



Supplement of

Citrate and malonate increase microbial activity and alter microbial community composition in uncontaminated and diesel-contaminated soil microcosms

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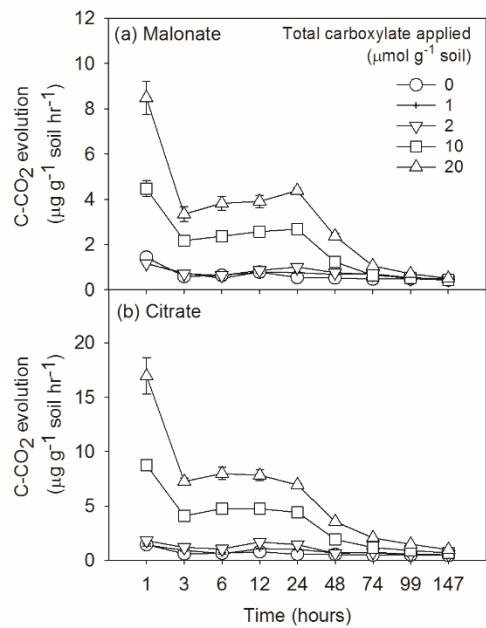


Fig. S1. Results of a preliminary experiment showing CO₂ evolution over 147 hours following the addition of a) malonate and b) citrate at 0 (water control), 0.25, 0.5, 2.5 and 5 µmol g⁻¹ soil into uncontaminated soil every 48 hours for 7 days. Values are means ± 5 SE (n = 4). Note that the highest rate of addition was the one used in the main experiment.

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Table S1. Experimental design

	Control deionised water h^{-1})	(sterile 48 1)	Malonate addition ($\mu\text{mol g}^{-1}$ soil 48 h $^{-1}$)	Citrate + malonate addition ($\mu\text{mol g}^{-1}$ soil 48 h $^{-1}$)	Citrate addition ($\mu\text{mol g}^{-1}$ soil 48 h $^{-1}$)	
Uncontaminated soil	500 $\mu\text{L jar}^{-1}$		5	2.5 citrate 2.5 malonate	5	
Diesel-contaminated soil	500 $\mu\text{L jar}^{-1}$		5	2.5 citrate 2.5 malonate	5	

Table S2. The 31 carbon substrates used to determine community level physiological profiles (CLPPs) in the MicroResp assay

Substrate class	Substrate
Amino acids	L-alanine, L-asparagine, L-glutamic acid, L-methionine, L-threonine, L-valine
Aromatics	Cinnamic, Coumarin, Imidazole, Quercetin, Syringic acid, +catechin
Carbohydrates	D-galactose, Dextrin, L-rhamnose
Carboxylic acids	a-ketobutyric acid, a-ketoglutaric acid, Citric acid, D-galacturonic, DL-lactic, DL-malic acid, Formic acid, Fumaric acid, Glycolic, L-ascorbic acid, L-tartaric acid, Quinic acid, Urocanic acid, Succinic acid
Sugar alcohols	D-mannitol
Vitamins	Thiamine