

## LMM, overzicht van artikelen

### 2023

Fraters, D., Ros, G.H., Brussée, T. (2023) Measuring Nitrate Leaching in the Vadose Zone of Loess Soils—Comparison of Batch Extraction and Centrifugation. *Water*, 15, 2709. (<https://doi.org/10.3390/w15152709>)

### 2022

Van Herpen, F., Van Aarle, N., Rozemeijer, J., Hooijboer, A., Oudenhoven, J. (2022) Praktijkervaringen met nitraatsensoren in oppervlaktewater. *H2O-Online* / 2 februari 2022, 9 pp., [https://www.h2owaternetwerk.nl/images/2022/Februari/H2O-Online\\_220202\\_Nitraatsensoren.pdf](https://www.h2owaternetwerk.nl/images/2022/Februari/H2O-Online_220202_Nitraatsensoren.pdf)

### 2021

Hooijboer, A., Tenner, E., Rozemeijers, J. (2021) Acht nitraatsensoren vergeleken, waarin zitten de verschillen? *Water Matters*, december 2021, 36-39.

Van Beelen, P., Van der Wal, A. (2021) Fosfaat in grondwater onder landbouwgrond meestal onder streefwaarde. *Water Matters*, december 2021, 28-31.

Van Beelen, P., Van der Wal, A. (2021) Phosphate concentrations in groundwater under Dutch farms are mostly below target value. *Water Matters*, december 2021, online: [https://www.h2o-watermatters.com/includes/partials/printArticle.php?ed=202112&art=07\\_Artikel](https://www.h2o-watermatters.com/includes/partials/printArticle.php?ed=202112&art=07_Artikel)

Spijker, J., Fraters, D., Vrijhoef, A. (2021) A machine learning based modelling framework to predict nitrate leaching from agricultural soils across the Netherlands. *Environ. Res. Commun.* 3, 045002 (<https://doi.org/10.1088/2515-7620/abf15f>)

Rozemeijer, J., Noordhuis, R., Ouwerkerk, K., Dionisio Pires, M., Blauw, A., Hooijboer, A., van Oldenborgh, G.J. (2021) Climate variability effects on eutrophication of groundwater, lakes, rivers, and coastal waters in the Netherlands. *Science of the Total Environment* 771, 145366 (<https://doi.org/10.1016/j.scitotenv.2021.145366>)

### 2020

Schepens, J., Lukács, S., Hooijboer, A., Van der Wal, A., Buijs, S. (2020) Water quality: from agricultural ditches to regional surface waters. *Knowledge Journal*, Edition 2, 2020 (<http://www.h2o-watermatters.com/?article=2020124>)

Blokhuis, C., Schepens, J.A.B., van der Wal, A. (2020) Een afweging van bodem-, water- en luchtdoelstellingen. *Bodem* 2020 (6): 37:39 (<https://www.rivm.nl/sites/default/files/2021-01/Artikel%20Blokhuis%20in%20tijdschrift%20Bodem%20december%202020.pdf>)

Hooijboer, A., Rozemeijer, J., Fraters, D., Tenner, E. (2020) WaterSNIP : Een nieuwe manier om de waterkwaliteit te monitoren. *Stromingen*, 26(2020)1: 81-92.

Kronvang, B., Wendland, F., Kovar, K., Fraters, D. (2020) Land Use and Water Quality. *Water* 2020(12), 2412: 9 pages (<https://doi.org/10.3390/w12092412>).

## 2019

Van der Wal, A., Hennen, W., De Koeijer, T. (2019) Bodem- en waterkwaliteit in de Nederlandse landbouw. Relatie tussen bodemorganische stof en nitraatuitspoeling op melkveebedrijven op zandgrond. *Bodem*, oktober 2019, 5: 34-36.

<https://www.rivm.nl/sites/default/files/2019-12/Bodem-%20en%20waterkwaliteit%20in%20de%20Nederlandse%20landbouw%20nieuw%20%282%29.pdf>

## 2017

Hooijboer, A., Fraters, D., Verloop, K. (2017) Het effect van rotatie van maïs en gras op de nitraatuitspoeling. *H2O Water Matters*, december 2017, 21-24.

<https://edepot.wur.nl/449841>

Hooijboer, A., Fraters, D., Verloop, K. (2017) The effect of the rotation of maize and grass on nitrate leaching. *H2O Knowledge Journal*, Edition 2, 2017. <http://www.h2o-watermatters.com/?ed=201712>

Spijker, J., Vrijhoef, A. (2017) Data Science is de wetenschap achter Big data - Ruimtelijk beeld nitraatconcentraties in grondwater. *Bodem*, 3: 14-16.

[https://www.rivm.nl/sites/default/files/2020-07/BOD\\_1703-Nitraatkaart.pdf](https://www.rivm.nl/sites/default/files/2020-07/BOD_1703-Nitraatkaart.pdf)

Fraters, D., Boom, G.J.F.L., Boumans, L.J.M., De Weerd, H., Wolters, M. (2017). Extraction of soil solution by drainage centrifugation - effects of centrifugal force and time of centrifugation on soil moisture recovery and solute concentration in soil moisture of loess subsoils. *Environmental Monitoring and Assessment*, 189: 83, 18 pages (<https://doi.org/10.1007/s10661-017-5788-7>).

## 2015

Fraters, D., van Leeuwen, T., Boumans, L., Reijs, J. (2015) Use of long-term monitoring data to derive a relationship between nitrogen surplus and nitrate leaching for grassland and arable land on well-drained sandy soils in the Netherlands. *Acta Agriculturae Scandinavica Section B: Soil and Plant Science*, 65, pp. 144-154 (<http://bit.ly/1bK9ZTI>).

## 2013

Buis, E., Hoogeveen, M.W., Fraters, D., Van Leeuwen, T.C. (2013) De gevolgen van 20 jaar mestbeleid op het milieu. Het Landelijk Meetnet effecten Mestbeleid: het meten van landbouwpraktijk en waterkwaliteit. *Bodem*, 23(1): 19-21.

## 2011

Hooijboer, A.E.J., Fraters, B. (2011) Nitrogen leaching to groundwater and surface water in the Dutch peat region. In: Groundwater quality management in a rapidly changing world. Proceedings of the 7th international groundwater quality conference, Zurich, Switzerland, 13-18 June 2010. IAHS publication 342, pp. 358-361.

Vrijhoef, A., Boumans, L.J.M. (2011) A method for standardising groundwater nitrate concentrations. In: Groundwater quality management in a rapidly changing world. Proceedings of the 7th international groundwater quality conference, Zurich, Switzerland, 13-18 June 2010. IAHS publication 342, pp. 342-345.

## 2008

Boumans, L.J.M., Fraters, B. and Van Drecht, G. (2008) Mapping nitrate leaching to upper groundwater in the sandy regions of The Netherlands, using conceptual knowledge. *Environ Monit Assess* (2008) 137:243-249.

Fraters, B., Willems, W.J. (2003) Monitoren van effecten van het Nederlandse mestbeleid op de waterkwaliteit. *Tijdschrift Water*, 8(2): 1-6.

## 2007

De Ruijter, F. J., Boumans, L.J.M., Smit, A.L., Van den Berg, M. (2007) Nitrate in upper groundwater on farms under tillage as affected by fertilizer use, soil type and groundwater table. *Nutrient Cycling in Agroecosystems*, 77:155–167. DOI 10.1007/s10705-006-9051-9

Schröder, J.J., Aarts, H.F.M., Middelkoop, J.C. van, Schils, R.L.M., Velthof, G.L., Fraters, B., Willems, W.J. (2007) Permissible manure and fertilizer use in dairy farming systems on sandy soils in The Netherlands to comply with the Nitrates Directive target. *Europ. J. Agronomy* 27, 102–114.

## 2006

Verloop, J., Boumans, L.J.M., Van Keulen, H., Oenema, J., Hilhorst, G.J., Aarts, H.F.M., and Sebek, L.B.J. (2006) Reducing nitrate leaching to groundwater in an intensive dairy farming system. *Nutrient Cycling in Agroecosystems*, 74:59–74. DOI 10.1007/s10705-005-6241-9

## 2005

Boumans, L.J.M., Fraters, B. and Van Drecht, G. (2005) Nitrate leaching in agriculture to upper groundwater in the sandy regions of the Netherlands during the 1992–1995 period. *Environmental Monitoring and Assessment*, 102(1-3): 225-241.

Fraters, B., Boumans, L.J.M., Van Leeuwen, T.C., De Hoop, D.W. (2005) Results of 10 years of monitoring nitrogen in the sandy regions in the Netherlands. *Water, Science & Technology*, 15(3-4): 239-247.

## 2004

Boumans, L.J.M., Fraters, B. and Van Drecht, G. (2004) Nitrate leaching by atmospheric N deposition to upper groundwater in the sandy regions of The Netherlands in 1990. *Environmental Monitoring and Assessment*, 93(1-3): 1-15.

## 2003

Fraters, B., Willems, W.J. (2003) Monitoren van effecten van het Nederlandse mestbeleid op de waterkwaliteit. *Tijdschrift Water*, 8(2): 1-6.

Langeveld, J.W.A., Smit, A.L. and Fraters, B. (2003) Reducing nitrate leaching from arable agriculture: preliminary results from the Netherlands. In: L. Razowska-Jaworek and A. Sadurki, Nitrates in Groundwater. Selected papers on Hydrogeology 5. International Association of Hydrogeologists. A.A. Balkema Publishers, Leiden; chapter 25: 259-268.

## 2002

Fraters, B., Boumans, L.J.M., Van Leeuwen, T.C., De Hoop, D.W. (2002) Monitoring nitrogen and phosphorus in shallow groundwater and ditch water on farms in the peat regions of the Netherlands. In: Proceedings of the 6th International Conference on Diffuse Pollution. Amsterdam, the Netherlands, 30 September –4 October 2002, pp. 575-576.

Fraters, B., Boumans, L.J.M., Reijnders, H.F.R., Van Leeuwen, T.C., De Hoop, D.W. (2002) Monitoring the effectiveness of the Dutch Mineral Policy on nitrate in groundwater. In: Steenvoorden, J., Cleassen, F. and Willems, W.J. (Eds.), Publication 273, Proceedings of the International Conference on Agricultural effect on Ground and Surface Waters. Research and Policy at the edge of science and society. Wageningen, the Netherlands, 1-4 October 2000, pp. 391-394.

## **2001**

Boumans, L.J.M., Fraters, B. and Van Drecht, G. (2001) Nitrate in the upper groundwater of 'De Marke' and other farms. *Netherlands Journal of Agricultural Science*, 49, (2-3), 163-177.

Fraters, B., Boumans, L.J.M., Van Leeuwen, T.C. and De Hoop, W.D. (2001) Monitoring nitrogen leaching for the evaluation of the Dutch minerals policy for agriculture in clay regions. *TheScientificworld*, 1 (S2), 758-766.

## **1999**

Meinardi, C.R., Schotten., C.G.J. (1999) Grondwateraanvulling en oppervlakkige afstroming in Nederland. Deel 3: De afwatering van veengebieden. *Stromingen*, 5 (1):5-18.

## **1998**

Fraters, B., Boumans, L.J.M., van Drecht, G., De Haan, T. en De Hoop, D.W. (1998) Nitrogen monitoring in groundwater in the sandy regions of the Netherlands. *Environmental Pollution* 102(S1): 479-485 ([http://dx.doi.org/10.1016/S0269-7491\(98\)80072-9](http://dx.doi.org/10.1016/S0269-7491(98)80072-9)).

Meinardi C.R., Van den Eertwegh, G.A.P.H., Schotten, C.G.J. (1998) Grondwateraanvulling en oppervlakkige afstroming in Nederland: Deel 2: De ontwatering van de kleigronden. *Stromingen*, 4 (4): 5-19.

Meinardi, C.R., Schotten, C.G.J., De Vries, J.J. (1998) Grondwateraanvulling en oppervlakkige afstroming in Nederland: Langjaarlijkse gemiddelden voor de zand- en leemgebieden. *Stromingen*, 4 (3):27-41.

Oenema, O., P.C.M. Boers, M.M. van Eerdt, B. Fraters, H.G. van der Meer, C.W.J. Roest, J.J. Schröder, W.J. Willems (1998). Leaching of nitrate from agriculture to groundwater: effect of policies and measures in the Netherlands. *Environmental Pollution* 102(S1): 471-478.

## **1997**

Fraters, D. en L.J.M. Boumans (1997) Monitoring Vermesting; een overzicht van de stand van zaken. *Bodem* 7 (3):105-108.