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From Compost Carryover to Compost Legacy: Intercropping and compost effects on yield, quality, and soil health in organic dryland wheat

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Expected Data Type

We will generate data in the lab and field. This data will include numerical and or categorical data on tree growth, groundcover growth, soil properties, arthropods, surveys of field day participants, feedback from the stakeholder advisory panel, and photos. Additional data regarding crop applications, implements used, and management practices will be generated. Field data will be entered in lab notebooks, scanned to PDF at the end of each day and transcribed to excel spreadsheets on a weekly basis. Lab data may be entered into lab notebooks, directly into a lab computer, or captured with instrument specific software and exported directly to a spreadsheet. Survey data is also regularly transcribed from paper to electronic format. Digital photos are uploaded from the camera to a computer on a regular basis.

All data will be manually double checked for errors and processed using statistical software.

Data Format

Data will entered directly into excel spreadsheets and saved as both excel and tab delimited formats using a file naming tree (project, data type, date). Data captured from lab instruments will be exported and saved as text, tab delimited or image files and also saved in excel.

Both raw and processed data will be stored to facilitate error checking.

Meta-data describing the goals of the project, location of research sites, methods or means of collection, collection dates and all appropriate units will be generated for all data type to facilitate data sharing.

Data Storage and Preservation

Lab notebooks will be scanned to pdf format the day of entry and transcribed to the appropriate electronic format (e.g. excel) on a weekly basis.

All lab notebooks will be stored in a locked lab and hard copies of surveys in a locked cabinet. Computer data is backed up daily on Box (or other cloud based storage system).

Reminders to double check data entry and backup data at the end of each day will be posted in the lab. Students and technicians will be reminded of data quality and control procedures at monthly lab meetings.
At the end of the project, project PIs will work with USU librarians to store data and metadata in the USU long-term repository Digital Commons, which uses a metadata scheme based on Dublin Core. Data will be placed under an embargo preventing public access until the date of publication.

Representative arthropod specimens will be archived in the USU Insect Collection, and examples of ground cover plants will be dried, mounted, and deposited in the Intermountain Herbarium.

Data Sharing and Public Access

Once published, the raw data (text, tab delimited or image files) and corresponding metadata will be made publicly available through the Utah State University Digital Commons and other public repositories appropriate to the published location.

Data embargo periods will vary depending on the speed at which the data can be analyzed and published.

Roles and Responsibilities

All students and staff on the project are responsible for digitizing and or manually entering and backing up data on a daily basis and adhering to the data management plan.

Each PI/CoPI on the project is responsible for reminding students and staff under their direct supervision on a regular basis of the importance of maintaining the data management plan. Each PI/CoPI on the project is also responsible for double checking that the data management plan is indeed being adhered to by all students and staff.

Jennifer Reeve, the lead PI on this project, will be responsible for collecting data from the CoPIs and working with the USU librarians to make it available on Digital Commons and or other sources after publication.

Monitoring and Reporting

The lead PI and all Co PIs will meet annually to discuss compliance with, adequacy and any necessary revisions to the data management plan.

The lead PI will be responsible for collecting annual and final progress reports from all CoPIs and submitting them to the USU Agricultural Experiment Station Director for submission to USDA NIFA.