Plan Overview

A Data Management Plan created using DMPTool

Title: Root Trait Genetic Characterization

Creator: Alfredo Delgado

Affiliation: Texas A&M University

Funder: National Science Foundation (nsf.gov)

Funding opportunity number: NSF 15-501

Template: NSF-BIO: Biological Sciences (2015-)

Last modified: 11-07-2017

Root Trait Genetic Characterization

Data and Materials Produced

Describe the types of data, physical samples or collections, software, curriculum materials, and other materials to be produced in the course of the project. (For collaborative proposals, the DMP must cover all the various data types being collected by each collaborator.)

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

Describe the standards to be used for all the data types anticipated, including data or file format 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

Describe the roles and responsibilities of all parties with respect to the management of the data (including contingency plans for the departure of key personnel from the project).

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

Describe the dissemination methods that will be used to make data and metadata available to others during the period of the award, and any modifications or additional technical information regarding data access after the grant ends.

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

Describe the PI's policies for data sharing, public access and re-use, including re-distribution by others and the production of derivatives. Where appropriate, include provisions for protection of privacy, confidentiality, security, intellectual property rights and other rights.

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

Where relevant, describe plans for archiving data, samples, software, and other research products, and for on-going access to these products through their lifecycle of usefulness to research and education.

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.