Wallace A Cowling

List of Publications by Year
in descending order

121 papers	4,229 citations	109321 35 h-index	138484 58 g-index
124 all docs	124 docs citations	124 times ranked	3640 citing authors

#	Article	IF	Citations
1	Neglecting legumes has compromised human health and sustainable food production. Nature Plants, 2016, 2, 16112.	9.3	529
2	The <i><scp>B</scp>rassica napus</i> blackleg resistance gene <scp><i>LepR3</i></scp> encodes a receptorâ€like protein triggered by the <i><scp>L</scp>eptosphaeria maculans</i> effector <scp>AVRLM</scp>1. New Phytologist, 2013, 197, 595-605.	7.3	237
3	Genetic diversity in Australian canola and implications for crop breeding for changing future environments. Field Crops Research, 2007, 104, 103-111.	5.1	125
4	The first gene-based map of Lupinus angustifolius L.-location of domestication genes and conserved synteny with Medicago truncatula. Theoretical and Applied Genetics, 2006, 113, 225-238.	3.6	116
5	Production of viable male unreduced gametes in Brassica interspecific hybrids is genotype specific and stimulated by cold temperatures. BMC Plant Biology, 2011, 11, 103.	3.6	109
6	A chickpea genetic variation map based on the sequencing of 3,366 genomes. Nature, 2021, 599, 622-627.	27.8	106
7	Analysis of yield and oil from a series of canola breeding trials. Part II. Exploring variety by environment interaction using factor analysisThis article is one of a selection of papers from the conference â€œExploiting Genome-wide Association in Oilseed Brassicas: a model for genetic improvement of major OECD crops for sustainable farmingâ€. Genome, 2010, 53, 1002-1016.	2.0	88
8	Divergent patterns of allelic diversity from similar origins: the case of oilseed rape (<i>Brassica) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46	2.0	87
9	Trigenomic Bridges for<i>Brassica</i>Improvement. Critical Reviews in Plant Sciences, 2011, 30, 524-547.	5.7	83
10	Fast-forward breeding for a food-secure world. Trends in Genetics, 2021, 37, 1124-1136.	6.7	82
11	Aligning a New Reference Genetic Map of Lupinus angustifolius with the Genome Sequence of the Model Legume, Lotus japonicus. DNA Research, 2010, 17, 73-83.	3.4	73
12	Center of Origin and Centers of Diversity in an Ancient Crop, Brassica rapa (Turnip Rape). Journal of Heredity, 2014, 105, 555-565.	2.4	73
13	The loss of vernalization requirement in narrowâ€leafed lupin is associated with a deletion in the promoter and deâ€repressed expression of a <i>Flowering Locus T</i> (<i><scp>FT</scp></i>) homologue. New Phytologist, 2017, 213, 220-232.	7.3	70
14	Evidence from Genome-wide Simple Sequence Repeat Markers for a Polyphyletic Origin and Secondary Centers of Genetic Diversity of Brassica juncea in China and India. Journal of Heredity, 2013, 104, 416-427.	2.4	69
15	Quantitative Trait Loci for Thermal Time to Flowering and Photoperiod Responsiveness Discovered in Summer Annual-Type Brassica napus L. PLoS ONE, 2014, 9, e102611.	2.5	69
16	Canola oil increases in polyunsaturated fatty acids and decreases in oleic acid in droughtâ€stressed Mediterraneanâ€type environments. Plant Breeding, 2009, 128, 348-355.	1.9	68
17	Genome structure affects the rate of autosyndesis and allosyndesis in AABC, BBAC and CCAB Brassica interspecific hybrids. Chromosome Research, 2010, 18, 655-666.	2.2	65
18	Microspore culture preferentially selects unreduced (2n) gametes from an interspecific hybrid of Brassica napus L.ÂÃ—ÂBrassica carinata Braun. Theoretical and Applied Genetics, 2009, 119, 497-505.	3.6	63

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19	A consensus map of rapeseed (Brassica napus L.) based on diversity array technology markers: applications in genetic dissection of qualitative and quantitative traits. BMC Genomics, 2013, 14, 277.	2.8	62
20	Title is missing!. Molecular Breeding, 2001, 7, 203-209.	2.1	58
21	Analysis of yield and oil from a series of canola breeding trials. Part I. Fitting factor analytic mixed models with pedigree informationThis article is one of a selection of papers from the conference â€œExploiting Genome-wide Association in Oilseed Brassicas: a model for genetic improvement of major OECD crops for sustainable farmingâ€. Genome, 2010, 53, 992-1001.	2.0	58
22	An efficient highâ€throughput flow cytometric method for estimating DNA ploidy level in plants. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2009, 75A, 1015-1019.	1.5	57
23	Identification of a single dominant allele for resistance to blackleg in Brassica napus â€˜Surpass 400â€™. Plant Breeding, 2003, 122, 485-488.	1.9	55
24	INDEL variation in the regulatory region of the major flowering time gene <i>LanFTc1</i> is associated with vernalization response and flowering time in narrowâ€leafed lupin (<i>Lupinus angustifolius</i>) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	5.7	51
25	Diversity Array Technology Markers: Genetic Diversity Analyses and Linkage Map Construction in Rapeseed (Brassica napus L.). DNA Research, 2012, 19, 51-65.	3.4	47
26	Solute accumulation and osmotic adjustment in leaves of Brassica oilseeds in response to soil water deficit. Australian Journal of Agricultural Research, 2004, 55, 939.	1.5	43
27	Diaporthe toxica sp. nov., the cause of lupinosis in sheep. Mycological Research, 1994, 98, 1364-1368.	2.5	41
28	Effect of genotype and environment on seed quality in sweet narrow-leafed lupin (Lupinus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382 Td	1.5	41
29	A model for incorporating novel alleles from the primary gene pool into elite crop breeding programs while reselecting major genes for domestication or adaptation. Crop and Pasture Science, 2009, 60, 1009.	1.5	41
30	A PCR based B-genome-specific marker in Brassica species. Theoretical and Applied Genetics, 2004, 109, 917-921.	3.6	40
31	Sustainable plant breeding. Plant Breeding, 2013, 132, 1-9.	1.9	40
32	Genotypic effects on the frequency of homoeologous and homologous recombination in Brassica napusÃÂ—ÂB. carinata hybrids. Theoretical and Applied Genetics, 2011, 122, 543-553.	3.6	39
33	Evolving gene banks: improving diverse populations of crop and exotic germplasm with optimal contribution selection. Journal of Experimental Botany, 2017, 68, erw406.	4.8	39
34	Title is missing!. Plant and Soil, 2003, 253, 413-427.	3.7	38
35	Resistance to seed transmission of cucumber mosaic virus in narrow-leafed lupins (Lupinus) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	1.5	37
36	Optical coherence tomography as a novel tool for non-destructive measurement of the hull thickness of lupin seeds. Plant Breeding, 2004, 123, 266-270.	1.9	37

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37	Successful induction of trigenomic hexaploid Brassica from a triploid hybrid of B. napus L. and B. nigra (L.) Koch. Euphytica, 2010, 176, 87-98.	1.2	36
38	Improvement in efficiency of microspore culture to produce doubled haploid canola (Brassica napus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.3	36
39	Structural and functional comparative mapping between the Brassica A genomes in allotetraploid Brassica napus and diploid Brassica rapa. Theoretical and Applied Genetics, 2011, 123, 927-941.	3.6	36
40	Allelic diversity in a novel gene pool of canola-quality Brassica napus enriched with alleles from B. rapa and B. carinata. Crop and Pasture Science, 2010, 61, 483.	1.5	35
41	The Fate of Chromosomes and Alleles in an Allohexaploid<i>Brassica</i>Population. Genetics, 2014, 197, 273-283.	2.9	34
42	Gaining Acceptance of Novel Plant Breeding Technologies. Trends in Plant Science, 2021, 26, 575-587.	8.8	34
43	Patterns of morphological diversity in relation to geographical origins of wild Lupinus angustifolius from the Aegean region. Genetic Resources and Crop Evolution, 1994, 41, 109-122.	1.6	33
44	Tracing B-genome chromatin in Brassica napus Ã— B. juncea interspecific progeny. Genome, 2006, 49, 1490-1497.	2.0	32
45	A new method for producing allohexaploid Brassica through unreduced gametes. Euphytica, 2012, 186, 277-287.	1.2	32
46	Doubled haploids of novel trigenomic Brassica derived from various interspecific crosses. Plant Cell, Tissue and Organ Culture, 2013, 113, 501-511.	2.3	31
47	Highâ€resolution molecular karyotyping uncovers pairing between ancestrally related Brassica chromosomes. New Phytologist, 2014, 202, 964-974.	7.3	31
48	Drought-Tolerant Brassica rapa Shows Rapid Expression of Gene Networks for General Stress Responses and Programmed Cell Death Under Simulated Drought Stress. Plant Molecular Biology Reporter, 2017, 35, 416-430.	1.8	30
49	Formation of Subcuticular Coralloid Hyphae by<i>Phomopsis leptostromiformis</i>Upon Latent Infection of Narrow-Leafed Lupins. Plant Disease, 1991, 75, 1023.	1.4	29
50	Title is missing!. Euphytica, 2002, 125, 35-44.	1.2	27
51	Genetic Variation for Heat Tolerance During the Reproductive Phase in <i><scp>B</scp>rassica rapa</i>. Journal of Agronomy and Crop Science, 2013, 199, 424-435.	3.5	27
52	Nondestructive Phenomic Tools for the Prediction of Heat and Drought Tolerance at Anthesis in <i>Brassica</i> Species. Plant Phenomics, 2019, 2019, 3264872.	5.9	27
53	Interspecific reproductive barriers and genomic similarity among the rough-seeded Lupinus species. Plant Breeding, 1996, 115, 123-127.	1.9	26
54	Global genetic diversity in oilseed Brassica rapa. Crop and Pasture Science, 2013, 64, 993.	1.5	25

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55	Characterization of Brassica nigra collections using simple sequence repeat markers reveals distinct groups associated with geographical location, and frequent mislabelling of species identity. Genome, 2011, 54, 50-63.	2.0	24
56	Microspore culture reveals complex meiotic behaviour in a trigenomic Brassica hybrid. BMC Plant Biology, 2015, 15, 173.	3.6	24
57	Continuing innovation in Australian canola breeding. Crop and Pasture Science, 2016, 67, 266.	1.5	24
58	Modeling crop breeding for global food security during climate change. Food and Energy Security, 2019, 8, e00157.	4.3	24
59	Anthracnose of Lupins in Western Australia.. Australasian Plant Pathology, 1995, 24, 271.	1.0	23
60	Resistance to Phomopsis Stem Blight in <i>Lupinus Angustifolius</i> L.¹. Crop Science, 1987, 27, 648-652.	1.8	23
61	Pro-embryos of Lupinus spp. produced from isolated microspore culture. Australian Journal of Agricultural Research, 2004, 55, 589.	1.5	22
62	The first genetic map of a synthesized allohexaploid Brassica with A, B and C genomes based on simple sequence repeat markers. Theoretical and Applied Genetics, 2016, 129, 689-701.	3.6	21
63	Transient daily heat stress during the early reproductive phase disrupts pod and seed development in <i>Brassica napus</i> L.. Food and Energy Security, 2021, 10, e262.	4.3	21
64	The Expression of Resistance to Latent Stem Infection byDiaporthe toxicain Narrow-Leafed Lupin. Phytopathology, 1996, 86, 692.	2.2	21
65	Delayed water loss and temperature rise in floral buds compared with leaves of Brassica rapa subjected to a transient water stress during reproductive development. Functional Plant Biology, 2013, 40, 690.	2.1	18
66	A High-Density Genetic Map of an Allohexaploid Brassica Doubled Haploid Population Reveals Quantitative Trait Loci for Pollen Viability and Fertility. Frontiers in Plant Science, 2018, 9, 1161.	3.6	18
67	Heritability of resistance to brown spot and root rot of narrow-leafed lupins caused by Pleiochaeta setosa (Kirchn.) Hughes in field experiments. Plant Breeding, 1997, 116, 341-345.	1.9	17
68	Significant reduction of fungal disease symptoms in transgenic lupin (<i>Lupinus angustifolius</i>) expressing the antiâ€apoptotic baculovirus gene <i>p35</i>. Plant Biotechnology Journal, 2009, 7, 778-790.	8.3	17
69	Can genomics assist the phenological adaptation of canola to new and changing environments?. Crop and Pasture Science, 2016, 67, 284.	1.5	17
70	Rapid delivery systems for future food security. Nature Biotechnology, 2021, 39, 1179-1181.	17.5	17
71	The leaf infection process and resistance to Pleiochaeta setosa in three lupin species. Australian Journal of Agricultural Research, 1996, 47, 787.	1.5	17
72	Prospects and challenges for genome-wide association and genomic selection in oilseed Brassica speciesThis article is one of a selection of papers from the conference â€œExploiting Genome-wide Association in Oilseed Brassicas: a model for genetic improvement of major OECD crops for sustainable farmingâ€• Genome, 2010, 53, 1024-1028.	2.0	16

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73	Using the Animal Model to Accelerate Response to Selection in a Self-Pollinating Crop. G3: Genes, Genomes, Genetics, 2015, 5, 1419-1428.	1.8	16
74	Association between collection site soil pH and chlorosis in Lupinus angustifolius induced by a fine-textured, alkaline soil. Australian Journal of Agricultural Research, 1993, 44, 1821.	1.5	15
75	Relationship between morphological variation and geographical origin or selection history in Lupinus pilosus. Plant Breeding, 1996, 115, 16-22.	1.9	15
76	Genetic variation in stem strength in field pea (Pisum sativum L.) and its association with compressed stem thickness. Australian Journal of Agricultural Research, 2006, 57, 193.	1.5	15
77	Two Cycles of Recurrent Selection Lead to Simultaneous Improvement in Black Spot Resistance and Stem Strength in Field Pea. Crop Science, 2008, 48, 2235-2244.	1.8	15
78	Resistance to Phomopsis stem blight reduces the lupinosis toxicity of narrow-leafed lupin stems. Australian Journal of Experimental Agriculture, 1988, 28, 195.	1.0	15
79	Trigenomic hybrids from interspecific crosses between Brassica napus and B. nigra. Crop and Pasture Science, 2010, 61, 464.	1.5	14
80	Lupin Breeding in Australia. Current Plant Science and Biotechnology in Agriculture, 2000, , 541-547.	0.0	14
81	Enhancement of genetic diversity in canola-quality Brassica napus and B. juncea by interspecific hybridisation. Australian Journal of Agricultural Research, 2008, 59, 918.	1.5	14
82	Additive genetic variance for stem strength in field pea (Pisum sativum). Australian Journal of Agricultural Research, 2008, 59, 80.	1.5	13
83	Multivariate genomic analysis and optimal contributions selection predicts high genetic gains in cooking time, iron, zinc, and grain yield in common beans in East Africa. Plant Genome, 2021, 14, e20156.	2.8	13
84	<i>Leptosphaeria maculans</i> Elicits Apoptosis Coincident with Leaf Lesion Formation and Hyphal Advance in <i>Brassica napus</i>. Molecular Plant-Microbe Interactions, 2008, 21, 1143-1153.	2.6	12
85	Biotypes of<i>Stemphylium botryosum</i>on Alfalfa in North America. Phytopathology, 1981, 71, 679.	2.2	12
86	Screening for resistance to Diaporthe toxica in lupins by estimation of phomopsins and glucoseamine in individual plants. Plant Pathology, 1999, 48, 320-324.	2.4	11
87	Patterns of inheritance for cotyledon resistance against Sclerotinia sclerotiorum in Brassica napus. Euphytica, 2020, 216, 1.	1.2	11
88	A bivariate mixed model approach for the analysis of plant survival data. Euphytica, 2013, 190, 371-383.	1.2	10
89	Genetic Diversity in Narrow-Leafed Lupin Breeding After the Domestication Bottleneck. Compendium of Plant Genomes, 2020, , 1-17.	0.5	10
90	Use of a Paraquat-Diquat Herbicide for the Detection of Phomopsis Leptostromiformis Infection in Lupins.. Australasian Plant Pathology, 1984, 13, 45.	1.0	9

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91	Resistance to Phomopsis stem and pod blight of narrow-leafed lupin in a range of environments and its association with reduced Phomopsis seed infection.. Australian Journal of Experimental Agriculture, 1989, 29, 43.	1.0	9
92	In silico simulation of future hybrid performance to evaluate heterotic pool formation in a self-pollinating crop. Scientific Reports, 2020, 10, 4037.	3.3	9
93	A Trimethylguanosine Synthase1-like (TGS1) homologue is implicated in vernalisation and flowering time control. Theoretical and Applied Genetics, 2021, 134, 3411-3426.	3.6	9
94	Genotypic Variation for Tolerance to Transient Drought During the Reproductive Phase of <i>Brassica rapa</i>. Journal of Agronomy and Crop Science, 2015, 201, 267-279.	3.5	8
95	Influence of the Pathogen on Disease Severity in Stemphylium Leafspot of Alfalfa in California. Phytopathology, 1980, 70, 1148.	2.2	8
96	Inheritance of leaf resistance to Sclerotinia sclerotiorum in Brassica napus and its genetic correlation with cotyledon resistance. Euphytica, 2020, 216, 1.	1.2	7
97	Status and advances in mining for blackleg (Leptosphaeria maculans) quantitative resistance (QR) in oilseed rape (Brassica napus). Theoretical and Applied Genetics, 2021, 134, 3123-3145.	3.6	7
98	Heat Stress during Meiosis Has Lasting Impacts on Plant Growth and Reproduction in Wheat (Triticum) Tj ETQq0 0 0 rgBT /Overlock 10	3.0	7
99	Histological observations of latent infection and tissue colonization by <i>Diaporthe toxica</i> in resistant and susceptible narrow-leafed lupins. Canadian Journal of Botany, 1998, 76, 1305-1316.	1.1	6
100	Ecophysiology and Phenology: Genetic Resources for Genetic/Genomic Improvement of Narrow-Leafed Lupin. Compendium of Plant Genomes, 2020, , 19-30.	0.5	6
101	Expression of Pathogen Virulence and Host Resistance During Infection of Alfalfa with<i>Stemphylium botryosum</i>. Phytopathology, 1982, 72, 36.	2.2	6
102	Osmotic adjustment in leaves of Brassica oilseeds in response to water deficit. Canadian Journal of Plant Science, 2006, 86, 389-397.	0.9	5
103	Lupins (Lupinus L.). Current Plant Science and Biotechnology in Agriculture, 2001, , 191-206.	0.0	5
104	Effect of Light and Moisture on Severity of Stemphylium Leaf Spot of Alfalfa. Plant Disease, 1982, 66, 291.	1.4	5
105	Progress in Selecting for Resistance to Stemphylium botryosum (Coolâ€Temperature Biotype) in Alfalfa 1. Crop Science, 1982, 22, 1155-1159.	1.8	5
106	Genetic evidence for a single functional deficiency in isolates of Nectria haematococca unable to demethylate pisatin. Canadian Journal of Botany, 1986, 64, 350-354.	1.1	4
107	Quantitative Inheritance of Sclerotinia Stem Rot Resistance in <i>Brassica napus</i> and Relationship to Cotyledon and Leaf Resistances. Plant Disease, 2022, 106, 127-136.	1.4	4
108	Detection of resistance to Diaporthe toxica in asymptomatically infected lupin seedlings based on an immunoassay for phomopsin. Plant Pathology, 1995, 44, 95-97.	2.4	3

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109	Lupinus ssp: conserved resources, priorities for collection and future prospects. Current Plant Science and Biotechnology in Agriculture, 2000, , 635-644.	0.0	3
110	Seed alkaloid concentrations are not affected by agronomic and phosphorus-nutrition treatments that reduce Pleiochaeta setosa Hughes disease on narrow-leafed lupin (Lupinus angustifolius). Australian Journal of Experimental Agriculture, 2006, 46, 681.	1.0	3
111	Crop breeding to break nexus between bee decline/food production?. Global Food Security, 2018, 19, 56-63.	8.1	2
112	Female reproductive organs of Brassica napus are more sensitive than male to transient heat stress. Euphytica, 2021, 217, 1.	1.2	2
113	Genomic Applications and Resources to Dissect Flowering Time Control in Narrow-Leafed Lupin. Compendium of Plant Genomes, 2020, , 109-137.	0.5	2
114	Utilisation Of Grain Legume Diversity. Current Plant Science and Biotechnology in Agriculture, 2001, , 311-326.	0.0	2
115	Variation in fatty acid composition among genetically homogeneous seeds of canola (Brassica napus), and implications for genotypic selection based on single seeds. Australian Journal of Agricultural Research, 2008, 59, 926.	1.5	2
116	Diversity Breeding Program on Common Bean (Phaseolus vulgaris L.) Targeting Rapid Cooking and Iron and Zinc Biofortification. Proceedings (mdpi), 2020, 36, .	0.2	1
117	Quantitative Trait Loci for Heat Stress Tolerance in Brassica rapa L. Are Distributed across the Genome and Occur in Diverse Genetic Groups, Flowering Phenologies and Morphotypes. Genes, 2022, 13, 296.	2.4	1
118	UC 1249 and UC 1250, Stemphyllium Leafspot Resistant Alfalfa Germplasm. Crop Science, 1983, 23, 805-805.	1.8	1
119	Exploiting genome-wide association in oilseed <i>Brassica</i> speciesThis article is one of a selection of papers from the conference â€œExploiting Genome-wide Association in Oilseed Brassicas: a model for genetic improvement of major OECD crops for sustainable farmingâ€•. Genome, 2010, 53, 853-855.	2.0	0
120	Correction to: Genetic Diversity in Narrow-Leafed Lupin Breeding After the Domestication Bottleneck. Compendium of Plant Genomes, 2020, , C1-C3.	0.5	0
121	A multiplex PCR marker distinguishes between a series of four LanFTc1 alleles regulating flowering time in narrowâ€leafed lupin (Lupinus angustifolius). Plant Breeding, 2021, 140, 1090-1101.	1.9	0