Surinder Saggar

List of Publications by Year
in descending order

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127	6,157	76196	79541
papers	citations	40 h-index	73 g-index

130	130	130	5198
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Denitrification and N2O:N2 production in temperate grasslands: Processes, measurements, modelling and mitigating negative impacts. Science of the Total Environment, 2013, 465, 173-195.	3.9	408
2	Effect of urease and nitrification inhibitors on N transformation, gaseous emissions of ammonia and nitrous oxide, pasture yield and N uptake in grazed pasture system. Soil Biology and Biochemistry, 2009, 41, 1270-1280.	4.2	305
3	DNDC: A process-based model of greenhouse gas fluxes from agricultural soils. Agriculture, Ecosystems and Environment, 2010, 136, 292-300.	2.5	292
4	A review of emissions of methane, ammonia, and nitrous oxide from animal excreta deposition and farm effluent application in grazed pastures. New Zealand Journal of Agricultural Research, 2004, 47, 513-544.	0.9	194
5	14C-labelled ryegrass turnover and residence times in soils varying in clay content and mineralogy. Soil Biology and Biochemistry, 1996, 28, 1677-1686.	4.2	182
6	Modelling nitrous oxide emissions from dairy-grazed pastures. Nutrient Cycling in Agroecosystems, 2004, 68, 243-255.	1.1	175
7	Gaseous Emissions of Nitrogen from Grazed Pastures: Processes, Measurements and Modelling, Environmental Implications, and Mitigation. Advances in Agronomy, 2004, 84, 37-120.	2.4	171
8	A simplified resin membrane technique for extracting phosphorus from soils. Fertilizer Research, 1990, 24, 173-180.	0.5	147
9	Tillage-induced changes to soil structure and organic carbon fractions in New Zealand soils. Soil Research, 2001, 39, 465.	0.6	142
10	Management options to reduce nitrous oxide emissions from intensively grazed pastures: A review. Agriculture, Ecosystems and Environment, 2010, 136, 282-291.	2.5	132
11	The effect of nitrification inhibitors on soil ammonia emissions in nitrogen managed soils: a meta-analysis. Nutrient Cycling in Agroecosystems, 2012, 93, 51-64.	1.1	128
12	Impact of urease inhibitor on ammonia and nitrous oxide emissions from temperate pasture soil cores receiving urea fertilizer and cattle urine. Science of the Total Environment, 2013, 465, 56-63.	3.9	126
13	Measurement of microbial sulfur in soil. Soil Biology and Biochemistry, 1981, 13, 493-498.	4.2	124
14	14C-labelled glucose turnover in New Zealand soils. Soil Biology and Biochemistry, 1999, 31, 2025-2037.	4.2	119
15	Measured and modelled estimates of nitrous oxide emission and methane consumption from a sheep-grazed pasture. Agriculture, Ecosystems and Environment, 2007, 122, 357-365.	2.5	118
16	Methane uptake in soils from Pinus radiata plantations, a reverting shrubland and adjacent pastures: Effects of land-use change, and soil texture, water and mineral nitrogen. Soil Biology and Biochemistry, 2007, 39, 1437-1449.	4.2	110
17	Effects of heavy metal contamination on the short-term decomposition of labelled [14C]glucose in a pasture soil. Soil Biology and Biochemistry, 1994, 26, 727-733.	4.2	109
18	Nitrous oxide emissions from a New Zealand cropped soil: tillage effects, spatial and seasonal variability. Agriculture, Ecosystems and Environment, 2002, 93, 33-43.	2.5	106

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19	BIOGEOCHEMICAL IMPACT OFHIERACIUMINVASION IN NEW ZEALAND'S GRAZED TUSSOCK GRASSLANDS: SUSTAINABILITY IMPLICATIONS. , 2001, 11, 1311-1322.		103
20	Decomposition of dicyandiamide (DCD) in three contrasting soils and its effect on nitrous oxide emission, soil respiratory activity, and microbial biomassâ€”an incubation study. Soil Research, 2008, 46, 517.	0.6	102
21	Partitioning and translocation of photosynthetically fixed 14 C in grazed hill pastures. Biology and Fertility of Soils, 1997, 25, 152-158.	2.3	100
22	Soil-atmosphere exchange of nitrous oxide and methane in New Zealand terrestrial ecosystems and their mitigation options: a review. Plant and Soil, 2008, 309, 25-42.	1.8	93
23	Modelling nitrous oxide emissions from grazed grasslands in New Zealand. Agriculture, Ecosystems and Environment, 2007, 119, 205-216.	2.5	91
24	Quantification of reductions in ammonia emissions from fertiliser urea and animal urine in grazed pastures with urease inhibitors for agriculture inventory: New Zealand as a case study. Science of the Total Environment, 2013, 465, 136-146.	3.9	78
25	Carbon turnover in a range of allophanic soils amended with 14C-labelled glucose. Soil Biology and Biochemistry, 1994, 26, 1263-1271.	4.2	77
26	Changes in soil microbial biomass, metabolic quotient, and organic matter turnover under Hieracium (H. pilosella L.). Biology and Fertility of Soils, 1999, 30, 232-238.	2.3	73
27	Sulfur transformations in relation to carbon and nitrogen in incubated soils. Soil Biology and Biochemistry, 1981, 13, 499-511.	4.2	71
28	Impact of Clover Cyst Nematode (Heterodera Trifolii) Infection On Soil Microbial Activity in the Rhizosphere of White Clover (Trifolium Repens) - a Pulse-Labelling Experiment. Nematologica, 1998, 44, 81-90.	0.2	68
29	A nutrient-transfer model to explain the fate of phosphorus and sulphur in a Grazed Hill-Country pasture. Agriculture, Ecosystems and Environment, 1990, 30, 295-315.	2.5	66
30	Can pH amendments in grazed pastures help reduce N2O emissions from denitrification? â€“ The effects of liming and urine addition on the completion of denitrification in fluvial and volcanic soils. Soil Biology and Biochemistry, 2016, 93, 90-104.	4.2	65
31	Denitrifier community size, structure and activity along a gradient of pasture to riparian soils. Soil Biology and Biochemistry, 2014, 71, 48-60.	4.2	61
32	Increase in 14C-carbon translocation to the soil microbial biomass when five species of plant-parasitic nematodes infect roots of white clover. Nematology, 1999, 1, 295-300.	0.2	56
33	Influence of land-use management on CO2 emissions from a silt loam soil in New Zealand. Agriculture, Ecosystems and Environment, 2000, 77, 257-262.	2.5	55
34	Carbon and phosphorus transformations during decomposition of pine forest floor with different phosphorus status. Biology and Fertility of Soils, 1998, 27, 197-204.	2.3	52
35	Response of methanotrophic communities to afforestation and reforestation in New Zealand. ISME Journal, 2011, 5, 1832-1836.	4.4	52
36	Title is missing!. Plant and Soil, 2001, 236, 91-103.	1.8	50

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37	Assessment of nitrogen losses from urea and an organic manure with and without nitrification inhibitor, dicyandiamide, applied to lettuce under glasshouse conditions. Soil Research, 2008, 46, 535.	0.6	49
38	Effect of nitrogen and phosphorus fertilization on the composition of rhizobacterial communities of two Chilean Andisol pastures. World Journal of Microbiology and Biotechnology, 2014, 30, 99-107.	1.7	47
39	Nitrous oxide emissions from urea fertiliser and effluent with and without inhibitors applied to pasture. Agriculture, Ecosystems and Environment, 2016, 219, 58-70.	2.5	46
40	N2O and N2 emissions from pasture and wetland soils with and without amendments of nitrate, lime and zeolite under laboratory condition. Soil Research, 2008, 46, 526.	0.6	45
41	Quantifying the climate-change consequences of shifting land use between forest and agriculture. Science of the Total Environment, 2013, 465, 314-324.	3.9	45
42	Re-introduction of light grazing reduces soil erosion and soil respiration in a converted grassland on the Loess Plateau, China. Agriculture, Ecosystems and Environment, 2019, 280, 43-52.	2.5	44
43	Rare earth elements (REE) for the removal and recovery of phosphorus: A review. Chemosphere, 2022, 286, 131661.	4.2	43
44	Nitrous oxide emissions from grazed hill land in New Zealand. Agriculture, Ecosystems and Environment, 2013, 181, 58-68.	2.5	42
45	Nitrogen transformation and nitrous oxide emissions from various types of farm effluents. Nutrient Cycling in Agroecosystems, 2007, 79, 193-208.	1.1	41
46	Procedure for Fast Simultaneous Analysis of the Greenhouse Gases: Methane, Carbon Dioxide, and Nitrous Oxide in Air Samples. Communications in Soil Science and Plant Analysis, 2006, 37, 1501-1510.	0.6	38
47	A preliminary study to model the effects of a nitrification inhibitor on nitrous oxide emissions from urine-amended pasture. Agriculture, Ecosystems and Environment, 2010, 136, 310-317.	2.5	38
48	Elevated CO2 effects on carbon and nitrogen cycling in grass/clover turves of a Psammaquent soil. Plant and Soil, 1996, 182, 185-198.	1.8	37
49	Title is missing!. Nutrient Cycling in Agroecosystems, 1999, 55, 35-50.	1.1	35
50	Soil microbial biomass, metabolic quotient, and carbon and nitrogen mineralisation in 25-year-old Pinus radiata agroforestry regimes. Soil Research, 2001, 39, 491.	0.6	35
51	Development and evaluation of an improved soil test for phosphorus. 2. Comparison of the Olsen and mixed cation-anion exchange resin tests for predicting the yield of ryegrass grown in pots. Fertilizer Research, 1992, 33, 135-144.	0.5	34
52	Biogeography and biophysicochemical traits link N2O emissions, N2O emission potential and microbial communities across New Zealand pasture soils. Soil Biology and Biochemistry, 2015, 82, 87-98.	4.2	34
53	Effects of irrigating dairy-grazed grassland with farm dairy effluent on nitrous oxide emissions. Plant and Soil, 2008, 309, 119-130.	1.8	33
54	Estimating direct N2O emissions from sheep, beef, and deer grazed pastures in New Zealand hill country: accounting for the effect of land slope on the N2O emission factors from urine and dung. Agriculture, Ecosystems and Environment, 2015, 205, 70-78.	2.5	32

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55	Improving bioavailability of phosphorous from cattle dung by using phosphatase immobilized on natural clay and nanoclay. Chemosphere, 2012, 89, 648-655.	4.2	30
56	Chemical fractionation to characterize changes in sulphur and carbon in soil caused by management. European Journal of Soil Science, 2004, 55, 79-90.	1.8	29
57	Refining the New Zealand nitrous oxide emission factor for urea fertiliser and farm dairy effluent. Agriculture, Ecosystems and Environment, 2016, 222, 133-137.	2.5	29
58	Post-harvest residue decomposition and nitrogen dynamics in Pinus radiata plantations of different N status. Forest Ecology and Management, 2001, 154, 55-67.	1.4	28
59	Comprehensive evaluation of the climate-change implications of shifting land use between forest and grassland: New Zealand as a case study. Agriculture, Ecosystems and Environment, 2012, 150, 123-138.	2.5	28
60	Soil organic matter transformations induced by Hieracium pilosella L. in tussock grassland of New Zealand. Biology and Fertility of Soils, 2000, 32, 194-201.	2.3	27
61	Influence of soil phosphorus status and nitrogen addition on carbon mineralization from 14 C-labelled glucose in pasture soils. Biology and Fertility of Soils, 2000, 32, 209-216.	2.3	27
62	Influence of dicyandiamide on nitrogen transformation and losses in cow-urine-amended soil cores from grazed pasture. Animal Production Science, 2009, 49, 253.	0.6	27
63	Fate of the nitrification inhibitor dicyandiamide (DCD) sprayed on a grazed pasture: effect of rate and time of application. Soil Research, 2012, 50, 337.	0.6	27
64	Environmental benefits and risks of biochar application to soil. Agriculture, Ecosystems and Environment, 2014, 191, 1-4.	2.5	27
65	Development and evaluation of an improved soil test for phosphorus: 1. The influence of phosphorus fertilizer solubility and soil properties on the extractability of soil P. Fertilizer Research, 1992, 33, 81-91.	0.5	26
66	Impact of urine and the application of the nitrification inhibitor DCD on microbial communities in dairy-grazed pasture soils. Soil Biology and Biochemistry, 2015, 88, 344-353.	4.2	26
67	Pathways of dicyandiamide uptake in pasture plants: a laboratory study. Biology and Fertility of Soils, 2016, 52, 539-546.	2.3	26
68	Nitrous oxide and methane emissions from a dairy farm stand-off pad. Australian Journal of Experimental Agriculture, 2008, 48, 179.	1.0	26
69	Quantification of nitrous oxide emissions and emission factors from beef and dairy cattle excreta deposited on grazed pastoral hill lands. Agriculture, Ecosystems and Environment, 2019, 270-271, 103-113.	2.5	25
70	Surface area of soils of contrasting mineralogies using para-nitrophenol adsorption and its relation to air-dry moisture content of soils. Soil Research, 2000, 38, 155.	0.6	24
71	Comparison of soil microbial properties and fauna under tussockâ€grassland and pine plantation. Journal of the Royal Society of New Zealand, 1998, 28, 523-535.	1.0	23
72	Predicting the fate of fertiliser sulphur in grazed hill country pastures by modelling the transfer and accumulation of soil phosphorus. New Zealand Journal of Agricultural Research, 1990, 33, 129-138.	0.9	22

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73	Effect of Nitrogen Inhibitors on Nitrous Oxide Emissions and Pasture Growth After an Autumn Application in Volcanic Soil. Chilean Journal of Agricultural Research, 2012, 72, 133-139.	0.4	22
74	Influence of liming-induced pH changes on nitrous oxide emission, nirS, nirK and nosZ gene abundance from applied cattle urine in allophanic and fluvial grazed pasture soils. Biology and Fertility of Soils, 2020, 56, 811-824.	2.3	22
75	Pasture production and soil phosphorus fractions resulting from six previous annual applications of triple superphosphate or Sechura phosphate rock. New Zealand Journal of Agricultural Research, 1992, 35, 307-319.	0.9	20
76	Understanding and analysing spatial variability of nitrous oxide emissions from a grazed pasture. Agriculture, Ecosystems and Environment, 2014, 186, 1-10.	2.5	20
77	Using the NZâ€“DNDC model to estimate agricultural N2O emissions in the Manawatuâ€“Wanganui region. Plant and Soil, 2008, 309, 191-209.	1.8	19
78	Carbon residence times obtained from labelled ryegrass decomposition in soils under contrasting environmental conditions. Soil Biology and Biochemistry, 2000, 32, 75-83.	4.2	17
79	Field studies assessing the effect of dicyandiamide (DCD) on N transformations, pasture yields, N₂O emissions and N-leaching in the Manawatu region. New Zealand Journal of Agricultural Research, 2014, 57, 271-293.	0.9	17
80	Evaluation of soil phosphate status where phosphate rock based fertilizers have been used. Fertilizer Research, 1993, 35, 67-82.	0.5	16
81	Soil properties impacting denitrifier community size, structure, and activity in New Zealand dairy-grazed pasture. Biogeosciences, 2017, 14, 4243-4253.	1.3	16
82	Chambers, micrometeorological measurements, and the New Zealand Denitrificationâ€“Decomposition model for nitrous oxide emission estimates from an irrigated dairy-grazed pasture. Journal of Integrative Environmental Sciences, 2010, 7, 61-70.	1.0	15
83	Does acidification of a soil biofilter compromise its methane-oxidising capacity?. Biology and Fertility of Soils, 2016, 52, 573-583.	2.3	14
84	Management and implications of using nitrification inhibitors to reduce nitrous oxide emissions from urine patches on grazed pasture soils â€“ A review. Science of the Total Environment, 2021, 791, 148099.	3.9	14
85	Verification techniques for N2O emission at the paddock scale in New Zealand: FarmGas2006. Australian Journal of Experimental Agriculture, 2008, 48, 138.	1.0	14
86	Effect of contrasting farm management on vegetation and biochemical, chemical, and biological condition of moist steepland soils of the South Island high country, New Zealand. Soil Research, 1999, 37, 847.	0.6	14
87	Time and source of nitrogen application in rice and wheat. Journal of Agricultural Science, 1987, 109, 387-391.	0.6	13
88	Assessment of farm soil, biochar, compost and weathered pine mulch to mitigate methane emissions. Applied Microbiology and Biotechnology, 2016, 100, 9365-9379.	1.7	13
89	Root hairs and cortex contribute to soil loss due to root crop harvesting. Catena, 2019, 174, 514-523.	2.2	13
90	Assessment of the relative agronomic effectiveness of phosphate rocks under glasshouse conditions. Fertilizer Research, 1993, 34, 141-151.	0.5	12

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91	Characterization of recently 14C pulse-labelled carbon from roots by fractionation of soil organic matter. European Journal of Soil Science, 2005, 56, 329-341.	1.8	12
92	Chapter 15 The role of inhibitors in the bioavailability and mitigation of nitrogen losses in grassland ecosystems. Developments in Soil Science, 2008, 32, 329-362.	0.5	12
93	Modelling NH3 volatilisation within a urine patch using NZ-DNDC. Nutrient Cycling in Agroecosystems, 2017, 108, 267-277.	1.1	12
94	Use of a urease inhibitor to mitigate ammonia emissions from urine patches. Environmental Technology (United Kingdom), 2021, 42, 20-31.	1.2	12
95	Field-scale verification of nitrous oxide emission reduction with DCD in dairy-grazed pasture using measurements and modelling. Soil Research, 2011, 49, 696.	0.6	12
96	Response of dryland wheat to fertilizer nitrogen in relation to stored water, rainfall and residual farm yard manure. Fertilizer Research, 1993, 36, 63-70.	0.5	10
97	Ammonia oxidising populations and relationships with N₂O emissions in three New Zealand soils. New Zealand Journal of Agricultural Research, 2014, 57, 228-243.	0.9	10
98	Why copper and zinc are ineffective in reducing soil urease activity in New Zealand dairy-grazed pasture soils. Soil Research, 2018, 56, 491.	0.6	10
99	A simple chamber technique for the in situ labelling of pasture sward with carbon (¹⁴C). Communications in Soil Science and Plant Analysis, 1995, 26, 1547-1563.	0.6	9
100	Net changes of soil C stocks in two grassland soils 26Âmonths after simulated pasture renovation including biochar addition. GCB Bioenergy, 2016, 8, 600-615.	2.5	9
101	Nitrous oxide emissions from cow urine patches in an intensively managed grassland: Influence of nitrogen loading under contrasting soil moisture. Science of the Total Environment, 2021, 757, 143790.	3.9	9
102	Biogas production from steer manures in Vietnam: Effects of feed supplements and tannin contents. Waste Management, 2017, 69, 492-497.	3.7	8
103	Assessing the Performance of Floating Biofilters for Oxidation of Methane from Dairy Effluent Ponds. Journal of Environmental Quality, 2017, 46, 272-280.	1.0	8
104	Urease inhibitors reduced ammonia emissions from cattle urine applied to pasture soil. Nutrient Cycling in Agroecosystems, 2020, 117, 317-335.	1.1	8
105	Intensification in Pastoral Farming: Impacts on Soil Attributes and Gaseous Emissions. Soil Biology, 2011, , 207-236.	0.6	8
106	Dryland wheat yield dependence on rainfall, applied N and mulching in preceding maize. Fertilizer Research, 1992, 32, 229-237.	0.5	7
107	Use of an unsorted pasture sample in herbage testing for sulphur, phosphorus, and nitrogen. New Zealand Journal of Agricultural Research, 1995, 38, 483-493.	0.9	7
108	Effect of leaching and clay content on carbon and nitrogen mineralisation in maize and pasture soils. Soil Research, 2001, 39, 535.	0.6	7

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109	In situ dynamics of recently allocated 14C in pasture soil and soil solution collected with Rhizon Soil Moisture Samplers. Soil Research, 2005, 43, 659.	0.6	7
110	Modelling organic matter dynamics in New Zealand soils. Environment International, 2001, 27, 111-119.	4.8	6
111	Distribution of 137Cs and 60Co in plough layer of farmland: Evidenced from a lysimeter experiment using undisturbed soil columns. Pedosphere, 2021, 31, 180-190.	2.1	6
112	Simultaneous examination of nitrous oxide emissions in grazed pastures using paddock-scale measurements and process-based models. Journal of Integrative Environmental Sciences, 2005, 2, 117-131.	0.8	5
113	Modelling 3D urine patch spread in grazed pasture soils to determine potential inhibitor effectiveness. Agriculture, Ecosystems and Environment, 2020, 292, 106809.	2.5	5
114	Improving the accuracy of nitrous oxide emission factors estimated for hotspots within dairy-grazed farms. Science of the Total Environment, 2022, 806, 150608.	3.9	5
115	Influence of Waiting Time after Insertion of Base Chamber into Soil on Produced Greenhouse Gas Fluxes. Chilean Journal of Agricultural Research, 2011, 71, 610-614.	0.4	5
116	The persistence and efficacy of nitrification inhibitors to mitigate nitrous oxide emissions from New Zealand pasture soils amended with urine. Geoderma Regional, 2022, 30, e00541.	0.9	5
117	Comparing the effectiveness and longevity of the urease inhibitor N-(2-nitrophenyl) phosphoric triamide (2-NPT) with N-(n-butyl) thiophosphoric triamide (nBTPT) in reducing ammonia emissions from cattle urine applied to dairy-grazed pasture soils. Soil Research, 2019, 57, 719.	0.6	4
118	Removing Hydrogen Sulfide Contamination in Biogas Produced from Animal Wastes. Journal of Environmental Quality, 2019, 48, 32-38.	1.0	4
119	Foreword. Science of the Total Environment, 2013, 465, 1-2.	3.9	3
120	Denitrification bioreactor nitrous oxide emissions under fluctuating flow conditions. , 2013, , .		2
121	Nitrous oxide emission factors in conventionally and naturally simulated cattle urine patches. Nutrient Cycling in Agroecosystems, 2021, 121, 129-147.	1.1	2
122	Evaluation of proximal sensing technologies for mapping bovine urine patches under grazing pastures. Computers and Electronics in Agriculture, 2021, 188, 106309.	3.7	2
123	Methods for extracting and analysing DMPP and Nitrapyrin in soil and plant samples from grazed pasture. Plant and Soil, 2021, 469, 149-160.	1.8	2
124	Soil Greenhouse Gas Emissions in Different Pastures Implemented as a Management Strategy for Climate Change. Agronomy, 2022, 12, 1097.	1.3	2
125	The proportion of deposited urine patch intercepted by a delayed inhibitor application. Environmental Technology (United Kingdom), 2021, , 1-29.	1.2	1
126	Beyond the logistic growth model for nitrous oxide emission factors from agricultural soils. , 2011, , .		0

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127	Review and update of a nutrient transfer model used for estimating nitrous oxide emissions from complex grazed landscapes, and implications for nationâ€wide accounting. Journal of Environmental Quality, 0, , .	1.0	0