

Supplementary Materials for

“Dynamic changes of physicochemical properties and microbial community in

three types of recycled manure solids for dairy heifers”

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Content

Table S1 Summary of MiSeq sequencing of 16S rRNA/ITS1 genes in composting samples.

	Sample ID	Chao1 index	Shannon index
16S	FSD1	412.33 ± 19.22 ^b	6.68 ± 0.12 ^{b,y}
	FSD16	565.33 ± 5.55 ^a	7.74 ± 0.03 ^{a,y}
	FSD31	470.67 ± 39.30 ^{ab}	7.77 ± 0.05 ^a
	FST1	446.33 ± 8.84 ^b	7.53 ± 0.02 ^{b,x}
	FST16	580.00 ± 21.5 ^a	8.22 ± 0.06 ^{a,x}
	FST31	536.00 ± 51.86 ^{ab}	8.00 ± 0.11 ^{ab}
	FM1	375.33 ± 7.45 ^b	7.02 ± 0.14 ^{b,xy}
	FM16	571.67 ± 19.34 ^a	7.88 ± 0.02 ^{a,xy}
	FM31	583.67 ± 7.80 ^a	8.13 ± 0.05 ^a
	FSD1	269.00 ± 31.07	6.11 ± 0.75
	FSD16	256.00 ± 10.82 ^{xy}	6.53 ± 0.21 ^{xy}
	FSD31	266.33 ± 30.15	7.03 ± 0.38
ITS	FST1	238.00 ± 7.02 ^b	6.09 ± 0.03 ^b
	FST16	309.33 ± 3.28 ^{a,x}	7.50 ± 0.16 ^{a,x}
	FST31	256.00 ± 21.07 ^{ab}	6.75 ± 0.37 ^{ab}
	FM1	193.00 ± 3.21	5.02 ± 0.05 ^b
	FM16	223.00 ± 8.76 ^y	5.87 ± 0.26 ^{a,y}
	FM31	262.00 ± 33.02	6.22 ± 0.09 ^a

Data are means ± SEM, n = 3. FSD, fermented sawdust; FST, fermented straw; FM, fermented sawdust straw mixture. Letters a and b show significant differences ($P < 0.05$) between different days in the same group. Letters x and y show significant differences ($P < 0.05$) between different groups at the same day.

Table S2 Analysis of the variability between univariate environmental factors and bacterial or fungal communities by using the Mantel test.

	Factors	Coefficient of determination (r)	<i>P</i> values
Bacteria	TN	0.411	< 0.001
	C/N ratio	0.546	< 0.001
	WC	0.559	< 0.001
	NH ₄ ⁺ -N	0.320	< 0.001
	OM	0.284	0.004
	EC	0.312	0.004
	NO ₃ ⁻ -N	0.257	0.006
	pH	0.123	0.075
	Temperature	0.121	0.109
	NH ₃	-0.007	0.493
	CH ₄	-0.096	0.85
	CO ₂	-0.110	0.885
	N ₂ O	-0.131	0.937
Fungi	TN	0.412	< 0.001
	WC	0.338	< 0.001
	NO ₃ ⁻ -N	0.237	0.004
	pH	0.224	0.006
	C/N ratio	0.221	0.010
	EC	0.172	0.014
	Temperature	0.192	0.044
	NH ₄ ⁺ -N	0.108	0.122
	OM	0.094	0.164
	CH ₄	0.081	0.178
	CO ₂	0.057	0.233
	N ₂ O	0.008	0.378
	NH ₃	-0.018	0.546