

List of Publications Prof. Dr. Nicole Wrage-Mönnig (August 2014)

Publications in Refereed Journals

- Breitsameter, L., Küchenmeister, K., Küchenmeister, F., **Wrage, N.**, Isselstein, J. (2013). Canopy cover and herbage accumulation of fourteen grassland species when stocked with chickens. *Agronomy Journal*, 105, 727-734.
- Chapuis-Lardy, L., **Wrage, N.**, Metay, A., Chotte, J.-L., Bernoux, M. (2007). Soils, a sink for N₂O? 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.
- Cuchillo, H.M., Puga, D.C., **Wrage-Mönnig, N.**, Espinosa, M.J.G., Montaña, B.S., Navarro-Ocaña, A., Ledesma, J.A., Diaz, M., Pérez-Gil, R.F. (2013). Chemical composition, antioxidant activity and bioactive compounds of vegetation species ingested by goats on semiarid rangelands. *Journal of Animal and Feed Sciences* 22, 106-115.
- Faramarzi, M., Kesting, S., Isselstein, J., **Wrage, N.** (2010). Rangeland condition in relation to environmental variables, grazing intensity and livestock owners' perceptions in semi-arid rangeland in western Iran. *The Rangeland Journal* 32, 367-377.
- Gauly, M., Bollwein, H., Breves, G., Brüggemann, K., Dänicke, S., Daş, G., Demeler, J., Hansen, H., Isselstein, J., König, S., Lohölter, M., Martinsohn, M., Meyer, U., Potthoff, M., Sanker, C., Schröder, B., **Wrage, N.**, Meibaum, B., von Samson-Himmelstjerna, G., Stinshoff, H., Wrenzycki, C. (2013). Future consequences and challenges for dairy cow production systems arising from climate change in Central Europe - A review. *Animal* 7, 843-859.
- Hoelt, I., Steude, K., **Wrage, N.**, Veldkamp, E. (2012). Response of nitrogen oxide emissions to grazer species and plant species composition in temperate agricultural grassland. *Agriculture, Ecosystems and Environment* 151, 34-43.
- Jerrentrup, J.S., **Wrage-Mönnig, N.**, Röver, K.-U., Isselstein, J. (2014). Grazing intensity affects insect diversity via sward structure and heterogeneity in a long-term experiment. *Journal of Applied Ecology* 51, 968-977.
- 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 H₂O and its implications for source determination of N₂O and NO₃⁻: 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 H₂O 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 ¹⁸O 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 N₂O from soil: a

- revised approach to the dual isotope labelling method. *European Journal of Soil Science* 61, 759-772.
- Kool, D.M., Dolfing, J., **Wrage, N.**, Van Groenigen, J.W. (2011). Nitrifier denitrification as a distinct and significant source of nitrous oxide from soil. *Soil Biology and Biochemistry* 43, 174-178.
- Kool, D.M., Van Groenigen, J.W., **Wrage, N.** (2011). Source determination of nitrous oxide based on nitrogen and oxygen isotope tracing: dealing with oxygen exchange. *Methods in Enzymology* 496, 139-160.
- Kool, D.M., **Wrage, N.**, Oenema, O., van Kessel, C., van Groenigen, J.W. (2011). Oxygen exchange with water alters the oxygen isotopic signature of nitrate in soil ecosystems. *Soil Biology and Biochemistry* 43, 1180-1185.
- Küchenmeister, F., Küchenmeister, K., **Wrage, N.**, Kayser, M., Isselstein, J. (2012). Yield and yield stability in mixtures of productive grassland species: Does species number or functional group composition matter? *Grassland Science* 58, 94-100.
- Küchenmeister, F., Küchenmeister, K., Kayser, M., **Wrage-Mönnig, N.**, Isselstein, J. (2014). Effects of drought stress and sward botanical composition on the nutritive value of grassland herbage. *International Journal of Agriculture and Biology* 16, 715-722.
- Küchenmeister, K., Küchenmeister, F., **Wrage, N.**, Kayser, M., Isselstein, J. (2012). Establishment and early yield development of five possible alternatives to *Trifolium repens* as a grassland legume. *Journal of Agricultural Science* 4, 86-95.
- Küchenmeister, K., Küchenmeister, F., Kayser, M., **Wrage-Mönnig, N.**, Isselstein, J. (2013). Influence of drought stress on nutritive value of perennial forage legumes. *International Journal of Plant Production* 7, 693-710.
- 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.
- Petersen, U., **Wrage, N.**, Köhler, L., Leuschner, C., Isselstein, J. (2011). Manipulating the species composition of permanent grasslands - a new approach to biodiversity experiments. *Basic and Applied Ecology* 13, 1-9.
- Petersen, U., **Wrage-Mönnig, N.**, Isselstein, J. (2013). Herbicide application to control sward composition – how does it affect yield and forage value in different management variants? *International Journal of Biodiversity Science, Ecosystem Services & Management* 9, 155-165.
- Rohe, L., Anderson, T.-H., Braker, G., Flessa, H., Giesemann, A., **Wrage-Mönnig, N.**, Well, R. (2014). Fungal oxygen exchange between denitrification intermediates and water. *Rapid Communications in Mass Spectrometry* 28, 377-384.
- Şahin Demirbağ, 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.
- Seither, M., **Wrage, N.**, Isselstein, J. (2012). Sward composition and grazer species effects on nutritive value and herbage accumulation. *Agronomy Journal* 104, 497-506.
- Seither, M., **Wrage, N.**, Isselstein, J. (2014). Biomass production of *Lolium-Cynosuretum* grassland is not affected by sward composition. *Journal of Plant Nutrition and Soil Science* 177, 613-623.
- 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 N₂O and NO_x emissions. *Biogeochemistry* 63, 229-247.

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- 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 N₂O in European grasslands by stable isotope analysis. *Rapid Communications in Mass Spectrometry* 18, 1-7.
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- 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 N₂O. *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.
- Wrage, N.**, Küchenmeister, F., Isselstein, J. (2011) Isotopic composition of soil, vegetation or cattle hair no suitable indicator of nitrogen balances in permanent pasture. *Nutrient Cycling in Agroecosystems* 90, 189-199.
- Wrage, N.**, Strodthoff, J., Cuchillo, H., Isselstein, J., Kayser, M. (2011). Phytodiversity of temperate permanent grasslands: ecosystem services for agriculture and livestock management for diversity conservation. *Biodiversity and Conservation* 20, 3317-3339.
- Wrage, N.**, Şahin Demirbağ, N., Hofmann, M., Isselstein, J. (2012). Vegetation height of patch more important for phytodiversity than that of paddock. *Agriculture, Ecosystem and Environment* 155, 111-116.

Monographs and Book Chapters

- 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 N₂O production from nitrification and denitrification. In Effects of liming and nitrogen fertilizer application on soil acidity and gaseous nitrogen oxide emissions in grassland systems (Eds. O. Oenema & A. Sapek), pp. 61-71. IMUZ Publisher, Falenty.
- Schnyder, H., Isselstein, J., Taube, F., Auerswald, K., Schellberg, J., Wachendorf, M., Herrmann, A., Gierus, M., **Wrage, N.**, Hopkins, A. (Eds., 2010). Grassland in a changing world. Grassland Science in Europe¹ 15, Mecke Druck und Verlag, Duderstadt.
- Wrage, N.**, Dixon, L., Estavillo, J.M., Nawalany, P., Oenema, O. (2000). The influence of soil pH and nitrogen fertiliser application on N₂O 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 (Eds. O. Oenema & A. Sapek), pp. 72-83. IMUZ Publisher, Falenty.
- Wrage, N.** (1999). Quantifizierung und Herkunftszuordnung der N₂O-Emission aus einem Grünlandökosystem mit Hilfe von ¹⁵N- und ¹⁸O-Messungen. Diplomarbeit, University of Bayreuth.
- Wrage, N.** (2003). Pitfalls in measuring nitrous oxide production by nitrifiers. Dissertation, Wageningen University and Research Centre, Wageningen.
- Wrage, N.**, Isselstein, J. (Eds., 2007). Neue Funktionen des Grünlands: Ökosystem, Energie, Erholung. Mitteilungen der Arbeitsgemeinschaft Grünland und Futterbau, Band 8, Göttingen.

Selected Contributions to Agricultural Periodicals

- Isselstein, J., Kayser, M., Küchenmeister, F., Küchenmeister, K., **Wrage, N.** (2011). Grünland im Klimawandel. DLG-Mitteilungen 6/2011, 76-79.
- Isselstein, J., Kayser, M., Küchenmeister, F., Küchenmeister, K., **Wrage, N.** (2011). Klimawandel mit Folgen für das Grünland. Österreichische Bauernzeitung 28, 5.
- Wrage, N.**, Müller, E., Wunderow, C., Isselstein, J. (2008). 7 Fragen zum Klimawandel. Topagrar 3, 26-28.

Media Coverage of the Person and her Projects

- Anonym. 05.08.2014: Neue Professorin an Agrarfakultät ernannt – Nicole Wrage-Mönnig wird im Fach Grünland lehren. Ostsee-Zeitung.
- Grass, M., 04.02.2012: Englisch am Niederrhein. Rheinische Post.
- Herbst, C., 13.1.2012: Interview for ‚Komm mach MINT: Nationaler Pakt für Frauen in MINT-Berufen‘ <http://www.komm-mach-mint.de/MINT-Du/MINT-Interviews/%28Fach%29/Naturwissenschaften>
- Grass, M., 30.11.2011: Die Frau fürs Grünland. Rheinische Post. <http://www.rp-online.de/niederrhein-nord/kleve/nachrichten/die-frau-fuers-gruenland-1.2620539>
- Stadtradio Göttingen, 19.01.2011: One hour Live-Interview: Eine Stunde ein Thema – Agrarwissenschaften und Klimawandel.

¹ ‚Grassland Science in Europe‘ is the annual publication of peer-reviewed contributions to the meetings of the European Grassland Federation

Böhm, C., 17.09.10: Wasserstress für Gräser und Klee, Göttinger Tageblatt.
<http://www.goettinger-tageblatt.de/Nachrichten/Wissen/Wissen-vor-Ort/Wasserstress-fuer-Graeser-und-Klee>