Soil Biology Report Performed By:

[redacted]

[redacted]

Client:

Name: Jon Aagaard Enni

Organization: Innovationscenter for Økologisk Landbrug

Agro Food

Email:

Date Observed: 28-06-2025

Sample Name: # 1

Sample Type: Soil

Plants Present/Desired:

Plant Succession: Early Successional

Beneficial Microorganisms

	Recommended Range		Sample Results	
Fungi (ug/g)	32	90	110	The fungal biomass is greater than the recommended maximum level. Please contact your Soil Biology Consultant.
Standard Deviation			86	Few target organism were present and variability was very high. Precision is very low.
Bacteria (ug/g)	135	270	528	The bacterial biomass is significantly greater than the maximum recommended level. Please contact your Soil Biology Consultant.
Standard Deviation			96	Distribution of the target organisms in the sample was uniform; variation was small.
Actinobacteria (ug/g)	10	100	0.26	Low: The actinobacterial biomass is below the expected range. This is not a problem.
Standard Deviation			0.59	Few target organism were present and variability was very high. Precision is very low.
F:B Ratio	0.2:1	0.4:1	0.21	The F:B ratio is within the desired range for your plant's succession. Great!

	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)	100	0	None detected: Bacterial-feeding nematodes help keep bacterial populations in balance and enhance nutrient cycling.
Fungal-feeding (#/g)	0	0	None detected: Fungal-feeding nematodes help to release nutrients from fungal hyphae to the plants.
Predatory (#/g)	0	0	None detected: Predatory nematodes help reduce root-feeding nematode numbers.

Detrimental Microorganisms

Disease-Causing Fungi	Maximum Value	Sample Results	
Oomycetes (ug/g)	0	62	As disease-causing fungi become predominate, disease outbreaks are likely. Please contact your Soil Biology Consultant.
Standard Deviation		139	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:

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Name: Jon Aagaard Enni

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Date Observed: 28-06-2025

Sample Name: Prøve 2

Sample Type: Soil

Plants Present/Desired:

Plant Succession: Early Successional

Beneficial Microorganisms

	Recommended Range		Sample Results	
Fungi (ug/g)	32	90	120	The fungal biomass is greater than the recommended maximum level. Please contact your Soil Biology Consultant.
Standard Deviation			93	Few target organism were present and variability was very high. Precision is very low.
Bacteria (ug/g)	135	270	337	The bacterial biomass is significantly greater than the maximum recommended level. Please contact your Soil Biology Consultant.
Standard Deviation			198	Target organisms were present in the sample, but extremely patchy in distribution. Precision is poor.
Actinobacteria (ug/g)	10	100	0.26	Low: The actinobacterial biomass is below the expected range. This is not a problem.
Standard Deviation			0.59	Few target organism were present and variability was very high. Precision is very low.
F:B Ratio	0.2:1	0.4:1	0.35	The F:B ratio is within the desired range for your plant's succession. Great!

	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)	100	0	None detected: Bacterial-feeding nematodes help keep bacterial populations in balance and enhance nutrient cycling.
Fungal-feeding (#/g)	0	0	None detected: Fungal-feeding nematodes help to release nutrients from fungal hyphae to the plants.
Predatory (#/g)	0	0	None detected: Predatory nematodes help reduce root-feeding nematode numbers.

Detrimental Microorganisms

Disease-Causing Fungi	Maximum Value	Sample Results	
Oomycetes (ug/g)	0	0	None detected: No disease-causing fungi were observed in the sample. Great!
Standard Deviation		0	Distribution of the target organisms in the sample was uniform; variation was small.

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:

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Name: Jon Aagaard Enni

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Email:

Date Observed: 28-06-2025

Sample Name: Prøve 3

Sample Type: Soil

Plants Present/Desired:

Plant Succession: Early Successional

Beneficial Microorganisms

	Recommended Range	Sample Results	
Fungi (ug/g)	32 90	29	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		39	Few target organism were present and variability was very high. Precision is very low.
Bacteria (ug/g)	135 270	352	The bacterial biomass is significantly greater than the maximum recommended level. Please contact your Soil Biology Consultant.
Standard Deviation		61	Distribution of the target organisms in the sample was uniform; variation was small.
Actinobacteria (ug/g)	10 100	0.79	Low: The actinobacterial biomass is below the expected range. This is not a problem.
Standard Deviation		1.44	Few target organism were present and variability was very high. Precision is very low.
F:B Ratio	0.2:1 0.4:1	0.08	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	16,304	Good: The number of beneficial protozoa is above the minimum requirement.
Standard Deviation		36,457	Few target organism were present and variability was very high. Precision is very low.
Flagellate (#/g)	*(See Total)*	0	
Standard Deviation		0	
Amoebae (#/g)	*(See Total)*	16,304	
Standard Deviation		36,457	

Nematodes			
Bacterial-feeding (#/g)	100	0	None detected: Bacterial-feeding nematodes help keep bacterial populations in balance and enhance nutrient cycling.
Fungal-feeding (#/g)	0	0	None detected: Fungal-feeding nematodes help to release nutrients from fungal hyphae to the plants.
Predatory (#/g)	0	0	None detected: Predatory nematodes help reduce root-feeding nematode numbers.

Detrimental Microorganisms

Disease-Causing Fungi	Maximum Value	Sample Results	
Oomycetes (ug/g)	0	0	None detected: No disease-causing fungi were observed in the sample. Great!
Standard Deviation		0	Distribution of the target organisms in the sample was uniform; variation was small.

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:

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Date Observed: 28-06-2025

Sample Name: Prøve 4

Sample Type: Soil

Plants Present/Desired:

Plant Succession: Early Successional

Beneficial Microorganisms

	Recommended Range	Sample Results	
Fungi (ug/g)	32 90	92	The fungal biomass is greater than the recommended maximum level. Please contact your Soil Biology Consultant.
Standard Deviation		125	Few target organism were present and variability was very high. Precision is very low.
Bacteria (ug/g)	135 270	660	The bacterial biomass is significantly greater than the maximum recommended level. Please contact your Soil Biology Consultant.
Standard Deviation		52	Distribution of the target organisms in the sample was uniform; variation was small.
Actinobacteria (ug/g)	10 100	0.93	Low: The actinobacterial biomass is below the expected range. This is not a problem.
Standard Deviation		0.89	Few target organism were present and variability was very high. Precision is very low.
F:B Ratio	0.2:1 0.4:1	0.14	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	16,304	Good: The number of beneficial protozoa is above the minimum requirement.
Standard Deviation		36,457	Few target organism were present and variability was very high. Precision is very low.
Flagellate (#/g)	*(See Total)*	16,304	
Standard Deviation		36,457	
Amoebae (#/g)	*(See Total)*	0	
Standard Deviation		0	

Nematodes

Bacterial-feeding (#/g)	100	0	None detected: Bacterial-feeding nematodes help keep bacterial populations in balance and enhance nutrient cycling.
Fungal-feeding (#/g)	0	0	None detected: Fungal-feeding nematodes help to release nutrients from fungal hyphae to the plants.
Predatory (#/g)	0	0	None detected: Predatory nematodes help reduce root-feeding nematode numbers.

Detrimental Microorganisms

Disease-Causing Fungi	Maximum Value	Sample Results	
Oomycetes (ug/g)	0	0	None detected: No disease-causing fungi were observed in the sample. Great!
Standard Deviation		0	Distribution of the target organisms in the sample was uniform; variation was small.

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:

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Kommentar til mikbiologiske jordprøver

Jorden i dine prøver har en meget løs struktur, nærmest som om jorden er meget mekanisk forarbejdet. De 4 jordprøver har alle et meget lavt niveau af biologi.

Meget usædvanligt er der slet ingen protozoer i 2 af prøverne og kun en enkelt protozoer i de andre 2 prøver. Jeg har set marker der forekommer nærmest kemisk renset for protozoer og svampe før, men så er der store mængder bakterier.

I de fleste jordprøver ser mange flagellater, amoebae og ciliater, jeg har set 1 eller 2 i dine 4 jord prøver, det er usædvanligt. Antallet af bakterie i din prøver er også meget lave. Der er lidt svampe i alle prøverne, men alt for lidt til de fleste afgrøder.

En anden usædvanlig ting er at jeg så enkelte døde nematoder og testate amoebae men ingen levende. Jeg tænker på om jorden har været udsat for en kemisk behandling, lyn frosset eller lignende.

Der er en del fulvic acid og humic acid og organisk materiale i alle 4 prøver, så der skulle være et grundlag for at mikrobiologien kan vokse frem.

Der ikke et grundlag for det biologiske kredsløb da dele af jordens biologiske netværk ikke findes.

At tilføre jorden biokomplet kompost er svaret på de problemer jeg ser i jord prøverne

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