

Electronic Supplementary Information (ESI)

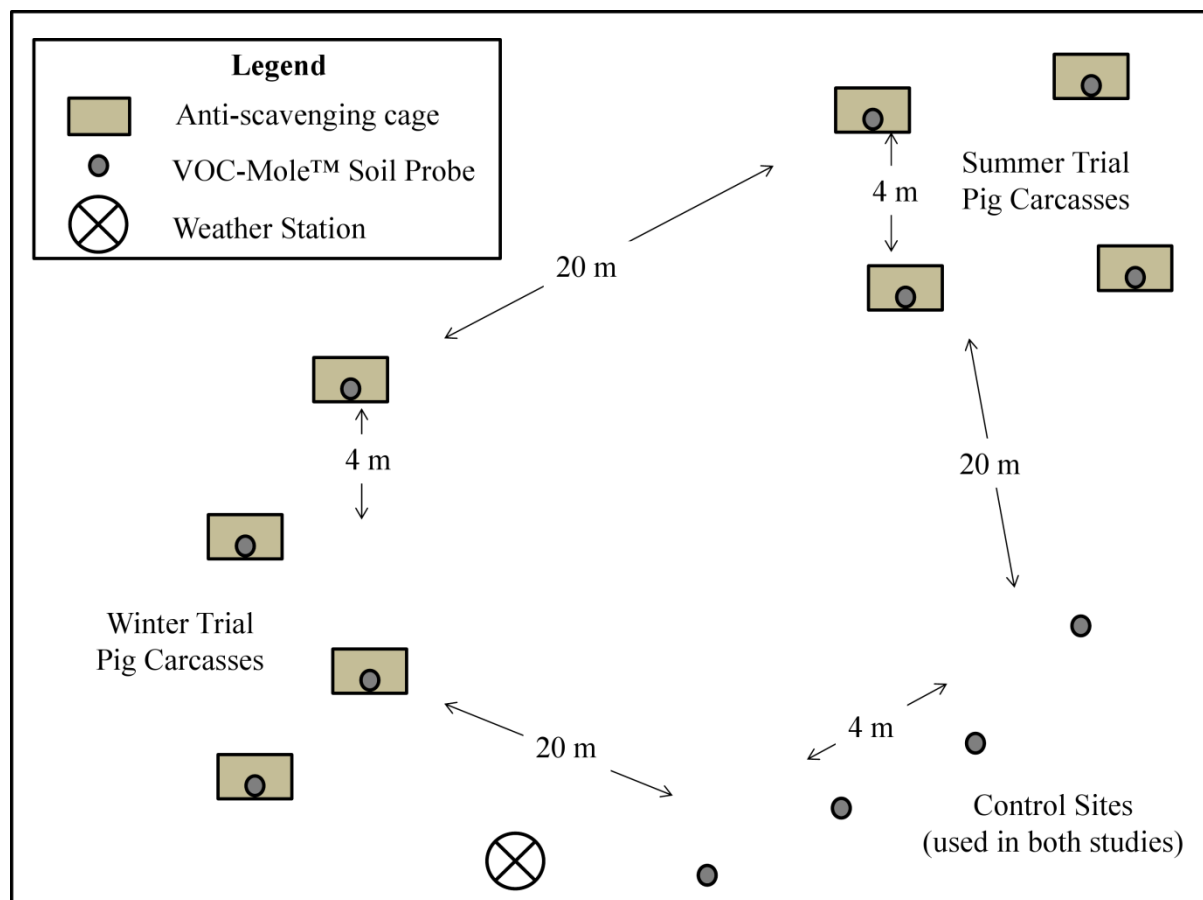


Figure S1. Schematic of field research site indicating the setup of the summer and winter trials (not to scale).

Table S1. Presence of significant VOCs detected during Winter 2013 trial according to compound class and stage of decomposition.

	Fresh	Bloat	Active Decay	Advanced Decay	Dry Remains
Sulphur-containing					
Dimethyl disulphide			X	X	X
Cyclohexane, isothiocyanato-			X		
Nitrogen-containing					
Methenamine			X	X	X
Benzamide, N,N-diethyl-4-methyl-		X			
Benzonitrile					X
Aromatic					
Benzene	X				X
Benzene, ethyl-			X		X
Benzene, propyl-					X
Toluene			X		
Ester					
Acetic acid, methyl ester		X	X	X	
Propanoic acid, methyl ester			X		
Butanoic acid, methyl ester			X		
Benzoic acid, methyl ester			X		
Aldehyde					
Heptanal			X		
Nonanal			X		
Benzaldehyde		X			
Ketone					
2-Butanone		X			
3-Buten-2-one (Methyl vinyl ketone)			X		
2-Pentanone		X	X		
3-Pentanone	X	X			
5-Hepten-2-one, 6-methyl-	X				
Alcohol					
Ethanol		X			
2-Propanol		X			
1-Hexanol, 2-ethyl-	X				
a-Terpineol			X		
Hydrocarbon					
Pentane		X		X	
Pentane, 2-methyl-	X				X
Hexane		X	X		X
Hexane, 2,2-dimethyl-	X				
3-Hexene					X
Heptane					X
1-Heptene					X
Octane			X		
1-Octene			X		
Undecane		X			
Heptadecane			X		
Cyclopropane, ethylidene-					X
Cyclopropane, 1-ethyl-2-methyl-, cis-		X			X
1,3,5,7-Cyclooctatetraene			X		
α-Pinene		X			

Table S2. Presence of significant VOCs detected during Summer 2014 trial according to compound class and stage of decomposition.

	Fresh	Bloat	Active Decay	Advanced Decay	Dry/ Remains
Sulphur-containing					
Sulphur dioxide				X	
Carbon disulphide			X		
Dimethyl disulphide	X	X	X	X	X
Dimethyl trisulphide		X	X	X	X
Dimethyl tetrasulphide		X	X		
Methyl thiolacetate			X		
Methanethiol			X	X	X
Methane, isothiocyanato-				X	X
Thiophene, 2-pentyl-				X	
Thiophene, 3-methyl-				X	
Nitrogen-containing					
Methenamine					X
Methylamine, N,N-dimethyl-			X	X	
Acetonitrile, (dimethylamino)-					X
Butanenitrile, 2-methyl-				X	
Butanenitrile, 3-methyl-				X	
Formamide, N,N-dimethyl-				X	
Benzonitrile			X	X	X
Indole				X	
Pyrazine, methyl-			X		
Pyrazine, 2,6-dimethyl-			X	X	
Pyridine, 2-methyl-				X	X
Pyridine, 2,6-dimethyl-				X	X
Pyrrole			X		
Aromatic					
1H-Pyrrole, 1-butyl-			X		
2-n-Butyl furan			X		
5H-1-Pyridine			X		
Benzene			X	X	
Benzene, 1,3-dimethyl-			X	X	X
Benzene, 1,2,3-trimethyl-					X
Benzene, ethyl-			X	X	X
Benzene, 1-methyl-3-(1-methylethyl)-					X
Furan, 2-methyl-			X	X	
Furan, 2-ethyl-			X		
Furan, 2-pentyl-			X	X	X
Furan, 2-butyltetrahydro-			X		
Phenol			X	X	
Phenol, 4-methyl-			X		
o-Cymene			X	X	X
Anisole				X	
p-Xylene				X	X
Styrene			X	X	X
Toluene			X	X	X
Halogenated/Other					
1-Iodo-2-methylundecane	X				
1,6-Octadien-3-ol, 3,7-dimethyl-, 2-aminobenzoate				X	
Ether					
Ethanol, 2-methoxy-				X	
1,4-Dioxane				X	
1,3-Dioxolane, 2-methyl-				X	X
2,2-Dimethoxybutane			X	X	X
Butane, 1-methoxy-3-methyl-					X
Eucalyptol				X	X

Table S2 continued.

	Fresh	Bloat	Active Decay	Advanced Decay	Dry/ Remains
Ester					
Acetic acid, methyl ester					X
Acetic acid ethenyl ester	X				
2-Propenoic acid, methyl ester				X	
Butanoic acid, methyl ester			X		
Butanoic acid, 2-methyl-, methyl ester			X		
Butanoic acid, 3-methyl-, methyl ester			X		
Benzoic acid, methyl ester				X	
Thiocyanic acid, methyl ester				X	X
Nitric acid, 1-methylethyl ester					X
Salicylic acid, tert.-butyl ester				X	
1-Hexyl-3-butenyl acetate				X	
Aldehyde					
Acetaldehyde				X	
Propanal, 2-methyl-			X		
2-Methylprop-2-enal			X	X	
Butanal			X		
Butanal, 2-methyl-			X	X	X
Butanal, 3-methyl-			X	X	X
2-Butenal, 2-methyl-, (E)-			X		
2-Butenal, 3-methyl-				X	
Pentanal					X
Hexanal	X		X	X	X
Heptanal	X		X		X
Octanal	X		X		X
Nonanal	X		X	X	X
Benzaldehyde			X	X	X
Ketone					
2-Butanone				X	X
2-Butanone, 3-methyl-			X	X	X
2,3-Butanedione			X	X	X
3-Buten-2-one (Methyl vinyl ketone)			X	X	X
1-Penten-3-one					
2-Pentanone			X	X	X
2-Pentanone, 3-methyl-			X		X
2,3-Pentanedione			X	X	X
3-Pentanone				X	X
3-Penten-2-one			X	X	X
3-Pentanone, 2,4-dimethyl-				X	X
4-Methylpentan-2-one (Methyl isobutyl ketone)			X	X	X
Cyclopentanone				X	
2-Hexanone			X	X	X
2-Hexanone, 5-methyl-					X
3-Hexanone			X	X	X
2,3-Hexanedione			X		
2-Heptanone			X	X	X
5-Hepten-2-one, 6-methyl-				X	X
2-Octanone					X
1-Octen-3-one			X	X	X
3-Octanone			X	X	X
2-Nonanone			X	X	X
2-Undecanone				X	X
Phenylethanone			X	X	X

Table S2 continued.

	Fresh	Bloat	Active Decay	Advanced Decay	Dry/ Remains
Alcohol					
Ethanol			X	X	X
1-Propanol			X	X	X
1-Propanol, 2-methyl-			X		
2-Propanol			X	X	X
1-Butanol			X	X	X
1-Butanol, 3-methyl-			X	X	X
2-Butanol			X	X	X
1-Pentanol			X		
1-Penten-3-ol			X		
2-Pentanol			X	X	
1-Hexanol			X	X	
1-Heptanol			X		
1-Octanol			X		
6-Methyl-1-octanol		X			
1-Octen-3-ol			X		X
2-Methyl-1-undecanol				X	
1-Dodecanol				X	
1,6-Octadien-3-ol, 3,7-dimethyl-					X
Hydrocarbon					
1-Butene, 3-methyl-				X	
Butane, 2-methyl-			X		
Pentane			X		X
Hexane				X	X
Hexane, 2,2-dimethyl-			X		
Heptane			X	X	X
Heptane, 3-methylene-			X	X	
1-Heptene				X	X
Octane			X	X	X
1-Octene					X
2-Octene					X
Nonane				X	X
Undecane				X	X
1-Tridecene	X				
Tetradecane	X				
1,13-Tetradecadiene				X	
Pentadecane		X			
Hexadecane	X		X	X	X
8-Heptadecene			X		X
Eicosane			X		
1,3,5-Cycloheptatriene					X
1,4-Cyclohexadiene, 1-methyl-					X
Cyclopropane, ethyl-					X
Cyclopropane, ethylidene-					X
Cyclopentane, butyl-				X	
Cyclohexene, 1-methyl-4-(1-methylethenyl)-					X
Camphene			X	X	X
Cetene				X	
Limonene			X	X	X
Phellandrene				X	X
Pinene			X	X	X
Aromandendrene				X	X
Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene-				X	
Bicyclo[2.2.1]heptane, 7,7-dimethyl-2-methylene-					X
Bicyclo[3.1.0]hex-2-ene, 2-methyl-5-(1-methylethyl)-				X	
Bicyclo[3.1.0]hex-2-ene, 4-methyl-1-(1-methylethyl)-					X
Bicyclo[3.1.0]hex-2-ene, 4-methylene-1-(1-methylethyl)-					X

