Table S1. Physicochemical soil average characteristics (0-0.30 m) of both experimental sites.

Characteristics	Site 1	Site 2
pH (potentiometry, 1:2.5 w/v)	8.2	8.1
Electrical conductivity (1:5 w/v; dS m^{-1})	0.18	0.16
Organic matter (Walkley–Black, % w/w)	1.9	1.8
Carbonates (Calcimeter Bernard method, % w/w)	30.0	36.2
Sand (0.05–2 mm, % w/w)	13	42
Silt (0.002–0.05 mm, % w/w)	61	42
Clay (<0.002 mm, % w/w)	26	16
Texture (USDA classification)	Silty loam	Sandy loam

Table S2. Main chemical properties of pig slurries with high (HDM) or low (LDM) dry matter content, applied in different textured soils: silty loam (SIL, site 1) or sandy loam (SL, site 2), before sowing (Oct-Nov) or at cereal tillering stage of winter cereal (topdressing, Feb-March).

	Application before sowing			**Application at topdressing**				
Soil texture	SIL	SIL	SL	SIL	SIL	SIL	SIL	SL
Year	2011	2012	2011	2012	2012	2013	2013	2012
Slurry type	HDM	HDM	HDM	HDM	LDM	HDM	LDM	LDM
pH	8.70	8.70	8.70	8.70	8.60	8.70	8.70	8.60
DM (%)	11.87	10.37	7.40	10.00	3.50	10.15	1.10	3.20
OM (%, DM)	66.40	60.59	73.00	72.90	73.10	60.12	73.40	69.20
Total N (%, DM)	6.27	5.71	7.26	7.05	6.91	6.60	14.37	14.53
NH_4^+-N (%, DM)	3.75	3.50	4.78	4.74	4.78	4.17	11.94	11.64

OM: organic matter; DM: dry matter.

Table S3. Effect of tillage systems (T: tillage; NT: no-tillage) when combined with slurries of different dry matter content (HDM: high dry matter, >7%; LDM: low slurry dry matter, <3.5%) on the average cumulative NH_3 volatilization during 12 h (± standard deviation). Slurries were surface applied in 2013 at cereal tillering stage (topdressing) over a silty loam soil.

Type of pig slurry	Slurry application			NH_3 volatilization per slurry type		Tillage	NH_3 volatilization per tillage system	
	Dose (t ha^{-1})	Total N (kg ha^{-1})	NH_4^+-N (kg ha^{-1})	Anova data[a] (df/ MS/ *p*)	NH_3-N (kg ha^{-1})		Anova data [a] (df/ MS/ *p*)	NH_3-N (kg ha^{-1})
HDM	15	99	64	1/1871058.7/0.06	1.37±0.63	T	1/ 423575.5/0.12	0.65±0.02
LDM	50	80	60		0.40±0.11	NT		1.11±0.52

[a] Anova analysis; df: degrees of freedom; MS: mean square (data units were g ha^{-1}); *p*: significance. No interaction was recorded between tillage system and slurry dry matter.