

9-11-2019

## Increasing the Efficacy and Integration of a Biocontrol Tool for Managing Canada Thistle in the Intermountain West

Steve Young  
*Utah State University*, [steve.young@usu.edu](mailto:steve.young@usu.edu)

Follow this and additional works at: [https://digitalcommons.usu.edu/funded\\_research\\_data](https://digitalcommons.usu.edu/funded_research_data)



Part of the [Agriculture Commons](#), and the [Plant Sciences Commons](#)

---

### Recommended Citation

Young, S. (2019). Increasing the Efficacy and Integration of a Biocontrol Tool for Managing Canada Thistle in the Intermountain West. Utah State University. <https://doi.org/10.26078/6S2R-FH39>

This Grant Record is brought to you for free and open access by DigitalCommons@USU. It has been accepted for inclusion in Funded Research Records by an authorized administrator of DigitalCommons@USU. For more information, please contact [digitalcommons@usu.edu](mailto:digitalcommons@usu.edu).



## Data Management Plan

### **Overview**

This Data Management Plan (DMP) describes the management, dissemination, retention, and archiving of products (data and publications) from the proposed research. The proposed DMP follows USDA-NIFA guidelines, and to the greatest extent possible, adheres to best practices developed by the Research Data Management Services (<https://datamanagement.usu.edu/index>) at Utah State University, who will be available for consultation as we implement the DMP over the course of the project.

### **Expected Data and Formats**

Table 1 details the types of data collected and produced during this research, and standards for metadata format and content, where applicable.

***Table 1. Data and Metadata – use your types of data for your project***

Type of Data	Description of Data	Description of Metadata
Physical specimens	Plants	PI, CO-PIs, and lab staff will work with a metadata expert to create a Darwin Core template that captures each site's metadata and that conforms to the data submission requirements of relevant repositories (e.g., State Museum Herbarium).
Phenotypic data	Laboratory & field notes entered into Excel spreadsheets, converted to CSV format for storage	ReadMe files created with assistance from USU library metadata expert
Publications	Post-prints of peer-reviewed journal articles, with links to data files in GenBank	Dublin Core
	Educational materials	Dublin Core

### **Data Retention and Preservation**

***Physical specimens:*** Dried plant specimens will be housed indefinitely in the labs of the PI and CO-PIs at Utah State University and Colorado Department of Agriculture. Any living plant materials will be retained in the PI's and CO-PIs' laboratories beyond the duration of this proposed research (no more than five years beyond the end of the project). Seed will be retained indefinitely in freezers in the PI's and CO-PIs' laboratories.

***Phenotypic data:*** Phenotypic data and associated metadata will be routinely backed up on an external hard drive in the PI and CO-PIs' laboratories, and by their respective institution's off-site backup service (Box.com). *These data will be archived indefinitely in each PI and CO-PIs' university data storage repository, a secure, low-cost and stable data archive for the research faculty. The archives' terms of service include regular checks of data integrity.*

For long-term storage of data files, Utah State University's institutional repository, eCommons will be used.

### **Data Sharing and Public Access**

*Physical specimens:* No living plant materials will be shared.

*Phenotypic data:* These data, supporting metadata, and associated ReadMe files will be available as downloadable files from the Dryad data repository after publication acceptance, as well as by request from the PI.

All parties involved are committed to the free and open sharing of the scientific data and educational materials produced during this research.

The PI, CO-PIs, and lab staff are responsible for data management and security. All research data generated during this project will be retained by the PI, including all plant material.

Under the terms of the Open Data Commons Open Data License, users may share, create, and/or adapt the research data; we request attribution, sharing by users under the terms of the ODbL, and redistribution without digital restriction measures.

Copyright will be retained by the author(s) for all published materials.

### **Roles and Responsibilities**

PI Young at Utah State University is ultimately responsible for carrying out the Data Management Plan. In addition, CO-PI Schaeffer at USU and CO-PI Bean at Colorado Department of Agriculture will be responsible for collecting, curating, and archiving data at their respective institutions and linking with PI Young at USU.