

Supplementary material for

Do elevated CO₂ and temperature affect organic nitrogen fractions and enzyme activities in soil under rice crop?

Partha Pratim Maity^A, B. Chakrabarti^{A,E}, T.J. Purakayastha^B, A. Bhatia^A, Namita Das Saha^A, R.S. Jatav^A, A. Sharma^A, A. Bhowmik^C, V. Kumar^A, and D. Chakraborty^D

^ACentre for Environment Science and Climate Resilient Agriculture, ICAR-Indian Agricultural Research Institute, New Delhi 110012, India.

^BDivision of Soil Science and Agricultural Chemistry, ICAR-Indian Agricultural Research Institute, New Delhi 110012, India.

^CICAR- Indian Agricultural Statistics Research Institute, New Delhi 110012, India.

^DDivision of Agricultural Physics, ICAR-Indian Agricultural Research Institute, New Delhi 110012, India.

^ECorresponding author. Email: bidisha2@yahoo.com

Table S1. Significant effect of different factors and their interaction on different plant and soil parameters

Parameters	CO ₂	Temp	N	CO ₂ XTemp	CO ₂ XN	TempXN	CO ₂ XTempXN
Grain Yield.	**	**	**				
Aboveground N uptake	**	**	**	*			
Total N (soil)			**	**			
Total Hydrolysable N	*		**				
Amino Acid N	**	*	**	*	**		
Amino sugar N	**	**	**				
Ammonia N	**		**				
Serine + Threonine N		*	**				
Acid-Insoluble N			**				
NAG activity			**				
LAP activity	**	**	**				
MBC	**		**				
MBN	**	*	**				

* and ** Significant at 0.05 and 0.01 level (2-tailed) respectively.

Table S2. Correlation coefficient between different plant and soil parameters

	Grain yield	Aboveground N	Total soil N	Total Hydrolysable N	Amino Acid N	Amino sugar N	Ammo nia N	Serine + Threonine N	Acid-Insoluble N	NAG	LAP	MBC	MBN
Grain Yield	1												
Aboveground N	0.93**	1											
Total soil N	0.55*	0.77**	1										
Total Hydrolyzable N	0.35	0.61*	0.80**	1									
Amino Acid N	0.26	0.53*	0.77**	0.96**	1								
Amino sugar N	0.17	0.28	0.46	0.68**	0.72**	1							
Ammonia N	0.22	0.51*	0.82**	0.85**	0.88**	0.65**	1						
Serine + Threonine N	0.63**	0.83**	0.77**	0.79**	0.78**	0.58*	0.75**	1					
Acid-Insoluble N	0.57*	0.73**	0.94**	0.55*	0.54*	0.26	0.65**	0.62*	1				
NAG	-0.63**	-0.73**	-0.55*	-0.59*	-0.46	-0.35	-0.45	-0.60*	-0.44	1			
LAP	-0.86**	-0.87**	-0.56*	-0.58*	-0.53*	-0.48	-0.45	-0.78**	-0.46	0.70**	1		
MBC	0.86**	0.95**	0.73**	0.64**	0.50*	0.22	0.48	0.78**	0.65**	-0.75**	-0.79**	1	
MBN	0.85**	0.97**	0.76**	0.70**	0.63**	0.35	0.57*	0.88**	0.67**	-0.73**	-0.85**	0.96**	1

* and ** Significant at 0.05 and 0.01 level respectively