

Supplementary data A

REFERENCE	LOCATION	CROP	FERTILIZER TYPE	N_RATE (kg N ha ⁻¹)	kg N ₂ O-N ha ⁻¹ yr ⁻¹
Henault_et_al._(1998)	Chalons, France	Rape	*	0	0,0
Killian_et_al._(1998)	Freising, Germany	Winter wheat/winter barley	*	0	2,5
Kavdir et al. (2008)	Potsdam, Tyskland	Triticale/ Rape seed/ Hemp	*	0	0,4
Kavdir et al. (2008)	Potsdam, Tyskland	Rape seed/ Rye/ Triticale	*	0	0,5
Flessa_et_al._(1998)	Göttingen, Germany	Winter wheat	CAN	55	1,3
Kaiser_and_Heinemeier_(1996)	Braunschweig, Germany	Barley	KN	60	1,1
Wagner-Riddle_et_al._(1997)	Guelph, Ontario, Canada	Barley	AN	75	1,1
Wagner-Riddle_et_al._(1997)	Guelph, Ontario, Canada	Canola	AN	100	1,3
Kamp_et_al._(1998)	Munich, Germany	Wheat	UAN	100	1,8
Syväsalo_et_al._(2004)	Jokioinen, southern Finland	Barley	AN	100	3,7
Syväsalo_et_al._(2004)	Jokioinen, southern Finland	Barley	AN	100	3,7
Kamp_et_al._(1998)	Munich, Germany	Wheat	UAN	100	4,0
Kaiser_et_al._(1998)	Timmerlah, Braunsweig, Germany	Winter rape	UAN	100	4,0
Syväsalo_et_al._(2004)	Jokioinen, southern Finland	Barley	AN	100	4,4
Syväsalo_et_al._(2004)	Jokioinen, southern Finland	Barley	AN	100	7,5
Kaiser_and_Heinemeier_(1996)	Braunschweig, Germany	Winter wheat	CAN	108	1,0
Smith_et_al._(1998)	Midlothian, Scotland	Barley	AN	120	0,8
Henault_et_al._(1998)	Longchamp, France	Rape	Mix	142	3,5
Yamulki_et_al._(1995)	Rothamsted, UK	Wheat	CAN	150	1,2
Kavdir et al. (2008)	Potsdam, Germany	Triticale/ Rape seed/ Hemp	CAN	150	1,2
Kavdir et al. (2008)	Potsdam, Germany	Rape seed/ Rye/ Triticale	CAN	150	2,2
Henault_et_al._(1998)	Chalons, France	Rape	Mix	153	0,2

Henault_et_al._(1998)	Messigny, France	Rape	Mix	162	0,9
Smith_et_al._(1998)	Midlothian, Scotland	Wheat, winter	AN	180	0,3
Flessa_et_al._(1995)	Sandy soil, Germany	Wheat	Mix	190	9,6
Flessa_et_al._(1995)	Clay soil, S. Germany	Wheat	Mix	190	16,8
Kaiser_and_Heinemeier_(1996)	Braunschweig, Germany	Barley	CAN	210	1,2
Kaiser_et_al._(1998)	Timmerlah, Braunsweig, Germany	Winter wheat	UAN	210	3,5
Henault_et_al._(1998)	Chalons, France	Rape	Mix	232	0,3
Henault_et_al._(1998)	Longchamp, France	Rape	Mix	237	5,9
Henault_et_al._(1998)	Messigny, France	Rape	Mix	262	2,0
Klemedtsson et al. unpublished	Mellby Sweden	Spring wheat	*	0	2,8
Klemedtsson et al. unpublished	Logården, Sweden	Spring wheat	AN	117	1,1
Klemedtsson et al. unpublished	Mellby Sweden	Spring wheat	CAN	120	3,4
Klemedtsson et al. unpublished	Mellby Sweden	Spring wheat	CAN	120	2,4
Klemedtsson et al. unpublished	Logården, Sweden	Spring wheat	AN	128	0,5

Literature from which data were gathered

- Flessa, H., Dörsch, P., and Beese, F.: Seasonal variation of N₂O and CH₄ fluxes in differently managed arable soils in southern Germany. *J. Geophys. Res.*, 100, 23115-23124, 1995.
- Henault, C., Devis, X., Page, S., Justes, E., Reau, R., and Germon, J.C.: Nitrous oxide emissions under different soil and land management conditions. *Biol. Fertil. Soils*, 26, 199-207, 1998.
- Kaiser, E.-A., Heinemeyer O.: Temporal changes in N₂O-losses from two arable soils, *Plant and Soil*, 181, 57-63, 1996.
- Kaiser, E.-A., Kohrs, K., Kücke, M., Schnug, E., Heinemeyer, O., and Munch, J.C.: Nitrous oxide release from arable soil: importance of N-fertilization, crops and temporal variation. *Soil Biol. Biochem.*, 30, 1553-1563, 1998.
- Kamp, T., Steindl, H., Hantschel R.E., Beese, F., and Munch J.-C.: Nitrous oxide emissions from a fallow and wheat field as affected by increased soil temperatures, *Biol. Fertil. Soils*, 27, 307-314, 1998.
- Kavdir, Y., Hellebrand, H.J., and Kern, J. Seasonal variations of nitrous oxide emissions in relation to nitrogen fertilization and energy crop types in sandy soil. *Soil Till. Res.*, 98, 175-186, 2008.
- Kilian, A., Gutser, R., and Claassen, N.: Sessions on Sources and Sinks at the Vdlufa Congress, sep 15-19, 1997 Leipzig, Germany, *Agribiological Research-Zeitschrift Fur Agrarbiologie Agrarkulturchemie Okologie*, 51, 27-36, 1998.
- Smith, K.A., McTaggart, I.P., Dobbie, K.E., and Conen, F.: Emissions of N₂O from Scottish agricultural soils, as a function of fertilizer N. *Nutr. Cycl. Agroecosyst.*, 52, 123-130, 1998.
- Syväsalo, E., Regina, K., Philatie, M., and Esala, M.: Emissions of nitrous oxide from boreal agricultural clay and loamy sand soils. *Nutr. Cycl. Agroecosyst.*, 69, 155-165, 2004.
- Wagner-Riddle, C., Thurtell, G.W., Kidd, G.K., Beauchamp, E.G., and Sweetman, R.: Estimates of nitrous oxide emissions from agricultural fields over 28 months. *Can. J. Soil Sci.*, 77, 135-144, 1997.