Christine A Watson

List of Publications by Year
in descending order

96 papers	6,150 citations	94415 37 h-index	74160 75 g-index
100 all docs	100 docs citations	100 times ranked	6723 citing authors

#	Article	IF	Citations
1	Improving intercropping: a synthesis of research in agronomy, plant physiology and ecology. New Phytologist, 2015, 206, 107-117.	7.3	805
2	Managing soil fertility in organic farming systems. Soil Use and Management, 2002, 18, 239-247.	4.9	324
3	The potential role of arbuscular mycorrhizal (AM) fungi in the bioprotection of plants against soil-borne pathogens in organic and/or other sustainable farming systems. Pest Management Science, 2004, 60, 149-157.	3.4	266
4	Controls on soil nitrogen cycling and microbial community composition across land use and incubation temperature. Soil Biology and Biochemistry, 2007, 39, 744-756.	8.8	253
5	Agronomic and environmental implications of organic farming systems. Advances in Agronomy, 2001, 70, 261-327.	5.2	247
6	The Role of Uncomposted Materials, Composts, Manures, and Compost Extracts in Reducing Pest and Disease Incidence and Severity in Sustainable Temperate Agricultural and Horticultural Crop Productionâ€"A Review. Critical Reviews in Plant Sciences, 2004, 23, 453-479.	5.7	213
7	The role of plants and land management in sequestering soil carbon in temperate arable and grassland ecosystems. Geoderma, 2005, 128, 130-154.	5.1	187
8	Grain Legume Production and Use in European Agricultural Systems. Advances in Agronomy, 2017, , 235-303.	5.2	176
9	The role of crop rotations in determining soil structure and crop growth conditions. Canadian Journal of Soil Science, 2005, 85, 557-577.	1.2	168
10	Risks and opportunities of increasing yields in organic farming. A review. Agronomy for Sustainable Development, 2018, 38, 1.	5.3	149
11	Grain legume decline and potential recovery in European agriculture: a review. Agronomy for Sustainable Development, 2016, 36, 1.	5.3	146
12	A review of farm-scale nutrient budgets for organic farms as a tool for management of soil fertility. Soil Use and Management, 2002, 18, 264-273.	4.9	134
13	SPACSYS: Integration of a 3D root architecture component to carbon, nitrogen and water cyclingâ€"Model description. Ecological Modelling, 2007, 200, 343-359.	2.5	129
14	Models of biological nitrogen fixation of legumes. A review. Agronomy for Sustainable Development, 2011, 31, 155-172.	5.3	129
15	The fate of nitrogen from incorporated cover crop and green manure residues. Nutrient Cycling in Agroecosystems, 2000, 56, 153-163.	2.2	125
16	A cropping system assessment frameworkâ€"Evaluating effects of introducing legumes into crop rotations. European Journal of Agronomy, 2016, 76, 186-197.	4.1	123
17	Influences of Root Diameter, Tree Age, Soil Depth and Season on Fine Root Survivorship in Prunus avium. Plant and Soil, 2005, 276, 15-22.	3.7	119
18	Trade-Offs between Economic and Environmental Impacts of Introducing Legumes into Cropping Systems. Frontiers in Plant Science, 2016, 7, 669.	3.6	111

#	Article	IF	Citations
19	Title is missing!. Nutrient Cycling in Agroecosystems, 1999, 53, 259-267.	2.2	109
20	Nitrous oxide emissions from European agriculture â€“ an analysis of variability and drivers of emissions from field experiments. Biogeosciences, 2013, 10, 2671-2682.	3.3	108
21	Arable plant communities as indicators of farming practice. Agriculture, Ecosystems and Environment, 2010, 138, 17-26.	5.3	100
22	The role of arbuscular mycorrhizal fungi in sustainable cropping systems. Advances in Agronomy, 2003, 79, 185-225.	5.2	94
23	N, P and K budgets for crop rotations on nine organic farms in the UK. Soil Use and Management, 2003, 19, 112-118.	4.9	89
24	Nitrous oxide emissions and nitrate leaching in an arable rotation resulting from the presence of an intercrop. Agriculture, Ecosystems and Environment, 2011, 141, 153-161.	5.3	86
25	Engineering a plant community to deliver multiple ecosystem services. Ecological Applications, 2015, 25, 1034-1043.	3.8	83
26	The Agronomic and Economic Potential of Break Crops for Ley/Arable Rotations in Temperate Organic Agriculture. Advances in Agronomy, 2002, , 369-427.	5.2	82
27	Functional aspects of root architecture and mycorrhizal inoculation with respect to nutrient uptake capacity. Mycorrhiza, 2004, 14, 177-184.	2.8	68
28	A Comparative Nitrogen Balance and Productivity Analysis of Legume and Non-legume Supported Cropping Systems: The Potential Role of Biological Nitrogen Fixation. Frontiers in Plant Science, 2016, 7, 1700.	3.6	60
29	The Beneficial Rhizosphere: a dynamic entity. Applied Soil Ecology, 2000, 15, 99-104.	4.3	55
30	Grain legume yields are as stable as other spring crops in long-term experiments across northern Europe. Agronomy for Sustainable Development, 2018, 38, 63.	5.3	55
31	Environment-induced Modifications to Root Longevity in Lolium perenne and Trifolium repens. Annals of Botany, 2000, 85, 397-401.	2.9	50
32	Reviews and syntheses: Review of causes and sources of N₂O emissions and NO₃ leaching from organic arable crop rotations. Biogeosciences, 2019, 16, 2795-2819.	3.3	50
33	Nitrous oxide mitigation in UK agriculture. Soil Science and Plant Nutrition, 2013, 59, 3-15.	1.9	49
34	Research in organic production systemsÂâ€“Âpast, present and future. Journal of Agricultural Science, 2008, 146, 1-19.	1.3	48
35	Developing Existing Plant Root System Architecture Models to Meet Future Agricultural Challenges. Advances in Agronomy, 2005, 85, 181-219.	5.2	45
36	Agro-economic prospects for expanding soybean production beyond its current northerly limit in Europe. European Journal of Agronomy, 2022, 133, 126415.	4.1	44

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37	Seasonal nitrous oxide emissions from field soils under reduced tillage, compost application or organic farming. Agriculture, Ecosystems and Environment, 2014, 189, 171-180.	5.3	41
38	Polysaccharides and monosaccharides in the hyphosphere of the arbuscular mycorrhizal fungi Glomus E3 and Glomus tenue. Soil Biology and Biochemistry, 2007, 39, 680-683.	8.8	40
39	Nitrous oxide emissions, cereal growth, N recovery and soil nitrogen status after ploughing organically managed grass/clover swards. Soil Use and Management, 2007, 23, 145-155.	4.9	37
40	Influence of organic leyâ€"arable management and afforestation in sandy loam to clay loam soils on fluxes of N2O and CH4 in Scotland. Agriculture, Ecosystems and Environment, 2002, 90, 305-317.	5.3	36
41	Farmer perceptions of legumes and their functions in smallholder farming systems in east Africa. International Journal of Agricultural Sustainability, 2019, 17, 205-218.	3.5	35
42	A framework of connections between soil and people can help improve sustainability of the food system and soil functions. Ambio, 2018, 47, 269-283.	5.5	34
43	Root morphology and water transport of Pistacia lentiscus seedlings under contrasting water supply: A test of the pipe stem theory. Environmental and Experimental Botany, 2008, 62, 343-350.	4.2	33
44	Biological indicators of soil quality in organic farming systems. Renewable Agriculture and Food Systems, 2009, 24, 308-318.	1.8	33
45	Legumes intercropped with spring barley contribute to increased biomass production and carry-over effects. Journal of Agricultural Science, 2012, 150, 584-594.	1.3	33
46	Re-designing organic grain legume cropping systems using systems agronomy. European Journal of Agronomy, 2020, 112, 125951.	4.1	32
47	Soil inorganic-N and nitrate leaching on organic farms. Journal of Agricultural Science, 1993, 120, 361-369.	1.3	31
48	Appropriateness of nutrient budgets for environmental risk assessment: a case study of outdoor pig production. European Journal of Agronomy, 2003, 20, 117-126.	4.1	31
49	The influence of arbuscular mycorrhizal colonization and environment on root development in soil. European Journal of Soil Science, 2003, 54, 751-757.	3.9	30
50	Micronutrient concentrations in common and novel forage species and varieties grown on two contrasting soils. Grass and Forage Science, 2013, 68, 427-436.	2.9	29
51	Factors influencing crop rotation strategies on organic farms with different time periods since conversion to organic production. Biological Agriculture and Horticulture, 2017, 33, 14-27.	1.0	28
52	Prospects, advantages and limitations of future crop production systems dependent upon the management of soil processes. Annals of Applied Biology, 2005, 146, 203-215.	2.5	26
53	Changes in soil C and N stocks and C:N stoichiometry 21 years after land use change on an arable mineral topsoil. Geoderma, 2017, 303, 19-26.	5.1	26
54	Reducing soil erosion in smallholder farming systems in east Africa through the introduction of different crop types. Experimental Agriculture, 2020, 56, 183-195.	0.9	26

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55	Using soil and plant properties and farm management practices to improve the micronutrient composition of food and feed. Journal of Geochemical Exploration, 2012, 121, 15-24.	3.2	25
56	Soil physical fertility, soil structure and rooting conditions after ploughing organically managed grass/clover swards. Soil Use and Management, 2007, 23, 20-27.	4.9	24
57	Estimating resource use efficiencies in organic agriculture: a review of budgeting approaches used. Journal of the Science of Food and Agriculture, 2007, 87, 2782-2790.	3.5	23
58	Output and sustainability of organic ley/arable crop rotations at two sites in northern Scotland. Journal of Agricultural Science, 2006, 144, 435-447.	1.3	21
59	Arbuscular mycorrhizal fungi in low input agriculture. , 2002, , 211-222.		21
60	Root development in the Mediterranean shrub Pistacia lentiscus as affected by nursery treatments. Journal of Arid Environments, 2005, 61, 1-12.	2.4	19
61	Supporting wild pollinators in agricultural landscapes through targeted legume mixtures. Agriculture, Ecosystems and Environment, 2022, 323, 107648.	5.3	19
62	Revisiting herbage sample collection and preparation procedures to minimise risks of trace element contamination. European Journal of Agronomy, 2012, 43, 33-39.	4.1	18
63	N, P and K on organic farms: herbage and cereal production, purchases and sales. Journal of Agricultural Science, 1993, 120, 353-360.	1.3	17
64	Soil Phosphorus Management in Organic Cropping Systems: From Current Practices to Avenues for a More Efficient Use of P Resources. , 2014, , 23-45.		17
65	Red clover increases micronutrient concentrations in forage mixtures. Field Crops Research, 2014, 169, 99-106.	5.1	16
66	Revisiting the Multiple Benefits of Historical Crop Rotations within Contemporary UK Agricultural Systems. Agroecology and Sustainable Food Systems, 2011, 35, 163-179.	0.9	15
67	The Importance of Root Dynamics in Cropping Systems Research. The Journal of Crop Improvement: Innovations in Practiceory and Research, 2003, 8, 127-155.	0.4	14
68	Crop protection-what will shape the future picture?. Pest Management Science, 2004, 60, 105-112.	3.4	13
69	Influence of ley duration on the yield and quality of the subsequent cereal crop (spring oats) in an organically managed long-term crop rotation experiment. Organic Agriculture, 2011, 1, 147-159.	2.4	13
70	Modeling Biological Dinitrogen Fixation of Field Pea with a Processâ€Based Simulation Model. Agronomy Journal, 2013, 105, 670-678.	1.8	13
71	Disease suppressive soils vary in resilience to stress. Applied Soil Ecology, 2020, 149, 103482.	4.3	13
72	Plant Nutrients in Organic Farming. , 2009, , 73-88.		12

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73	Micronutrient concentrations in relation to phenological development of red clover (<i><scp>T</scp>rifolium pratense </i><scp>L</scp>.), perennial ryegrass (<i><scp>L</scp>olium) Tj ETQq1 1 0.784314 rgBT /Overlo Forage Science, 2014, 69, 276-284.	2.9	12
74	Socio-ecological factors determine crop performance in agricultural systems. Scientific Reports, 2020, 10, 4232.	3.3	12
75	Response of organically managed grassland to available phosphorus and potassium in the soil and supplementary fertilization: field trials using grassâ€“clover leys cut for silage. Soil Use and Management, 2005, 21, 370-376.	4.9	11
76	Understanding effects of multiple farm management practices on barley performance. European Journal of Agronomy, 2017, 90, 43-52.	4.1	11
77	Considerations for Scottish soil monitoring in the European context. European Journal of Soil Science, 2009, 60, 833-843.	3.9	10
78	Improving Bioavailability of Phosphate Rock for Organic Farming. Sustainable Agriculture Reviews, 2010, , 99-117.	1.1	10
79	Seasonal patterns of fine-root production and mortality in Prunus avium in Scotland. Canadian Journal of Forest Research, 2004, 34, 1534-1537.	1.7	9
80	Residue-C effects on denitrification vary with soil depth. Soil Biology and Biochemistry, 2016, 103, 365-375.	8.8	9
81	Estimation of N2-fixation by grass?white clover mixtures in cut or grazed swards. Soil Use and Management, 1997, 13, 165-167.	4.9	8
82	The effect of co-composted cabbage and ground phosphate rock on the early growth and P uptake of oilseed rape and perennial ryegrass. Journal of Plant Nutrition and Soil Science, 2012, 175, 595-603.	1.9	8
83	Elemental status (Cu, Mo, Co, B, S and Zn) of Scottish agricultural soils compared with a soilâ€based risk assessment. Soil Use and Management, 2012, 28, 167-176.	4.9	8
84	Predicting the effect of rotation design on N, P, K balances on organic farms using the NDICEA model. Renewable Agriculture and Food Systems, 2016, 31, 471-484.	1.8	8
85	The environmental impact of intensive systems of animal production in the lowlands. Animal Science, 1996, 63, 353-361.	1.3	5
86	Measuring household legume cultivation intensity in sub-Saharan Africa. International Journal of Agricultural Sustainability, 2021, 19, 319-334.	3.5	5
87	Issues and pressures facing the future of soil carbon stocks with particular emphasis on Scottish soils. Journal of Agricultural Science, 2014, 152, 699-715.	1.3	4
88	Effects of management practices on legume productivity in smallholder farming systems in subâ€Saharan Africa. Food and Energy Security, 2022, 11, .	4.3	4
89	Purchases and Sales of N, P and K, Soil Inorganic N and Nitrate Leaching on an Organic Horticultural Holding. Biological Agriculture and Horticulture, 1994, 10, 189-195.	1.0	3
90	Quantifying annual variations in field scale element flows and balances is essential for sustainable nutrient management in farming systems. Biological Agriculture and Horticulture, 2016, 32, 110-126.	1.0	2

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91	Regional land use efficiency and nutritional quality of protein production. Global Food Security, 2020, 26, 100386.	8.1	2
92	Investigating the Use of Silage Effluent to Improve Available Phosphorus from Gafsa Phosphate Rock. Communications in Soil Science and Plant Analysis, 2014, 45, 332-346.	1.4	1
93	Demographic quantification of carbon and nitrogen dynamics associated with root turnover in white clover. Plant, Cell and Environment, 2018, 41, 2045-2056.	5.7	1
94	Linking Arable Cropping and Livestock Production for Efficient Recycling of NÂand P. , 2019, , 169-188.		1
95	Predicting the effect of rotation design on N, P, K balances on organic farms using the NDICEA model - CORRIGENDUM. Renewable Agriculture and Food Systems, 2016, 31, 574-574.	1.8	0
96	Influence of Different Vegetation Management Regimes on Nitrogen Partitioning Within Agriforestry Systems. , 1992, , 695-696.		0