

# Sustainability Work Group

## Securing the Critical Role of AgBioData Consortium Databases



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2025 AgBioData Community Workshop, May 14 and 15<sup>th</sup>, 2025

# Sustainability Working Group Members



- Tanya Berardini
- Chuck Cook
- Christine Elsik
- Dorrie Main (Co-Chair)
- Fiona McCarthy
- John McNamara
- Lukas Mueller
- Sushma Naithani
- Surya Saha
- Shabari Subramaniam
- Karen Yook
- Josh Young (Co-Chair)

- \* With the RCN Extension we are looking to refresh working group membership\*
- Add agricultural industry representatives?
- Align more closely with the Global Biodata Resource
- Re-establish quarterly meetings
- Distribute work tasks

# Sustainability: Possible Funding Sources



**THRIVE** NOT JUST SURVIVE OR ARCHIVE!

- Competitive funding (USDA NIFA, NSF etc.)
- Government funding (USDA ARS)
- Commodity funding
- Researchers include funding in grants (contract type funding)
- Subscription/pay for access (not pay for data)
- Charge researchers to submit data
- Charge journals for data checking/hosting (integration) – ensures data is FAIR!
- Appropriations
- Fundraising

**DISCUSSION OF NEED FOR AN AgBioData CENTER!**

# Prior Activities of Sustainability WG



- Survey of AgBioData membership regarding sustainability (2022)
- Identification of possible exemplar resources (2023)
- Invitation of selected resources for further sustainability modeling (2023)
- Interviews with PIs of representative crop and livestock community databases to identify available resources over time (personnel and funding), and challenges and opportunities (2024) – **very informative**
  - **Still needs to be completed for a few databases – by mid June.**

# Activities of Sustainability WG in the Past Year



- Sustainability Presentations
  1. Impact of Community Databases at Plant Biology 2024 Bioinformatics Workshop, June 2024
  2. AgBioData Workshop at PAG 32, January 2025
  3. AgBioData Database Sustainability Workshop at PAG 32, January 2025
- Pilot project (5 databases) to identify and collect key metrics to **quantify impact** of AgBioData Databases (2024): **Economic value of database species, usage, citations** (primary and secondary), **calculation of Return of Investment**
  - Remaining crop and animal community databases - complete by June 30.

# Current Activities of Sustainability WG



- Continuing Impact Analysis – Funding in N
- For each database this will include pro with links to the publication and numb journal

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	A	B	C	D	E	F
1	GDR Journals cited catalog					
2	Journal Name	Impact factor	2024	2023	2022	2021
3	Biotech	3.1				
4	Acta Ecologica Sinica	1.111			1	
5	Acta Physiologiae Plantarum	2.63			2	1
6	Advances in Botanical Research	2.2				
7	Agriculture	3.6			1	1
8	Agronomy	2.24	1	3	6	3
9	Agronomy Journal	2.24			1	
10	American Journal of Botany	3				1
11	Anais da Academia Brasileira de Ciências	1.73			1	
12	Annual Review of Plant Biology	30.5				1
13	Antioxidants	7.675			2	1
14	AoB Plants	3.138				
15	Applications in Plant Sciences	3.6				1
16	Arabian Journal for Science and Engineering	2.7				
17	Australasian Plant Pathology	1.4				
18	Biochemical and Biophysical Research Communicat	3.1				1
19	Biochemical Genetics	2.22			1	
20	Biochemical Systematics and Ecology	1.6				
21	Biochimie	3.9				
22	Biodiversity and Conservation	3.7				
23	BioFactors	6				
24	Bioinformatics	5.8				
25	Biologia Futura	1.9				1
26	Biologia Plantarum	1.5				
27	Biological Control	3.857		1		
28	Biology	5.168		2	1	
29	Biology Methods & Protocols	3.6				
30	BioMed Research International*	0				2
31	Biomolecules	6.064		2		1
32	Biotechnology & Biotechnological Equipment	1.73			1	1
33	Biotechnology advances	16				
34	Biotechnology for Biofuels and Bioproducts	7.862				1
35	BMC bioinformatics	4.3				1

## 2023 Peer-reviewed

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- Lang, X., Yu, C., Shen, M., Gu, L., Qian, Q., Zhou, D., ... & Liu, Q. (2023). PRMD: an integrated dat
  - Zhang, Y., Kan, L., Hu, S., Liu, Z., & Kang, C. (2023). Roles and evolution of four LEAFY homologs i
  - Sun, Y., Liu, Y., Liang, J., Luo, J., Yang, F., Feng, P., ... & Zhao, T. (2023). Identification of PLATZ gen
  - Lv, J., Feng, Y., Jiang, L., Zhang, G., Wu, T., Zhang, X., ... & Han, Z. (2023). Genome-wide identifica
  - Jing, X., Xu, L., Huai, X., Zhang, H., Zhao, F., & Qiao, Y. (2023). Genome-Wide Identification and C
  - Feng, Y., Lv, J., Peng, M., Li, J., Wu, Y., Gao, M., ... & Han, Z. (2023). Genome-wide identification a
  - Goeckeritz, C. Z., Rhoades, K. E., Childs, K. L., Iezzoni, A. F., VanBuren, R., & Hollender, C. A. (2023). Large-Scale Biom
  - Zhang, Z., Fang, M., Wu, R., Zong, H., Huang, H., Tong, Y., ... & Wang, Y. (2023). Large-Scale Biom
  - Wamhoff, D., Patzer, L., Schulz, D. F., Debener, T., & Winkelmann, T. (2023). GWAS of adventitious root formation
  - Price, R. J., Davik, J., Fernández Fernández, F., Bates, H. J., Lynn, S., Nellist, C. F., ... & Sargent, D. (2023). Large-Scale Biom
  - Jiang, L., Lin, Y., Wang, L., Peng, Y., Yang, M., Jiang, Y., ... & Luo, Y. (2023). Genome-wide identifica
  - Challer, A., Vanderzande, S., & Peace, C. (2023). Deducing genotypes for loci of interest from SN
  - Mansfeld, B. N., Yocca, A., Ou, S., Harkess, A., Burchard, E., Gutierrez, B., ... & Gottschalk, C. (2023). Large-Scale Biom
  - Rawandoozi, Z., Young, E. L., Liang, S., Wu, X., Fu, Q., Hochhaus, T., ... & Riera-Lizarazu, O. (2023). C
  - Lau, J., Gill, H., Taniguchi, C. H., Young, E. L., Klein, P. E., Byrne, D. H., & Riera-Lizarazu, O. (2023). C
  - Zhang, Y., Yuan, Y., Qu, M., & Kang, C. (2023). Brassinosteroid catabolic enzyme CYP734A129 reg
  - Da, L., Li, J., Zhao, F., Liu, H., Shi, P., Shi, S., ... & Zhang, H. (2023). RoseAP: an analytical platform
  - Jiang, L., Lv, J., Li, K., Zhai, L., Wu, Y., Wu, T., ... & Wang, Y. (2023). MdGRF11-MdARF19-2 module
  - Moya-León, M. A., Stappung, Y., Mattus-Araya, E., & Herrera, R. (2023). Insights into the Genes I
  - Lin, Y., He, H., Wen, Y., Cao, S., Wang, Z., Sun, Z., ... & Tang, H. (2023). Comprehensive Analysis o
- drought and ABA stresses. *Frontiers in Plant Science*, 13, 1109784.
- Cited By
- Lv, J., Feng, Y., Jiang, L., Zhang, G., Wu, T., Zhang, X., ... & Han, Z. (2023). Genome-wide identifica
- analysis of MdWOX13-1 in drought resistance. *Plant Science*, 328, 111564.
- Cited By
- Jing, X., Xu, L., Huai, X., Zhang, H., Zhao, F., & Qiao, Y. (2023). Genome-Wide Identification and Cha
- Gene Families and Their Expression Analyses in *Fragaria* spp. *Genes*, 14(1), 121.
- Cited By

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# Current Activities of Sustainability WG



- Outreach activities – **GET OUT THE MESSAGE**
  - Securing America's Agricultural Future: The Critical Role of AgBioData Databases
    - One-pager summaries of the importance of AgBioData resources for different audiences
      - Legislator version - draft available for review
      - Scientist stakeholder version - draft available
      - Industry version – draft version almost ready for review
      - Journal opinion piece

# Current Activities of Sustainability WG



## Securing America's Agricultural Future: The Critical Role of AgBioData Databases – *legislator version*

- Foundation for Agricultural Innovation
- What AgBioData Databases Do
- Impact and Return on Investment
- Why Permanent Funding is Required
- The Path Forward

Whitepaper – complete by end of year 1 of RCN Extension



# Current Activities of Sustainability WG



- Upcoming Outreach Activities
  - Plant Biology Global 2025
    - AgBioData Consortium Resources and Databases for FAIR Agricultural Data Discovery, Sharing and Reuse
    - Tuesday July 15, 2025 - 12:00 PM - 2:00 PM
    - Sustainability Talk (Dorrie Main)
  - PAG 26, January 2025
    - AgBioData Workshop
    - Sustainability workshop (hopefully)