

## Publications in Revised Journals

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- Chapuis-Lardy, L., **Wrage, N.**, Metay, A., Chotte, J.-L., Bernoux, M. (2007). Soils, a sink for  $\text{N}_2\text{O}$ ? A review. *Global Change Biology* 13, 1-17.
- Cuchillo, M.H., Puga, C.D., **Wrage, N.**, Pérez-Gil, R.F. (2010). Feeding goats on scrubby Mexican rangeland and pasteurization: Influences on milk and artisan cheese quality. *Tropical Animal Health and Production* 42, 1127–1134.
- Faramarzi, M., Kesting, S., Isselstein, J., **Wrage, N.** (im Druck). Rangeland condition in relation to environmental variables, grazing intensity and livestock owners' perceptions in semi-arid rangeland in western Iran. *The Rangeland Journal*.
- Kesting, S., **Wrage, N.**, Isselstein, J. (2009). Herbage mass and nutritive value of herbage of extensively managed temperate grasslands along a gradient of shrub encroachment. *Grass and Forage Science* 64, 246-254.
- Kool, D.M., **Wrage, N.**, Oenema, O., Dolfing, J., van Groenigen, J.W. (2007). Oxygen exchange between (de)nitrification intermediates and  $\text{H}_2\text{O}$  and its implications for source determination of  $\text{N}_2\text{O}$  and  $\text{NO}_3^-$ : a review. *Rapid Communications in Mass Spectrometry* 21, 3569-3578.
- Kool, D.M., Müller, C., **Wrage, N.**, Oenema, O., van Groenigen, J.W. (2009). Oxygen exchange between nitrogen oxides and  $\text{H}_2\text{O}$  can occur during nitrifier pathways. *Soil Biology and Biochemistry* 41, 1632-1641.
- Kool, D.M., **Wrage, N.**, Oenema, O., Harris, D., van Groenigen, J.W. (2009). The  $^{18}\text{O}$  isotopic signature of biogenic nitrous oxide is determined by O exchange with water. *Rapid Communications in Mass Spectrometry* 23, 104-108.
- Kool, D.M., **Wrage, N.**, Zechmeister-Boltenstern, S., Pfeffer, M., Brus, D., Oenema, O., Van Groenigen, J.W. (2010). Nitrifier denitrification can be a source of  $\text{N}_2\text{O}$  from soil: a revised approach to the dual isotope labelling method. *European Journal of Soil Science* 61, 759-772.
- Oenema, O., **Wrage, N.**, Velthof, G., Groenigen, J.W., Dolfing, J., Kuikman, P. (2005). Trends in global nitrous oxide emissions from animal production systems. *Nutrient Cycling in Agroecosystems* 72, 51-65.
- Sahin Demirbag, N., Röver, K.-U., **Wrage, N.**, Hofmann, M., Isselstein, J. (2009). Sward height related herbage growth rate on extensively managed pastures. *Grass and Forage Science* 64, 12-18.
- Tilsner, J., **Wrage, N.**, Lauf, J., Gebauer, G. (2003). Emission of gaseous nitrogen oxides from an extensively managed grassland in NE Bavaria, Germany. I. Annual budgets of  $\text{N}_2\text{O}$  and  $\text{NO}_x$  emissions. *Biogeochemistry* 63, 229-247.
- Tilsner, J., **Wrage, N.**, Lauf, J., Gebauer, G. (2003). Emission of gaseous nitrogen oxides from an extensively managed grassland in NE Bavaria. II. Stable isotope natural abundance of  $\text{N}_2\text{O}$ . *Biogeochemistry* 63, 249-267.
- Wrage, N.**, Velthof, G.L., van Beusichem, M.L., Oenema, O. (2001). Role of nitrifier denitrification in the production of nitrous oxide. *Soil Biology and Biochemistry* 33, 1723-1732.
- Wrage, N.**, Lauf, J., del Prado, A., Pinto, M., Pietrzak, S., Yamulki, S., Oenema, O., Gebauer, G. (2004). Distinguishing sources of  $\text{N}_2\text{O}$  in European grasslands by stable isotope analysis. *Rapid Communications in Mass Spectrometry* 18, 1-7.
- Wrage, N.**, Velthof, G.L., Laanbroek, H.J., Oenema, O. (2004). Nitrous oxide production in grassland soils: Assessing the contribution of nitrifier denitrification. *Soil Biology and Biochemistry* 36, 229-236.

- Wrage, N.**, Velthof, G.L., Oenema, O., Laanbroek, H.J. (2004). Acetylene and oxygen as inhibitors of nitrous oxide production in *Nitrosomonas europaea* and *Nitrosospira briensis*: a cautionary tale. FEMS Microbiology Ecology 47, 13-18.
- Wrage, N.**, van Groenigen, J.W., Oenema, O., Baggs, E.M. (2005). A novel dual-isotope labelling method for distinguishing between soil sources of N<sub>2</sub>O. Rapid Communications in Mass Spectrometry 19, 3298-3306.
- Wrage, N.**, Chapuis-Lardy, L., Isselstein, J. (2010) Importance of phosphorus for plant diversity. Sustainable Agriculture Reviews 3, 147-169.

### **Monographs and Book Chapters**

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- Estavillo, J.M., Merino, P., **Wrage, N.**, Dixon, L., Corré, W.J., Sapek, B., Plodzik, M. (2000). The influence of soil pH and nitrogen fertiliser application on N<sub>2</sub>O production from nitrification and denitrification. In Effects of liming and nitrogen fertilizer application on soil acidity and gaseous nitrogen oxide emissions in grassland systems (Hrsg. O. Oenema & A. Sapek), pp. 61-71. IMUZ Publisher, Falenty.
- Wrage, N.**, Dixon, L., Estavillo, J.M., Nawalany, P., Oenema, O. (2000). The influence of soil pH and nitrogen fertiliser application on N<sub>2</sub>O production by nitrifier denitrification. Some preliminary results. In Effects of liming and nitrogen fertilizer application on soil acidity and gaseous nitrogen oxide emissions in grassland systems (Hrsg. O. Oenema & A. Sapek), pp. 72-83. IMUZ Publisher, Falenty.
- Wrage, N.** (1999). Quantifizierung und Herkunftszuordnung der N<sub>2</sub>O-Emission aus einem Grünlandökosystem mit Hilfe von <sup>15</sup>N- und <sup>18</sup>O-Messungen. Diplomarbeit, Universität Bayreuth.
- Wrage, N.** (2003). Pitfalls in measuring nitrous oxide production by nitrifiers. Dissertation, Wageningen University and Research Centre, Wageningen.
- Wrage, N.**, Isselstein, J. (Hrsg., 2007). Neue Funktionen des Grünlands: Ökosystem, Energie, Erholung. Mitteilungen der Arbeitsgemeinschaft Grünland und Futterbau, Band 8, Göttingen.
- Schnyder, H., Isselstein, J., Taube, F., Auerswald, K., Schellberg, J., Wachendorf, M., Herrmann, A., Gierus, M., **Wrage, N.**, Hopkins, A. (Hrsg., 2010). Grassland in a changing world. Grassland Science in Europe<sup>1</sup> 15, Mecke Druck und Verlag, Duderstadt.

### **Selected Contributions to Proceedings and Agricultural Periodicals**

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- Wrage, N.**, Oenema, O. (2004). Environmental economics of soil organic matter management. In Controlling Nitrogen Flows and Losses (Hrsg. D.J. Hatch, D.R. Chadwick, S.C. Jarvis & J.A. Roker), 96-97. Wageningen Academic Publishers, Wageningen.
- Wrage, N.**, Sahin, N., Röver, K.U., Hofmann, M., Isselstein, J. (2006). Zeitliche Verteilung von Nährstoffen auf beweidetem Grünland: Nährstoffverarmung durch Weidehaltung? Mitteilungen der Arbeitsgemeinschaft Grünland und Futterbau 8, 220 – 223.

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<sup>1</sup> ‘Grassland Science in Europe’ is the publication of peer-reviewed papers of the meetings of the European Grassland Federation

- Wrage, N.**, Sahin Demirbag, N., Röver, K.-U., Hofmann, M., Isselstein, J. (2007). Forecasting the development of plant diversity in grazed pastures: Possible with nutrient balances? *Grassland Science in Europe* 12, 303-306.
- Wrage, N.**, Küchenmeister, F., Isselstein, J. (2007). Stickstoffbilanzen und Isotopensignaturen von heterogenem Grünland. *Mitteilungen der Gesellschaft für Pflanzenbauwissenschaften* 19, 168-169.
- Wrage, N.**, Müller, E., Wunderow, C., Isselstein, J. (2008). 7 Fragen zum Klimawandel. *Topagrar* 3, 26-28.
- Wrage, N.**, Ebenau, A., Jarzmik, A., Steude, K., Peter, K., Thies, C., Isselstein, J. (2009). Water-use efficiency of grassland differing in diversity. *Grassland Science in Europe* 14, 281-283.
- Wrage, N.**, Gauckler, L., Steep, E., Küchenmeister, F., Küchenmeister, K., Isselstein, J. (2010). Influence of drought stress and fertilisation on carbon isotopes as indicators of water use of grassland differing in diversity. *Grassland Science in Europe* 15, 860-862.