NUMERICAL DATA

Effects of water deficit stress on agronomic and physiological responses of rice and greenhouse gas emission from rice soil under elevated atmospheric CO_2 (2018)

Table 1. Representative studies reporting GHG emissions from rice soils under different water management practices.

Author	Environment	GHG Emission		
		CH_4 (kg ha^{-1})	N_2O (kg ha^{-1})	GWP (kg CO_2 equivalent ha^{-1})
Hadi et al., 2010	Continuous flooded	634.2[a]	3.4[c]	15,378
	Intermittent drainage	370.9[a]	4.6[c]	9706
Tyagi et al., 2010	Continuous flooded	14.45[b]	–	8153.88
	Intermittent drainage	8.53[b]	–	4816.25
Xu and Hosen, 2010	Continuous flooded	2.62	–	–
	Irrigation at 79% soil water content	1.7	–	–
Khosa et al., 2011	Continuous flooded	1.3[b]	–	–
	AWD	0.47[b]	–	–
Li et al., 2011	Early aeration	1.49	132[d]	2920
	Prolonge aeration	1.52	85[d]	2300
Wang et al., 2011	Continuous flooded	–	0.28	–
	Intermittent drainage	–	0.37	–
Wang et al., 2012	Continuous flooded	221	0.16	–
	Intermittent drainage	74	0.22	–
Jain et al., 2014	TPR	22.59	0.61	888.1
	SRI	8.81	0.91	644.3
Li et al., 2014	Early aeration	1.27[b]	112[d]	2640
	Prolonged aeration	0.85[b]	113[d]	2330
Pandey et al., 2014	Continuous flooded	108	0.31	2784
	AWD	31	0.74	1005
Kumar et al., 2016	Continuous flooded	34.07	1.04	2328.53
	Irrigation at −40 kPa	16.7	0.98	1867.64

a Value in kg carbon ha^{-1} $season^{-1}$.

b Value in mg m^{-2} h^{-1}.
c Value in kg Nitrogen ha^{-1} $season^{-1}$.
d Value in μg N_2O m^{-2} h^{-1}.

Source : https://www.sciencedirect.com/science/article/pii/S0048969718338026

Effects of biochar application in forest ecosystems on soil properties and greenhouse gas emissions: a review (2018)

Table 1: Effects of biochar application on the greenhouse gas emissions in forest soils.

Soil type	Study type (scale)	Biochar type	Biochar rate	Time	CO_2 emission (over control)	CH_4 uptake (over control)	N_2O emission (over control)	Reference
Cambisols	Laboratory	Corn silage (500 °C)	1%, w/w	105	No significant difference	No significant difference	Decreased N_2O emission	Malghani et al. (2013)
Ferralsols	Laboratory	Chicken manure (540 °C)	10%, w/w	84	-	Increased CH_4 uptake	-	Yu et al. (2013)
Brunisol	Laboratory	Sugar maple wood (500 °C)	5, 10, and 20%, w/w	24	Increased CO_2 emission	-	-	Mitchell et al. (2015)
Humo-ferric podzols	Laboratory	Douglas-fir (420 °C)	1 and 10%, w/w	25	Increased CO_2 emission	Decreased CH_4 uptake	No significant difference in the 1% biochar treatment; Increased N_2O emission by 191% in the 10% biochar treatment	Hawthorne et al. (2017)
Lixisol	Field	Wheat straw (450 °C)	30 t ha−1	1	Decreased CO_2 emission by 31.5%	-	Decreased N_2O emission by 25.5%	Sun et al. (2014)
Ferralsols	Field	Bamboo leaf (500 °C)	5 t ha−1	1	No significant difference	-	-	Wang et al. (2014)
Humo-ferric podzols	Field	Mixed maple and spruce sawdust (350–450 °C)	1 and 10%, w/w	1	No significant difference	No significant difference	No significant difference	Sackett et al. (2015)
Ferralsols	Field	Bamboo leaf (500 °C)	5 t ha−1	1	-	-	Decreased N_2O emission by 20.5%	Xiao et al. (2016b)
Humo-ferric podzols	Laboratory	Douglas-fir slash (420 °C)	20 t ha−1	3	Increased CO_2 emission by 6.6%	Decreased CH_4 uptake by 8.4%	-	Johnson et al. (2017)
Ultisol	Field	Chicken manure (400°C)/Sawdust (400°C)	24 t ha−1	1	-	No significant difference	No significant difference	Lin et al. (2017)
Ferralsols	Field	Bamboo (800 °C)	10 and 30 t ha−1	16	No significance difference	-	-	Zhou et al. (2017)

Source: https://link.springer.com/article/10.1007/s11368-017-1906-y

Nitrogen fertilization and conservation tillage: a review on growth, yield, and greenhouse gas emissions in cotton. (2017)

Table 1. Reported GHG emission and their fluxes in different countries in cotton.

Place of study	GHG under study	GHG emission	GHG flux	Reference
Pakistan	N_2O	3.2 kg ha^{-1}	2.33 g N ha^{-1} day^{-1}	Mahmood et al. (2008)
China	N_2O	2.6 kg ha^{-1}	30 μg N m^{-2} h^{-1}	Liu et al. (2010)
China	NO	0.8 kg ha^{-1}	8.8 μg N m^{-2} h^{-1}	Liu et al. (2010)
Uzbekistan	N_2O	0.9 to 6 kg ha^{-1}	3000 μg N m^{-2} h^{-1}	Scheer et al. (2008a, b)
Australia	CO_2e	127, 127, and 1634 kg ha^{-1} (for solid-plant, double-skip, and irrigated cotton farming systems, respectively)	–	Maraseni et al. (2010)

Source: https://link.springer.com/article/10.1007/s11356-016-7894-4