Soil Biology Report Performed By:

Lab name: Rewild Ecosystem Services

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Client:

Name: Client

Organization: XYZ

123

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Date Observed: 05-04-2022

Sample Name: Under white pine

Sample Type: Soil

Plants Present/Desired: White pine

Plant Succession: Conifer/Evergreen Trees

Beneficial Microorganisms

	Recommended Range		Sample Results	
Fungi (ug/g)	1350	45,000	961	Low: The fungal biomass is below the recommended minimum level for your plant's stage in succession. Please contact your Soil Biology Consultant.
Standard Deviation			925	Few target organism were present and variability was very high. Precision is very low.
Bacteria (ug/g)	135	450	1,348	The bacterial biomass is significantly greater than the maximum recommended level. Please contact your Soil Biology Consultant.
Standard Deviation			346	Distribution of organisms was somewhat uneven, resulting in an acceptable degree of variation.
Actinobacteria (ug/g)	1	4	1.24	Good: The actinobacterial biomass is within the recommended range for your plant's succession.
Standard Deviation			1.55	Few target organism were present and variability was very high. Precision is very low.
F:B Ratio	10:1	1000:1	0.71	The F:B ratio is low. Increase fungal biomass or reduce bacterial biomass, and check predators to assess balance. Please contact your Soil Biology Consultant.

	Minimum Value		
Protozoa (Total)	> 10,000	0	None detected: Please contact your Soil Biology Consultant.
Standard Deviation		0	Distribution of the target organisms in the sample was uniform; variation was small.
Flagellate (#/g)	*(See Total)*	0	
Standard Deviation		0	
Amoebae (#/g)	*(See Total)*	0	
Standard Deviation		0	

Nematodes

Bacterial-feeding (#/g)	200	0	None detected: Bacterial-feeding nematodes help keep bacterial populations in balance and enhance nutrient cycling.
Fungal-feeding (#/g)	400	0	None detected: Fungal-feeding nematodes help to release nutrients from fungal hyphae to the plants.
Predatory (#/g)	200	0	None detected: Predatory nematodes help reduce root-feeding nematode numbers.

Detrimental Microorganisms

Disease-Causing Fungi	Maximum Value	Sample Results	
Oomycetes (ug/g)	0	307	Some oomycetes detected. Beneficial fungi should be more than double the disease-causer's biomass to outcompete them and hold the disease fungi in check.
Standard Deviation		572	Few target organism were present and variability was very high. Precision is very low.

Anaerobic Protozoa			
Ciliate (#/g)	0	0	None detected: No ciliates were observed in the sample. Aerobic conditions prevail. Great!
Standard Deviation		0	Distribution of the target organisms in the sample was uniform; variation was small.

Nematode			
Root-feeding (#/g)	0	0	None detected: No root-feeding nematodes were observed. Great!

Additional Comments:

- No nematodes, flagellates, or amoeba = lacking complex soil food web. This could be because soil temperatures aren't warm enough yet.
- No ciliates = a good thing. Ciliates represent anaerobic conditions.
- Some oomycetes = not very good. Oomycetes aka. water molds can be disease-causing
- Very little actinobacteria is fine.
- Fungi was diverse in diameter and colour. A fair bit of clear fungi indicates potential for disease-causing fungi.

Recommend follow-up soil analysis when conditions are warmer (1 month) for more accurate results.

Colleen Dempster, Certified Soil Food Web Laboratory Technician