

OmniBio™ Index Final Report

Name and address of client	Name and address of laboratory
Example	Omnia Fertilizer, a division of Omnia Group (Pty) Ltd Henry Road Northern Industries Sasolburg 1947

Form number	xxxxx
Agriculturalist	
Farm name	
Sample date	6/23/2019
Date samples were received	6/27/2019
Date reported	7/8/2019
Reported by	Technical Signatory

Methods:

Extraction and counting of free-living and plant parasitic nematodes from soil and extraction and counting of free-living and plant parasitic nematodes from roots.

Results:

Table 1. Total count of nematodes in 200ml soil and 5g root samples

Samples	Lab no.	Soil samples (200ml)		Root samples (5g)	
		Free-living nematodes (beneficial)	Plant parasitic nematodes	Free-living nematodes	Plant parasitic nematodes
Strawberries					
A	74	124	136	0	0
B	75	280	142	0	0
C	76	124	58	0	0
D	77	76	32	0	0
E	78	58	56	0	0
F	79	64	40	0	0
G	80	136	118	0	0
H	81	430	128	0	0
I	82	254	42	0	0
J	83	122	58	0	0
K	84	236	50	0	0
L	85	266	44	0	0

Disclaimer

Results marked "Not SANAS Accredited" in this report are not included in the SANAS Schedule of Accreditation for this laboratory. Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.

The report that follows including the interpretations and opinions are outside the scope of SANAS accreditation.

NB. Analysis represents samples as received.

Section 1

Nematode analysis: Opinion and interpretation

Plant parasitic nematodes

Plant parasitic nematodes are the detrimental group of nematodes which inflict damage to the roots of plants and may result in a reduction of yield and quality.

Table 2. Plant parasitic nematodes found in 200ml soil samples

Crop: Strawberries						
Samples	Free-living	Plant Parasitic Nematodes				
		Low	Relatively Low	Relatively High	High	Very High
		<i>Aphelenchoides</i> spp.	<i>Meloidogyne</i> spp. - Juvenile			
		High Economical Importance	High Economical Importance			
A	124	136	0			
B	280	142	0			
C	124	58	0			
D	76	32	0			
E	58	56	0			
F	64	40	0			
G	136	118	0			
H	430	128	0			
I	254	0	42			
J	122	0	58			
K	236	0	50			
L	266	0	44			

Meloidogyne spp. (Root-knot nematodes) Root-knot nematodes development giant cells inside plat roots. These giant cells cause an obstruction in the vascular system preventing the upward translocation of water and nutrients.

Free-living (beneficial) nematodes.

Free-living (beneficial) nematodes have an important role in nutrient cycling. A well-managed soil consists of high numbers of fungivores, bacterivores, omnivores and predator nematodes. Nematodes found in soils are numerous with high species diversity; therefore, full free-living genera identification gives good information of the diversity and stability of the soil microbial communities.

Free-living Nematode Diversity

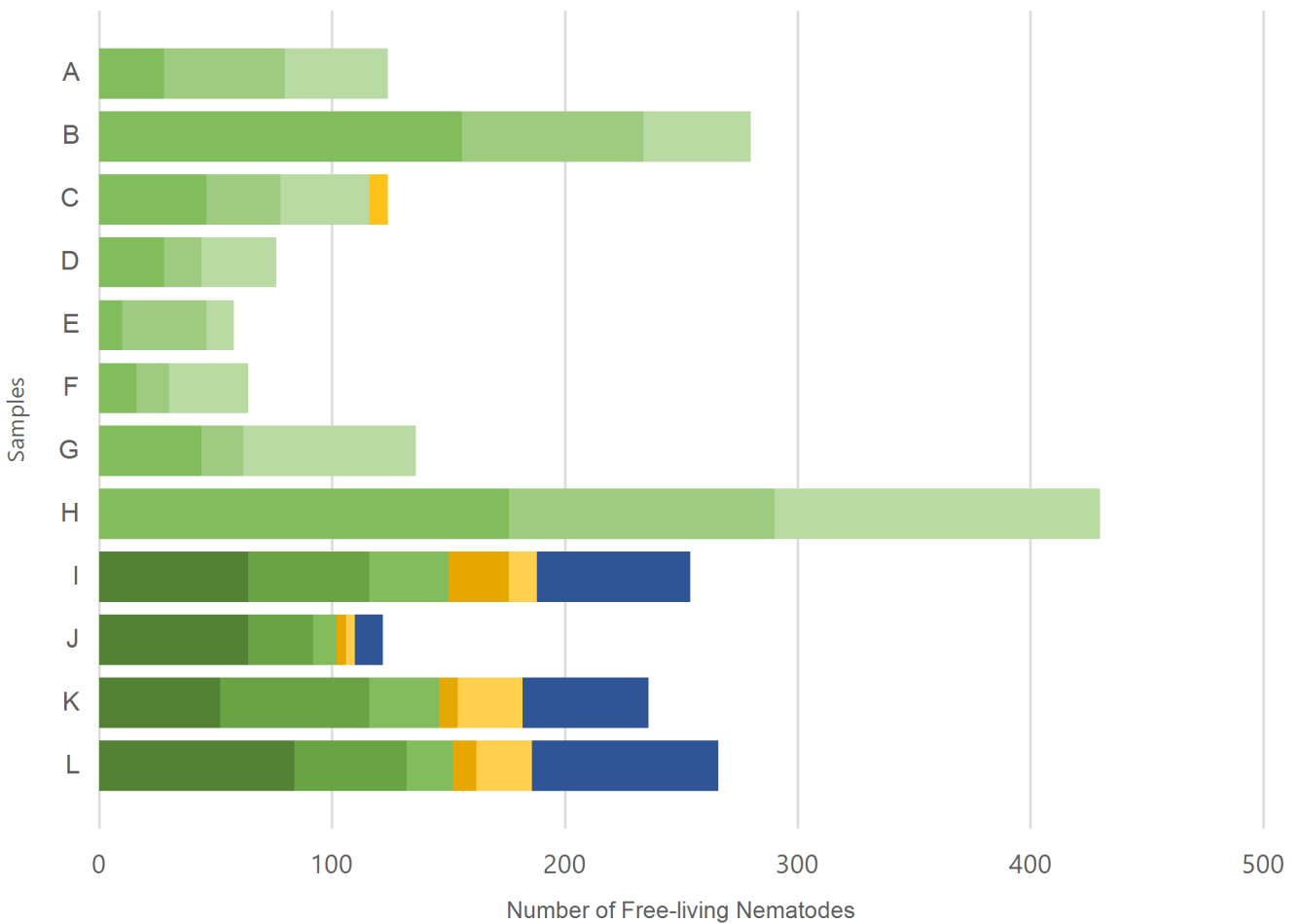
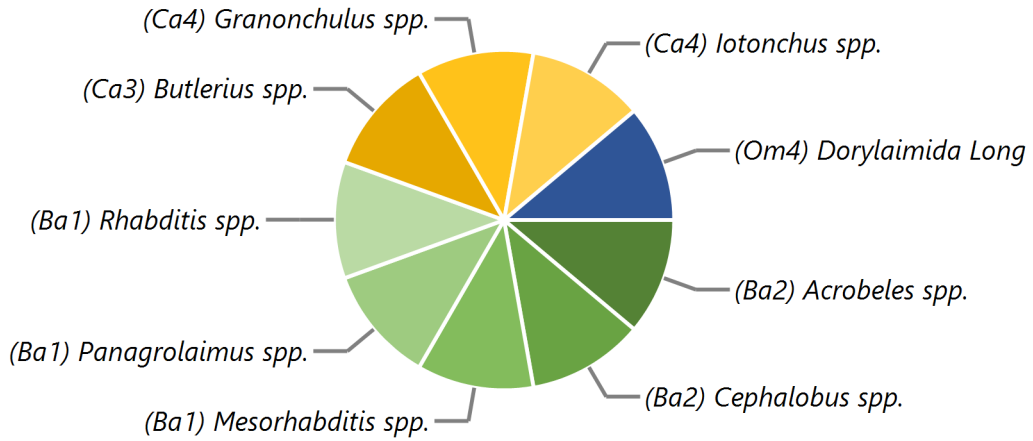


Figure 1.1a Free-living nematode diversity observed in 200ml soil samples

Bacterivore (bacterial feeders) - *Mesorhabditis* spp., *Acrobeles* spp., *Rhabditis* spp., *Panagrolaimus* spp., *Cephalobus* spp.

Carnivore (predacious nematodes) - *Iotonchus* spp., *Granonchulus* spp., *Butlerius* spp.

Omnivore (fungal, bacterial and root hair feeders) - *Dorylaimida* Long

Section 2

OmniBio™ Index: Interpretation and opinion

The OmniBio™ Index consists of four different scores; nematode risk, phosphorous mineralization, urease mineralization and rhizo-health (root health).

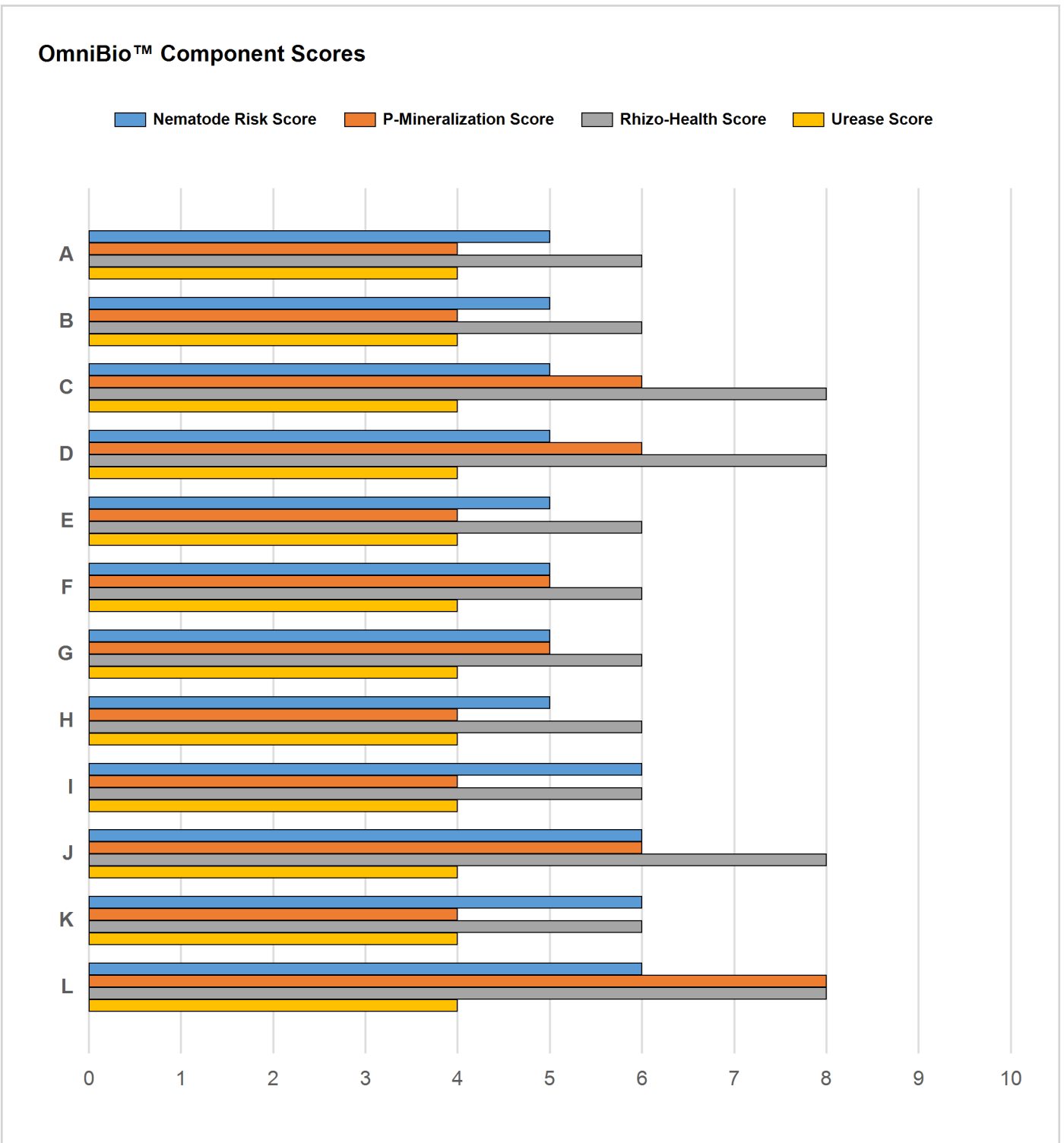


Figure 2.1a OmniBio™ Index component scores

OmniBio™ Index Final Scores

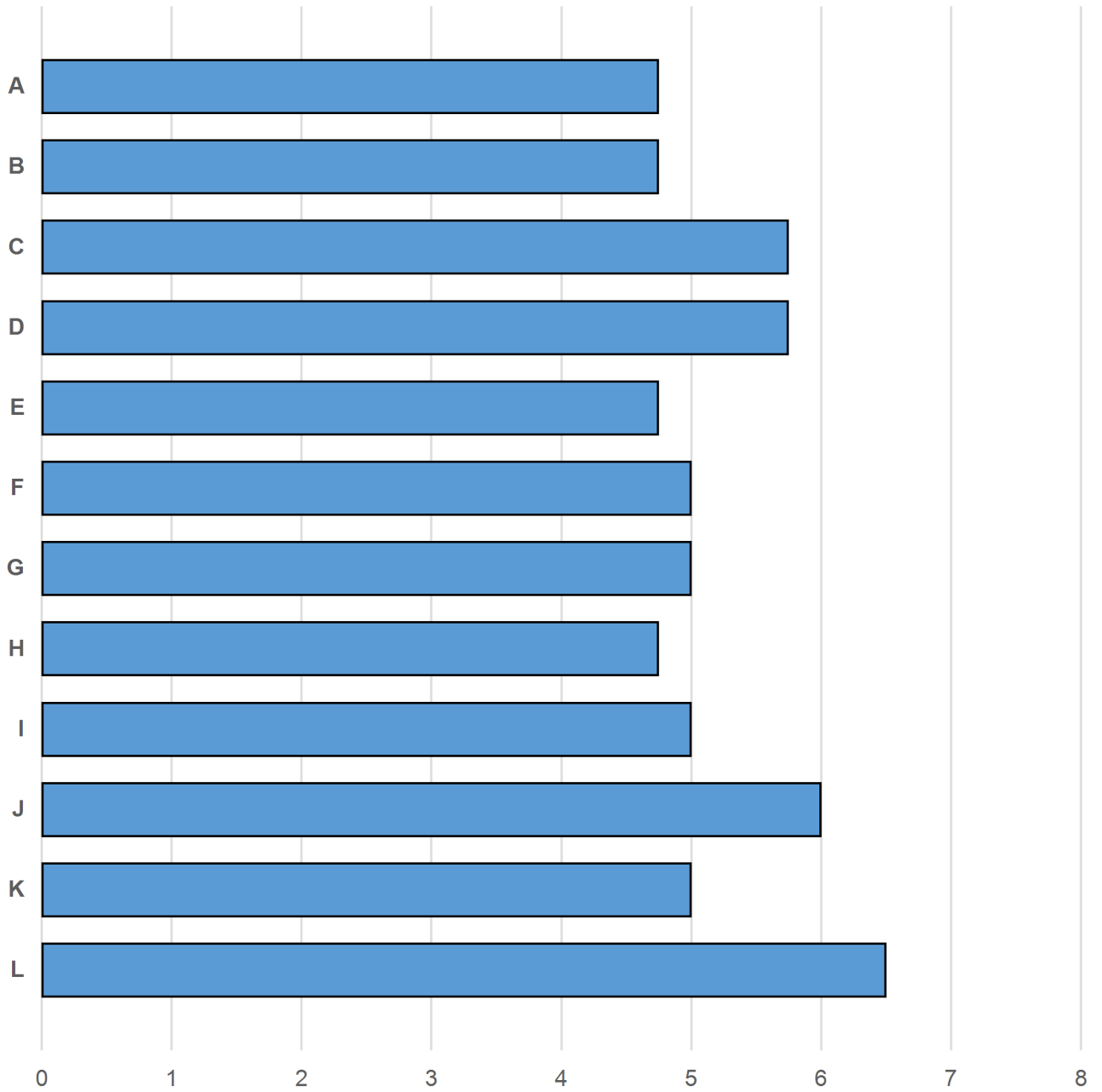


Figure 2.2a OmniBio™ Index final scores

OmniBio™ Organic Carbon Values

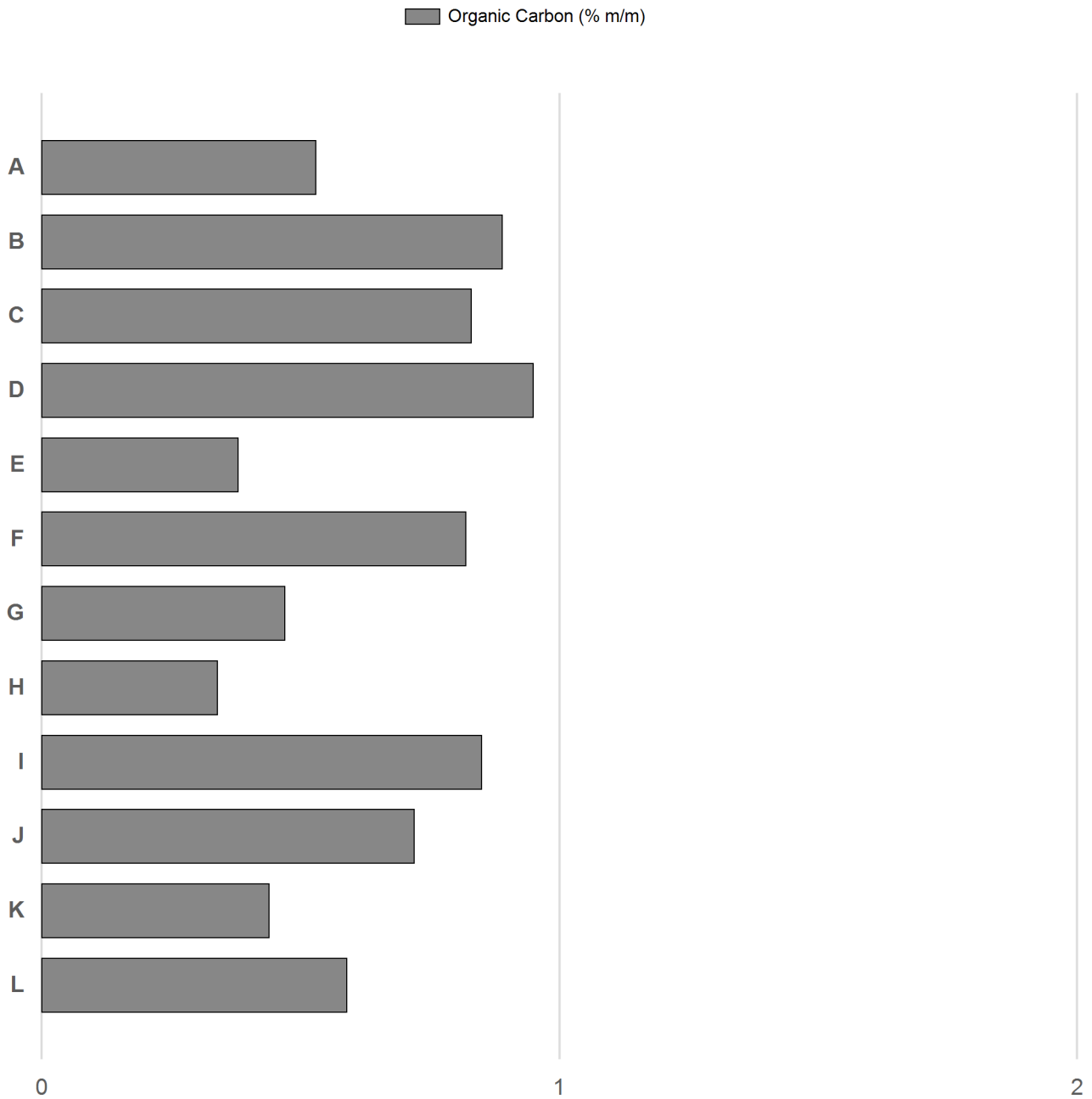


Figure 2.3a Visual representation of different carbon sources and organic matter in soil samples

End of Report.

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