Supporting Information

FIVE TABLES

List of contents

Tables:

Table S1 Nitrate and ammonium nitrogen content in rice soil under different oxygenation measures.....3
Table S2 Cumulative greenhouse gas emissions from rice under different oxygenation measures. 4
Table S3 The flux of CH4 from rice under different oxygenation measures.....5
Table S4 The flux of N_2O from rice under different oxygenation measures.....6
Table S5 The flux of CO_2 from rice under different oxygenation measures.....7

Table S1 Nitrate and ammonium nitrogen content in rice soil under different oxygenation measures.

Treatment	NO_3^--N(mg/kg）	NH_4^+-N（mg/kg）
NR	0.12±0.05a	9.6±1.98c
SR	0.18±0.04b	6.15±1.07bc
CI	0.17±0.03ab	8.06±0.62bc
OI	0.26±0.07ab	7.03±0.37ab
OF	0.33±0.06ab	8.83±1.59a
CF	0.24±0.03ab	8.93±0.95ab

Table S2 Cumulative greenhouse gas emissions from rice under different oxygenation measures.

Treatment	CH_4 Emissions (g)	CO_2 Emissions (g)	N_2O Emissions (g)
NR	762.52±24.86e	30045.51±2057.74a	417.53±18.48abc
SR	3838.22±157.05a	33981.60±2476.30a	426.93±41.38a
CI	2734.69±79.89cd	30726.15±2197.06bc	295.13±27.52abc
OI	3513.41±116.50b	31302.86±922.82c	297.50±62.10ab
OF	2976.50±178.22c	26380.40±4181.25ab	355.67±29.82c
CF	2558.42±214.23d	27962.14±393.36c	269.79±45.40bc

Table S3 The flux of CH4 from rice under different oxygenation measures.

Treatment / Date	NR	SR	CI	OI	OF	CF
6/12	1.88±0.03	14.46±3.05	16.82±5.58	22.06±4.19	16.38±5.67	16.35±4.01
6/15	3.90±0.13	19.20±3.00	36.53±2.77	41.69±1.45	39.30377±3.82	48.88±5.21
6/18	45.39±1.26	88.18±12.21	33.79±5.66	70.98±4.23	65.82±6.96	55.16±5.40
6/26	16.73±0.30	44.73±13.16	23.63±2.10	39.16±5.61	27.73±4.20	18.86±3.72
6/28	17.17±5.89	45.46±6.93	14.73±0.30	28.77±6.42	25.62±5.32	21.99±1.26
7/2	19.23±3.69	30.74±4.49	23.59±1.60	30.74±1.12	30.56±4.95	23.66±2.06
7/9	25.19±6.81	19.04±4.39	18.21±2.32	23.32±2.88	33.26±2.11	17.89±4.60
7/16	38.40±8.11	21.07±0.69	42.54±1.51	43.11±1.71	23.83±2.21	25.20±4.50
7/19	4.06±0.49	6.95±0.34	16.39±0.74	11.00±1.80	6.65±2.43	8.04±0.81
7/24	6.10±0.55	14.96±0.91	10.63±0.73	14.24±1.61	10.12±1.35	8.62±0.43
7/30	6.44±0.42	17.98±2.71	14.19±2.18	10.31±1.48	14.63±1.10	11.93±0.83
8/6	8.97±2.59	19.68±4.01	13.31±2.20	20.70±3.22	14.76±0.75	18.71±0.93
8/13	5.69±0.89	17.41±2.65	7.66±1.68	12.40±2.58	8.28±2.28	14.21±0.65
8/23	1.95±0.88	8.83±1.45	3.59±1.08	4.98±0.87	3.68±0.25	2.43±0.96

Table S4 The flux of N_2O from rice under different oxygenation measures.

Treatment / Date	NR	SR	CI	OI	OF	CF
6/12	3.92±1.15	7.89±1.22	7.30±1.28	4.41±0.73	8.01±1.16	4.04±0.41
6/15	1.54±0.50	3.43±0.49	2.74±0.46	2.40±0.39	2.36±0.90	2.74±0.32
6/18	2.28±0.50	3.44±1.08	1.58±0.22	4.33±2.28	7.74±0.46	5.02±1.16
6/26	11.13±2.81	9.15±2.21	14.15±3.90	8.85±3.44	13.39±2.57	16.94±3.48
6/28	19.23±4.99	10.09±2.39	22.83±4.52	8.75±1.10	8.04±1.86	3.92±1.29
7/2	22.49±5.42	12.98±1.57	15.54±3.67	18.88±4.31	17.81±3.30	19.88±3.83
7/9	19.33±6.63	6.99±0.20	18.42±1.63	8.85±3.59	33.12±3.40	13.74±4.3
7/16	20.99±4.42	35.49±4.18	52.77±7.15	54.89±10.36	22.95±3.53	25.07±3.54
7/19	20.54±3.89	33.76±2.26	29.74±3.22	24.73±0.64	20.70±2.95	26.74±4.68
7/24	24.61±3.55	36.78±9.02	17.25±0.44	45.67±28.54	76.08±7.81	45.35±12.75
7/30	122.05±12.87	130.47±18.99	18.76±2.94	22.64±9.76	26.98±9.53	19.56±1.1
8/6	22.27±3.70	15.30±3.56	16.72±2.53	19.06±3.21	4.11±4.98	12.3±7.22
8/13	3.21±0.48	4.11±0.46	12.07±4.78	3.08±0.53	15.91±2.53	5.48±0.47
8/23	1.62±0.39	1.31±0.08	1.03±0.11	1.22±0.27	1.57±0.39	1.38±0.21

Table S5 The flux of CO_2 from rice under different oxygenation measures.

Treatment / Date	NR	SR	CI	OI	OF	CF
6/12	64.35±4.18	64.35±4.18	141.95±21.8	103.06±14.79	146.26±11.02	119.35±8.27
6/15	89.68±25.9	89.68±25.9	133.13±21.97	207.01±32.24	147.59±7.46	187.13±9.35
6/18	115.01±55.17	115.01±55.17	124.31±53.04	310.95±73.31	148.93±19.58	254.91±25.37
6/26	130.29±13.6	130.29±13.6	308.88±60.04	461.94±29.57	308.7±37.9	350.01±8.42
6/28	364.21±66.65	364.21±66.65	496.16±72.28	590.83±35.31	531.06±100.28	524.59±22.87
7/2	404.25±56.96	404.25±56.96	378.46±42.11	617.07±56.05	429.07±66.95	461.29±70.15
7/9	894.92±73.35	894.92±73.35	932.51±158.9	793.1±16.98	474.78±94.72	741.03±62.51
7/16	1979.5±191.49	1979.5±191.49	622.75±74.27	1813.56±168.5	1762.44±278.05	1807.89±169.34
7/19	1666.46±253.92	1666.46±253.92	1776.17±219.46	1708.69±160.92	1617.48±346.2	1491.89±35.6
7/24	2146.32±190.05	2146.32±190.05	2079.05±228.13	1720.65±108.7	1540.16±251.56	1434.16±125.82
7/30	2693.6±256.38	2693.6±256.38	2441.31±390.61	2646.97±139.15	2113.37±165.72	2119.52±74.77
8/6	1958.03±134.61	1958.03±134.61	2529.99±364.46	2326.27±121.91	2169.33±239.66	1784.24±87.94
8/13	1963.09±97.65	1963.09±97.65	2007.61±116.93	1676.31±168.52	1186.72±337.46	1644.31±128.95
8/23	1346.09±262.34	1346.09±262.34	1528.26±17.05	1493.25±213.11	1316.24±320.36	1435.01±70.44