COMMENTS BY THE AGRICULTURE & FOOD SYSTEMS INSTITUTE (AFSI)

ON THE

DATA COLLECTION AND ANALYSIS TOOLS FOR FOOD SECURITY AND NUTRITION

HLPE E-CONSULTATION ON THE REPORT’S SCOPE

The Agriculture & Food Systems Institute (AFSI) is a nonprofit organization headquartered in Washington DC with a mission to enable safe and sustainable agri-food, health, and environmental systems. We advance science for the public benefit through applied research, capacity-building, education, databases, and outreach.

Food Security and Nutrition (FSN) is a very broad area, and it is highly likely that a collection of databases and analytical tools will be needed to be able to characterize different facets it encompasses. We would like to share our experience with the Crop Composition Database (CCDB) that addresses the levels of nutritional components in some of the crops that form the world’s food and feed supply. The CCDB has been widely used and cited since its launch in 2003. It has applicability in designing healthy diets for humans, livestock, and is used as a reference by risk assessors and regulators for approval of new plant varieties.

The latest version of the CCDB which was released in October of 2020 is a repository of compositional data comprising more than 1.25 million data points in totality from 10 crops across 215 components collected from multilocalational field trials since 1995 across 14 countries. We would like to share our experience and lessons that we have learned in successfully designing, updating, and maintaining this resource. Some of the key learnings are summarized below:

1. The success of the CCDB is attributed in part to advice by a Working Group (WG) comprising of scientists. All members on the WG are experts in one or other aspect of compositional data such as with expertise in a particular crop, analytical methodologies, design of field trials, or statistical analyses. Collective input by these crop experts has resulted in building a robust resource of high-quality compositional data.

   Extrapolating this learning to the FSN tools, we underscore the importance of identifying early on, the objective for a specific tool and identifying subject matter experts to lay out a blueprint for the tool and their subsequent involvement in progressive refinement.

2. Another factor in running the CCDB is management of the resource by a program manager (PM) with scientific expertise, clear understanding of the resource and its working, as well as involvement with its operations.

   Extrapolating the role of the PM to developing FSN tools, we suggest aligning expertise and experience of the PM with a specific tool or a collection of tools deployed towards a specific area of the food system.

3. Collection of high-quality data is central to establishing a robust database. As with the CCDB, we recommend having a set of clearly outlined data acceptance/collection criteria. These criteria should be described in sufficient detail to aid understanding of how the data should be collected. Having clear data acceptance/collection criteria enables collection of high-quality data in the first place.

4. Financial support is key for the development of any such tool or database. It is important to have sufficient monetary resources for the data collection project(s).
5. The role of effective and regular communication of AFSI’s PM with the WG (in case of the CCDB – monthly), data providers (in the event of addition of new data), and software developers (in the event of database functionality update and version update) is at the heart of a successful project as in the case of the CCDB. In this case, close communication with experts enables a reviewing of the quality of data, analytical methodologies used to generate the data as well as discussions on improving the functionality of the database.

6. A mechanism for collection of the data on a regular basis (intervals may be determined depending upon the data that is being collected) should be deployed.