Accessory publication

Matrix-bound phosphine in paddy fields under a simulated increase in global atmospheric CO_2

J. Zhang,[A] *J.J. Geng,*[A,C] *R. Zhang,*[B] *H.Q. Ren*[A] *and X.R. Wang*[A]

[A]State Key Laboratory of Pollution Control and Resource Reuse, School of the Environment, Nanjing University, Nanjing 210093, China.

[B]School of Chemical and Environmental Science, Nanjing Normal University, Nanjing 210097, China.

[C]Corresponding author. Email: jjgeng@nju.edu.cn

Table A1 lists the detailed sampling dates, rice growing stages and water properties in the paddy field.

Table A1. Cultivation practice in the paddy field

Sampling collection dates	Growing stages	Water properties in the field
15 June	Transplanting	Flooding (fertiliser was applied on 14 June)
30 July	Late tillering	No water
17 August	Jointing	Interim irrigation with less water ~2–3 cm
30 August	Heading	Interim irrigation with less water ~2–3 cm
10 September	Flowering	No water
20 September	Ripening	Shallow water ~2 cm
18 October	Harvest	No water in the field

Table A2 shows the concentration of TP, IP, OP and OM from soil with depth of 0–5 cm, 5–10 cm and 10–20 cm respectively.

Table A2. Phosphorus fractionations and organic matter in the paddy soil

	FACE plots			Ambient plots		
	0–5 cm	5–10 cm	10–20 cm	0–5 cm	5–10 cm	10–20 cm
TP (mg kg^{-1})						
Transplanting	534	403	417	543	388	406
Later tillering	496	435	423	667	560	437
Jointing	445	399	382	487	437	444
Heading	460	372	282	373	380	407
Flowering	450	448	343	425	434	442
Ripening	454	441	493	495	431	412
Harvest	547	439	450	557	505	440
IP (mg kg^{-1})						
Transplanting	502	446	382	511	491	390
Later tillering	421	281	227	494	378	361
Jointing	374	285	187	386	360	364
Heading	380	319	197	378	365	333
Flowering	413	314	259	360	341	327
Ripening	393	320	339	384	379	349
Harvest	424	414	348	402	389	335
OP (mg kg^{-1})						
Transplanting	93	123	96	37	44	66
Later tillering	76	89	79	173	102	49
Jointing	71	81	117	101	90	104
Heading	80	77	13	7	32	76
Flowering	53	104	27	65	110	138
Ripening	61	91	154	111	62	78
Harvest	105	31	115	127	101	114
OM (%)						
Transplanting	1.73	1.54	1.37	2.58	2.18	1.87
Later tillering	2.57	1.58	1.29	2.71	2.25	1.26
Jointing	2.03	1.00	0.96	2.00	1.19	0.95
Heading	1.82	1.48	0.82	2.08	1.87	1.00
Flowering	2.36	1.27	1.04	2.07	0.93	0.65
Ripening	2.36	1.62	1.30	2.32	1.72	0.79
Harvest	3.68	3.08	1.73	2.80	2.06	0.87