Timothy S George

List of Publications by Year
in descending order

111 papers	7,334 citations	53794 45 h-index	62596 80 g-index
115 all docs	115 docs citations	115 times ranked	6675 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	Plant mechanisms to optimise access to soil phosphorus. Crop and Pasture Science, 2009, 60, 124.	1.5	367
3	Matching roots to their environment. Annals of Botany, 2013, 112, 207-222.	2.9	247
4	Crops that feed the world 4. Barley: a resilient crop? Strengths and weaknesses in the context of food security. Food Security, 2011, 3, 141-178.	5.3	216
5	Root hairs improve root penetration, rootâ€"soil contact, and phosphorus acquisition in soils of different strength. Journal of Experimental Botany, 2013, 64, 3711-3721.	4.8	215
6	Opportunities for mobilizing recalcitrant phosphorus from agricultural soils: a review. Plant and Soil, 2018, 427, 5-16.	3.7	191
7	What are the implications of variation in root hair length on tolerance to phosphorus deficiency in combination with water stress in barley (Hordeum vulgare)?. Annals of Botany, 2012, 110, 319-328.	2.9	175
8	Arbuscular mycorrhizal fungi enhance mineralisation of organic phosphorus by carrying bacteria along their extraradical hyphae. New Phytologist, 2021, 230, 304-315.	7.3	167
9	Strategies and methods for studying the rhizosphereâ€"the plant science toolbox. Plant and Soil, 2009, 321, 431-456.	3.7	159
10	Root traits for infertile soils. Frontiers in Plant Science, 2013, 4, 193.	3.6	145
11	Organic phosphorus in the terrestrial environment: a perspective on the state of the art and future priorities. Plant and Soil, 2018, 427, 191-208.	3.7	145
12	Plant exudates may stabilize or weaken soil depending on species, origin and time. European Journal of Soil Science, 2017, 68, 806-816.	3.9	144
13	Feeding nine billion: the challenge to sustainable crop production. Journal of Experimental Botany, 2011, 62, 5233-5239.	4.8	138
14	Expression of a fungal phytase gene in Nicotiana tabacum improves phosphorus nutrition of plants grown in amended soils. Plant Biotechnology Journal, 2005, 3, 129-140.	8.3	135
15	Land use and soil factors affecting accumulation of phosphorus species in temperate soils. Geoderma, 2015, 257-258, 29-39.	5.1	133
16	Phosphatase activity and organic acids in the rhizosphere of potential agroforestry species and maize. Soil Biology and Biochemistry, 2002, 34, 1487-1494.	8.8	132
17	Behaviour of plantâ€derived extracellular phytase upon addition to soil. Soil Biology and Biochemistry, 2005, 37, 977-988.	8.8	123
18	A conceptual model of root hair ideotypes for future agricultural environments: what combination of traits should be targeted to cope with limited P availability?. Annals of Botany, 2013, 112, 317-330.	2.9	118

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19	Characterization of transgenic Trifolium subterraneum L. which expresses phyA and releases extracellular phytase: growth and P nutrition in laboratory media and soil. Plant, Cell and Environment, 2004, 27, 1351-1361.	5.7	116
20	Recovering Phosphorus from Soil: A Root Solution?. Environmental Science & Technology, 2012, 46, 1977-1978.	10.0	116
21	Highâ€resolution synchrotron imaging shows that root hairs influence rhizosphere soil structure formation. New Phytologist, 2017, 216, 124-135.	7.3	116
22	Understanding the genetic control and physiological traits associated with rhizosheath production by barley (<i><scp>H</scp>ordeum vulgare</i>). New Phytologist, 2014, 203, 195-205.	7.3	105
23	Organic Acids Regulation of Chemicalâ€"Microbial Phosphorus Transformations in Soils. Environmental Science & Technology, 2016, 50, 11521-11531.	10.0	102
24	Root hair length and rhizosheath mass depend on soil porosity, strength and water content in barley genotypes. Planta, 2014, 239, 643-651.	3.2	101
25	Arbuscular mycorrhizal fungi stimulate organic phosphate mobilization associated with changing bacterial community structure under field conditions. Environmental Microbiology, 2018, 20, 2639-2651.	3.8	100
26	Depletion of organic phosphorus from Oxisols in relation to phosphatase activities in the rhizosphere. European Journal of Soil Science, 2006, 57, 47-57.	3.9	98
27	Differential interaction of Aspergillus niger and Peniophora lycii phytases with soil particles affects the hydrolysis of inositol phosphates. Soil Biology and Biochemistry, 2007, 39, 793-803.	8.8	94
28	The rhizosheath â€" a potential trait for future agricultural sustainability occurs in orders throughout the angiosperms. Plant and Soil, 2017, 418, 115-128.	3.7	92
29	Variation in root-associated phosphatase activities in wheat contributes to the utilization of organic P substrates in vitro, but does not explain differences in the P-nutrition of plants when grown in soils. Environmental and Experimental Botany, 2008, 64, 239-249.	4.2	90
30	Arbuscular mycorrhizal fungi conducting the hyphosphere bacterial orchestra. Trends in Plant Science, 2022, 27, 402-411.	8.8	88
31	Root Hair Mutations Displace the Barley Rhizosphere Microbiota. Frontiers in Plant Science, 2017, 8, 1094.	3.6	85
32	Measuring variation in potato roots in both field and glasshouse: the search for useful yield predictors and a simple screen for root traits. Plant and Soil, 2013, 368, 231-249.	3.7	74
33	Phosphorus in soils and plants â€" facing phosphorus scarcity. Plant and Soil, 2016, 401, 1-6.	3.7	74
34	A Holistic Approach to Understanding the Desorption of Phosphorus in Soils. Environmental Science & Technology, 2016, 50, 3371-3381.	10.0	71
35	Microbial mechanisms of the contrast residue decomposition and priming effect in soils with different organic and chemical fertilization histories. Soil Biology and Biochemistry, 2019, 135, 213-221.	8.8	68
36	Significance of root hairs for plant performance under contrasting field conditions and water deficit. Annals of Botany, 2021, 128, 1-16.	2.9	66

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37	Barley genotype influences stabilization of rhizodeposition-derived CÂand soil organic matter mineralization. Soil Biology and Biochemistry, 2016, 95, 60-69.	8.8	63
38	Title is missing!. Plant and Soil, 2002, 246, 65-73.	3.7	62
39	Facilitation and biodiversityâ€"ecosystem function relationships in crop production systems and their role in sustainable farming. Journal of Ecology, 2021, 109, 2054-2067.	4.0	58
40	Interactions between root hair length and arbuscular mycorrhizal colonisation in phosphorus deficient barley (Hordeum vulgare). Plant and Soil, 2013, 372, 195-205.	3.7	55
41	Variation in the angiosperm ionome. Physiologia Plantarum, 2018, 163, 306-322.	5.2	55
42	Surface tension, rheology and hydrophobicity of rhizodeposits and seed mucilage influence soil water retention and hysteresis. Plant and Soil, 2019, 437, 65-81.	3.7	53
43	Limitations to the Potential of Transgenic Trifolium subterraneum L. Plants that Exude Phytase when Grown in Soils with a Range of Organic P Content. Plant and Soil, 2005, 278, 263-274.	3.7	51
44	Imaging microstructure of the barley rhizosphere: particle packing and root hair influences. New Phytologist, 2019, 221, 1878-1889.	7.3	51
45	Climate Change and Consequences for Potato Production: a Review of Tolerance to Emerging Abiotic Stress. Potato Research, 2017, 60, 239-268.	2.7	50
46	Potential and limitations to improving crops for enhanced phosphorus utilization. Plant Ecophysiology, 2008, , 247-270.	1.5	49
47	Simulated root exudates stimulate the abundance of Saccharimonadales to improve the alkaline phosphatase activity in maize rhizosphere. Applied Soil Ecology, 2022, 170, 104274.	4.3	49
48	Biological nitrification inhibition (BNI)-Is there potential for genetic interventions in the Triticeae?. Breeding Science, 2009, 59, 529-545.	1.9	47
49	Different Arbuscular Mycorrhizal Fungi Cocolonizing on a Single Plant Root System Recruit Distinct Microbiomes. MSystems, 2020, 5, .	3.8	47
50	Genotypic variation in the ability of landraces and commercial cereal varieties to avoid manganese deficiency in soils with limited manganese availability: is there a role for rootâ€exuded phytases?. Physiologia Plantarum, 2014, 151, 243-256.	5.2	46
51	Inter- and intra-species intercropping of barley cultivars and legume species, as affected by soil phosphorus availability. Plant and Soil, 2018, 427, 125-138.	3.7	46
52	Extracellular release ofâ€ƒ a heterologous phytase from roots of transgenic plants: does manipulation of rhizosphere biochemistry impact microbial community structure?. FEMS Microbiology Ecology, 2009, 70, 433-445.	2.7	44
53	Accumulation and phosphatase-lability of organic phosphorus in fertilised pasture soils. Australian Journal of Agricultural Research, 2007, 58, 47.	1.5	43
54	Field phenotyping of potato to assess root and shoot characteristics associated with drought tolerance. Plant and Soil, 2014, 378, 351-363.	3.7	43

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55	Impact of soil tillage on the robustness of the genetic component of variation in phosphorus (P) use efficiency in barley (Hordeum vulgare L.). Plant and Soil, 2011, 339, 113-123.	3.7	42
56	Significance of root hairs at the field scale â€“ modelling root water and phosphorus uptake under different field conditions. Plant and Soil, 2020, 447, 281-304.	3.7	42
57	Response-based selection of barley cultivars and legume species for complementarity: Root morphology and exudation in relation to nutrient source. Plant Science, 2017, 255, 12-28.	3.6	41
58	Root development impacts on the distribution of phosphatase activity: Improvements in quantification using soil zymography. Soil Biology and Biochemistry, 2018, 116, 158-166.	8.8	40
59	Closing the Loop on Phosphorus Loss from Intensive Agricultural Soil: A Microbial Immobilization Solution?. Frontiers in Microbiology, 2018, 9, 104.	3.5	38
60	Phosphorus acquisition by citrateâ€•and phytaseâ€exuding <scp><i>Nicotiana tabacum</i></scp> plant mixtures depends on soil phosphorus availability and root intermingling. Physiologia Plantarum, 2018, 163, 356-371.	5.2	35
61	Active and adaptive plasticity in a changing climate. Trends in Plant Science, 2022, 27, 717-728.	8.8	35
62	Differences in nutrient foraging among Trifolium subterraneum cultivars deliver improved P-acquisition efficiency. Plant and Soil, 2018, 424, 539-554.	3.7	34
63	Utilisation of soil organic P by agroforestry and crop species in the field, western Kenya. Plant and Soil, 2002, 246, 53-63.	3.7	33
64	Phosphorus Nutrition: Rhizosphere Processes, Plant Response and Adaptations. Soil Biology, 2011, , 245-271.	0.8	32
65	Plant influence on nitrification. Biochemical Society Transactions, 2011, 39, 275-278.	3.4	31
66	Searching for the Origins of Bere Barley: a Geometric Morphometric Approach to Cereal Landrace Recognition in Archaeology. Journal of Archaeological Method and Theory, 2019, 26, 1125-1142.	3.0	31
67	Linear relationships between shoot magnesium and calcium concentrations among angiosperm species are associated with cell wall chemistry. Annals of Botany, 2018, 122, 221-226.	2.9	30
68	Addition of fructose to the maize hyphosphere increases phosphatase activity by changing bacterial community structure. Soil Biology and Biochemistry, 2020, 142, 107724.	8.8	30
69	Ancient barley landraces adapted to marginal soils demonstrate exceptional tolerance to manganese limitation. Annals of Botany, 2019, 123, 831-843.	2.9	29
70	Juvenile root vigour improves phosphorus use efficiency of potato. Plant and Soil, 2018, 432, 45-63.	3.7	27
71	Morphological responses of wheat (<i>Triticum aestivum</i>L.) roots to phosphorus supply in two contrasting soils. Journal of Agricultural Science, 2016, 154, 98-108.	1.3	25
72	Does the combination of citrate and phytase exudation in Nicotiana tabacum promote the acquisition of endogenous soil organic phosphorus?. Plant and Soil, 2017, 412, 43-59.	3.7	25

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73	Plantâ€"environment microscopy tracks interactions of <i>Bacillus subtilis</i> with plant roots across the entire rhizosphere. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	24
74	Building soil sustainability from rootâ€"soil interface traits. Trends in Plant Science, 2022, 27, 688-698.	8.8	24
75	Simultaneous Quantification of Soil Phosphorus Labile Pool and Desorption Kinetics Using DGTs and 3D-DIFS. Environmental Science & Technology, 2019, 53, 6718-6728.	10.0	23
76	Using a meta-analysis approach to understand complexity in soil biodiversity and phosphorus acquisition in plants. Soil Biology and Biochemistry, 2020, 142, 107695.	8.8	22
77	Title is missing!. Agroforestry Systems, 2001, 52, 199-205.	2.0	21
78	Arbuscular mycorrhizal fungi have a greater role than root hairs of maize for priming the rhizosphere microbial community and enhancing rhizosphere organic P mineralization. Soil Biology and Biochemistry, 2022, 171, 108713.	8.8	18
79	Carbon addition reduces labile soil phosphorus by increasing microbial biomass phosphorus in intensive agricultural systems. Soil Use and Management, 2020, 36, 536-546.	4.9	17
80	Field Phenotyping and Long-Term Platforms to Characterise How Crop Genotypes Interact with Soil Processes and the Environment. Agronomy, 2014, 4, 242-278.	3.0	16
81	Interaction between root hairs and soil phosphorus on rhizosphere priming of soil organic matter. Soil Biology and Biochemistry, 2019, 135, 264-266.	8.8	14
82	Editorial: Legacy Phosphorus in Agriculture: Role of Past Management and Perspectives for the Future. Frontiers in Earth Science, 2020, 8, .	1.8	14
83	Two isolates of Rhizophagus irregularis select different strategies for improving plants phosphorus uptake at moderate soil P availability. Geoderma, 2022, 421, 115910.	5.1	14
84	Linking the depletion of rhizosphere phosphorus to the heterologous expression of a fungal phytase in Nicotiana tabacum as revealed by enzyme-labile P and solution 31P NMR spectroscopy. Rhizosphere, 2017, 3, 82-91.	3.0	12
85	The influence of phylogeny and ecology on root, shoot and plant ionomes of 14 native Brazilian species. Physiologia Plantarum, 2020, 168, 790-802.	5.2	12
86	Assessing the variation in manganese use efficiency traits in Scottish barley landrace Bere (Hordeum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.9	12
87	Chemical and Physical Mechanisms of Fungal Bioweathering of Rock Phosphate. Geomicrobiology Journal, 2021, 38, 384-394.	2.0	12
88	Effect of citrate on Aspergillus niger phytase adsorption and catalytic activity in soil. Geoderma, 2017, 305, 346-353.	5.1	11
89	Roots and microbiome jointly drive the distributions of 17 phytohormones in the plant soil continuum in a phytohormoneâ€specific manner. Plant and Soil, 2022, 470, 153-165.	3.7	11
90	Organic anions facilitate the mobilization of soil organic phosphorus and its subsequent lability to phosphatases. Plant and Soil, 2022, 476, 161-180.	3.7	11

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91	Identifying potential novel resistance to the foliar disease â€˜Scaldâ€™ (Rhynchosporium commune) in a population of Scottish Bere barley landrace (Hordeum vulgare L.). Journal of Plant Diseases and Protection, 2021, 128, 999-1012.	2.9	10
92	Effects of schedules of subsurface drip irrigation with air injection on water consumption, yield components and water use efficiency of tomato in a greenhouse in the North China Plain. Scientia Horticulturae, 2020, 269, 109396.	3.6	10
93	Morphological and genetic characterisation of the root system architecture of selected barley recombinant chromosome substitution lines using an integrated phenotyping approach. Journal of Theoretical Biology, 2018, 447, 84-97.	1.7	9
94	Greenhouse Gas Emissions from the Tibetan Alpine Grassland: Effects of Nitrogen and Phosphorus Addition. Sustainability, 2018, 10, 4454.	3.2	9
95	New methods for new questions about rhizosphere/plant root interactions. Plant and Soil, 2022, 476, 699-712.	3.7	9
96	The effect of root exudates on rhizosphere water dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180149.	2.1	8
97	Variable impacts of reduced and zero tillage on soil carbon storage across 4â€“10 years of UK field experiments. Journal of Soils and Sediments, 2021, 21, 890-904.	3.0	8
98	Genetic dissection of quantitative and qualitative traits using a minimum set of barley Recombinant Chromosome Substitution Lines. BMC Plant Biology, 2018, 18, 340.	3.6	7
99	Improving crop mineral nutrition. Plant and Soil, 2014, 384, 1-5.	3.7	6
100	Rhizosphere Engineering by Plants: Quantifying Soil-Root Interactions. Advances in Agricultural Systems Modeling, 0, , 1-30.	0.3	6
101	Is Bere barley specifically adapted to fertilisation with seaweed as a nutrient source?. Nutrient Cycling in Agroecosystems, 2020, 118, 149-163.	2.2	5
102	Phosphorus leaching from riparian soils with differing management histories under three grass species. Journal of Environmental Quality, 2020, 49, 74-84.	2.0	5
103	Is Green Manure from Riparian Buffer Strip Species an Effective Nutrient Source for Crops?. Journal of Environmental Quality, 2019, 48, 385-393.	2.0	4
104	Identifying Spring Barley Cultivars with Differential Response to Tillage. Agronomy, 2020, 10, 686.	3.0	4
105	Investigating bacterial coupled assimilation of fertilizerâ€‘nitrogen and crop residueâ€‘carbon in upland soils by DNA-qSIP. Science of the Total Environment, 2022, 845, 157279.	8.0	4
106	Genome-Annotated Bacterial Collection of the Barley Rhizosphere Microbiota. Microbiology Resource Announcements, 2022, 11, e0106421.	0.6	3
107	Evaluating Variation in Germination and Growth of Landraces of Barley (Hordeum vulgare L.) Under Salinity Stress. Frontiers in Plant Science, 0, 13, .	3.6	3
108	Advances in understanding plant root hairs in relation to nutrient acquisition and crop root function. Burleigh Dodds Series in Agricultural Science, 2021, , 127-162.	0.2	0

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109	Sodium hyperaccumulators in the Caryophyllales are characterized by both abnormally large shoot sodium concentrations and [Na]shoot/[Na]root quotients greater than unity. Annals of Botany, 2022, 129, 65-78.	2.9	0
110	Advances in understanding crop use of phosphorus. Burleigh Dodds Series in Agricultural Science, 2020, , 83-114.	0.2	0
111	Scientific impact, direction and highlights of Plant and Soil in the 30Âyears since Professor Hans Lambers became Editor in Chief. Plant and Soil, 0, , .	3.7	0