

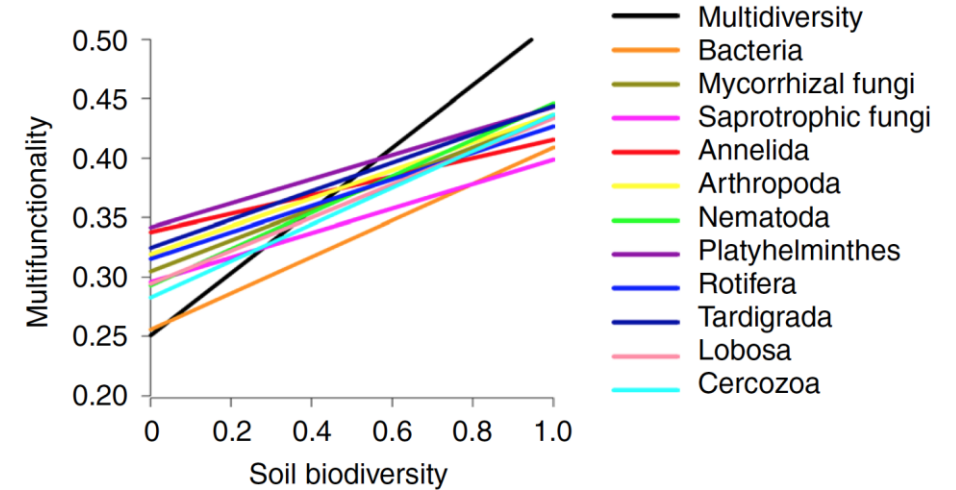
Breakout session: Soil biodiversity and ecosystem services

Annual Science Days 2023, Riga - BS C2: Soil biodiversity and ecosystem services

Dylan Warren Raffa



FAO. (2020). State of knowledge of soil biodiversity-Status, challenges and potentialities. Food and Agriculture Organization of the UN. Rome, Italy.



Graph source: Delgado-Baquerizo, M., Reich, P.B., Trivedi, C., Eldridge, D.J., Abades, S., Alfaro, F.D., Bastida, F., Berhe, A.A., Cutler, N.A., Gallardo, A., García-Velázquez, L., Hart, S.C., Hayes, P.E., He, J.-Z., Hseu, Z.-Y., Hu, H.-W., Kirchmair, M., Neuhauser, S., Pérez, C.A., Reed, S.C., Santos, F., Sullivan, B.W., Trivedi, P., Wang, J.-T., Weber-Grullon, L., Williams, M.A. & Singh, B.K. 2020. Multiple elements of soil biodiversity drive ecosystem functions across biomes. *Nature Ecology & Evolution*, 4(2): 210–220.

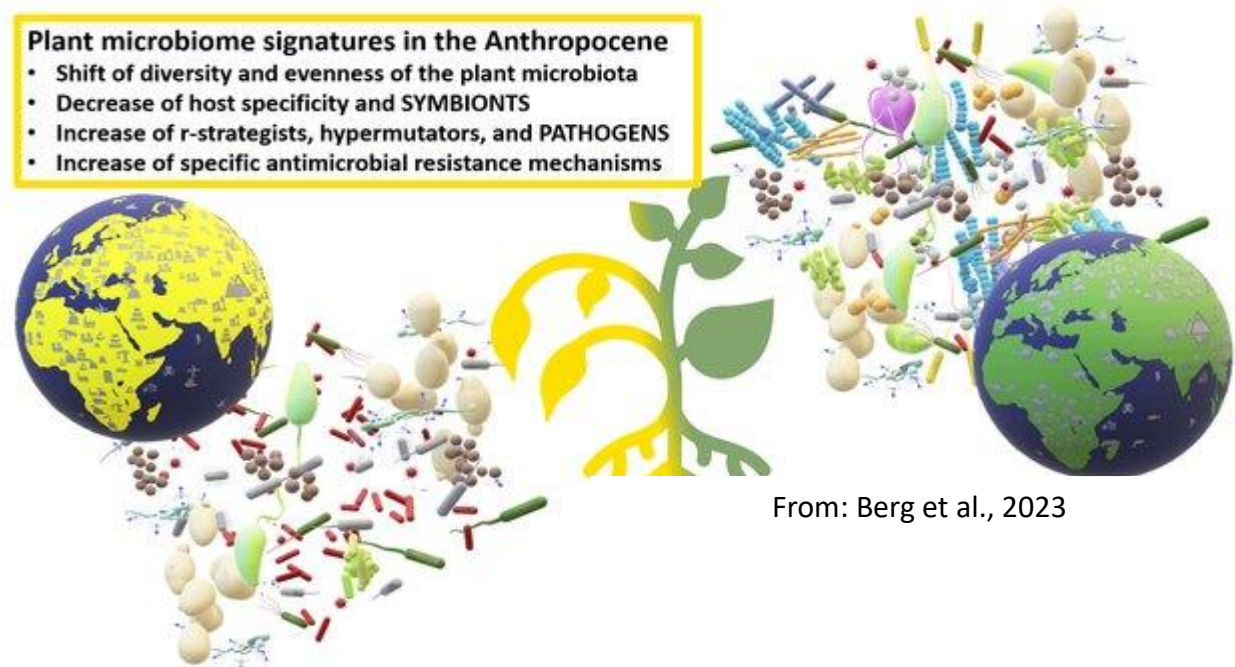
We **know 1% of soil the soil biodiversity.....**

.....but we are already able to appreciate **a significant effect on Ecosystem Services**

→ Huge potential to use this fauna

→ How to use it?

- How to make use of soil biodiversity
 - **Direct:** apply selected communities (e.g. biofertilizers)
 - **Indirect:** agroecological practices able to stimulate “useful” biodiversity (e.g. multicropping systems)
- **Agronomic practices** as filters to make use of soil biodiversity
- We started selecting soil biodiversity about 10.000 years ago
- ➔ **Missing microbes/organisms?**



How can we exploit the potential of soil biodiversity without losing genes and organisms that could be critical to address the challenges of today and tomorrow?

Thank you!

1. A photograph
2. 1 striking quote
3. A word cloud emphasizing the main keywords
4. A 1 sentence takeaway thought
5. An appreciation for 1 person/speaker (can be bullets but no more than 15 words on slide!)
6. An appreciation for 1 project that was presented (can be bullets but no more than 15 words on slide!)
7. An image that summarizes your main takeaway
8. A title for a hypothetical paper that you want to start writing after your session
9. An idea for further research that you took from your session
10. A (mini)-infograph with some interesting numbers that were mentioned (or just 1 very interesting number if time is too tight)

