Root Trait Genetic Characterization

A Data Management Plan created using DMPTool

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Data and Materials Produced

Because of the interdisciplinary nature of this proposal, data produced will range from observational and experimental data collected in the lab and field to large bioinformatics datasets and datasets generated through computer-simulated experiments. These data will be mainly in digital format. Several projects will generate 'omic level data; genomics and phenomics. Ground penetrating radar (GPR) and spectral imagery image files.

Standards, Formats and Metadata

Data gathered will typically be in the following formats: MS Excel (.xlsx), MS Word (.docx), Comma Separated Values (.csv), Portable Document Format (.pdf), Joint Photographic Experts Group (.jpg), Tagged Image File Format (.tiff), and GPR files requiring proprietary software K2FastWave (.dt).

Roles and Responsibilities

This large interdisciplinary project will employ a standardized data management program. Each data set will be linked to a project description that describes the purpose of the research, the methods used to generate the data and the experimental design, the period of time data were collected and if the data has been updated. The Fellow will be responsible for ensuring the implementation of the data management plan with a specific check at each quarterly review. Maintained and updated laboratory notebook, either digital or hard copy will be required. Here we will implement best practices followed by industry to assure documentation of the generation of intellectual property. Each quarter, Fellow will have a data and materials review with the current hosting sponsor to provide accountability.

Dissemination Methods

To facilitate file access and sharing, we will develop a detailed plan for sharing data between collaborators on each project, including the use of secure cloud-based access such as Dropbox, and Google Drive. Generally, participants will be expected to archive and make final datasets publicly available within two years of collection, or as soon as they are published, whichever comes first. Work will be undertaken to begin an implementation process on data to CassavaBase to consolidate all data in a specific database.

Policies for Data Sharing and Public Access

As part of facilitating increasingly complex webs of collaboration, as well as holding members of a collaboration responsible for the data they produce, expectations for project deliverables and plans for disseminating deliverables, when applicable, will be developed at the start of a project and revised as required during the collaboration. Examples of steps collaborators will take to facilitate productive policies for data re-use and re-sharing include:

- Creating a list of participants, by section of a project, for all projects being proposed so that credit can be correctly attributed,
- Including each contributor's expectations for acknowledgement,
- Specifying if data are under license such as common data licenses from Creative Commons or Open Data Commons.

Archiving, Storage and Preservation

Until the full integration of data to the CassavaBase system, cloud archiving via Dropbox and a redundant Google Drive, as well as hard copy, will be the form of storage.