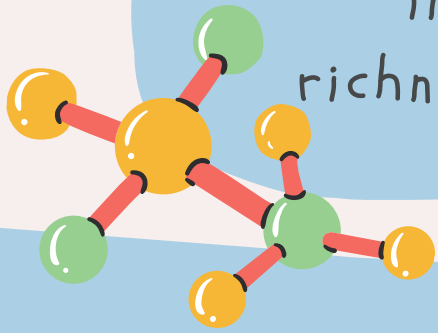


# WHO ARE the AGRICULTURALLY important microflora?



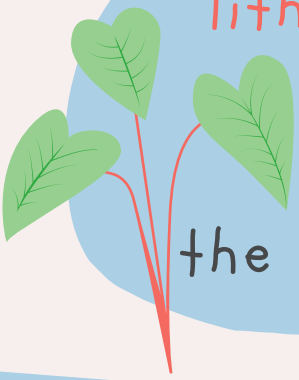
Soil is made up of a series of "**horizons**" that have distinct properties such as having increased quantities of organic carbon, richness of organic detritus, aeration, etc.



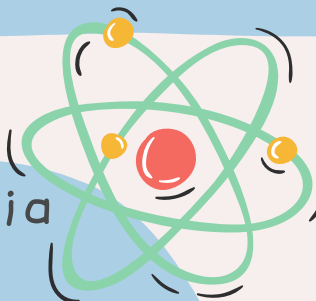
These "**horizons**" are significant because the conditions only allow for specific microbes to thrive in each zone. And soil microbes play a vital role in the **soil food web**.



Soil microbes may act as **decomposers**, **lithotrophs**, or **plant symbionts** (pathogens or mutualists). When soil microflora act as mutualists, they typically colonize on the surface of plants or their internal tissues.



Examples include: **Rhizobia** that are bacteria that form a symbiotic relationships with legumes and supply N to the plant in return for C. While **mycorrhizal fungi** improve plant access to water in return for C and other nutrients.



The study of microbial diversity across space and time, or **biogeography**, demonstrates that agricultural techniques such as **tilling** can cause **damage** to these microbial symbiotic relationships, increase plant pathogens, etc.



However, thankfully, both soil bacteria and fungi can be used for **bioremediation** of ecosystems! This is the **metabolization of pollutants** by microbes to protect plants and agriculture!

