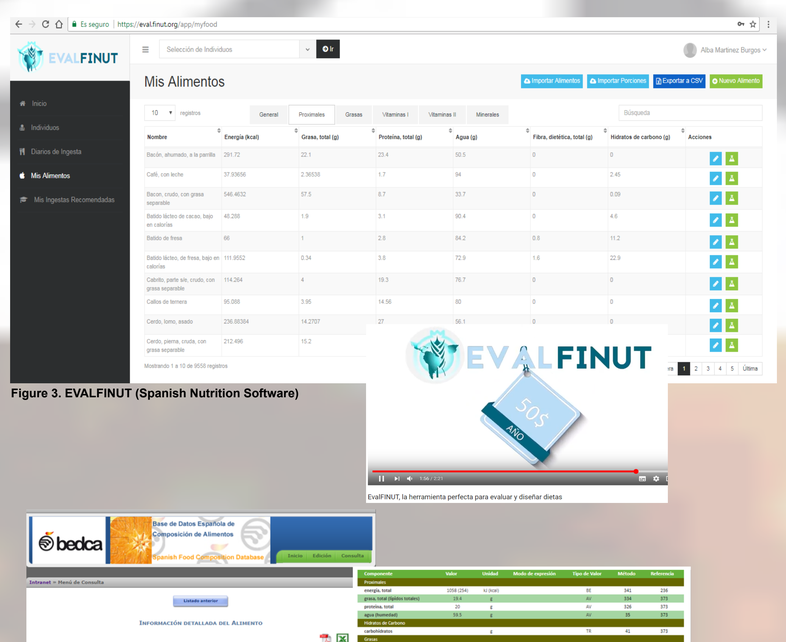

Figure 3. EVALFINUT (Spanish Nutrition Software)

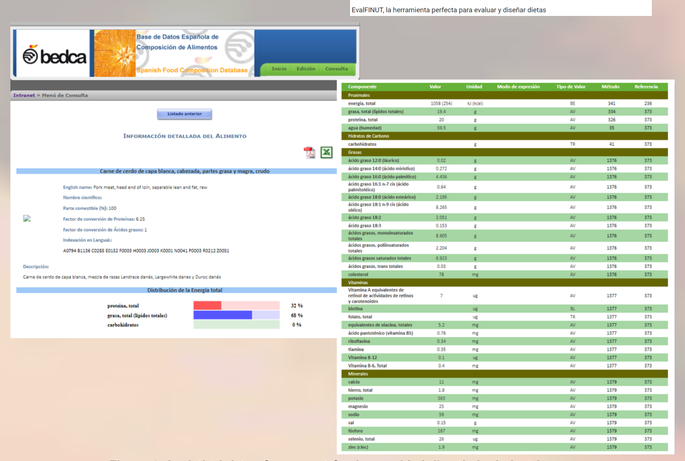

Figure 4. Analytical data of new meat foods, provided directly by industries and analyzed in the Food Analysis Unit of the UGR (BEDCA v2.3)

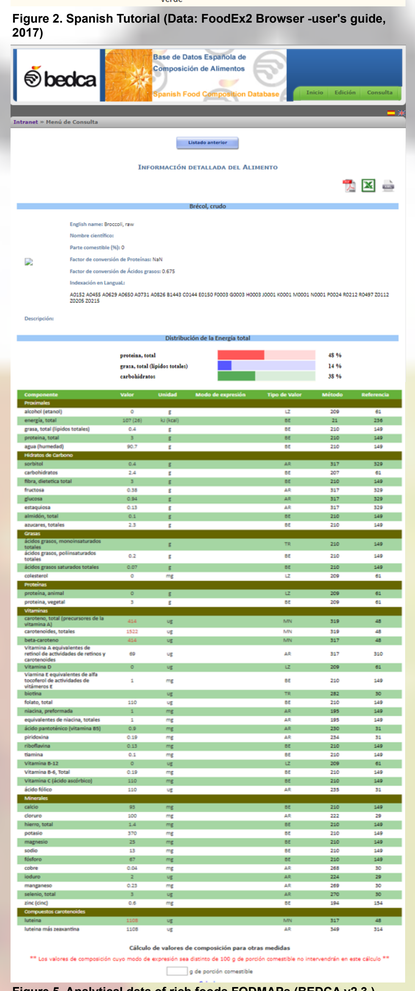

Figure 5. Analytical data of rich foods FODMAPs (BEDCA v2.3)

RESULTS

The information provided on BEDCA in the last Forum of EuroFIR (Brussels, 2016) included a list of individual fatty acids, trans fatty acids, mono and disaccharides, non-provitamin carotenoids, the classification of foods, based on their content of natural sugars and/or added. The profile of vitamins and minerals was also completed, "controversial" data were reviewed, the specification of foods with and without gluten of different commercial brands, their inclusion in BEDCA and the development of a protocol for the generation of recipes, based on guidelines EuroFIR. We managed to start a process of compatibilization and readjustments, for the inclusion of BEDCA in EVALFINUT (http://www.finut.org/evalfinut/), a computer application developed by the Iberoamerican Nutrition Foundation (FINUT), for evaluation or design of diets.

In the new stage:

a) We have recoded and reclassified with the latest version of FoodEx2, after the changes imposed by EFSA recently (FoodEx2 Browser -user's guide, 2017) all the foods included in BEDCA (Figure 1a). This has meant a comprehensive, expensive and long-lasting work. BEDCA maintains LanguaL (Figure 1b).

b) We have developed a guide-tutorial of FoodEx 2 employment in Spanish, for use by postgraduate students, in specific courses, on tools and methods for nutritional studies of the University of Granada (Figure 2).

c) We have finalized the process of inclusion of BEDCA in EVALFINUT (Figure 3).

d) The composition data and their coding in LanguaL and FoodEx2 of new meat foods, provided directly by industries, previously analyzed in the Food Analysis Unit of the UGR, have been included (Figure 4).

e) We have expanded the list of Spanish foods from the latest food surveys, not included in BEDCA.

f) We have compiled and included in BEDCA analytical data of rich foods FODMAP (Figure 5), in order to establish information alerts, for patients with inflammatory bowel disease.

g) Synergies have been established with relevant companies in the Spanish market, allowing us to analyze and include BEDCA's own data on numerous white label foods, which are very consumed in Spain.

CONCLUSIONS

BEDCA is currently the only FCDB developed in Spain with documented and compiled data, according to EuroFIR standards and included in FoodExplorer.

BEDCA allows users and professionals in Nutrition and Public Health the online use of quality food composition data.

REFERENCES

Pennington, J.A.T. Food composition data: The foundation of dietetic practice and research. Journal American Dietetic Association, 107 (2007), pp. 2105–2113.

Martínez-Victoria E, Martínez de Victoria I, Martínez-Burgos MA. Intake of energy and nutrients; harmonization of Food Composition Databases. Nutr Hosp. 2015 Feb 26;31 Suppl 3:168-76.

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