Jan Willem Van Groenigen

List of Publications by Citations

115 papers	8,360 citations	47 h-index	90 g-index
120 ext. papers	9,879 ext. citations	6 avg, IF	6.16 L-index

#	Paper	IF	Citations
115	Soil quality □A critical review. *Soil Biology and Biochemistry*, **2018**, 120, 105-125	7.5	801
114	Towards an agronomic assessment of N2O emissions: a case study for arable crops. *European Journal of Soil Science*, **2010**, 61, 903-913	3.4	522
113	Biochar boosts tropical but not temperate crop yields. *Environmental Research Letters*, **2017**, 12, 053001	6.2	306
112	Nitrifier denitrification as a distinct and significant source of nitrous oxide from soil. *Soil Biology and Biochemistry*, **2011**, 43, 174-178	7.5	299
111	Greenhouse-gas emissions from soils increased by earthworms. *Nature Climate Change*, **2013**, 3, 187-194	21.4	247
110	Trends in Global Nitrous Oxide Emissions from Animal Production Systems. *Nutrient Cycling in Agroecosystems*, **2005**, 72, 51-65	3.3	242
109	Earthworms increase plant production: a meta-analysis. *Scientific Reports*, **2014**, 4, 6365	4.9	237
108	Constrained optimisation of soil sampling for minimisation of the kriging variance. *Geoderma*, **1999**, 87, 239-259	6.7	225
107	Diet effects on urine composition of cattle and N2O emissions. *Animal*, **2013**, 7 Suppl 2, 292-302	3.1	199
106	Biochar application does not improve the soil hydrological function of a sandy soil. *Geoderma*, **2015**, 251-252, 47-54	6.7	184
105	The way forward in biochar research: targeting trade-offs between the potential wins. *GCB Bioenergy*, **2015**, 7, 1-13	5.6	177
104	Tracing 15N through landscapes: potential uses and precautions. *Journal of Hydrology*, **2003**, 272, 175-190	3.0	172
103	Global trends and uncertainties in terrestrial denitrification and N□ emissions. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2013**, 368, 20130112	5.8	166
102	Constrained Optimization of Spatial Sampling using Continuous Simulated Annealing. *Journal of Environmental Quality*, **1998**, 27, 1078-1086	3.4	163
101	Dissolved organic nitrogen: an overlooked pathway of nitrogen loss from agricultural systems?. *Journal of Environmental Quality*, **2009**, 38, 393-401	3.4	154
100	A novel dual-isotope labelling method for distinguishing between soil sources of N2O. *Rapid Communications in Mass Spectrometry*, **2005**, 19, 3298-306	2.2	148
99	Sequestering Soil Organic Carbon: A Nitrogen Dilemma. *Environmental Science & Technology*, **2017**, 51, 4738-4739	10.3	131

98	Nitrous oxide emission from urine-treated soil as influenced by urine composition and soil physical conditions. *Soil Biology and Biochemistry*, **2005**, 37, 463-473	7.5	131
97	Nitrous oxide emissions from silage maize fields under different mineral nitrogen fertilizer and slurry applications. *Plant and Soil*, **2004**, 263, 101-111	4.2	129
96	The soil N cycle: new insights and key challenges. *Soil*, **2015**, 1, 235-256	5.8	116
95	Biochar application rate affects biological nitrogen fixation in red clover conditional on potassium availability. *Agriculture, Ecosystems and Environment*, **2014**, 191, 83-91	5.7	116
94	Nitrifier denitrification can be a source of N2O from soil: a revised approach to the dual-isotope labelling method. *European Journal of Soil Science*, **2010**, 61, 759-772	3.4	115
93	Seasonal variation in N2O emissions from urine patches: Effects of urine concentration, soil compaction and dung. *Plant and Soil*, **2005**, 273, 15-27	4.2	112
92	Residues of bioenergy production chains as soil amendments: immediate and temporal phytotoxicity. *Journal of Hazardous Materials*, **2011**, 186, 2017-25	12.8	108
91	Oxygen exchange between (de)nitrification intermediates and H2O and its implications for source determination of NO3- and N2O: a review. *Rapid Communications in Mass Spectrometry*, **2007**, 21, 3569-78	2.2	105
90	Assessment and field-scale mapping of soil quality properties of a saline-sodic soil. *Geoderma*, **2003**, 114, 231-259	6.7	105
89	Earthworm species composition affects the soil bacterial community and net nitrogen mineralization. *Pedobiologia*, **2006**, 50, 243-256	1.7	96
88	Soil amendment with biochar increases the competitive ability of legumes via increased potassium availability. *Agriculture, Ecosystems and Environment*, **2014**, 191, 92-98	5.7	90
87	Pig slurry treatment modifies slurry composition, N2O, and CO2 emissions after soil incorporation. *Soil Biology and Biochemistry*, **2008**, 40, 1999-2006	7.5	90
86	Towards a global-scale soil climate mitigation strategy. *Nature Communications*, **2020**, 11, 5427	17.4	87
85	The influence of variogram parameters on optimal sampling schemes for mapping by kriging. *Geoderma*, **2000**, 97, 223-236	6.7	83
84	Management of irrigation frequency and nitrogen fertilization to mitigate GHG and NO emissions from drip-fertigated crops. *Science of the Total Environment*, **2014**, 490, 880-8	10.2	82
83	Plant species identity surpasses species richness as a key driver of N(2)O emissions from grassland. *Global Change Biology*, **2014**, 20, 265-75	11.4	79
82	Nitrogen losses from two grassland soils with different fungal biomass. *Soil Biology and Biochemistry*, **2011**, 43, 997-1005	7.5	77
81	NIR and DRIFT-MIR spectrometry of soils for predicting soil and crop parameters in a flooded field. *Plant and Soil*, **2003**, 250, 155-165	4.2	77

80	How fertile are earthworm casts? A meta-analysis. *Geoderma*, **2019**, 338, 525-535	6.7	75
79	Earthworm activity as a determinant for N2O emission from crop residue. *Soil Biology and Biochemistry*, **2007**, 39, 2058-2069	7.5	72
78	Increased hippuric acid content of urine can reduce soil N2O fluxes. *Soil Biology and Biochemistry*, **2006**, 38, 1021-1027	7.5	66
77	Can earthworms simultaneously enhance decomposition and stabilization of plant residue carbon?. *Soil Biology and Biochemistry*, **2017**, 105, 12-24	7.5	65
76	The 18O signature of biogenic nitrous oxide is determined by O exchange with water. *Rapid Communications in Mass Spectrometry*, **2009**, 23, 104-8	2.2	64
75	Role of maize stover incorporation on nitrogen oxide emissions in a non-irrigated Mediterranean barley field. *Plant and Soil*, **2013**, 364, 357-371	4.2	62
74	Oxygen exchange with water alters the oxygen isotopic signature of nitrate in soil ecosystems. *Soil Biology and Biochemistry*, **2011**, 43, 1180-1185	7.5	62
73	Oxygen exchange between nitrogen oxides and H2O can occur during nitrifier pathways. *Soil Biology and Biochemistry*, **2009**, 41, 1632-1641	7.5	60
72	Interactions between residue placement and earthworm ecological strategy affect aggregate turnover and N2O dynamics in agricultural soil. *Soil Biology and Biochemistry*, **2010**, 42, 618-625	7.5	58
71	Vertical gradients of delta15N and delta18O in soil atmospheric N2O--temporal dynamics in a sandy soil. *Rapid Communications in Mass Spectrometry*, **2005**, 19, 1289-95	2.2	55
70	Earthworm-induced N mineralization in fertilized grassland increases both N2O emission and crop-N uptake. *European Journal of Soil Science*, **2011**, 62, 152-161	3.4	54
69	Nitrous oxide emissions from multiple combined applications of fertiliser and cattle slurry to grassland. *Plant and Soil*, **2008**, 310, 89-101	4.2	48
68	The effective mitigation of greenhouse gas emissions from rice paddies without compromising yield by early-season drainage. *Science of the Total Environment*, **2018**, 612, 1329-1339	10.2	47
67	Do earthworms increase N2O emissions in ploughed grassland?. *Soil Biology and Biochemistry*, **2007**, 39, 632-640	7.5	47
66	What plant functional traits can reduce nitrous oxide emissions from intensively managed grasslands?. *Global Change Biology*, **2018**, 24, e248-e258	11.4	46
65	What artificial urine composition is adequate for simulating soil N2O fluxes and mineral N dynamics?. *Soil Biology and Biochemistry*, **2006**, 38, 1757-1763	7.5	46
64	Bioenergy from cattle manure? Implications of anaerobic digestion and subsequent pyrolysis for carbon and nitrogen dynamics in soil *GCB Bioenergy*, **2012**, 4, 751-760	5.6	44
63	Subsoil 15N-N2O Concentrations in a Sandy Soil Profile After Application of 15N-fertilizer. *Nutrient Cycling in Agroecosystems*, **2005**, 72, 13-25	3.3	44

62	Temporal Stability of Spatial Patterns of Nitrous Oxide Fluxes from Sloping Grassland. *Journal of Environmental Quality*, **2000**, 29, 1397-1407	3.4	44
61	Long-term nitrogen loading alleviates phosphorus limitation in terrestrial ecosystems. *Global Change Biology*, **2020**, 26, 5077-5086	11.4	41
60	Nitrous oxide and carbon dioxide emissions during initial decomposition of animal by-products applied as fertilisers to soils. *Geoderma*, **2010**, 157, 235-242	6.7	41
59	Relationships Between Soil Nitrogen Availability Indices, Yield, and Nitrogen Accumulation of Wheat. *Soil Science Society of America Journal*, **2002**, 66, 1549-1561	2.5	41
58	Temperature and moisture affect methane and nitrous oxide emission from bovine manure patches in tropical conditions. *Soil Biology and Biochemistry*, **2014**, 76, 242-248	7.5	40
57	Association of earthworm-denitrifier interactions with increased emission of nitrous oxide from soil mesocosms amended with crop residue. *Applied and Environmental Microbiology*, **2011**, 77, 4097-104	4.8	40
56	Effects of foraging waterfowl in winter flooded rice fields on weed stress and residue decomposition. *Agriculture, Ecosystems and Environment*, **2003**, 95, 289-296	5.7	40
55	Soil biochar amendment in a nature restoration area: effects on plant productivity and community composition **2014**, 24, 1167-77		38
54	Emissions of N2O from fertilized and grazed grassland on organic soil in relation to groundwater level. *Nutrient Cycling in Agroecosystems*, **2010**, 86, 331-340	3.3	38
53	Integrating spatial statistics and remote sensing. *International Journal of Remote Sensing*, **1998**, 19, 1793-1814	3.1	37
52	Soil invertebrate fauna affect N2 O emissions from soil. *Global Change Biology*, **2013**, 19, 2814-25	11.4	36
51	Decomposition of 14C-labeled roots in a pasture soil exposed to 10 years of elevated CO2. *Soil Biology and Biochemistry*, **2005**, 37, 497-506	7.5	35
50	Liebig's law of the minimum applied to a greenhouse gas: alleviation of P-limitation reduces soil N2O emission. *Plant and Soil*, **2014**, 374, 539-548	4.2	33
49	Do earthworms affect phosphorus availability to grass? A pot experiment. *Soil Biology and Biochemistry*, **2014**, 79, 34-42	7.5	27
48	Bioenergy by-products as soil amendments? Implications for carbon sequestration and greenhouse gas emissions. *GCB Bioenergy*, **2010**, 2, no-no	5.6	25
47	Exploring the relationship between soil mesofauna, soil structure and N2O emissions. *Soil Biology and Biochemistry*, **2016**, 96, 55-64	7.5	24
46	Residue incorporation depth is a controlling factor of earthworm-induced nitrous oxide emissions. *Global Change Biology*, **2012**, 18, 1141-1151	11.4	24
45	Source determination of nitrous oxide based on nitrogen and oxygen isotope tracing dealing with oxygen exchange. *Methods in Enzymology*, **2011**, 496, 139-60	1.7	24

44	Inhibition of denitrification and N2O emission by urine-derived benzoic and hippuric acid. *Soil Biology and Biochemistry*, **2006**, 38, 2499-2502	7.5	24
43	Interactions between microbial-feeding and predatory soil fauna trigger N2O emissions. *Soil Biology and Biochemistry*, **2014**, 70, 256-262	7.5	23
42	Soil Sampling Strategies for Precision Agriculture Research under Sahelian Conditions. *Soil Science Society of America Journal*, **2000**, 64, 1674-1680	2.5	23
41	Short-Range Spatial Variability of Nitrogen Fixation by Field-Grown Chickpea. *Soil Science Society of America Journal*, **2001**, 65, 1717-1722	2.5	22
40	Reduced greenhouse gas mitigation potential of no-tillage soils through earthworm activity. *Scientific Reports*, **2015**, 5, 13787	4.9	21
39	Use of the nitrification inhibitor dicyandiamide (DCD) does not mitigate N2O emission from bovine urine patches under Oxisol in Northwest Brazil. *Nutrient Cycling in Agroecosystems*, **2015**, 101, 83-92	3.3	21
38	Space-time statistics for environmental and agricultural related phenomena. *Environmental and Ecological Statistics*, **1998**, 5, 155-172	2.2	21
37	Initial biochar effects on plant productivity derive from N fertilization. *Plant and Soil*, **2017**, 415, 435-448	4.2	19
36	Earthworms can increase nitrous oxide emissions from managed grassland: A field study. *Agriculture, Ecosystems and Environment*, **2013**, 174, 40-48	5.7	19
35	Chapter 14 Designing Spatial Coverage Samples Using the k-means Clustering Algorithm. *Developments in Soil Science*, **2006**, 31, 183-192	1.3	19
34	Plant trait-based approaches to improve nitrogen cycling in agroecosystems. *Journal of Applied Ecology*, **2019**, 56, 2454-2466	5.8	18
33	Soil Bulk Density and Moisture Content Influence Relative Gas Diffusivity and the Reduction of Nitrogen-15 Nitrous Oxide. *Vadose Zone Journal*, **2014**, 13, vzj2014.07.0089	2.7	18
32	Mitigation strategies for greenhouse gas emissions from animal production systems: synergy between measuring and modelling at different scales. *Australian Journal of Experimental Agriculture*, **2008**, 48, 46		18
31	Exploring the pathways of earthworm-induced phosphorus availability. *Geoderma*, **2017**, 303, 99-109	6.7	17
30	Mitigation of greenhouse gas emissions and reduced irrigation water use in rice production through water-saving irrigation scheduling, reduced tillage and fertiliser application strategies. *Science of the Total Environment*, **2020**, 739, 140215	10.2	17
29	A simple and effective method to keep earthworms confined to open-top mesocosms. *Applied Soil Ecology*, **2013**, 64, 190-193	5	17
28	Greenhouse gas emissions along a peat swamp forest degradation gradient in the Peruvian Amazon: soil moisture and palm roots effects. *Mitigation and Adaptation Strategies for Global Change*, **2019**, 24, 625-643	3.9	15
27	Large variations in readily-available phosphorus in casts of eight earthworm species are linked to cast properties. *Soil Biology and Biochemistry*, **2019**, 138, 107583	7.5	14

26	Optimization of environmental sampling using interactive GIS. *Soil and Tillage Research*, **1997**, 10, 83-97		14
25	Interactive GIS for environmental risk assessment. *International Journal of Geographical Information Science*, **1995**, 9, 509-525	4.1	14
24	Application technique affects the potential of mineral concentrates from livestock manure to replace inorganic nitrogen fertilizer. *Soil Use and Management*, **2012**, 28, 468-477	3.1	13
23	A novel method to determine buffer strip effectiveness on deep soils. *Journal of Environmental Quality*, **2012**, 41, 334-47	3.4	13
22	Can the presence of plantain (Plantago lanceolata L.) improve nitrogen cycling of dairy grassland systems on peat soils?. *New Zealand Journal of Agricultural Research*, **2020**, 63, 106-122	1.9	12
21	Simulation of Daily Nitrous Oxide Emissions from Managed Peat Soils. *Vadose Zone Journal*, **2011**, 10, 156-168	2.7	11
20	Earthworm-induced N2O emissions in a sandy soil with surface-applied crop residues. *Pedobiologia*, **2011**, 54, S103-S111	1.7	10
19	Gaseous Nitrogen Emissions from Livestock Farming Systems **2008**, 395-441		10
18	What root traits determine grass resistance to phosphorus deficiency in production grassland?. *Journal of Plant Nutrition and Soil Science*, **2018**, 181, 323-335	2.3	9
17	Biochars produced from individual grassland species differ in their effect on plant growth. *Basic and Applied Ecology*, **2014**, 15, 18-25	3.2	8
16	Isotopic analysis of dissolved organic nitrogen in soils. *Analytical Chemistry*, **2010**, 82, 7814-20	7.8	8
15	Reducing greenhouse gas emissions and grain arsenic and lead levels without compromising yield in organically produced rice. *Agriculture, Ecosystems and Environment*, **2020**, 295, 106922	5.7	7
14	Manipulating plant community composition to steer efficient N-cycling in intensively managed grasslands. *Journal of Applied Ecology*, **2021**, 58, 167-180	5.8	7
13	Response to the Letter to the Editor Regarding Our Viewpoint "Sequestering Soil Organic Carbon: A Nitrogen Dilemma". *Environmental Science & Technology*, **2017**, 51, 11503-11504	10.3	6
12	Isotopic evidence for changes in residue decomposition and N-cycling in winter flooded rice fields by foraging waterfowl. *Agriculture, Ecosystems and Environment*, **2004**, 102, 41-47	5.7	6
11	Soil fauna diversity increases CO but suppresses N O emissions from soil. *Global Change Biology*, **2020**, 26, 1886-1898	11.4	6
10	Tracking C and N dynamics and stabilization in soil amended with wheat residue and its corresponding bioethanol by-product: a 13C/15N study. *GCB Bioenergy*, **2014**, 6, 499-508	5.6	5
9	A Novel Method for Quantifying Nitrous Oxide Reduction in Soil. *Vadose Zone Journal*, **2012**, 11, vzj2011.0107	2.7	5

8	Mitigating N2O emissions from urine patches in pastures. *International Congress Series*, **2006**, 1293, 347-350		5
7	Towards optimal use of phosphorus fertiliser. *Scientific Reports*, **2020**, 10, 17804	4.9	5
6	Photosynthetic limits on carbon sequestration in croplands. *Geoderma*, **2022**, 416, 115810	6.7	5
5	Plant community flood resilience in intensively managed grasslands and the role of the plant economic spectrum. *Journal of Applied Ecology*, **2020**, 57, 1524-1534	5.8	4
4	Nitrate leaching and apparent recovery of urine-N in grassland on sandy soils in the Netherlands. *Njas - Wageningen Journal of Life Sciences*, **2014**, 70-71, 25-32	7	4
3	Can flooding-induced greenhouse gas emissions be mitigated by trait-based plant species choice?. *Science of the Total Environment*, **2020**, 727, 138476	10.2	3
2	Is the climate change mitigation effect of enhanced silicate weathering governed by biological processes?. *Global Change Biology*, **2021**,	11.4	1
1	Plant traits of grass and legume species for flood resilience and N2O mitigation. *Functional Ecology*, **2021**, 35, 2205	5.6	1