
Dry Bean Agronomy and Pest Management

A Data Management Plan created using DMP Assistant

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Project abstract:

Dry bean is an important niche field crop in Canada, with Ontario typically having the largest production area. Dry bean is a high management crop with a number of key pest issues. Applied research is needed to keep dry beans competitive with the major Ontario field crops, in order to maintain acreage and the processing infrastructure needed for a viable industry. There is a real lack of knowledge into dry bean pest management agronomy, fertility and tillage systems throughout North America. This research proposal will fill this knowledge gap, and provides growers with the applied research answers they need to remain competitive against the major Ontario field crops.

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Dry Bean Agronomy and Pest Management

Data collection

Provide an overview of the data that will be generated, collected or acquired to support this project. If data will be acquired from a third party, specify the source.

The data collected during this project will consist of pest incidence and severity, pest damage to the crop, crop phytotoxicity, plant emergence and early season plant vigour, crop growth and development (height, dry weight, developmental stage, % ground cover and crop maturity) and crop yield parameters (seed yield, seed weight and seed quality).

What method(s) of data collection will be employed?

Pest and crop damage, as well as plant vigour, maturity and seed quality data will be visual ratings. Plant emergence, plant height, dry weight, seed weight and seed yield will be measured on a subset of plants in each experimental unit.

What types of data will be included?

Numerical data.

What software or digital formats will be used to collect, manage and analyze the data?

Data will be collected and managed using MS Excel and ARM (Agriculture Research Manager) software.

Provide an indication of the scope of the data?

Data will be collected primarily at the Huron Research Station. Additional sites may be present in grower fields. Typically two data points are generated for each study each year.

Data storage

Estimate the size of data storage that will be required.

Approximately 5 MB of data storage is required each year.

Where will your data be stored during the collection, collation and analysis phases of the project?

The data is stored on an encrypted password protected computer in the lab. This computer has a mirrored hard drive to provide one back up copy. Data is also stored in OneDrive to provide a second back up copy.

What backup strategy will be employed?

This computer has a mirrored hard drive to provide one back up copy. Data is also stored in OneDrive to provide a second back up copy.

How will your data files be organized? What file naming conventions will you use? A brief overview or example would be adequate.

Data files are organized into folders based on year, pest and trial location. Files names describe the trial, pest, location and year (e.g. white mold fungicide efficacy in dry beans HRS 2021).

What metadata will be developed for your data? Will there be supplemental documentation prepared to assist with the interpretation and analysis of your data?

Metafiles are developed to organize data for statistical analysis for a scientific publication, once sufficient data has been generated. Columns are created at this point to identify specific year, location and experiment.

Data archiving and preservation

Will you deposit your data in the UG data repository or an external data repository? If you are opting to not archive your data in a repository, where will your data be housed after completion of your project?

We will use the UG data repository after completion of the project.

Discuss any data transformations that will be needed so your data is preserved in appropriate, non-proprietary formats.

Data will be exported from Excel and preserved as plain text CSV files.

If some of your data will not be preserved, how long will you retain it? Will the non-preserved data be destroyed?

All data will be preserved and will not be destroyed.

Sharing and reuse

Will the data that you archive in a data repository be made available for sharing and reuse by other researchers?

Data in the data repository will be available for sharing and reuse by other researchers.

Explain which version of your data or subset of your data will be shared.

A de-identified version of the final data will be shared.

When will your data be available for discovery by other researchers? Will you impose an embargo on publication of your data? If so, please provide details on the duration of the embargo.

Data will be available at the completion of the project, once publication is finished.

Will you limit who can access your data? If so, who will that be and why are you limiting the data's reuse?

Final, de-identified data will be openly available. The raw data may be provided to researchers who submit a request to C.L. Gillard.

Are there specific license terms you will assign to users of your data?

The data will be licensed with a CC Attribution-ShareAlike license.

Restrictions/limitations

Are there limitations or constraints on how you manage your data resulting from legal, ethical or intellectual property concerns?

No

Would your data need to be anonymized or de-identified before being shared with others?

Some data may need to be de-identified before sharing to remove the co-operator name and address.

Confidential information

What information do you want to include in your DMP that should not be publicly shared?

All information can be publicly shared.