Supplementary Table S1. Studies of correlation coefficients on soil properties, yield and yield contributing eleven characters in the relation of CH_4 emission.

1.	**.**	**2.**	**CH_4 emission.**	**3.**	**Soil pH.**	**4.**	**Soil Eh.**	**5.**	**Organic carbon .**	**6.**	**Plant height .**	**7.**	**Number of panicles hill$^{-1.}$**	**8.**	**No. of filled grains hill$^{-1.}$**	**9.**	**Grain yield .**	**10.**	**Straw yield (kg ha^{-1}).**	**11.**	**Harvest index (%)..**
12.	CH_4 emission.	13.	1.	14.	.611**.	15.	-0.094.	16.	.588**.	17.	0.12.	18.	-0.268.	19.	-0.104.	20.	-0.312.	21.	-0.204.	22.	-0.103..
23.	Soil pH.	24.	.611**.	25.	1.	26.	-.487**.	27.	.715**.	28.	0.211.	29.	-0.252.	30.	-0.059.	31.	-0.363.	32.	-0.372.	33.	0.007..
34.	Soil Eh.	35.	-0.094.	36.	-.487**.	37.	1.	38.	-0.279.	39.	0.086.	40.	0.322.	41.	0.34.	42.	0.071.	43.	0.377.	44.	-0.34..
45.	Organic carbon .	46.	.588**.	47.	.715**.	48.	-0.279.	49.	1.	50.	0.103.	51.	-0.224.	52.	-0.114.	53.	-0.152.	54.	0.009.	55.	-0.181..
56.	Plant height .	57.	0.12.	58.	0.211.	59.	0.086.	60.	0.103.	61.	1.	62.	.413*.	63.	0.327.	64.	-0.035.	65.	0.011.	66.	-0.045..
67.	Number of panicles hill$^{-1.}$	68.	-0.268.	69.	-0.252.	70.	0.322.	71.	-0.224.	72.	.413*.	73.	1.	74.	.718**.	75.	0.046.	76.	0.141.	77.	-0.096..
78.	Number of filled grains hill$^{-1.}$	79.	-0.104.	80.	-0.059.	81.	0.34.	82.	-0.114.	83.	0.327.	84.	.718**.	85.	1.	86.	-0.02.	87.	0.17.	88.	-0.212..
89.	Grain yield .	90.	-0.312.	91.	-0.363.	92.	0.071.	93.	-0.152.	94.	-0.035.	95.	0.046.	96.	-0.02.	97.	1.	98.	.533**.	99.	.457*..
100.	Straw yield .	101.	-0.204.	102.	-0.372.	103.	0.377.	104.	0.009.	105.	0.011.	106.	0.141.	107.	0.17.	108.	.533**.	109.	1.	110.	-.504**..
111.	Harvest index .	112.	-0.103.	113.	0.007.	114.	-0.34.	115.	-0.181.	116.	-0.045.	117.	-0.096.	118.	-0.212.	119.	.457*.	120.	-.504**.	121.	1..

122. significant correlation is marked with '**'at the 0.01 level, and '*' at the 0.05 level.