

Table 1 Effect of the amendment materials on rice yield, cumulative GHGs emission and global-warming potentials

Treatment	Rice yield (Mg ha ⁻¹)	Cumulative GHGs emission			Global-warming potential (kg CO ₂ -eq ha ⁻¹)			Global-warming potential (kg CO ₂ -eq ha ⁻¹)	Global-warming potential (kg CO ₂ -eq Mg ⁻¹ yield)
		CO ₂ (g m ⁻²)	CH ₄ (g m ⁻²)	N ₂ O (g m ⁻²)	CO ₂	CH ₄	N ₂ O		
Early paddy									
Control	4.63±0.64a	2747±174a	6.51±0.43a	0.127±0.051a	27473±1744a	2214±145a	377±152a	30063±1686a	6811±1244a
Steel slag	4.67±0.20a	2635±192a	5.83±0.47a	0.092±0.007a	26352±1915a	1982±160a	274±21a	28608±1782a	6182±615a
Biochar	4.91±0.52a	2476±329a	6.99±1.62a	0.107±0.020a	24756±3287a	2375±550a	320±59a	27451±3590a	5816±1147a
Steel slag+biochar	5.06±0.26a	2233±71a	4.29±0.08b	0.101±0.005a	22332±709a	1458±27b	301±16a	24091±703a	4798±393a
Late paddy									
Control	6.73±0.94a	3241±90a	17.80±1.52a	0.146±0.059a	32412±895a	6053±516a	434±175a	38899±1332a	5994±784a
Steel slag	6.83±0.19a	2844±58b	15.15±4.05a	0.106±0.008a	28438±577b	5151±1378a	316±24a	33905±1975ab	4972±304ab
Biochar	6.97±0.21a	2419±195c	10.04±7.28a	0.124±0.023a	24188±1945c	3414±2476a	369±69a	27971±4161b	4033±644b
Steel slag+biochar	7.20±0.14a	2550±110bc	11.85±3.64ba	0.116±0.006a	25500±1102bc	4028±1238ba	347±19a	29875±1175b	4153±167b
Early paddy + late paddy	Sum	Sum			Sum	Sum	Sum	Sum	Sum
Control	11.36±0.52a	5988±246a	24.31±1.35a	0.273±0.109a	59885±2463a	8267±459a	810±326a	68962±2731a	12805±1547a
Steel slag	11.50±0.12a	5479±240ab	20.98±3.91a	0.198±0.015a	54790±2396ab	7133±1328a	590±45a	62513±3556ab	11154±787ab
Biochar	11.88±0.48a	4895±287b	17.03±6.87a	0.231±0.043a	48944±2872b	5788±2336a	689±128a	55422±2826b	9848±686ab
Steel slag+biochar	12.26±0.35a	4783±86b	16.14±3.58a	0.217±0.012a	47831±856b	5485±1216a	649±35a	53965±1620b	8951±552b

Different letters within a column indicate significant differences between the amended treatments and the control ($P<0.05$) obtained by Bonferroni's post hoc test.