Supplementary Materials

Variations in Methanogenic and Methanotrophic Communities Resulted in Different Methane Emissions from Paddy Soil Applied with Two Types of Manure

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Table S1. Statistic results of contrasting NCM and RCM, respectively, with control on five sampling days based on t-test.

CH_4 emission increase (%)	Stage1						Stage2			
	NCM			RCM			NCM		RCM	
	279.4% ↑ **			120.8% ↑ *			132.8% ↑ *		95.1% ↓ *	
Soil properties	**7d**	**21d**	**39d**	**7d**	**21d**	**39d**	**90d**	**133d**	**90d**	**133d**
DOC	↑ **	↑ **	↑ **	↑ **	↑ **	↑ **	↑ **	↑ **	n.s.	n.s.
Methanogen amount	↑ *	↑ *	↑ *	n.s.	↓ **	n.s.	↑ *	n.s.	n.s.	n.s.
Methanosarcina abundance	↑ **	↑ **	↑ **	n.s.	n.s.	n.s.	↑ *	↑ *	↑ *	n.s.
NH_4^+	↑ **	↑ **	↑ *	↑ **	↑ **	↑ **	n.s.	↑ **	↑ **	↑ *
NO_3^-	↑ **	n.s.	↑ **	↑ **	n.s.	↑ **	n.s.	n.s.	n.s.	↑ **
SO_4^{2-}	n.s.	n.s.	n.s.	↑ **	↑ **	↑ *	n.s.	n.s.	↑ **	↑ **
Methanotroph amount	n.s.	↓ *	↑ *	n.s.	↓ **	n.s.	n.s.	↑ **	↑ *	n.s.
dsr genes amount	↑ **	↑ **	n.s.	↑ *	n.s.	n.s.	n.s.	↑ **	↑ *	↑ *
Methylophilaceae abundance	n.s.	—	n.s.	n.s.	—	n.s.	—	n.s.	—	↑ **

n.s., not significant; **, significant at $p<0.01$; *, significant at $p<0.05$. NCM, non-composted manure; RCM, composted manure; Ctrl, control, with no manure incorporated.

Table S2. Effects of different treatments on rice biomass.

Dry matter (g/pot)	Ctrl	NCM	RCM
Straw	31.63±3.38 c	40.16±3.17 b	54.67±2.63 a
Grain	34.14±2.67 c	38.38±1.13 b	53.24±1.22 a
Root	3.96±0.36 b	7.33±0.17 a	7.05±0.21 a