Gregory J Rebetzke

List of Publications by Year
in descending order

126 papers	11,040 citations	28190 55 h-index	32761 100 g-index
128 all docs	128 docs citations	128 times ranked	7460 citing authors

#	Article	IF	Citations
1	Breeding for high water-use efficiency. Journal of Experimental Botany, 2004, 55, 2447-2460.	2.4	969
2	Traits and selection strategies to improve root systems and water uptake in water-limited wheat crops. Journal of Experimental Botany, 2012, 63, 3485-3498.	2.4	643
3	"Perfect" markers for the Rht-B1b and Rht-D1b dwarfing genes in wheat. Theoretical and Applied Genetics, 2002, 105, 1038-1042.	1.8	449
4	Breeding for improved water productivity in temperate cereals: phenotyping, quantitative trait loci, markers and the selection environment. Functional Plant Biology, 2010, 37, 85.	1.1	310
5	Improving Intrinsic Water-Use Efficiency and Crop Yield. Crop Science, 2002, 42, 122.	0.8	273
6	Large root systems: are they useful in adapting wheat to dry environments?. Functional Plant Biology, 2011, 38, 347.	1.1	241
7	Breeding Opportunities for Increasing the Efficiency of Water Use and Crop Yield in Temperate Cereals. Crop Science, 2002, 42, 111.	0.8	229
8	Molecular mapping of gibberellin-responsive dwarfing genes in bread wheat. Theoretical and Applied Genetics, 2005, 111, 423-430.	1.8	228
9	Selection for Reduced Carbon Isotope Discrimination Increases Aerial Biomass and Grain Yield of Rainfed Bread Wheat. Crop Science, 2002, 42, 739.	0.8	224
10	Genetic variation for improving the salt tolerance of durum wheat. Australian Journal of Agricultural Research, 2000, 51, 69.	1.5	218
11	Genetic improvement of early vigour in wheat. Australian Journal of Agricultural Research, 1999, 50, 291.	1.5	217
12	High Throughput Determination of Plant Height, Ground Cover, and Above-Ground Biomass in Wheat with LiDAR. Frontiers in Plant Science, 2018, 9, 237.	1.7	206
13	Analysis of leaf and stripe rust severities reveals pathotype changes and multiple minor QTLs associated with resistance in an AvocetÂÃ—ÂPastor wheat population. Theoretical and Applied Genetics, 2012, 124, 1283-1294.	1.8	200
14	The effect of different height reducing genes on the early growth of wheat. Functional Plant Biology, 2004, 31, 583.	1.1	196
15	Genotypic increases in coleoptile length improves stand establishment, vigour and grain yield of deep-sown wheat. Field Crops Research, 2007, 100, 10-23.	2.3	176
16	Genomic regions for canopy temperature and their genetic association with stomatal conductance and grain yield in wheat. Functional Plant Biology, 2013, 40, 14.	1.1	174
17	Guiding deployment of resistance in cereals using evolutionary principles. Evolutionary Applications, 2014, 7, 609-624.	1.5	171
18	Genotypic variation in water-soluble carbohydrate accumulation in wheat. Functional Plant Biology, 2006, 33, 799.	1.1	165

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19	Quantitative trait loci for carbon isotope discrimination are repeatable across environments and wheat mapping populations. Theoretical and Applied Genetics, 2008, 118, 123-137.	1.8	160
20	Quantitative trait loci for water-soluble carbohydrates and associations with agronomic traits in wheat. Australian Journal of Agricultural Research, 2008, 59, 891.	1.5	160
21	Sense and nonsense in conservation agriculture: Principles, pragmatism and productivity in Australian mixed farming systems. Agriculture, Ecosystems and Environment, 2014, 187, 133-145.	2.5	152
22	Gibberellic acid-sensitive dwarfing genes reduce plant height to increase kernel number and grain yield of wheat. Australian Journal of Agricultural Research, 2000, 51, 235.	1.5	146
23	A rapid, controlled-environment seedling root screen for wheat correlates well with rooting depths at vegetative, but not reproductive, stages at two field sites. Annals of Botany, 2013, 112, 447-455.	1.4	146
24	Field evaluation of early vigour for genetic improvement of grain yield in wheat. Australian Journal of Agricultural Research, 2002, 53, 1137.	1.5	145
25	Molecular mapping of genes for Coleoptile growth in bread wheat (Triticum aestivum L.). Theoretical and Applied Genetics, 2007, 114, 1173-1183.	1.8	137
26	Soil coring at multiple field environments can directly quantify variation in deep root traits to select wheat genotypes for breeding. Journal of Experimental Botany, 2014, 65, 6231-6249.	2.4	134
27	Implementation of markers in Australian wheat breeding. Australian Journal of Agricultural Research, 2001, 52, 1349.	1.5	132
28	Methodology for High-Throughput Field Phenotyping of Canopy Temperature Using Airborne Thermography. Frontiers in Plant Science, 2016, 7, 1808.	1.7	118
29	Awns reduce grain number to increase grain size and harvestable yield in irrigated and rainfed spring wheat. Journal of Experimental Botany, 2016, 67, 2573-2586.	2.4	117
30	Genetic control of sodium exclusion in durum wheat. Australian Journal of Agricultural Research, 2003, 54, 627.	1.5	115
31	Genotypic variation in specific leaf area for genetic improvement of early vigour in wheat. Field Crops Research, 2004, 88, 179-189.	2.3	112
32	Height reduction and agronomic performance for selected gibberellin-responsive dwarfing genes in bread wheat (Triticum aestivum L.). Field Crops Research, 2012, 126, 87-96.	2.3	110
33	A multisite managed environment facility for targeted trait and germplasm phenotyping. Functional Plant Biology, 2013, 40, 1.	1.1	109
34	Influence of the Gibberellin-sensitive Rht8 Dwarfing Gene on Leaf Epidermal Cell Dimensions and Early Vigour in Wheat (Triticum aestivum L.). Annals of Botany, 2005, 95, 631-639.	1.4	108
35	A wheat genotype developed for rapid leaf growth copes well with the physical and biological constraints of unploughed soil. Functional Plant Biology, 2005, 32, 695.	1.1	106
36	Indirect selection for potential yield in early-generation, spaced plantings of wheat and other small-grain cereals: a review. Crop and Pasture Science, 2018, 69, 439.	0.7	105

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37	Quantitative trait loci for slow-rusting resistance in wheat to leaf rust and stripe rust identified with multi-environment analysis. Theoretical and Applied Genetics, 2008, 116, 1027-1034.	1.8	99
38	Dynamic quantification of canopy structure to characterize early plant vigour in wheat genotypes. Journal of Experimental Botany, 2016, 67, 4523-4534.	2.4	98
39	Physiological traits and cereal germplasm for sustainable agricultural systems. Euphytica, 2007, 154, 409-425.	0.6	96
40	Review: High-throughput phenotyping to enhance the use of crop genetic resources. Plant Science, 2019, 282, 40-48.	1.7	95
41	Wheat drought tolerance in the field is predicted by amino acid responses to glasshouse-imposed drought. Journal of Experimental Botany, 2019, 70, 4931-4948.	2.4	92
42	Longer coleoptiles improve emergence through crop residues to increase seedling number and biomass in wheat (Triticum aestivum L.). Plant and Soil, 2005, 272, 87-100.	1.8	87
43	Use of a large multiparent wheat mapping population in genomic dissection of coleoptile and seedling growth. Plant Biotechnology Journal, 2014, 12, 219-230.	4.1	86
44	Plot size matters: interference from intergenotypic competition in plant phenotyping studies. Functional Plant Biology, 2014, 41, 107.	1.1	86
45	Effect of previous crops on crown rot and yield of durum and bread wheat in northern NSW. Australian Journal of Agricultural Research, 2004, 55, 321.	1.5	81
46	Genetic control of duration of pre-anthesis phases in wheat (Triticum aestivum L.) and relationships to leaf appearance, tillering, and dry matter accumulation. Journal of Experimental Botany, 2012, 63, 69-89.	2.4	80
47	High-throughput phenotyping technologies allow accurate selection of stay-green. Journal of Experimental Botany, 2016, 67, 4919-4924.	2.4	75
48	The Rht13 dwarfing gene reduces peduncle length and plant height to increase grain number and yield of wheat. Field Crops Research, 2011, 124, 323-331.	2.3	74
49	Application of Population Genetic Theory and Simulation Models to Efficiently Pyramid Multiple Genes via Markerâ€Assisted Selection. Crop Science, 2007, 47, 582-588.	0.8	73
50	A 192bp allele at the Xgwm261 locus is not always associated with the Rht8 dwarfing gene in wheat (Triticum aestivum L.). Euphytica, 2007, 157, 209-214.	0.6	71
51	Restricted-tillering wheat does not lead to greater investment in roots and early nitrogen uptake. Field Crops Research, 2007, 104, 52-59.	2.3	70
52	Wheat genotypes with high early vigour accumulate more nitrogen and have higher photosynthetic nitrogen use efficiency during early growth. Functional Plant Biology, 2014, 41, 215.	1.1	70
53	Genetic analysis of coleoptile length and diameter in wheat. Australian Journal of Agricultural Research, 2004, 55, 733.	1.5	66
54	Inheritance of Carbon Isotope Discrimination in Bread Wheat (Triticum Aestivum L.). Euphytica, 2006, 150, 97-106.	0.6	65

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55	A tillering inhibition gene influences rootâ€“shoot carbon partitioning and pattern of water use to improve wheat productivity in rainfed environments. Journal of Experimental Botany, 2016, 67, 327-340.	2.4	65
56	Effects of plant height on type I and type II resistance to fusarium head blight in wheat. Plant Pathology, 2011, 60, 506-512.	1.2	59
57	Integration of phenotyping and genetic platforms for a better understanding of wheat performance under drought. Journal of Experimental Botany, 2014, 65, 6167-6177.	2.4	59
58	Combining gibberellic acid-sensitive and insensitive dwarfing genes in breeding of higher-yielding, sesqui-dwarf wheats. Field Crops Research, 2012, 127, 17-25.	2.3	53
59	Plasticity of wheat grain yield is associated with plasticity of ear number. Crop and Pasture Science, 2013, 64, 234.	0.7	53
60	â€œRolled-upnessâ€ phenotyping leaf rolling in cereals using computer vision and functional data analysis approaches. Plant Methods, 2015, 11, 52.	1.9	53
61	Benefits of increasing transpiration efficiency in wheat under elevated <scp>CO</scp>₂ for rainfed regions. Global Change Biology, 2018, 24, 1965-1977.	4.2	52
62	Registration of N98â€“4445A Midâ€Oleic Soybean Germplasm Line. Crop Science, 2006, 46, 1010-1012.	0.8	51
63	Modelling impact of early vigour on wheat yield in dryland regions. Journal of Experimental Botany, 2019, 70, 2535-2548.	2.4	51
64	Evaluation of a reduced-tillering (tin) gene in wheat lines grown across different production environments. Crop and Pasture Science, 2012, 63, 128.	0.7	49
65	Evaluation of reduced-tillering (tin) wheat lines in managed, terminal water deficit environments. Journal of Experimental Botany, 2013, 64, 3439-3451.	2.4	46
66	Early vigour improves phosphate uptake in wheat. Journal of Experimental Botany, 2015, 66, 7089-7100.	2.4	46
67	Improving process-based crop models to better capture genotypeÃ—environmentÃ—management interactions. Journal of Experimental Botany, 2019, 70, 2389-2401.	2.4	46
68	Variation in Adult Plant Phenotypes and Partitioning among Seed and Stem-Borne Roots across <i>Brachypodium distachyon</i> Accessions to Exploit in Breeding Cereals for Well-Watered and Drought Environments. Plant Physiology, 2015, 168, 953-967.	2.3	44
69	Deeper roots associated with cooler canopies, higher normalized difference vegetation index, and greater yield in three wheat populations grown on stored soil water. Journal of Experimental Botany, 2019, 70, 4963-4974.	2.4	43
70	Gene action for leaf conductance in three wheat crosses. Australian Journal of Agricultural Research, 2003, 54, 381.	1.5	42
71	Rhizosheaths on wheat grown in acid soils: phosphorus acquisition efficiency and genetic control. Journal of Experimental Botany, 2016, 67, 3709-3718.	2.4	42
72	Changes in Agronomic and Seed Characteristics with Selection for Reduced Palmitic Acid Content in Soybean. Crop Science, 1998, 38, 297-302.	0.8	41

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73	Simultaneous selection of major and minor genes: use of QTL to increase selection efficiency of coleoptile length of wheat (Triticum aestivum L.). Theoretical and Applied Genetics, 2009, 119, 65-74.	1.8	40
74	The plasticity of the growth and proliferation of wheat root system under elevated CO2. Plant and Soil, 2014, 374, 963-976.	1.8	39
75	Recurrent selection for wider seedling leaves increases early biomass and leaf area in wheat (Triticum) Tj ETQq1 1 0.784314 rgBT /Overl	2.4	39
76	Selection for water-soluble carbohydrate accumulation and investigation of geneticÂÃ—Âenvironment interactions in an elite wheat breeding population. Theoretical and Applied Genetics, 2017, 130, 2445-2461.	1.8	39
77	Variation among Australian accessions of the wild mungbean (Vigna radiata ssp. sublobata) for traits of agronomic, adaptive, or taxonomic interest. Australian Journal of Agricultural Research, 2006, 57, 119.	1.5	39
78	Canopy architectural and physiological characterization of near-isogenic wheat lines differing in the tiller inhibition gene tin. Frontiers in Plant Science, 2014, 5, 617.	1.7	37
79	Evaluation of the Phenotypic Repeatability of Canopy Temperature in Wheat Using Continuous-Terrestrial and Airborne Measurements. Frontiers in Plant Science, 2019, 10, 875.	1.7	36
80	Genetic Variation for Modifiers Controlling Reduced Saturated Fatty Acid Content in Soybean. Crop Science, 1998, 38, 303-308.	0.8	34
81	Soybean PI 416937 Root System Contributes to Biomass Accumulation in Reciprocal Grafts. Agronomy Journal, 1999, 91, 840-844.	0.9	32
82	Do wheat breeders have suitable genetic variation to overcome short coleoptiles and poor establishment in the warmer soils of future climates?. Functional Plant Biology, 2016, 43, 961.	1.1	32
83	Transgressive Segregation for Palmitic Acid in Seed Oil of Soybean. Crop Science, 1994, 34, 1248-1250.	0.8	29
84	Genotypic variation in the accumulation of water soluble carbohydrates in wheat. Functional Plant Biology, 2012, 39, 560.	1.1	29
85	The effect of rht genotype and temperature on coleoptile growth and dry matter partitioning in young wheat seedlings. Functional Plant Biology, 2001, 28, 417.	1.1	28
86	First report of Wheat streak mosaic virus in Australia. Australasian Plant Pathology, 2003, 32, 551.	0.5	28
87	Detection of Wheat streak mosaic virus in four pasture grass species in Australia. Plant Pathology, 2004, 53, 239-239.	1.2	28
88	A low-cost method to rapidly and accurately screen for transpiration efficiency in wheat. Plant Methods, 2018, 14, 77.	1.9	28
89	Prospects for yield improvement in the Australian wheat industry: a perspective. Food and Energy Security, 2016, 5, 107-122.	2.0	27
90	Determining the Genetic Architecture of Reproductive Stage Drought Tolerance in Wheat Using a Correlated Trait and Correlated Marker Effect Model. G3: Genes, Genomes, Genetics, 2019, 9, 473-489.	0.8	27

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91	Novel wheat varieties facilitate deep sowing to beat the heat of changing climates. Nature Climate Change, 2022, 12, 291-296.	8.1	27
92	The phenotype and the components of phenotypic variance of crop traits. Field Crops Research, 2013, 154, 255-259.	2.3	26
93	Inheritance of coleoptile tiller appearance and size in wheat. Australian Journal of Agricultural Research, 2008, 59, 863.	1.5	24
94	Genotypic stability of weed competitive ability for bread wheat (Triticum aestivum) genotypes in multiple environments. Crop and Pasture Science, 2016, 67, 695.	0.7	23
95	Genome-Wide Associations for Water-Soluble Carbohydrate Concentration and Relative Maturity in Wheat Using SNP and DArT Marker Arrays. G3: Genes, Genomes, Genetics, 2017, 7, 2821-2830.	0.8	22
96	Mapping quantitative trait loci associated with root penetration ability of wheat in contrasting environments. Molecular Breeding, 2014, 34, 631-642.	1.0	19
97	Assessing the place and role of crop simulation modelling in Australia. Crop and Pasture Science, 2015, 66, 877.	0.7	19
98	Genomic Regions for Embryo Size and Early Vigour in Multiple Wheat (Triticum aestivum L.) Populations. Agronomy, 2015, 5, 152-179.	1.3	18
99	Genotypic variation for lodging tolerance in spring wheat: wider and deeper root plates, a feature of low lodging, high yielding germplasm. Field Crops Research, 2020, 258, 107942.	2.3	18
100	Adaptive responses of wild mungbean (Vigna radiata ssp. sublobata) to photo-thermal environment. II. Growth, biomass, and seed yield. Australian Journal of Agricultural Research, 2006, 57, 929.	1.5	17
101	Of growing importance: combining greater early vigour and transpiration efficiency for wheat in variable rainfed environments. Functional Plant Biology, 2015, 42, 1107.	1.1	17
102	The influence of shoot and root size on nitrogen uptake in wheat is affected by nitrate affinity in the roots during early growth. Functional Plant Biology, 2015, 42, 1179.	1.1	17
103	Ground-Based LiDAR Improves Phenotypic Repeatability of Above-Ground Biomass and Crop Growth Rate in Wheat. Plant Phenomics, 2020, 2020, 8329798.	2.5	17
104	Adaptive responses of wild mungbean (Vigna radiata ssp. sublobata) to photo-thermal environment. I. Phenology. Australian Journal of Agricultural Research, 2006, 57, 917.	1.5	16
105	Grain yield responsiveness to water supply in near-isogenic reduced-tillering wheat lines â€“ An engineered crop trait near its upper limit. European Journal of Agronomy, 2019, 102, 33-38.	1.9	16
106	Dynamics of Competition between Wheat and Oat. Agronomy Journal, 2003, 95, 1305-1313.	0.9	14
107	Root and shoot attributes of indigenous perennial accessions of the wild mungbean (Vigna radiata) Tj ETQq1 1 0.784314 rgBT /Overl	1.5	14
108	Genetically vigorous wheat genotypes maintain superior early growth in no-till soils. Plant and Soil, 2014, 377, 127-144.	1.8	14

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109	Phenotypic variation and QTL analysis for oil content and protein concentration in bread wheat (Triticum aestivum L.). Euphytica, 2015, 204, 371-382.	0.6	14
110	Performance of spring wheat lines near-isogenic for the reduced-tillering â€˜ tin â€™ trait across a wide range of water-stress environment-types. Field Crops Research, 2017, 200, 98-113.	2.3	14
111	Pyramiding greater early vigour and integrated transpiration efficiency in bread wheat; trade-offs and benefits. Field Crops Research, 2015, 183, 102-110.	2.3	12
112	Accounting for Genotype-by-Environment Interactions and Residual Genetic Variation in Genomic Selection for Water-Soluble Carbohydrate Concentration in Wheat. G3: Genes, Genomes, Genetics, 2018, 8, 1909-1919.	0.8	12
113	Increase in coleoptile length and establishment by Lcol-A1, a genetic locus with major effect in wheat. BMC Plant Biology, 2019, 19, 332.	1.6	12
114	Competitiveness of Early Vigour Wheat (Triticum aestivum L.) Genotypes Is Established at Early Growth Stages. Agronomy, 2022, 12, 377.	1.3	9
115	The Potential of Lr19 and Bdv2 Translocations to Improve Yield and Disease Resistance in the High Rainfall Wheat Zones of Australia. Agronomy, 2015, 5, 55-70.	1.3	8
116	A reducedâ€tillering trait shows small but important yield gains in dryland wheat production. Global Change Biology, 2020, 26, 4056-4067.	4.2	8
117	From inspiration to impact: delivering value from global root research. Journal of Experimental Botany, 2016, 67, 3601-3603.	2.4	6
118	Selection for early shoot vigour in wheat increases root hair length but reduces epidermal cell size of roots and leaves. Journal of Experimental Botany, 2022, 73, 2499-2510.	2.4	6
119	Seedling and field assessment of wheat (<i>Triticum aestivum</i> L.) dwarfing genes and their influence on root traits in multiple genetic backgrounds. Journal of Experimental Botany, 2022, 73, 6292-6306.	2.4	6
120	Agronomic assessment of the durum. Crop and Pasture Science, 2022, 73, 325-336.	0.7	5
121	Impact of Varying Light and Dew on Ground Cover Estimates from Active NDVI, RGB, and LiDAR. Plant Phenomics, 2021, 2021, 9842178.	2.5	3
122	Inheritance of root glucosinolate content in canola. Australian Journal of Agricultural Research, 2001, 52, 745.	1.5	3
123	Strategies to improve field establishment of canola: A review. Advances in Agronomy, 2022, , 133-177.	2.4	3
124	Phenotypic Evaluation and Genetic Analysis of Seedling Emergence in a Global Collection of Wheat Genotypes (Triticum aestivum L.) Under Limited Water Availability. Frontiers in Plant Science, 2021, 12, 796176.	1.7	2
125	Facets of the maximum crop yield problem. Field Crops Research, 2015, 182, 1-2.	2.3	1
126	Efficient integration of molecular and conventional breeding methodologies. , 2007, , 747-752.		0