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Research Data Sharing and Reuse

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Actions Involved in Research Data Management

- Plan
- Create
- Process
- Analyze
- Preserve
- Share
- Reuse
Reasons for Sharing Research Data

- Avoiding loss of research data
- Maximizing benefits through reuse of data for scholarship and innovation
- Addressing reproducibility issue
- Funding agencies’ requirements
- Journals’ requirements
- Norm in certain research communities
Benefits of Sharing Research Data

• Possible offer for collaboration from other researchers
• More citations of the associated article(s)
• Citations of shared data
• Better chance to gain access to other researchers’ data
When and What to Share

• Sharing data around the publication time of the associated article
• Data that supports the publication
• In a format most useful to other researchers
• Codes for computational research
• Exemption for sensitive data or data tied to patentable inventions
Preparation for Research Data Sharing

• Quality control of data
• Documentation about data and research process
• Related information
How and Where to Share

• Publishing data as the supplementary file(s) of the associated article
• Publishing an article in a data journal
• Deposit of data in an online repository
Decision on Data Repository

Criteria Recommended by MIT Libraries

• Scope
• Metadata and indexing
• Deposit policies and workflow
• Review procedures
• Access policies and procedures
• Tracking and citation
• Preservation features
Institutional Repository at UK
http://uknowledge.uky.edu/
Institutional Repository at Iowa State
http://lib.dr.iastate.edu/
Registry of Research Data Repositories
http://www.re3data.org/
Open Access Directory: Data Repositories
http://oad.simmons.edu/oadwiki/Data_repositories
Required Information for Data Deposit

• Creator name (with ORCID identifier)
• Dataset title
• Publisher
• Publication year
• Resource type
• Identifier (usually provided by publisher)
Recommended Information for Data Deposit

If applicable

• Description
• Subject(s)
• Contributor(s)
• Additional date(s)
• Related identifier(s)
• Geographic location
Rights and Licensing for Reuse

Creative Commons Licenses
• CC0 tool (no rights reserved)
• Attribution (CC BY) license
• Other licenses with specific restrictions

Open Data Commons licenses
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• Attribution License
Record of Shared Research Data

Ergot and Lolrine Alkaloid Concentrations in Endophyte-Infected Tall Fescue Tillers

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Dataset Citation
16-2009

Release Date
2017

Publisher
University of Kentucky Libraries

Description
Approximately 40 tall fescue tillers were randomly collected and frozen from each of the 20 treatment plots.

Plot material was cut at 7.5 cm above ground level and stored for the presence of the ergot-like endophyte using an enzyme-linked immunosorbent assay.

Tillers from each plot were sorted into infected vs. uninfected groups, lyophilized, and ground through a 300 mesh screen using a Cyclotec 1100 mill.

Ground material from the endophyte-infected tillers was analyzed for ergot and loline alkaloids in the lab of Lowell Bush at the University of Kentucky, Plant and Soil Sciences Dept.

For details on alkaloid analysis see McCulley et al., Oct. 2014. Frontiers in Chemistry, Volume 2, Article 66 (www.frontiersin.org – doi
10.3389/fchem.2014.00066)

Digital Object Identifier (DOI)
https://doi.org/10.13023/4ZRPAS

Rights
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Supporting Information
Details about the experiment are on the first tab of the downloadable file.

File Format
Excel file

File Size
25 MB

Spatial Coverage
The dataset is available in the specified format.
Relevant Resources


Data Sharing Requirements by Federal Agency

http://researchsharing.sparcopen.org/data

Research Funder Data Sharing Policies

https://sparcopen.org/our-work/research-data-sharing-policy-initiative/funder-policies/
Relevant Resources

Data Repository Comparison Chart (from MIT Libraries)
http://libraries.mit.edu/repository-comparison

UKnowledge (institutional repository at University of Kentucky)
http://uknowledge.uky.edu/

Iowa State University Digital Repository
http://lib.dr.iastate.edu/
Relevant Resources

Registry of Research Data Repositories (re3data)
http://www.re3data.org/

Open Access Directory: Data Repositories
http://oad.simmons.edu/oadwiki/Data_repositories

CC0 Tool
https://creativecommons.org/share-your-work/public-domain/cc0/
Relevant Resources

Creative Commons Licenses
https://creativecommons.org/share-your-work/licensing-types-examples/licensing-examples/

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