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

AgBioData RCN

Education Working Group

AgBioData

Toward enhanced genomics, genetics, and breeding research outcomes through standardization of practices and protocols across agricultural databases

- 283 members
- 105 working group participants
- Over 40 databases

Educational WG Goals

Create educational curriculum:

- 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
- Journals

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

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

Curriculum

▶ What is a Biological Data Repository?

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▶ Databases for agriculture

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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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?

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

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https://www.agbiodata.org/join-slack

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