Learning how to be FAIR: Open source education tools for AgBioData

AgBioData RCN

Education Working Group

Educational WG Goals

Create educational curriculum that can be incorporated into various types of educational settings.

- Purpose, structure, and importance of GGB Databases
- How they benefit the entire scientific community via public data deposition/integration
- How databases are essential to FAIR data

Defining Stakeholders

Who will utilize the materials? Who will advertise the materials?

- Educators
- Databases
- Funding Agencies

Who would benefit from this knowledge? Who would engage with the material?

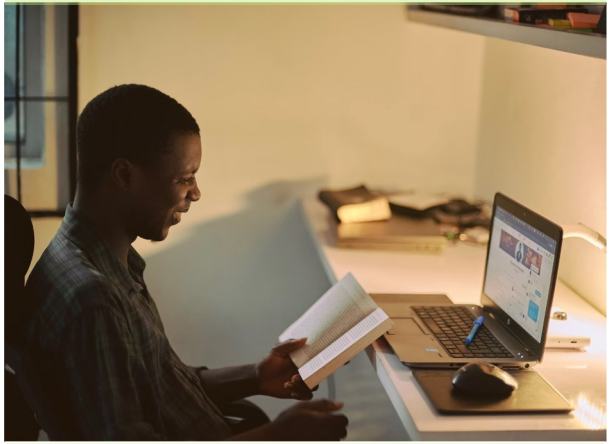
- Researchers
- Educators, from high school to university
- Students, from high school to university

Modalities

In person, interactive

- Slides
- Activity Descriptions
- Discussion Prompts

Self directed, asynchronous



- Videos
- Activity Descriptions
- Reflection Exercises

Year 1 - Focusing our Scope

- Discovery: There is A LOT of FAIR data curriculum already out there.
- Solution: Focus on the database aspect, as that is less well covered, and particularly thin for agricultural resources.

FAIRSFAIR
Fostering Fair Data Practices in Europe

Project Title	Fostering FAIR Data Practices in Europe
Project Acronym	FAIRsFAIR
Grant Agreement No	831558
Instrument	H2020-INFRAEOSC-2018-4
Topic	INFRAEOSC-05-2018-2019 Support to the EOSC Governance
Start Date of Project	1st March 2019
Duration of Project	36 months
Project Website	www.fairsfair.eu

Curriculum

- What is a Biological Data Repository?
- FAIR and Databases
- Bio-databases: Types of Data, Finding and Obtaining data
- Data Management Plans/TRUST Principles
- Submitting data
- How to use your library resources
- Databases for agriculture

Slides drafted for 7/7 lessons
Videos complete for 2/7 lessons

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Transparency
Responsibility
User focus
Sustainability
Technology

The TRUST Principles for digital repositories

Dawei Lin, Jonathan Crabtree, Ingrid Dillo, Robert R. Downs, Rorie Edmunds, David Giaretta, Marisa De Giusti, Hervé L'Hours, Wim Hugo, Reyna Jenkyns, Varsha Khodiyar, Maryann E. Martone, Mustapha Mokrane, Vivek Navale, Jonathan Petters, Barbara Sierman, Dina V. Sokolova, Martina Stockhause & John Westbrook

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Future Additions?

- Technology of databases (intro)
- Technology of databases (advanced)
- Ontologies
- Community recommendations?

White Paper:
"A teaching and training framework for biological data repositories as essential sources for FAIR data, scientific knowledge, and new knowledge generation"

- Motivation and Introduction to Biological Databases
  - Who, what, why of agricultural databases
  - Databases are essential to FAIR data
- Skills and competence framework
  - Competence profiles for high school, bachelor, master and doctoral level
  - Learning outcomes

Community Feedback

- How will you use this, and how can we help you use this?
- What formats are the easiest to use? (e.g., video lectures, lesson plans, slides, etc.)
- How do we get the word out, and what comes next? (sustainability, expansion, etc.)
- Can you contribute?

Future Educational Products and Goals

Generate an accessible and widely applicable guide for FAIR data management available to all agricultural scientists.

- Overview of the current database environment
- The set of FAIR data management published standards from other WG
- Specific instructions for handling the most common types of data

Timeline: Year 2->3

Education WG Membership

Erin Antognoli	USDA National Agricultural Library
Leyla Cabugos	California Polytechnic State University,
Chao Cai	Purdue University
Alenka Hafner	Pennsylvania State University
Beant Kapoor	University of Tennessee, Knoxville
John McNamara	Washington State University
Annarita Marrano	Phoenix Bioinformatics/AgBioData
Megan O'Donnell	Iowa State University, University Library
Leonore Reiser	Phoenix Bioinformatics
Meg Staton	University of Tennessee, Knoxville

Next steps

- We'd love new members
  - Students welcome!
  - Additional representation from livestock communities

@AgBioData

Join us on Slack
https://www.agbiodata.org/join-slack

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