Stephen Bruce Powles

List of Publications by Year
in descending order

113 papers	9,410 citations	53794 45 h-index	40979 93 g-index
113 all docs	113 docs citations	113 times ranked	4651 citing authors

#	Article	IF	Citations
1	Evolution in Action: Plants Resistant to Herbicides. Annual Review of Plant Biology, 2010, 61, 317-347.	18.7	1,301
2	Glyphosate: a onceâ€inâ€aâ€century herbicide. Pest Management Science, 2008, 64, 319-325.	3.4	1,253
3	Evolved glyphosateâ€resistant weeds around the world: lessons to be learnt. Pest Management Science, 2008, 64, 360-365.	3.4	373
4	Metabolism-Based Herbicide Resistance and Cross-Resistance in Crop Weeds: A Threat to Herbicide Sustainability and Global Crop Production. Plant Physiology, 2014, 166, 1106-1118.	4.8	366
5	Fitness costs associated with evolved herbicide resistance alleles in plants. New Phytologist, 2009, 184, 751-767.	7.3	295
6	Targeting Weed Seeds In-Crop: A New Weed Control Paradigm for Global Agriculture. Weed Technology, 2013, 27, 431-436.	0.9	205
7	Evolved Glyphosate Resistance in Plants: Biochemical and Genetic Basis of Resistance. Weed Technology, 2006, 20, 282-289.	0.9	202
8	Evolution of a Double Amino Acid Substitution in the 5-Enolpyruvylshikimate-3-Phosphate Synthase in <i>Eleusine indica</i> Conferring High-Level Glyphosate Resistance. Plant Physiology, 2015, 167, 1440-1447.	4.8	197
9	Multiple Resistance to Dissimilar Herbicide Chemistries in a Biotype ofLolium rigidumDue to Enhanced Activity of Several Herbicide Degrading Enzymes. Pesticide Biochemistry and Physiology, 1996, 54, 123-134.	3.6	195
10	AHAS herbicide resistance endowing mutations: effect on AHAS functionality and plant growth. Journal of Experimental Botany, 2010, 61, 3925-3934.	4.8	186
11	<scp>RNA</scp>â€Seq transcriptome analysis to identify genes involved in metabolismâ€based diclofop resistance in <i>Lolium rigidum</i>. Plant Journal, 2014, 78, 865-876.	5.7	185
12	Glyphosate, paraquat and ACCase multiple herbicide resistance evolved in a Lolium rigidum biotype. Planta, 2006, 225, 499-513.	3.2	183
13	Cross-Resistance to Herbicides in Annual Ryegrass (<i>Lolium rigidum</i>). Plant Physiology, 1991, 95, 1036-1043.	4.8	163
14	Resistance to Acetolactate Synthase-Inhibiting Herbicides in Annual Ryegrass (<i>Lolium rigidum</i>) Involves at Least Two Mechanisms. Plant Physiology, 1992, 100, 1909-1913.	4.8	148
15	Distinct non-target site mechanisms endow resistance to glyphosate, ACCase and ALS-inhibiting herbicides in multiple herbicide-resistant Lolium rigidum. Planta, 2009, 230, 713-723.	3.2	139
16	Rapid Evolution of Herbicide Resistance by Low Herbicide Dosages. Weed Science, 2011, 59, 210-217.	1.5	136
17	Mutations of the ALS gene endowing resistance to ALSâ€inhibiting herbicides in <i>Lolium rigidum</i> populations. Pest Management Science, 2008, 64, 1229-1236.	3.4	134
18	Harrington Seed Destructor: A New Nonchemical Weed Control Tool for Global Grain Crops. Crop Science, 2012, 52, 1343-1347.	1.8	111

#	ARTICLE	IF	CITATIONS
19	Herbicide multiple-resistance in a Lolium rigidum biotype is endowed by multiple mechanisms: isolation of a subset with resistant acetyl-CoA carboxylase. Physiologia Plantarum, 1994, 91, 488-494.	5.2	110
20	Herbicideâ€resistant weeds: from research and knowledge to future needs. Evolutionary Applications, 2013, 6, 1218-1221.	3.1	108
21	Molecular basis of resistance to acetolactate synthase-inhibiting herbicides inSisymbrium orientaleandBrassica tournefortii. Pest Management Science, 1999, 55, 507-516.	0.4	104
22	Multiple-herbicide resistance across four modes of action in wild radish (Raphanus raphanistrum). Weed Science, 2004, 52, 8-13.	1.5	98
23	No fitness cost of glyphosate resistance endowed by massive EPSPS gene amplification in Amaranthus palmeri. Planta, 2014, 239, 793-801.	3.2	97
24	Aldo-keto Reductase Metabolizes Glyphosate and Confers Glyphosate Resistance in <i>Echinochloa colona</i>. Plant Physiology, 2019, 181, 1519-1534.	4.8	97
25	Glyphosate resistance in perennial <i>Sorghum halepense</i> (Johnsongrass), endowed by reduced glyphosate translocation and leaf uptake. Pest Management Science, 2012, 68, 430-436.	3.4	96
26	Cytochrome P450 CYP81A10v7 in <i>Lolium rigidum</i> confers metabolic resistance to herbicides across at least five modes of action. Plant Journal, 2021, 105, 79-92.	5.7	93
27	2,4-D resistance in wild radish: reduced herbicide translocation via inhibition of cellular transport. Journal of Experimental Botany, 2016, 67, 3223-3235.	4.8	92
28	High Seed Retention at Maturity of Annual Weeds Infesting Crop Fields Highlights the Potential for Harvest Weed Seed Control. Weed Technology, 2014, 28, 486-493.	0.9	88
29	An ABCC-type transporter endowing glyphosate resistance in plants. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	85
30	Cross-Resistance to Herbicides in Annual Ryegrass (Lolium rigidum). Plant Physiology, 1991, 97, 1026-1034.	4.8	78
31	Widespread occurrence of both metabolic and target-site herbicide resistance mechanisms in<i>Lolium rigidum</i>populations. Pest Management Science, 2016, 72, 255-263.	3.4	77
32	Evolution of Glyphosate-Resistant Johnsongrass (<i>Sorghum halepense</i>) in Glyphosate-Resistant Soybean. Weed Science, 2007, 55, 566-571.	1.5	71
33	Rotations and mixtures of soilâ€applied herbicides delay resistance. Pest Management Science, 2020, 76, 487-496.	3.4	65
34	Dintroaniline Herbicide Resistance in Rigid Ryegrass (Lolium rigidum). Weed Science, 1995, 43, 55-62.	1.5	64
35	A potential role for endogenous microflora in dormancy release, cytokinin metabolism and the response to fluridone in Lolium rigidum seeds. Annals of Botany, 2015, 115, 293-301.	2.9	62
36	High Levels of Adoption Indicate That Harvest Weed Seed Control Is Now an Established Weed Control Practice in Australian Cropping. Weed Technology, 2017, 31, 341-347.	0.9	61

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37	Evidence for an ecological cost of enhanced herbicide metabolism in<i>Lolium rigidum</i>. Journal of Ecology, 2009, 97, 772-780.	4.0	58
38	Recurrent Sublethal-Dose Selection for Reduced Susceptibility of Palmer Amaranth (<i>Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.5	57
39	Phorate can reverse P450 metabolism-based herbicide resistance in<i>Lolium rigidum</i>. Pest Management Science, 2017, 73, 410-417.	3.4	57
40	Multiple herbicide resistance in a glyphosate-resistant rigid ryegrass (Lolium rigidum) population. Weed Science, 2004, 52, 920-928.	1.5	55
41	Do plants pay a fitness cost to be resistant to glyphosate?. New Phytologist, 2019, 223, 532-547.	7.3	55
42	The Potential for Pyroxasulfone to Selectively Control Resistant and Susceptible Rigid Ryegrass (<i>Lolium rigidum</i>) Biotypes in Australian Grain Crop Production Systems. Weed Technology, 2011, 25, 30-37.	0.9	54
43	Gene amplification delivers glyphosate-resistant weed evolution. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 955-956.	7.1	53
44	A double EPSPS gene mutation endowing glyphosate resistance shows a remarkably high resistance cost. Plant, Cell and Environment, 2017, 40, 3031-3042.	5.7	53
45	Integrating Herbicide Programs with Harvest Weed Seed Control and Other Fall Management Practices for the Control of Glyphosate-Resistant Palmer Amaranth (<i>Amaranthus palmeri</i>). Weed Science, 2016, 64, 540-550.	1.5	49
46	Herbicide resistance and the adoption of integrated weed management by Western Australian grain growers. Agricultural Economics (United Kingdom), 2007, 36, 123-130.	3.9	46
47	Effect of herbicide resistance endowing Ile-1781-Leu and Asp-2078-Gly<i>ACCase</i>gene mutations on ACCase kinetics and growth traits in<i>Lolium rigidum</i>. Journal of Experimental Botany, 2015, 66, 4711-4718.	4.8	46
48	Novel Î±-Tubulin Mutations Conferring Resistance to Dinitroaniline Herbicides in Lolium rigidum. Frontiers in Plant Science, 2018, 9, 97.	3.6	46
49	Pyroxasulfone resistance in Lolium rigidum is metabolism-based. Pesticide Biochemistry and Physiology, 2018, 148, 74-80.	3.6	45
50	Identification of Genetic Elements Associated with EPSPS Gene Amplification. PLoS ONE, 2013, 8, e65819.	2.5	44
51	Evolution of resistance to HPPDâ€inhibiting herbicides in a wild radish population via enhanced herbicide metabolism. Pest Management Science, 2020, 76, 1929-1937.	3.4	43
52	Effect of malathion on resistance to soil-applied herbicides in a population of rigid ryegrass (<i>Lolium rigidum</i>). Weed Science, 1999, 47, 258-261.	1.5	40
53	Glyphosate Resistance in <i>Tridax procumbens</i> via a Novel EPSPS Thr-102-Ser Substitution. Journal of Agricultural and Food Chemistry, 2018, 66, 7880-7888.	5.2	40
54	Green and blue light photoreceptors are involved in maintenance of dormancy in imbibed annual ryegrass (<i>Lolium rigidum</i>) seeds. New Phytologist, 2008, 180, 81-89.	7.3	38

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55	Paraquat resistance in a population of Lolium rigidum. Functional Plant Biology, 2004, 31, 247.	2.1	38
56	Resistance to glyphosate inLolium rigidum. Pest Management Science, 1999, 55, 489-491.	0.4	37
57	Synergistic Effects of Atrazine and Mesotrione on Susceptible and Resistant Wild Radish (Raphanus) Tj ETQq1 1 0.784314 rgBT /Overl Technology, 2012, 26, 341-347.	0.9	37
58	Chlamydomonas reinhardtii as a model system for pro-active herbicide resistance evolution research. Biological Journal of the Linnean Society, 2007, 91, 257-266.	1.6	36
59	Evolved Resistance to Glyphosate in Junglerice (<i>Echinochloa colona</i>) from the Tropical Ord River Region in Australia. Weed Technology, 2012, 26, 480-484.	0.9	36
60	Inheritance of evolved resistance to a novel herbicide (pyroxasulfone). Plant Science, 2014, 217-218, 127-134.	3.6	36
61	Herbicide Resistance Endowed by Enhanced Rates of Herbicide Metabolism in Wild Oat (<i>Avena</i>spp.). Weed Science, 2013, 61, 55-62.	1.5	35
62	Target-site EPSPS Pro-106 mutations: sufficient to endow glyphosate resistance in polyploid<i>Echinochloa colona</i>?. Pest Management Science, 2016, 72, 264-271.	3.4	35
63	Exploring the Potential for a Regulatory Change to Encourage Diversity in Herbicide Use. Weed Science, 2016, 64, 649-654.	1.5	31
64	Harvest Weed Seed Control Systems are Similarly Effective on Rigid Ryegrass. Weed Technology, 2017, 31, 178-183.	0.9	31
65	Dinitroaniline herbicide resistance in a multipleâ€resistant <scp><i>Lolium rigidum</i></scp> population. Pest Management Science, 2018, 74, 925-932.	3.4	31
66	Understanding Lolium rigidum Seeds: The Key to Managing a Problem Weed?. Agronomy, 2012, 2, 222-239.	3.0	30
67	Crossâ€resistance to prosulfocarb + <i>S</i>â€metolachlor and pyroxasulfone selected by either herbicide in <i>Lolium rigidum</i>. Pest Management Science, 2016, 72, 1664-1672.	3.4	29
68	Response to low-dose herbicide selection in self-pollinated<i>Avena fatua</i>. Pest Management Science, 2016, 72, 603-608.	3.4	29
69	Why was resistance to shorterâ€acting preâ€emergence herbicides slower to evolve?. Pest Management Science, 2017, 73, 844-851.	3.4	29
70	Intensive cropping systems select for greater seed dormancy and increased herbicide resistance levels in <i>Lolium rigidum</i> (annual ryegrass). Pest Management Science, 2015, 71, 966-971.	3.4	28
71	Recurrent selection with reduced 2,4â€D amine doses results in the rapid evolution of 2,4â€D herbicide resistance in wild radish (<i>Raphanus raphanistrum</i> L.). Pest Management Science, 2016, 72, 2091-2098.	3.4	28
72	Cinmethylin controls multiple herbicideâ€resistant <i>Lolium rigidum</i> and its wheat selectivity is P450â€based. Pest Management Science, 2020, 76, 2601-2608.	3.4	28

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73	A novel <i>psbA</i> mutation (Phe274â€“Val) confers resistance to PSII herbicides in wild radish (<scp><i>Raphanus raphanistrum</i></scp>). Pest Management Science, 2019, 75, 144-151.	3.4	27
74	Glyphosate-Resistant Rigid Ryegrass (Lolium rigidum) Populations in the Western Australian Grain Belt. Weed Technology, 2010, 24, 44-49.	0.9	26
75	Global Herbicide Resistance Challenge. Pest Management Science, 2014, 70, 1305-1305.	3.4	26
76	Influence of Crop Competition and Harvest Weed Seed Control on Rigid Ryegrass (<i>Lolium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622	1.5	25
77	Resistance to ACCase-inhibiting herbicides in sprangletop (Leptochloa chinensis). Weed Science, 2005, 53, 290-295.	1.5	24
78	Characterisation of glufosinate resistance mechanisms in <i>Eleusine indica</i>. Pest Management Science, 2017, 73, 1091-1100.	3.4	24
79	Herbicide Resistance in Rigid Ryegrass (Lolium rigidum)Has Not Led to Higher Weed Densities in Western Australian Cropping Fields. Weed Science, 2009, 57, 61-65.	1.5	23
80	ACCase-Inhibiting Herbicide-Resistant<i>Avena</i>spp. Populations from the Western Australian Grain Belt. Weed Technology, 2012, 26, 130-136.	0.9	23
81	2,4-D and dicamba resistance mechanisms in wild radish: subtle, complex and population specific?. Annals of Botany, 2018, 122, 627-640.	2.9	22
82	Metribuzin Resistance in a Wild Radish (<i>Raphanus raphanistrum</i>) Population via Both <i>psbA</i> Gene Mutation and Enhanced Metabolism. Journal of Agricultural and Food Chemistry, 2019, 67, 1353-1359.	5.2	22
83	Reduced sensitivity to paraquat evolves under selection with low glyphosate doses in Lolium rigidum. Agronomy for Sustainable Development, 2011, 31, 525-531.	5.3	21
84	Inheritance of 2,4-D resistance traits in multiple herbicide- resistant Raphanus raphanistrum populations. Plant Science, 2017, 257, 1-8.	3.6	20
85	iHSD Mill Efficacy on the Seeds of Australian Cropping System Weeds. Weed Technology, 2018, 32, 103-108.	0.9	20
86	A Valâ€202â€Phe Î±â€tubulin mutation and enhanced metabolism confer dinitroaniline resistance in a single <i>Lolium rigidum</i> population. Pest Management Science, 2020, 76, 645-652.	3.4	20
87	Metribuzin resistance via enhanced metabolism in a multiple herbicide resistant <scp><i>Lolium rigidum</i></scp> population. Pest Management Science, 2020, 76, 3785-3791.	3.4	20
88	Upgrading the RIM Model for Improved Support of Integrated Weed Management Extension Efforts in Cropping Systems. Weed Technology, 2014, 28, 703-720.	0.9	19
89	Modeling the Impact of Harvest Weed Seed Control on Herbicide-Resistance Evolution. Weed Science, 2018, 66, 395-403.	1.5	19
90	Can herbicide safeners allow selective control of weedy rice infesting rice crops?. Pest Management Science, 2017, 73, 71-77.	3.4	18

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91	Enhanced Trifluralin Metabolism Can Confer Resistance in <i>Lolium rigidum</i>. Journal of Agricultural and Food Chemistry, 2018, 66, 7589-7596.	5.2	18
92	A naturally evolved mutation (Ser59Gly) in glutamine synthetase confers glufosinate resistance in plants. Journal of Experimental Botany, 2022, 73, 2251-2262.	4.8	18
93	RIM: Anatomy of a Weed Management Decision Support System for Adaptation and Wider Application. Weed Science, 2015, 63, 676-689.	1.5	17
94	PAM: Decision Support for Long-Term Palmer Amaranth (<i>Amaranthus palmeri</i>) Control. Weed Technology, 2017, 31, 915-927.	0.9	17
95	Dinitroaniline Herbicide Resistance and Mechanisms in Weeds. Frontiers in Plant Science, 2021, 12, 634018.	3.6	17
96	Glyphosate resistance in <i>Echinochloa colona</i>: phenotypic characterisation and quantification of selection intensity. Pest Management Science, 2016, 72, 67-73.	3.4	15
97	Genetic inheritance of dinitroaniline resistance in an annual ryegrass population. Plant Science, 2019, 283, 189-194.	3.6	14
98	Exploring quinclorac resistance mechanisms in Echinochloa crusâ€pavonis from China. Pest Management Science, 2021, 77, 194-201.	3.4	13
99	An Herbicide-Susceptible Rigid Ryegrass (<i>Lolium rigidum</i>) Population Made Even More Susceptible. Weed Science, 2012, 60, 101-105.	1.5	12
100	Nonâ€targetâ€site resistance to PDSâ€inhibiting herbicides in a wild radish (<scp><i>Raphanus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	3.4	12
101	My view. Weed Science, 2003, 51, 471-471.	1.5	10
102	Physiological and Molecular Characterization of Atrazine Resistance in a Wild Radish (<i>Raphanus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.9	10
103	A Survey in the Southern Grain Belt of Western Australia Did Not Find <i>Conyza</i> Spp. Resistant to Glyphosate. Weed Technology, 2009, 23, 492-494.	0.9	9
104	Plasma membrane receptor-like kinases and transporters are associated with 2,4-D resistance in wild radish. Annals of Botany, 2020, 125, 821-832.	2.9	9
105	Identification of Triazine-Resistant<i>Vulpia bromoides</i>. Weed Technology, 2016, 30, 456-463.	0.9	8
106	Mechanistic basis for synergism of 2,4-D amine and metribuzin in <i>Avena sterilis</i>. Journal of Pesticide Sciences, 2020, 45, 216-222.	1.4	6
107	Potential for Preseason Herbicide Application to Prevent Weed Emergence in the Subsequent Growing Season. 1. Identification and Evaluation of Possible Herbicides. Weed Technology, 2004, 18, 228-235.	0.9	4
108	Loss of trifluralin metabolic resistance in Lolium rigidum plants exposed to prosulfocarb recurrent selection. Pest Management Science, 2020, 76, 3926-3934.	3.4	4

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109	Diversity of Î±â€tubulin transcripts in Lolium rigidum. Pest Management Science, 2021, 77, 970-977.	3.4	4
110	Contrasting plant ecological benefits endowed by naturally occurring EPSPS resistance mutations under glyphosate selection. Evolutionary Applications, 2021, 14, 1635-1645.	3.1	4
111	Targetâ€site resistance to trifluralin is more prevalent in annual ryegrass populations from Western Australia. Pest Management Science, 2022, 78, 1206-1212.	3.4	4
112	No auxinic herbicideâ€"resistance cost in wild radish (Raphanus raphanistrum). Weed Science, 2019, 67, 539-545.	1.5	3
113	A dinitroaniline herbicide resistance mutation can be nearly lethal to plants. Pest Management Science, 2022, 78, 1547-1554.	3.4	2