Philip John White

List of Publications by Year
in descending order

281 papers	30,089 citations	7096 78 h-index	5539 163 g-index
292 all docs	292 docs citations	292 times ranked	25030 citing authors

#	Article	IF	Citations
1	Biofortification of crops with seven mineral elements often lacking in human diets â€“ iron, zinc, copper, calcium, magnesium, selenium and iodine. New Phytologist, 2009, 182, 49-84.	7.3	1,667
2	Calcium in Plants. Annals of Botany, 2003, 92, 487-511.	2.9	1,666
3	Zinc in plants. New Phytologist, 2007, 173, 677-702.	7.3	1,577
4	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
5	How do plants respond to nutrient shortage by biomass allocation?. Trends in Plant Science, 2006, 11, 610-617.	8.8	957
6	Root responses to cadmium in the rhizosphere: a review. Journal of Experimental Botany, 2011, 62, 21-37.	4.8	862
7	Phylogenetic Variation in the Silicon Composition of Plants. Annals of Botany, 2005, 96, 1027-1046.	2.9	842
8	Plant nutrition for sustainable development and global health. Annals of Botany, 2010, 105, 1073-1080.	2.9	814
9	Improving intercropping: a synthesis of research in agronomy, plant physiology and ecology. New Phytologist, 2015, 206, 107-117.	7.3	805
10	Biofortifying crops with essential mineral elements. Trends in Plant Science, 2005, 10, 586-593.	8.8	768
11	Opportunities for improving phosphorusâ€use efficiency in crop plants. New Phytologist, 2012, 195, 306-320.	7.3	702
12	Chloride in Soils and its Uptake and Movement within the Plant: A Review. Annals of Botany, 2001, 88, 967-988.	2.9	499
13	Biological costs and benefits to plantâ€“microbe interactions in the rhizosphere. Journal of Experimental Botany, 2005, 56, 1729-1739.	4.8	411
14	Sucrose transport in the phloem: integrating root responses to phosphorus starvation. Journal of Experimental Botany, 2007, 59, 93-109.	4.8	394
15	Changes in Gene Expression in Arabidopsis Shoots during Phosphate Starvation and the Potential for Developing Smart Plants. Plant Physiology, 2003, 132, 578-596.	4.8	393
16	Biofortification of UK food crops with selenium. Proceedings of the Nutrition Society, 2006, 65, 169-181.	1.0	378
17	The pathways of calcium movement to the xylem. Journal of Experimental Botany, 2001, 52, 891-899.	4.8	369
18	Interactions between selenium and sulphur nutrition in Arabidopsis thaliana. Journal of Experimental Botany, 2004, 55, 1927-1937.	4.8	368

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19	Tansley Review No. 113. New Phytologist, 2000, 147, 241-256.	7.3	317
20	Evolutionary control of leaf element composition in plants. New Phytologist, 2007, 174, 516-523.	7.3	304
21	Calcium channels in higher plants. Biochimica Et Biophysica Acta - Biomembranes, 2000, 1465, 171-189.	2.6	303
22	Liming impacts on soils, crops and biodiversity in the UK: A review. Science of the Total Environment, 2018, 610-611, 316-332.	8.0	285
23	Shoot yield drives phosphorus use efficiency in Brassica oleracea and correlates with root architecture traits. Journal of Experimental Botany, 2009, 60, 1953-1968.	4.8	278
24	Genetic Responses to Phosphorus Deficiency. Annals of Botany, 2004, 94, 323-332.	2.9	269
25	Selenium accumulation by plants. Annals of Botany, 2016, 117, mcv180.	2.9	256
26	The high affinity K⁺transporter AtHAK5 plays a physiological role<i>in planta</i>at very low K⁺concentrations and provides a caesium uptake pathway in<i>Arabidopsis</i>. Journal of Experimental Botany, 2008, 59, 595-607.	4.8	255
27	Matching roots to their environment. Annals of Botany, 2013, 112, 207-222.	2.9	247
28	Moving cationic minerals to edible tissues: potassium, magnesium, calcium. Current Opinion in Plant Biology, 2009, 12, 291-298.	7.1	246
29	Selenium biofortification of high-yielding winter wheat (Triticum aestivum L.) by liquid or granular Se fertilisation. Plant and Soil, 2010, 332, 5-18.	3.7	242
30	Phylogenetic variation in the shoot mineral concentration of angiosperms. Journal of Experimental Botany, 2004, 55, 321-336.	4.8	235
31	A Cellular Hypothesis for the Induction of Blossom-End Rot in Tomato Fruit. Annals of Botany, 2005, 95, 571-581.	2.9	225
32	Physiological Limits to Zinc Biofortification of Edible Crops. Frontiers in Plant Science, 2011, 2, 80.	3.6	223
33	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
34	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
35	A comparison of the Thlaspi caerulescens and Thlaspi arvense shoot transcriptomes. New Phytologist, 2006, 170, 239-260.	7.3	213
36	Phylogenetic variation in heavy metal accumulation in angiosperms. New Phytologist, 2001, 152, 9-27.	7.3	191

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37	Selenium metabolism in plants. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 2333-2342.	2.4	187
38	Genes for calcium-permeable channels in the plasma membrane of plant root cells. Biochimica Et Biophysica Acta - Biomembranes, 2002, 1564, 299-309.	2.6	182
39	Dietary mineral supplies in Africa. Physiologia Plantarum, 2014, 151, 208-229.	5.2	178
40	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
41	Arabidopsis thaliana root non-selective cation channels mediate calcium uptake and are involved in growth. Plant Journal, 2002, 32, 799-808.	5.7	174
42	Cesium Toxicity in Arabidopsis. Plant Physiology, 2004, 136, 3824-3837.	4.8	168
43	Nature and nurture: the importance of seed phosphorus content. Plant and Soil, 2012, 357, 1-8.	3.7	167
44	Recent advances in fruit development and ripening: an overview. Journal of Experimental Botany, 2002, 53, 1995-2000.	4.8	155
45	Nutrient Sensing and Signalling in Plants: Potassium and Phosphorus. Advances in Botanical Research, 2005, 43, 209-257.	1.1	155
46	Sugar Signaling in Root Responses to Low Phosphorus Availability. Plant Physiology, 2011, 156, 1033-1040.	4.8	154
47	Extraordinarily High Leaf Selenium to Sulfur Ratios Define â€˜Se-accumulatorâ€™ Plants. Annals of Botany, 2007, 100, 111-118.	2.9	149
48	Phosphorus nutrition of terrestrial plants. Plant Ecophysiology, 2008, , 51-81.	1.5	146
49	Root traits for infertile soils. Frontiers in Plant Science, 2013, 4, 193.	3.6	145
50	Zinc for better crop production and human health. Plant and Soil, 2017, 411, 1-4.	3.7	133
51	Variation in the shoot calcium content of angiosperms. Journal of Experimental Botany, 2003, 54, 1431-1446.	4.8	131
52	Linking root exudation to belowground economic traits for resource acquisition. New Phytologist, 2022, 233, 1620-1635.	7.3	129
53	Calcium Channels in the Plasma Membrane of Root Cells. Annals of Botany, 1998, 81, 173-183.	2.9	127
54	Analyzing Lateral Root Development: How to Move Forward. Plant Cell, 2012, 24, 15-20.	6.6	125

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55	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
56	Long-distance Transport in the Xylem and Phloem. , 2012, , 49-70.		117
57	Challenges and opportunities for quantifying roots and rhizosphere interactions through imaging and image analysis. Plant, Cell and Environment, 2015, 38, 1213-1232.	5.7	117
58	Improving potassium acquisition and utilisation by crop plants. Journal of Plant Nutrition and Soil Science, 2013, 176, 305-316.	1.9	115
59	Analysis of improvements in nitrogen use efficiency associated with 75 years of spring barley breeding. European Journal of Agronomy, 2012, 42, 49-58.	4.1	112
60	Tandem Quadruplication of HMA4 in the Zinc (Zn) and Cadmium (Cd) Hyperaccumulator Noccaea caerulescens. PLoS ONE, 2011, 6, e17814.	2.5	112
61	Selenium concentration and speciation in biofortified flour and bread: Retention of selenium during grain biofortification, processing and production of Se-enriched food. Food Chemistry, 2011, 126, 1771-1778.	8.2	110
62	Rice auxin influx carrier OsAUX1 facilitates root hair elongation in response to low external phosphate. Nature Communications, 2018, 9, 1408.	12.8	110
63	Does zinc move apoplastically to the xylem in roots of Thlaspi caerulescens?. New Phytologist, 2002, 153, 201-207.	7.3	109
64	Relationships Between Yield and Mineral Concentrations in Potato Tubers. Hortscience: A Publication of the American Society for Hortcultural Science, 2009, 44, 6-11.	1.0	109
65	The effect of supplemental irrigation after jointing on leaf senescence and grain filling in wheat. Field Crops Research, 2013, 151, 35-44.	5.1	108
66	Shoot Calcium and Magnesium Concentrations Differ between Subtaxa, Are Highly Heritable, and Associate with Potentially Pleiotropic Loci in <i>Brassica oleracea</i> Â Â Â. Plant Physiology, 2008, 146, 1707-1720.	4.8	107
67	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
68	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
69	Ion Uptake Mechanisms of Individual Cells and Roots. , 2012, , 7-47.		100
70	A scanner system for high-resolution quantification of variation in root growth dynamics of Brassica rapa genotypes. Journal of Experimental Botany, 2014, 65, 2039-2048.	4.8	96
71	Phenotypic plasticity of the maize root system in response to heterogeneous nitrogen availability. Planta, 2014, 240, 667-678.	3.2	95
72	The three-dimensional distribution of minerals in potato tubers. Annals of Botany, 2011, 107, 681-691.	2.9	93

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73	The physiological basis of genotypic differences in nitrogen use efficiency in oilseed rape (Brassica) Tj ETQq1 1 0.784314 rgBT /Overlock	5.1	92
74	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
75	Physiological, biochemical, and ultrastructural characterization of selenium toxicity in cowpea plants. Environmental and Experimental Botany, 2018, 150, 172-182.	4.2	92
76	High-throughput root phenotyping screens identify genetic loci associated with root architectural traits in Brassica napus under contrasting phosphate availabilities. Annals of Botany, 2013, 112, 381-389.	2.9	90
77	Root morphology and seed and leaf ionomic traits in a Brassica napus L. diversity panel show wide phenotypic variation and are characteristic of crop habit. BMC Plant Biology, 2016, 16, 214.	3.6	88
78	Shaping an Optimal Soil by Rootâ€“Soil Interaction. Trends in Plant Science, 2017, 22, 823-829.	8.8	87
79	Eats roots and leaves. Can edible horticultural crops address dietary calcium, magnesium and potassium deficiencies?. Proceedings of the Nutrition Society, 2010, 69, 601-612.	1.0	85
80	Soil factors affecting selenium concentration in wheat grain and the fate and speciation of Se fertilisers applied to soil. Plant and Soil, 2010, 332, 19-30.	3.7	84
81	Storage nitrogen co-ordinates leaf expansion and photosynthetic capacity in winter oilseed rape. Journal of Experimental Botany, 2018, 69, 2995-3007.	4.8	83
82	Potassium currents across the plasma membrane of protoplasts derived from rye roots: a patch-clamp study. Journal of Experimental Botany, 1995, 46, 497-511.	4.8	80
83	Yield responses of arable crops to liming â€“ An evaluation of relationships between yields and soil pH from a long-term liming experiment. European Journal of Agronomy, 2019, 105, 176-188.	4.1	80
84	High Resolution Melt (HRM) analysis is an efficient tool to genotype EMS mutants in complex crop genomes. Plant Methods, 2011, 7, 43.	4.3	79
85	Testing the distinctness of shoot ionomes of angiosperm families using the Rothamsted Park Grass Continuous Hay Experiment. New Phytologist, 2012, 196, 101-109.	7.3	79
86	The molecular mechanism of sodium influx to root cells. Trends in Plant Science, 1999, 4, 245-246.	8.8	78
87	High-throughput phenotyping (HTP) identifies seedling root traits linked to variation in seed yield and nutrient capture in field-grown oilseed rape (<i>Brassica napus</i>L.). Annals of Botany, 2016, 118, 655-665.	2.9	78
88	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
89	Using genomic DNA-based probe-selection to improve the sensitivity of high-density oligonucleotide arrays when applied to heterologous species. Plant Methods, 2005, 1, 10.	4.3	73
90	Impact of sulphur fertilisation on crop response to selenium fertilisation. Plant and Soil, 2010, 332, 31-40.	3.7	70

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91	Influx and accumulation of Cs+ by the akt1 mutant of Arabidopsis thaliana (L.) Heynh. lacking a dominant K+ transport system. Journal of Experimental Botany, 2001, 52, 839-844.	4.8	66
92	The deposition of suberin lamellae determines the magnitude of cytosolic Ca2+ elevations in root endodermal cells subjected to cooling. Plant Journal, 2002, 30, 457-465.	5.7	66
93	Natural genetic variation in caesium (Cs) accumulation by Arabidopsis thaliana. New Phytologist, 2004, 162, 535-548.	7.3	64
94	The Sources of Phosphorus in the Waters of Great Britain. Journal of Environmental Quality, 2009, 38, 13-26.	2.0	63
95	Interactions between light intensity and phosphorus nutrition affect the phosphate-mining capacity of white lupin (Lupinus albus L.). Journal of Experimental Botany, 2014, 65, 2995-3003.	4.8	63
96	Mapping and cloning of quantitative trait loci for phosphorus efficiency in crops: opportunities and challenges. Plant and Soil, 2019, 439, 91-112.	3.7	63
97	Selecting plants to minimise radiocaesium in the food chain. Plant and Soil, 2003, 249, 177-186.	3.7	62
98	Effect of controlled atmosphere storage on abscisic acid concentration and other biochemical attributes of onion bulbs. Postharvest Biology and Technology, 2006, 39, 233-242.	6.0	62
99	Proton and anion transport at the tonoplast in crassulacean-acid-metabolism plants: specificity of the malate-influx system in Kalanchoï¿½ daigremontiana. Planta, 1989, 179, 265-274.	3.2	61
100	Regulatory Hotspots Are Associated with Plant Gene Expression under Varying Soil Phosphorus Supply in <i>Brassica rapa</i> Â Â Â. Plant Physiology, 2011, 156, 1230-1241.	4.8	60
101	Potassium channels from the plasma membrane of rye roots characterized following incorporation into planar lipid bilayers. Planta, 1992, 186, 188-202.	3.2	58
102	Managing the Nutrition of Plants and People. Applied and Environmental Soil Science, 2012, 2012, 1-13.	1.7	56
103	Sustainable Cropping Requires Adaptation to a Heterogeneous Rhizosphere. Trends in Plant Science, 2020, 25, 1194-1202.	8.8	56
104	The regulation of K+influx into roots of rye (Secale cerealeL.) seedlings by negative feedback via the K+flux from shoot to root in the phloem. Journal of Experimental Botany, 1997, 48, 2063-2073.	4.8	55
105	Functional Characterization of Two Ripening-related Sucrose Transporters from Grape Berries. Annals of Botany, 2001, 87, 125-129.	2.9	55
106	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
107	QTL meta-analysis of root traits in Brassica napus under contrasting phosphorus supply in two growth systems. Scientific Reports, 2016, 6, 33113.	3.3	55
108	Variation in the angiosperm ionome. Physiologia Plantarum, 2018, 163, 306-322.	5.2	55

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109	The effect of 1-methylcyclopropene (1-MCP) on the physical and biochemical characteristics of onion cv. SS1 bulbs during storage. Postharvest Biology and Technology, 2007, 44, 131-140.	6.0	54
110	Genetic analysis of potassium use efficiency in Brassica oleracea. Annals of Botany, 2010, 105, 1199-1210.	2.9	54
111	An easily implemented agro-hydrological procedure with dynamic root simulation for water transfer in the cropâ€“soil system: Validation and application. Journal of Hydrology, 2009, 370, 177-190.	5.4	53
112	A Large and Deep Root System Underlies High Nitrogen-Use Efficiency in Maize Production. PLoS ONE, 2015, 10, e0126293.	2.5	53
113	Estimating radionuclide transfer to wild speciesâ€"data requirements and availability for terrestrial ecosystems. Journal of Radiological Protection, 2004, 24, A89-A103.	1.1	52
114	A dynamic model for the combined effects of N, P and K fertilizers on yield and mineral composition; description and experimental test. Plant and Soil, 2007, 298, 81-98.	3.7	51
115	Substrate Kinetics of the Tonoplast H+-Translocating Inorganic Pyrophosphatase and Its Activation by Free Mg2+. Plant Physiology, 1990, 93, 1063-1070.	4.8	50
116	Colonization and community structure of arbuscular mycorrhizal fungi in maize roots at different depths in the soil profile respond differently to phosphorus inputs on a long-term experimental site. Mycorrhiza, 2017, 27, 369-381.	2.8	50
117	Climate Change and Consequences for Potato Production: a Review of Tolerance to Emerging Abiotic Stress. Potato Research, 2017, 60, 239-268.	2.7	50
118	The Voltage-Independent Cation Channel in the Plasma Membrane of Wheat Roots Is Permeable to Divalent Cations and May Be Involved in Cytosolic Ca2+ Homeostasis. Plant Physiology, 2002, 130, 1386-1395.	4.8	49
119	A new physical interpretation of plant root capacitance. Journal of Experimental Botany, 2012, 63, 6149-6159.	4.8	49
120	Can root electrical capacitance be used to predict root mass in soil?. Annals of Botany, 2013, 112, 457-464.	2.9	49
121	The Permeation of Ammonium through a Voltage-independent K + Channel in the Plasma Membrane of Rye Roots. Journal of Membrane Biology, 1996, 152, 89-99.	2.1	48
122	Effects of supplemental irrigation with micro-sprinkling hoses on water distribution in soil and grain yield of winter wheat. Field Crops Research, 2014, 161, 26-37.	5.1	47
123	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
124	Acclimation of potassium influx in rye (Secale cereale) to low root temperatures. Planta, 1987, 171, 377-385.	3.2	45
125	Applying a solute transfer model to phytoextraction: Zinc acquisition by Thlaspi caerulescens. Plant and Soil, 2003, 249, 45-56.	3.7	44
126	Distribution of calcium (Ca) and magnesium (Mg) in the leaves of Brassica rapa under varying exogenous Ca and Mg supply. Annals of Botany, 2012, 109, 1081-1089.	2.9	43

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127	Field phenotyping of potato to assess root and shoot characteristics associated with drought tolerance. Plant and Soil, 2014, 378, 351-363.	3.7	43
128	Plant nutrition and soil fertility: synergies for acquiring global green growth and sustainable development. Plant and Soil, 2019, 434, 1-6.	3.7	43
129	The effect of the transition between controlled atmosphere and regular atmosphere storage on bulbs of onion cultivars SS1, Carlos and Renate. Postharvest Biology and Technology, 2007, 44, 228-239.	6.0	42
130	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
131	Agronomic biofortification of cowpea with selenium: effects of selenate and selenite applications on selenium and phytate concentrations in seeds. Journal of the Science of Food and Agriculture, 2019, 99, 5969-5983.	3.5	42
132	Comparative genome and transcriptome analysis unravels key factors of nitrogen use efficiency in <scp><i>Brassica napus</i></scp> L. Plant, Cell and Environment, 2020, 43, 712-731.	5.7	41
133	Gene Expression Changes in Phosphorus Deficient Potato (Solanum tuberosum L.) Leaves and the Potential for Diagnostic Gene Expression Markers. PLoS ONE, 2011, 6, e24606.	2.5	41
134	Cell marking inArabidopsis thaliana andits application to patch-clamp studies. Plant Journal, 1998, 15, 843-851.	5.7	40
135	Genetical and Comparative Genomics of <i>Brassica</i> under Altered Ca Supply Identifies <i>Arabidopsis</i> Ca-Transporter Orthologs Â. Plant Cell, 2014, 26, 2818-2830.	6.6	40
136	Identification of Candidate Genes for Calcium and Magnesium Accumulation in Brassica napus L. by Association Genetics. Frontiers in Plant Science, 2017, 8, 1968.	3.6	39
137	Soil Management for Sustainable Agriculture. Applied and Environmental Soil Science, 2012, 2012, 1-3.	1.7	38
138	Biofortifying Scottish potatoes with zinc. Plant and Soil, 2017, 411, 151-165.	3.7	38
139	Bio-fortification of potato tubers using foliar zinc-fertiliser. Journal of Horticultural Science and Biotechnology, 2012, 87, 123-129.	1.9	37
140	Silicon Uptake and Localisation in Date Palm (Phoenix dactylifera) â€" A Unique Association With Sclerenchyma. Frontiers in Plant Science, 2019, 10, 988.	3.6	37
141	Mechanisms for improving phosphorus utilization efficiency in plants. Annals of Botany, 2022, 129, 247-258.	2.9	37
142	Phytoremediation assisted by microorganisms. Trends in Plant Science, 2001, 6, 502.	8.8	36
143	The dynamics of root meristem distribution in the soil. Plant, Cell and Environment, 2010, 33, 358-369.	5.7	36
144	Depolarizationâ€activated calcium channels shape the calcium signatures induced by lowâ€temperature stress. New Phytologist, 2009, 183, 6-8.	7.3	34

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145	Advanced patch-clamp techniques and single-channel analysis. Journal of Experimental Botany, 1999, 50, 1037-1054.	4.8	32
146	Phosphorus Nutrition: Rhizosphere Processes, Plant Response and Adaptations. Soil Biology, 2011, , 245-271.	0.8	32
147	Phosphorusâ€"zinc interactions in cotton: consequences for biomass production and nutrientâ€use efficiency in photosynthesis. Physiologia Plantarum, 2019, 166, 996-1007.	5.2	31
148	Mineral element composition of cabbage as affected by soil type and phosphorus and zinc fertilisation. Plant and Soil, 2019, 434, 151-165.	3.7	31
149	Solute is imported to elongating root cells of barley as a pressure driven-flow of solution. Functional Plant Biology, 2004, 31, 391.	2.1	30
150	Evidence of neutral transcriptome evolution in plants. New Phytologist, 2008, 180, 587-593.	7.3	30
151	Continuous, high-resolution biospeckle imaging reveals a discrete zone of activity at the root apex that responds to contact with obstacles. Annals of Botany, 2014, 113, 555-563.	2.9	30
152	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
153	Root traits benefitting crop production in environments with limited water and nutrient availability. Annals of Botany, 2019, 124, 883-890.	2.9	30
154	Unidirectional Ca2+Fluxes in Roots of Rye (Secale cerealeL). A Comparison of Excised Roots with Roots of Intact Plants. Journal of Experimental Botany, 1992, 43, 1061-1074.	4.8	29
155	Phytic acid accumulation in plants: Biosynthesis pathway regulation and role in human diet. Plant Physiology and Biochemistry, 2021, 164, 132-146.	5.8	29
156	Cation Permeability and Selectivity of a Root Plasma Membrane Calcium Channel. Journal of Membrane Biology, 2000, 174, 71-83.	2.1	28
157	The nitrogen and nitrate economy of butterhead lettuce (Lactuca sativa var. capitata L.). Journal of Experimental Botany, 2003, 54, 2081-2090.	4.8	28
158	Some elements are more equal than others: soil-to-plant transfer of radiocaesium and radiostrontium, revisited. Plant and Soil, 2012, 355, 23-27.	3.7	28
159	Effects of Low Temperature on the Development and Morphology of Rye (Secale cereale) and Wheat (Triticum aestivum). Annals of Botany, 1990, 66, 559-566.	2.9	27
160	Phosphorus Response Components of Different Brassica oleracea Genotypes Are Reproducible in Different Environments. Crop Science, 2005, 45, 1728-1735.	1.8	27
161	A Brassica Exon Array for Whole-Transcript Gene Expression Profiling. PLoS ONE, 2010, 5, e12812.	2.5	27
162	Biomass partitioning and rhizosphere responses of maize and faba bean to phosphorus deficiency. Crop and Pasture Science, 2016, 67, 847.	1.5	27

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163	Effect of Climate and Agricultural Land Use Changes on UK Feed Barley Production and Food Security to the 2050s. Land, 2017, 6, 74.	2.9	27
164	Juvenile root vigour improves phosphorus use efficiency of potato. Plant and Soil, 2018, 432, 45-63.	3.7	27
165	Specificity of ion channel inhibitors for the maxi cation channel in rye root plasma membranes. Journal of Experimental Botany, 1996, 47, 713-716.	4.8	26
166	Potato Proteins, Lipids, and Minerals. , 2009, , 99-125.		26
167	Analysis of root growth from a phenotyping data set using a density-based model. Journal of Experimental Botany, 2016, 67, 1045-1058.	4.8	26
168	Limits to the Biofortification of Leafy Brassicas with Zinc. Agriculture (Switzerland), 2018, 8, 32.	3.1	26
169	Effects of Low Temperature on Growth and Nutrient Accumulation in Rye (Secale cereale) and Wheat (Triticum aestivum). Annals of Botany, 1991, 68, 23-31.	2.9	25
170	Selenium and its relationship with sulfur. Plant Ecophysiology, 2007, , 225-252.	1.5	25
171	Evolutionary origins of abnormally large shoot sodium accumulation in nonsaline environments within the Caryophyllales. New Phytologist, 2017, 214, 284-293.	7.3	25
172	Contrasting nutrientâ€“disease relationships: Potassium gradients in barley leaves have opposite effects on two fungal pathogens with different sensitivities to jasmonic acid. Plant, Cell and Environment, 2018, 41, 2357-2372.	5.7	25
173	A Short and Economical Synthesis of 2,2,7,7-Tetramethyl-4-Octene -3,6-dione from 2-Furoic Acid and t-Butyl Chloride. Synthetic Communications, 1982, 12, 489-494.	2.1	24
174	The length of micro-sprinkling hoses delivering supplemental irrigation affects photosynthesis and dry matter production of winter wheat. Field Crops Research, 2014, 168, 65-74.	5.1	24
175	Simulated Regional Yields of Spring Barley in the United Kingdom under Projected Climate Change. Climate, 2016, 4, 54.	2.8	24
176	Leaf photosynthetic capacity is regulated by the interaction of nitrogen and potassium through coordination of CO₂ diffusion and carboxylation. Physiologia Plantarum, 2019, 167, 418-432.	5.2	24
177	Heterogeneous phosphate supply influences maize lateral root proliferation by regulating auxin redistribution. Annals of Botany, 2020, 125, 119-130.	2.9	24
178	Variation in tuber mineral concentrations among accessions of Solanum species held in the Commonwealth Potato Collection. Genetic Resources and Crop Evolution, 2017, 64, 1927-1935.	1.6	23
179	Physiological responses of date palm (Phoenix dactylifera) seedlings to acute ozone exposure at high temperature. Environmental Pollution, 2018, 242, 905-913.	7.5	23
180	Agronomic biofortification with selenium impacts storage proteins in grains of upland rice. Journal of the Science of Food and Agriculture, 2020, 100, 1990-1997.	3.5	23

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181	Relationship Between the Development and Growth of Rye (Secale cereale L.) and the Potassium Concentration in Solution. Annals of Botany, 1993, 72, 349-358.	2.9	22
182	Maize Varieties Released in Different Eras Have Similar Root Length Density Distributions in the Soil, Which Are Negatively Correlated with Local Concentrations of Soil Mineral Nitrogen. PLoS ONE, 2015, 10, e0121892.	2.5	22
183	Species-Wide Variation in Shoot Nitrate Concentration, and Genetic Loci Controlling Nitrate, Phosphorus and Potassium Accumulation in Brassica napus L.. Frontiers in Plant Science, 2018, 9, 1487.	3.6	22
184	The impact of different morphological and biochemical root traits on phosphorus acquisition and seed yield of Brassica napus. Field Crops Research, 2020, 258, 107960.	5.1	22
185	Relationships Between Leaf Carbon and Macronutrients Across Woody Species and Forest Ecosystems Highlight How Carbon Is Allocated to Leaf Structural Function. Frontiers in Plant Science, 2021, 12, 674932.	3.6	22
186	Global magnesium supply in the food chain. Crop and Pasture Science, 2015, 66, 1278.	1.5	21
187	Loss of organic carbon in suburban soil upon urbanization of Chengdu megacity, China. Science of the Total Environment, 2021, 785, 147209.	8.0	20
188	Mutation increasing Î²-carotene concentrations does not adversely affect concentrations of essential mineral elements in pepper fruit. PLoS ONE, 2017, 12, e0172180.	2.5	20
189	Effects of the growth retardant tetcyclacis on the sterol composition of oat (Avena sativa). Plant Growth Regulation, 1987, 5, 207-217.	3.4	19
190	Agronomic biofortification of cowpea with zinc: Variation in primary metabolism responses and grain nutritional quality among 29 diverse genotypes. Plant Physiology and Biochemistry, 2021, 162, 378-387.	5.8	19
191	An efficient procedure for normalizing ionomics data for <i>Arabidopsis thaliana</i>. New Phytologist, 2010, 186, 270-274.	7.3	18
192	Yield loss of oilseed rape (Brassica napus L.) under nitrogen deficiency is associated with under-regulation of plant population density. European Journal of Agronomy, 2019, 103, 80-89.	4.1	18
193	Unravelling homeostasis effects of phosphorus and zinc nutrition by leaf photochemistry and metabolic adjustment in cotton plants. Scientific Reports, 2021, 11, 13746.	3.3	18
194	Root hair abundance impacts cadmium accumulation in Arabidopsis thaliana shoots. Annals of Botany, 2018, 122, 903-914.	2.9	17
195	Transcriptional Regulation of Genes Involved in Zinc Uptake, Sequestration and Redistribution Following Foliar Zinc Application to Medicago sativa. Plants, 2021, 10, 476.	3.5	17
196	Dietary Requirements for Magnesium, but not Calcium, are Likely to be met in Malawi Based on National Food Supply Data. International Journal for Vitamin and Nutrition Research, 2012, 82, 192-199.	1.5	17
197	Does plant growth temperature modulate the membrane composition and ATPase activities of tonoplast and plasma-membrane fractions from rye roots?. Phytochemistry, 1990, 29, 3385-3393.	2.9	16
198	An Energy-Barrier Model for the Permeation of Monovalent and Divalent Cations Through the Maxi Cation Channel in the Plasma Membrane of Rye Roots. Journal of Membrane Biology, 1999, 168, 63-75.	2.1	16

#	Article	IF	Citations
199	Minerals, Soils and Roots. , 2007, , 739-752.		16
200	Phylogenetic effects on shoot magnesium concentration. Crop and Pasture Science, 2015, 66, 1241.	1.5	16
201	Breeding histories and selection criteria for oilseed rape in Europe and China identified by genome wide pedigree dissection. Scientific Reports, 2017, 7, 1916.	3.3	16
202	Early Responses of Brassica oleracea Roots to Zinc Supply Under Sufficient and Sub-Optimal Phosphorus Supply. Frontiers in Plant Science, 2019, 10, 1645.	3.6	16
203	Using planar lipid-bilayers to study plant ion channels. Physiologia Plantarum, 1994, 91, 770-774.	5.2	15
204	Developing a reliable strategy to infer the effective soil hydraulic properties from field evaporation experiments for agro-hydrological models. Agricultural Water Management, 2010, 97, 399-409.	5.6	15
205	Photosynthesis and Drymass Production of Winter Wheat in Response to Microâ€Sprinkling Irrigation. Agronomy Journal, 2017, 109, 549-561.	1.8	15
206	Effect of phosphorus supply on root traits of two Brassica oleracea L. genotypes. BMC Plant Biology, 2020, 20, 368.	3.6	15
207	Characterization of ion channels from Acetabularia plasma membrane in planar lipid bilayers. Journal of Membrane Biology, 1993, 133, 145-60.	2.1	14
208	Separation of K+-and Clâ˜-selective ion channels from rye roots on a continuous sucrose density gradient. Journal of Experimental Botany, 1995, 46, 361-376.	4.8	14
209	Inter-cultivar variation in soil-to-plant transfer of radiocaesium and radiostrontium in Brassica oleracea. Journal of Environmental Radioactivity, 2016, 155-156, 112-121.	1.7	14
210	Effects of Growth and Assay Temperatures on Unidirectional K+Fluxes in Roots of Rye (Secale) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302	4.8	13
211	Bafilomycin A1 is a non-competitive inhibitor of the tonoplast H+-ATPase of maize coleoptiles. Journal of Experimental Botany, 1994, 45, 1397-1402.	4.8	13
212	Preharvest application of exogenous abscisic acid (ABA) or an ABA analogue does not affect endogenous ABA concentration of onion bulbs. Plant Growth Regulation, 2007, 52, 117-129.	3.4	13
213	Relative Values of Physiological Parameters of P Response of Different Genotypes can be Measured in Experiments with Only Two P Treatments. Plant and Soil, 2006, 281, 159-172.	3.7	12
214	Effect of supplemental irrigation on the relationships between leaf ABA concentrations, tiller development and photosynthate accumulation and remobilization in winter wheat. Plant Growth Regulation, 2016, 79, 331-343.	3.4	12
215	The Genetics of Selenium Accumulation by Plants. Plant Ecophysiology, 2017, , 143-163.	1.5	12
216	Faba bean as a novel brewing adjunct: Consumer evaluation. Journal of the Institute of Brewing, 2019, 125, 310-314.	2.3	12

#	Article	IF	Citations
217	Regional variations in potential groundwater recharge from spring barley crop fields in the UK under projected climate change. Groundwater for Sustainable Development, 2019, 8, 332-345.	4.6	12
218	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
219	Virtual water flows under projected climate, land use and population change: the case of UK feed barley and meat. Heliyon, 2020, 6, e03127.	3.2	12
220	The Estimation of Rapid Rate Constants from Current-Amplitude Frequency Distributions of Single-Channel Recordings. Journal of Membrane Biology, 1998, 161, 115-129.	2.1	11
221	Optimising the analysis of transcript data using high density oligonucleotide arrays and genomic DNA-based probe selection. BMC Genomics, 2007, 8, 344.	2.8	11
222	Caesium inhibits the colonization of Medicago truncatula by arbuscular mycorrhizal fungi. Journal of Environmental Radioactivity, 2015, 141, 57-61.	1.7	11
223	Accelerating root system phenotyping of seedlings through a computer-assisted processing pipeline. Plant Methods, 2017, 13, 57.	4.3	11
224	Physiological responses of date palm (<i>Phoenix dactylifera</i>) seedlings to seawater and flooding. New Phytologist, 2021, 229, 3318-3329.	7.3	11
225	Magnesium and calcium overaccumulate in the leaves of a<i>schengen3</i>mutant of<i>Brassica rapa</i>. Plant Physiology, 2021, 186, 1616-1631.	4.8	11
226	Integrated transcriptome and metabolome analysis reveals the physiological and molecular responses of allotetraploid rapeseed to ammonium toxicity. Environmental and Experimental Botany, 2021, 189, 104550.	4.2	11
227	Generation of nonvernalâ€obligate, fasterâ€cycling <i>Noccaea caerulescens</i> lines through fast neutron mutagenesis. New Phytologist, 2011, 189, 409-414.	7.3	10
228	Effect of balanced application of boron and phosphorus fertilizers on soil bacterial community, seed yield and phosphorus use efficiency of Brassica napus. Science of the Total Environment, 2021, 751, 141644.	8.0	10
229	Genetic Dissection of Root Angle of Brassica napus in Response to Low Phosphorus. Frontiers in Plant Science, 2021, 12, 697872.	3.6	10
230	The effect of shoot-root ratio and temperature on K+ influx in rye. Plant and Soil, 1988, 111, 245-248.	3.7	9
231	Identification of QTLs associated with potassium use efficiency and underlying candidate genes by whole-genome resequencing of two parental lines in Brassica napus. Genomics, 2021, 113, 755-768.	2.9	9
232	Advanced patch-clamp techniques and single-channel analysis. Journal of Experimental Botany, 1999, 50, 1037-1054.	4.8	9
233	Local and systemic responses conferring acclimation of <i>Brassica napus</i> roots to low phosphorus conditions. Journal of Experimental Botany, 2022, 73, 4753-4777.	4.8	9
234	Malate-Dependent Proton Transport in Tonoplast Vesicles Isolated from Orchid Leaves Correlates with the Expression of Crassulacean Acid Metabolism. Journal of Plant Physiology, 1992, 139, 533-538.	3.5	8

#	Article	IF	Citations
235	A pump for the auxin fountain: AUX1 and root gravitropism. Trends in Plant Science, 2002, 7, 8.	8.8	8
236	Selenium in Soils and Crops. Molecular and Integrative Toxicology, 2018, , 29-50.	0.5	8
237	Grain zinc concentrations differ among Brazilian wheat genotypes and respond to zinc and nitrogen supply. PLoS ONE, 2018, 13, e0199464.	2.5	8
238	Boron and Phosphorus Act Synergistically to Modulate Absorption and Distribution of Phosphorus and Growth of <i>Brassica napus</i>. Journal of Agricultural and Food Chemistry, 2020, 68, 7830-7838.	5.2	8
239	Genetic dissection of the shoot and root ionomes of Brassica napus grown with contrasting phosphate supplies. Annals of Botany, 2020, 126, 119-140.	2.9	8
240	Cation Channels and the Uptake of Radiocaesium by Plants. Signaling and Communication in Plants, 2010, , 47-67.	0.7	8
241	A universal agro-hydrological model for water and nitrogen cycles in the soilâ€"crop system SMCR_N: Critical update and further validation. Agricultural Water Management, 2010, 97, 1411-1422.	5.6	7
242	Mechanistic interpretation of the varying selectivity of Cesium-137 and potassium uptake by radish (Raphanus sativus L.) under field conditions near Chernobyl. Journal of Environmental Radioactivity, 2016, 152, 85-91.	1.7	7
243	A scanner-based rhizobox system enabling the quantification of root system development and response of <i>Brassica rapa</i> seedlings to external P availability. Plant Root, 2017, 11, 16-32.	0.3	7
244	Identification of QTLs for relative root traits associated with phosphorus efficiency in two culture systems in Brassica napus. Euphytica, 2019, 215, 1.	1.2	7
245	Magnesium in crop production and food quality. Plant and Soil, 2020, 457, 1-3.	3.7	7
246	Possible consequences of an inability of plants to control manganese uptake. Plant and Soil, 2021, 461, 63-68.	3.7	7
247	Liming impacts barley yield over a wide concentration range of soil exchangeable cations. Nutrient Cycling in Agroecosystems, 2021, 120, 131-144.	2.2	7
248	Short planks in the crop nutrient barrel theory of China are changing: Evidence from 15 crops in 13 provinces. Food and Energy Security, 2023, 12, .	4.3	7
249	Voltage-dependent Ca2+ uptake by right-side-out plasma membrane vesicles derived from maize shoots. Journal of Plant Physiology, 1998, 152, 17-24.	3.5	6
250	Response to Andrews et al.: correlations and causality. Trends in Plant Science, 2007, 12, 532-533.	8.8	6
251	Improving crop mineral nutrition. Plant and Soil, 2014, 384, 1-5.	3.7	6
252	Potassium Use Efficiency of Plants. , 2021, , 119-145.		6

#	Article	IF	Citations
253	What evidence exists on the effectiveness of the techniques and management approaches used to improve the productivity of field grown tomatoes under conditions of water-, nitrogen- and/or phosphorus-deficit? A systematic map protocol. Environmental Evidence, 2019, 8, .	2.7	5
254	The secrets of calcicole species revealed. Journal of Experimental Botany, 2021, 72, 968-970.	4.8	5
255	Interaction between sulfur and selenium in agronomic biofortification of cowpea plants under field conditions. Plant and Soil, 2023, 486, 69-85.	3.7	5
256	Studying Calcium Channels from the Plasma Membrane of Plant Root Cells in Planar Lipid Bilayers. Behavior Research Methods, 2005, 1, 101-120.	4.0	4
257	Diagnosing phosphorus deficiency in crop plants. Plant Ecophysiology, 2008, , 225-246.	1.5	4
258	Effects of rooting media on root growth and morphology of Brassica rapa seedlings. South African Journal of Plant and Soil, 2016, 33, 219-227.	1.1	4
259	Utilization of Low Nitrogen Barley for Production of Distilling Quality Malt. Journal of the American Society of Brewing Chemists, 2021, 79, 26-32.	1.1	4
260	The Kinetics of Quinine Blockade of the Maxi Cation Channel in the Plasma Membrane of Rye Roots. Journal of Membrane Biology, 1998, 164, 275-281.	2.1	3
261	Ammonium Improves Corn Phosphorus Acquisition Through Changes in the Rhizosphere Processes and Root Morphology. Pedosphere, 2019, 29, 534-539.	4.0	3
262	Application of sodium selenate to cowpea (Vigna unguiculata L.) increases shoot and grain Se partitioning with strong genotypic interactions. Journal of Trace Elements in Medicine and Biology, 2021, 67, 126781.	3.0	3
263	The Application of Planar Lipid Bilayers to the Study of Plant Ion Channels. , 1992, , 119-133.		3
264	Rhizosphere Processes and Root Traits Determining the Acquisition of Soil Potassium. , 2021, , 99-117.		3
265	Optimised processing of faba bean (Vicia faba L.) kernels as a brewing adjunct. Journal of the Institute of Brewing, 2021, 127, 13-20.	2.3	3
266	A Nod and a wave: calcium signals during nodulation. Trends in Plant Science, 2001, 6, 141.	8.8	2
267	New insights to lateral rooting: Differential responses to heterogeneous nitrogen availability among maize root types. Plant Signaling and Behavior, 2015, 10, e1013795.	2.4	2
268	Minimizing the Treatments Required to Determine the Responses of Different Crop Genotypes to Potassium Supply. Communications in Soil Science and Plant Analysis, 2016, 47, 104-111.	1.4	2
269	Predicting dates of head initiation and yields of broccoli crops grown throughout Scotland. European Journal of Agronomy, 2020, 116, 126055.	4.1	2
270	Improving nutrient management in potato cultivation. Burleigh Dodds Series in Agricultural Science, 2018, , 45-68.	0.2	2

#	Article	IF	Citations
271	Potassium in crop physiology. Burleigh Dodds Series in Agricultural Science, 2020, , 213-236.	0.2	2
272	Confirming a conformist conformation: the topology of AtHKT1. Trends in Plant Science, 2001, 6, 293-294.	8.8	1
273	Using Quantitative Trait Loci Analysis to Select Plants for Altered Radionuclide Accumulation. Methods in Biotechnology, 2007, , 27-47.	0.2	1
274	Preface. Journal of Experimental Botany, 2013, 64, 1179-1179.	4.8	1
275	What evidence exists on the effectiveness of the techniques and management approaches used to improve the productivity of field-grown tomatoes under conditions of water-, nitrogen- and/or phosphorus-deficit? A systematic map. Environmental Evidence, 2021, 10, .	2.7	1
276	Three defensive openings: AtCNGC2 and plant responses to pathogens. Trends in Plant Science, 2001, 6, 95-96.	8.8	0
277	A structure for binding auxins. Trends in Plant Science, 2001, 6, 240.	8.8	0
278	Preface to Below Ground Processes. Journal of Experimental Botany, 2005, 56, 1728-1728.	4.8	0
279	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
280	Dependence of the concentrations of 137Cs and potassium in extracted soil solutions on soil humidity before centrifugation. Nuclear Physics and Atomic Energy, 2017, 18, 87-92.	0.5	0
281	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