

Supplementary Tables and Figures

Table S1. An overview of the study area and fertilizer application under organic and conventional Taraori Basmati rice cultivation systems in Kaithal, Haryana, India.

Field No.	No. of field	Replications	Nutrients applied		Field area (ha)	Latitude	Longitude
			Rate	Form			
Organic 1	7	3	Recommended dose (N:P:K::150:40:40)	Certified organic manures (farm yard manure and decorticated neem cake)	2.4	29°76' N	76°39' E
Organic 2					2.0	29°71' N	77°18' E
Organic 3					2.0	29°79' N	76°40' E
Organic 4					2.4	29°39' N	76°37' E
Organic 5					3.6	29°42' N	76°41' E
Organic 6					6.0	29°41' N	76°36' E
Organic 7					3.2	29°50' N	76°19' E
Conventional 1	7	3	Recommended dose (N:P:K::150:40:40)	Urea, single super phosphate, and muriate of potash	0.8	29°58' N	77°02' E
Conventional 2					0.4	29°78' N	76°33' E
Conventional 3					0.4	29°41' N	76°31' E
Conventional 4					0.8	29°37' N	76°43' E
Conventional 5					1.6	29°77' N	76°39' E
Conventional 6					0.8	29°28' N	77°12' E
Conventional 7					0.8	29°44' N	76°30' E

Table S2. Permissible limit (or threshold value) of groundwater quality parameters for drinking and irrigation purposes.

Groundwater quality parameter	Permissible limit		Source
	Value	Unit	
Groundwater pH	6.5-8.5	-	EPA (2012)
Groundwater EC	0.7	dS m ⁻¹	Flynn (2009)
Groundwater total dissolved solid (TDS)	500	mg L ⁻¹	EPA (2012)
Groundwater nitrate (NO ₃)	50	mg L ⁻¹	WHO (2008)
Residual sodium carbonate (RSC)	1.24	meq. L ⁻¹	Flynn (2009)
Sodium adsorption ratio (SAR)	1.0	-	Flynn (2009)

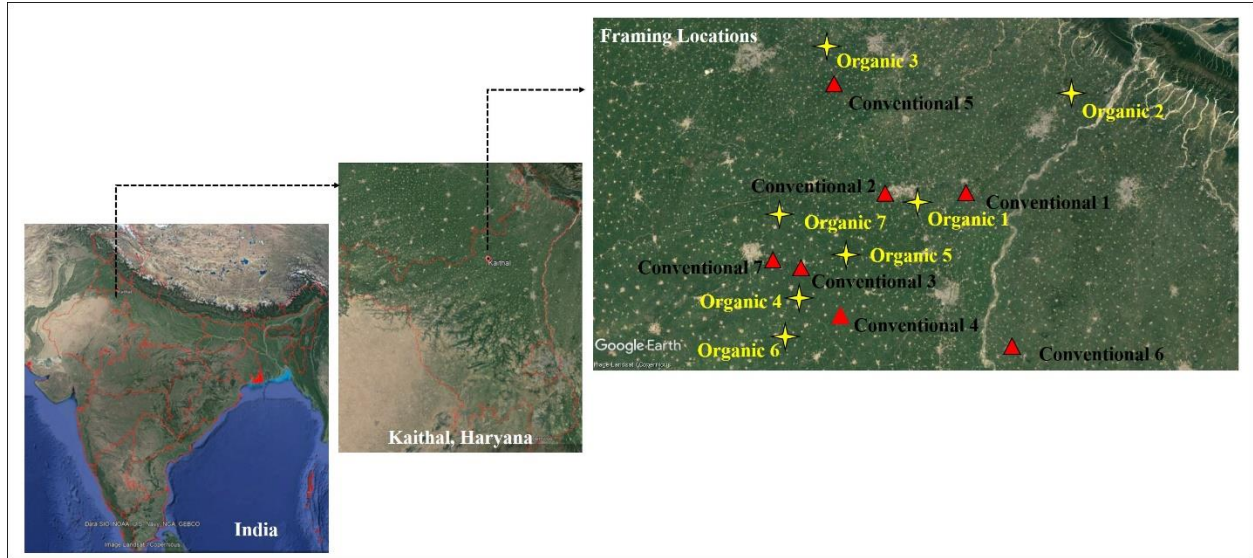


Figure S1: Study locations in Kaithal district of Haryana, India, and geographical positions of the organic and conventional fields used for groundwater samples collection.

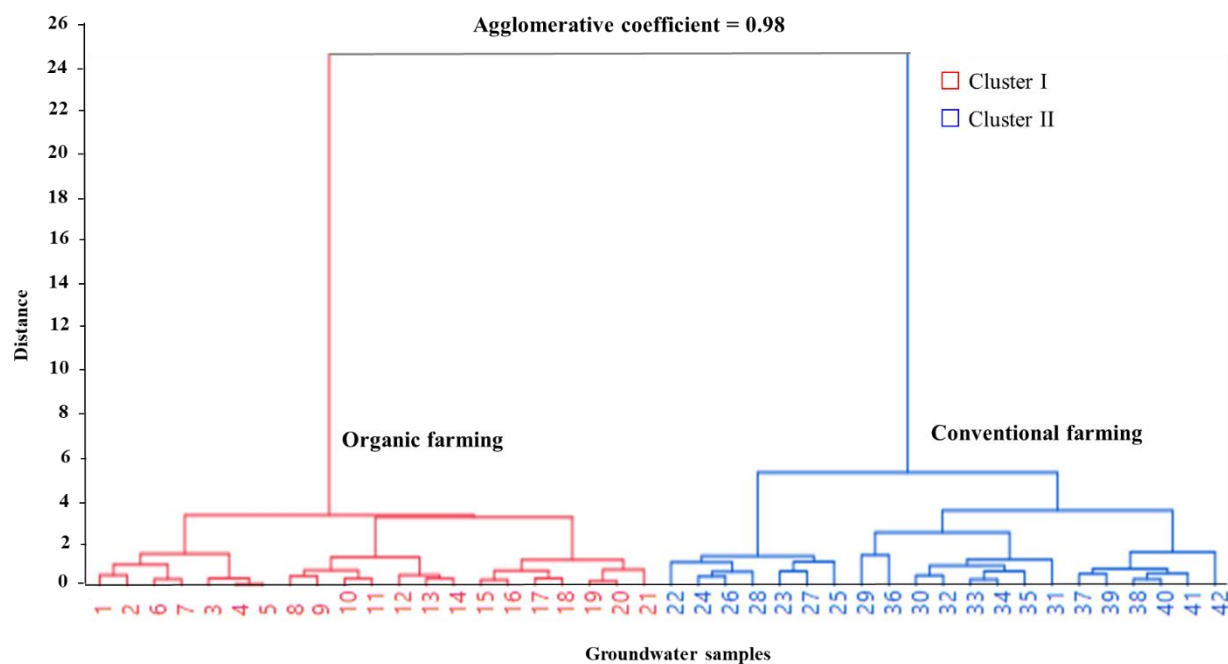


Figure S2. Dendrogram of the cluster identified from the analysis of answers related to the groundwater quality parameters of the samples collected from organic and conventional “Taraori Basmati” rice cultivation systems ($n = 42$, combining both years) in Kaithal, Haryana, India. Cluster I and II show the groundwater samples collected from organic and conventional fields, respectively. EC; electrical conductivity, EC; electrical conductivity, TDS; total dissolved solids, NO_3 ; nitrate, RSC; residual sodium carbonate, SAR; sodium adsorption ratio.