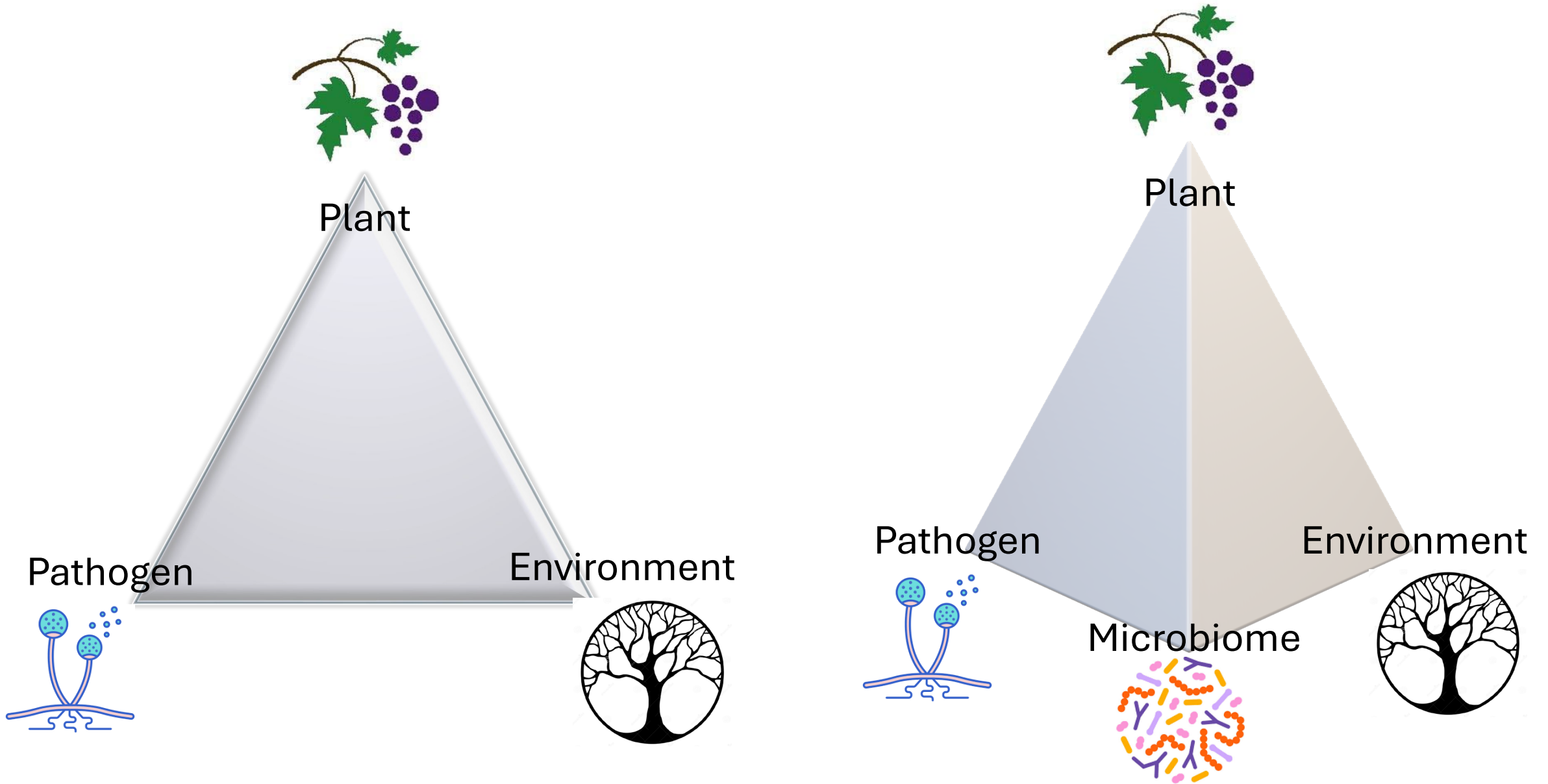


# From Disease Triangle to Pyramid



# Microbial Communities are Dynamic and Adaptable



Nursery Vine

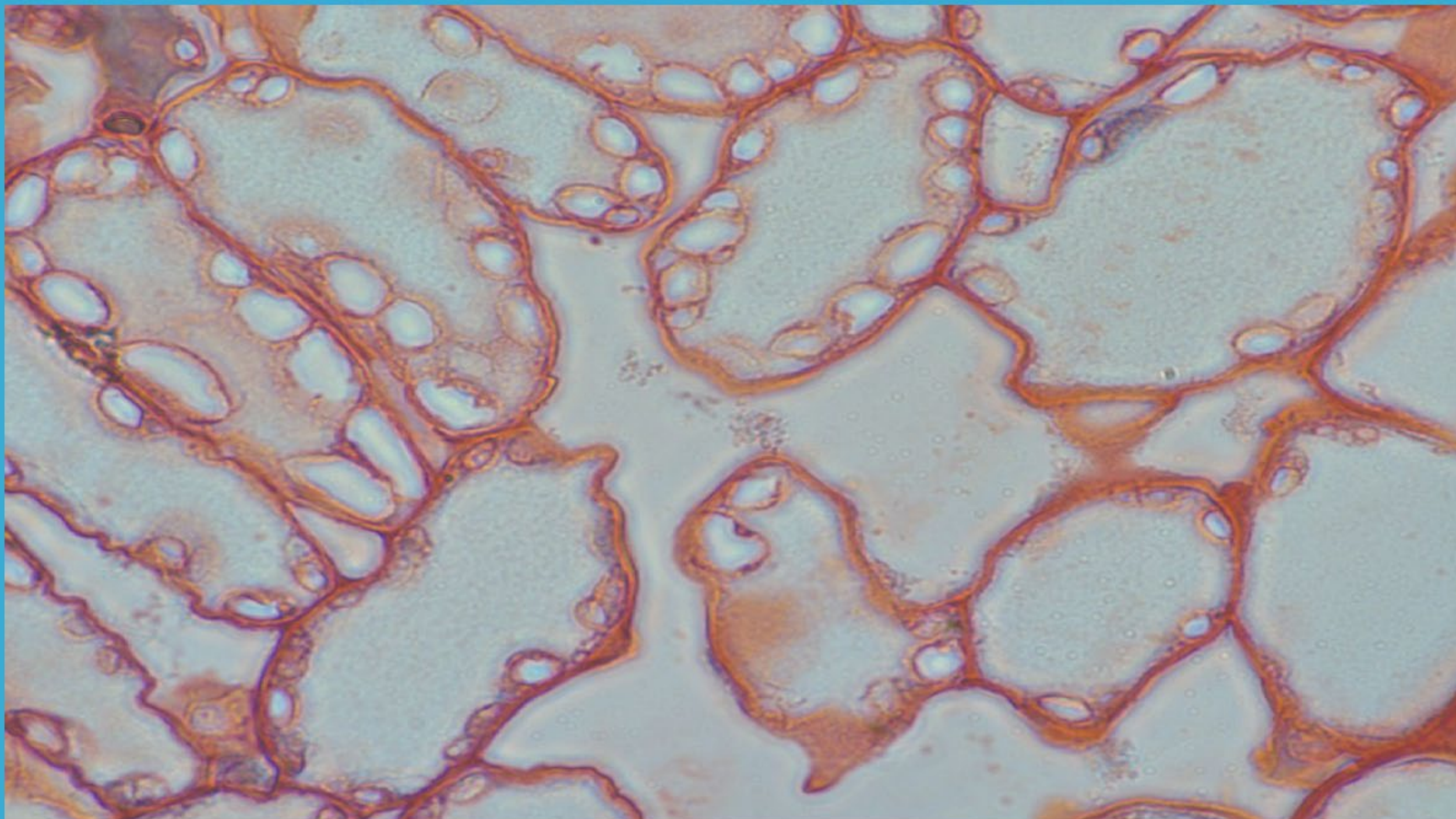
Nursery A

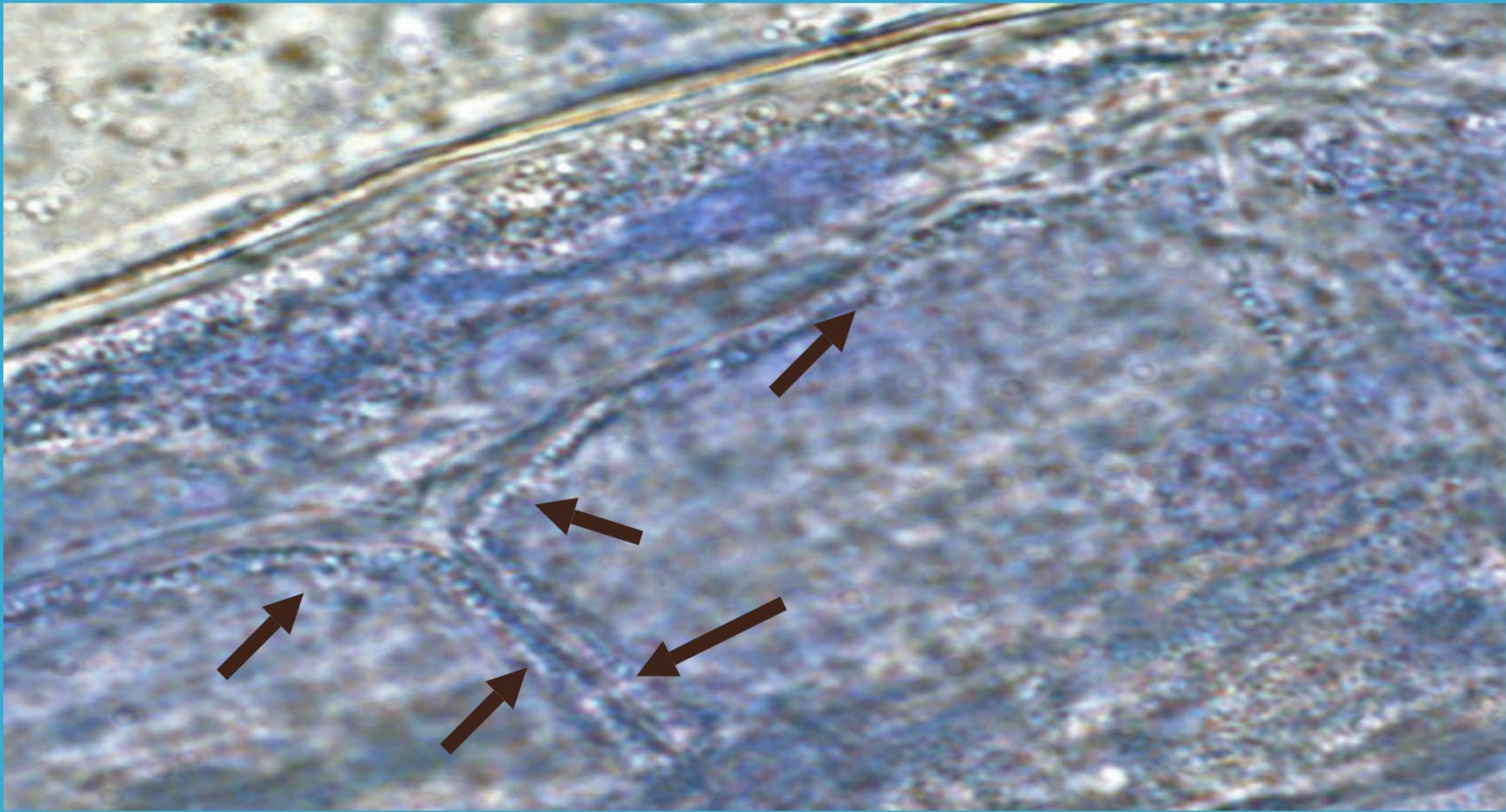
Nursery B

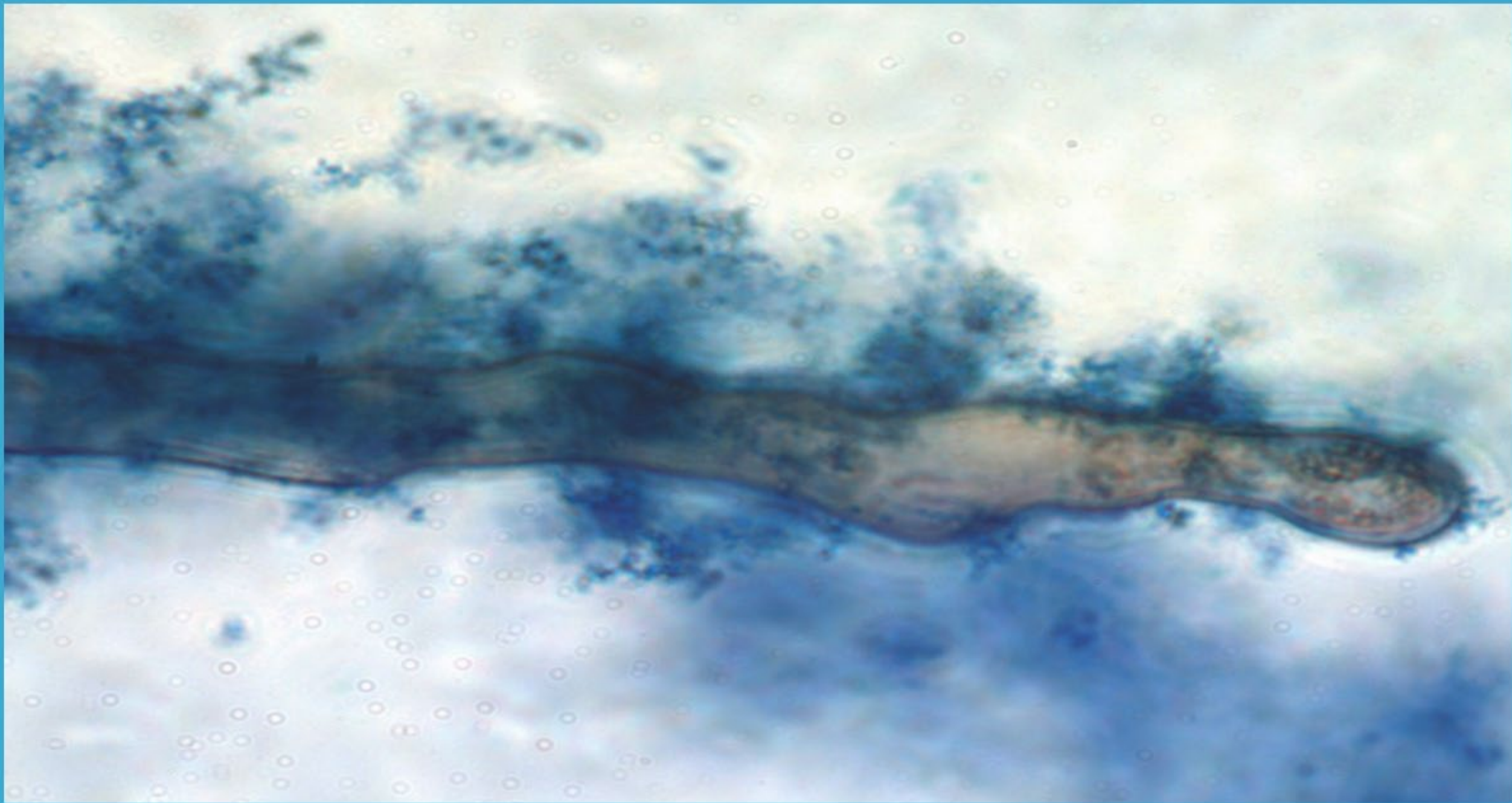


Three-Year Old Vine











How do our practices impact plant microbiomes?

# Further Reading

## Teaming Series by Jeff Lowenfels:

- Lowenfels, J., & Lewis, W. (2010). *Teaming with Microbes: The Organic Gardener's Guide to the Soil Food Web* (Rev. ed.). Timber Press. ISBN 978-1604691139.
- Lowenfels, J. (2013). *Teaming with Nutrients: The Organic Gardener's Guide to Optimizing Plant Nutrition*. Timber Press. ISBN 978-1604693140.
- Lowenfels, J. (2017). *Teaming with Fungi: The Organic Grower's Guide to Mycorrhizae*. Timber Press. ISBN 978-1604697810.
- Lowenfels, J. (2022). *Teaming with Bacteria: The Organic Gardener's Guide to Endophytic Bacteria and the Rhizophagy Cycle*. Timber Press. ISBN 978-1643261393.

## Some Related Research:

- Deyett, E., & Rolshausen, P. E. (2020). Endophytic microbial assemblage in grapevine. *FEMS Microbiology Ecology*, 96(5).
- Deyett, E., Roper, M. C., Ruegger, P., Yang, J.-I., Borneman, J., & Rolshausen, P. E. (2017). Microbial landscape of the grapevine endosphere in the context of Pierce's disease. *Phytobiomes Journal*, 1(3), 138–149.
- Travadon, R., Baumgartner, K., Rolshausen, P. E., et al. (2018). Profiling grapevine trunk pathogens in planta: A case for community-targeted DNA metabarcoding. *BMC Microbiology*, 18, Article 213
- White, J. F., Kingsley, K. L., Zhang, Q., Verma, R., Obi, N., Dvinskikh, S., Elmore, M. T., Verma, S. K., Gond, S. K., & Kowalski, K. P. (2019). Review: endophytic microbes and their potential applications in crop management. *Pest Management Science*, 75(10), 2558–2565.