NUMERICAL DATA

Environmental impact of biogas: A short review of current knowledge (2018)

Table 1. Emission factors of biogas plants operating direct biogas combustion.

Pollutant	Emission factor (g GJ^{-1})	Source
Carbon monoxide (CO)	310	Nielsen et al.,
	256	Kristensen et al.,
Sulphur dioxide (SO_2)	25	Nielsen et al.,
Nitrogen oxides (NO_x)	202	Nielsen et al.,
	540	Kristensen et al.,
Non-methane volatile organic	10	Nielsen et al.,
compounds (NMVOC)	21.15	Kristensen et al.,
Formaldehyde (CH_2O)	8.7	Nielsen et al.,
	14	Kristensen et al.,

Source : https://www.tandfonline.com/doi/full/10.1080/10934529.2018.1459076

Biogas plant on an industrial farm as an effective way of utilizing animal waste (2018)

Table 1: Biogas and methane yield of animal faeces.

Animal feaces	Dry matter [% FM]	Cumulated biogas [m^3·Mg FM]	Methane percent [%]
chicken droppings	73	83	68
manure	26	55	60
slurry	14.7	35	65

Source: https://www.e3s-conferences.org/articles/e3sconf/abs/2018/19/e3sconf_eko-dok2018_00164/e3sconf_eko-dok2018_00164.html

Rice-duck co-culture for reducing negative impacts of biogas slurry application in rice production systems. (2018)

Table 1. Effects of rice-duck co-culture and fertilization treatment on rice productivity under biogas slurry irrigation.

Treatment	Effective spikes (10^6 hm ^{2})	Grain number (spike ^{1})	Seed-setting rate (%)	1000-grain weight (g)	Theoretical yield (t hm ^{2})	Grain yield (t hm ^{2})
RM-CF	2.72a	135.44a	89.34a	27.62a	9.09a	8.09a
RD-CF	2.73a	130.07a	89.95a	28.29a	9.04a	8.21a
RM-BS	2.53a	125.89b	88.97ab	27.76a	7.87b	6.89b
RD-BS	2.72b	125.45b	90.87a	28.91a	8.96a	7.91a

Notes: RM-CF: rice monoculture with chemical fertilizer; RM-BS: rice monoculture with biogas slurry; RD-CF: rice-duck with chemical fertilizer; RD-BS: rice-duck with biogas slurry. Different letters next to values indicate significant differences of means among treatments (Fisher's LSD $P < 0.05$).

Source: https://www.sciencedirect.com/science/article/pii/S0301479718301907

The impact of biogas plants on regional dynamics of permanent grassland and maize area—The example of Hesse, Germany (2005–2010) (2017)

Table : 1 Correlations between variables of agricultural land use and distance of municipalities to the next biogas plant and livestock density index in 2010 based on Pearson's Correlation Coefficient).

Region	Correlations between						
	Maize area 2010*		Expansion of maize area 2005–2010**		Conversion of grassland 2005 to arable land 2010***		
	Distance of municipalities to next biogas plant	Livestock density index	Distance of municipalities to next biogas plant	Livestock density index	Distance of municipalities to next biogas plant	Livestock density index	
Hesse	0.21	0.49	0.31	0.08	0.31	0.07	
TLPDA	0.30	0.33	0.29	0.18	0.25	0.33	
TLPDB	0.09	0.03	0.36	0.13	0.43	0.26	
TLPDC	0.42	0.58	0.30	0.11	0.07	0.09	
TLPDD	0.24	0.66	0.36	0.14	0.39	0.09	
TLPDE	0.07	0.53	0.42	0.07	0.27	0.38	

* n = 428.
** n = 422.
*** n = 426.

Source: https://www.sciencedirect.com/science/article/pii/S0167880917300865