Todd Adam Gaines

List of Publications by Year
in descending order

87 papers	4,124 citations	136885 32 h-index	128225 60 g-index
96 all docs	96 docs citations	96 times ranked	2084 citing authors

#	Article	IF	Citations
1	Gene amplification confers glyphosate resistance in <i>Amaranthus palmeri</i>. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1029-1034.	3.3	557
2	Glyphosate resistance: state of knowledge. Pest Management Science, 2014, 70, 1367-1377.	1.7	375
3	Mechanisms of evolved herbicide resistance. Journal of Biological Chemistry, 2020, 295, 10307-10330.	1.6	329
4	<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.	2.8	185
5	Herbicideâ€resistant weeds: from research and knowledge to future needs. Evolutionary Applications, 2013, 6, 1218-1221.	1.5	108
6	Mechanism of Resistance of Evolved Glyphosate-Resistant Palmer Amaranth (Amaranthus palmeri). Journal of Agricultural and Food Chemistry, 2011, 59, 5886-5889.	2.4	107
7	Gene amplification of 5-enol-pyruvylshikimate-3-phosphate synthase in glyphosate-resistant Kochia scoparia. Planta, 2015, 241, 463-474.	1.6	106
8	No fitness cost of glyphosate resistance endowed by massive EPSPS gene amplification in Amaranthus palmeri. Planta, 2014, 239, 793-801.	1.6	97
9	Characterization of Glyphosate Resistance in <i>Amaranthus tuberculatus</i> Populations. Journal of Agricultural and Food Chemistry, 2014, 62, 8134-8142.	2.4	78
10	Molecular mechanisms of adaptive evolution revealed by global selection for glyphosate resistance. New Phytologist, 2019, 223, 1770-1775.	3.5	78
11	The power and potential of genomics in weed biology and management. Pest Management Science, 2018, 74, 2216-2225.	1.7	76
12	Interspecific hybridization transfers a previously unknown glyphosate resistance mechanism in <i>Amaranthus</i> species. Evolutionary Applications, 2012, 5, 29-38.	1.5	74
13	Glyphosate Resistance and EPSPS Gene Duplication: Convergent Evolution in Multiple Plant Species. Journal of Heredity, 2018, 109, 117-125.	1.0	71
14	Herbicide Metabolism: Crop Selectivity, Bioactivation, Weed Resistance, and Regulation. Weed Science, 2019, 67, 149-175.	0.8	62
15	Metabolism of 2,4â€dichlorophenoxyacetic acid contributes to resistance in a common waterhemp (<i>Amaranthus tuberculatus</i>) population. Pest Management Science, 2018, 74, 2356-2362.	1.7	60
16	Phorate can reverse P450 metabolism-based herbicide resistance in<i>Lolium rigidum</i>. Pest Management Science, 2017, 73, 410-417.	1.7	57
17	Glyphosate resistance in <i>Ambrosia trifida:</i> Part 2. Rapid response physiology and nonâ€targetâ€site resistance. Pest Management Science, 2018, 74, 1079-1088.	1.7	57
18	Reversing resistance to tembotrione in an <scp><i>Amaranthus tuberculatus</i></scp> (var.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 T Science, 2018, 74, 2296-2305.	1.7	56

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19	Multiple Resistance to Glyphosate and Acetolactate Synthase Inhibitors in Palmer Amaranth (<i>Amaranthus palmeri</i>) Identified in Brazil. Weed Science, 2017, 65, 317-326.	0.8	55
20	Pollen-mediated gene flow from glyphosate-resistant common waterhemp (Amaranthus rudis Sauer): consequences for the dispersal of resistance genes. Scientific Reports, 2017, 7, 44913.	1.6	54
21	Glyphosate resistance in <i>Ambrosia trifida</i>: Part 1. Novel rapid cell death response to glyphosate. Pest Management Science, 2018, 74, 1071-1078.	1.7	50
22	Tembotrione detoxification in 4â€hydroxyphenylpyruvate dioxygenase (HPPD) inhibitorâ€resistant Palmer amaranth (<scp><i>Amaranthus palmeri</i></scp> S. Wats.). Pest Management Science, 2018, 74, 2325-2334.	1.7	50
23	Confirmation and Control of HPPD-Inhibiting Herbicideâ€"Resistant Waterhemp (<i>Amaranthus) Tj ETQq1 1 0.784314 rgBT /Overlock	0.4	48
24	Pyroxasulfone resistance in Lolium rigidum is metabolism-based. Pesticide Biochemistry and Physiology, 2018, 148, 74-80.	1.6	45
25	Identification of Genetic Elements Associated with EPSPS Gene Amplification. PLoS ONE, 2013, 8, e65819.	1.1	44
26	Exploring the fate of mRNA in aging seeds: protection, destruction, or slow decay?. Journal of Experimental Botany, 2018, 69, 4309-4321.	2.4	43
27	Auxinic herbicides, mechanisms of action, and weed resistance: A look into recent plant science advances. Scientia Agricola, 2015, 72, 356-362.	0.6	42
28	Confirmation and mechanism of glyphosate resistance in tall windmill grass (<i>Chloris elata</i>) from Brazil. Pest Management Science, 2016, 72, 1758-1764.	1.7	38
29	Increased chalcone synthase (CHS) expression is associated with dicamba resistance in <scp><i>Kochia scoparia</i></scp>. Pest Management Science, 2018, 74, 2306-2315.	1.7	38
30	Evolved Resistance to Glyphosate in Junglerice (<i>Echinochloa colona</i>) from the Tropical Ord River Region in Australia. Weed Technology, 2012, 26, 480-484.	0.4	36
31	Inheritance of evolved resistance to a novel herbicide (pyroxasulfone). Plant Science, 2014, 217-218, 127-134.	1.7	36
32	A KASP Genotyping Method to Identify Northern Watermilfoil, Eurasian Watermilfoil, and Their Interspecific Hybrids. Frontiers in Plant Science, 2017, 8, 752.	1.7	36
33	Omics in Weed Science: A Perspective from Genomics, Transcriptomics, and Metabolomics Approaches. Weed Science, 2018, 66, 681-695.	0.8	36
34	Can new herbicide discovery allow weed management to outpace resistance evolution?. Pest Management Science, 2021, 77, 3036-3041.	1.7	35
35	Herbicide drift exposure leads to reduced herbicide sensitivity in Amaranthus spp.. Scientific Reports, 2020, 10, 2146.	1.6	34
36	Synthetic auxin herbicides: finding the lock and key to weed resistance. Plant Science, 2020, 300, 110631.	1.7	33

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37	EPSPS Gene Copy Number and Whole-Plant Glyphosate Resistance Level in Kochia scoparia. PLoS ONE, 2016, 11, e0168295.	1.1	33
38	Aminopyralid and Clopyralid Absorption and Translocation in Canada Thistle (<i>Cirsium arvense</i>). Weed Science, 2009, 57, 10-15.	0.8	31
39	Exploring the Potential for a Regulatory Change to Encourage Diversity in Herbicide Use. Weed Science, 2016, 64, 649-654.	0.8	31
40	Population Genetic Structure in Glyphosate-Resistant and -Susceptible Palmer Amaranth (Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.7	31
41	The Draft Genome of Kochia scoparia and the Mechanism of Glyphosate Resistance via Transposon-Mediated EPSPS Tandem Gene Duplication. Genome Biology and Evolution, 2019, 11, 2927-2940.	1.1	31
42	Jointed Goatgrass (Aegilops Cylindrica) by Imidazolinone-Resistant Wheat Hybridization under Field Conditions. Weed Science, 2008, 56, 32-36.	0.8	30
43	Seedbank persistence, germination and early growth of glyphosateâ€resistant <i>Kochia scoparia</i>. Weed Research, 2018, 58, 177-187.	0.8	30
44	Metabolism-Based Herbicide Resistance, the Major Threat Among the Non-Target Site Resistance Mechanisms. Outlooks on Pest Management, 2020, 31, 162-168.	0.1	30
45	Optimizing RNAâ€seq studies to investigate herbicide resistance. Pest Management Science, 2018, 74, 2260-2264.	1.7	29
46	Trp2027Cys mutation evolves in Digitaria insularis with cross-resistance to ACCase inhibitors. Pesticide Biochemistry and Physiology, 2020, 164, 1-6.	1.6	27
47	A novel TIPT double mutation in <i>EPSPS</i> conferring glyphosate resistance in tetraploid <i>Bidens subalternans</i>. Pest Management Science, 2020, 76, 95-102.	1.7	26
48	An Empirically Derived Model of Fieldâ€Scale Gene Flow in Winter Wheat. Crop Science, 2007, 47, 2308-2316.	0.8	25
49	Distribution of glyphosateâ€resistant <i>Amaranthus</i> spp. in Nebraska. Pest Management Science, 2018, 74, 2316-2324.	1.7	25
50	Proline-106 EPSPS Mutation Imparting Glyphosate Resistance in Goosegrass (<i>Eleusine indica</i>) Emerges in South America. Weed Science, 2019, 67, 48-56.	0.8	25
51	Managing Wicked Herbicide-Resistance: Lessons from the Field. Weed Technology, 2018, 32, 475-488.	0.4	24
52	Interspecific and intraspecific transference of metabolismâ€based mesotrione resistance in dioecious weedy <i>Amaranthus</i>. Plant Journal, 2018, 96, 1051-1063.	2.8	24
53	Adventitious Presence of Herbicide Resistant Wheat in Certified and Farmâ€Saved Seed Lots. Crop Science, 2007, 47, 751-754.	0.8	23
54	Effects of EPSPS Copy Number Variation (CNV) and Glyphosate Application on the Aromatic and Branched Chain Amino Acid Synthesis Pathways in Amaranthus palmeri. Frontiers in Plant Science, 2017, 8, 1970.	1.7	23

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55	Inheritance of Mesotrione Resistance in an Amaranthus tuberculatus (var. rudis) Population from Nebraska, USA. Frontiers in Plant Science, 2018, 9, 60.	1.7	23
56	Seed retention of winter annual grass weeds at winter wheat harvest maturity shows potential for harvest weed seed control. Weed Technology, 2020, 34, 266-271.	0.4	22
57	Coexpression Clusters and Allele-Specific Expression in Metabolism-Based Herbicide Resistance. Genome Biology and Evolution, 2020, 12, 2267-2278.	1.1	21
58	Weed Population Dynamics after Six Years under Glyphosate- and Conventional Herbicide-based Weed Control Strategies. Crop Science, 2008, 48, 1170.	0.8	20
59	Survey reveals frequency of multiple resistance to glyphosate and dicamba in kochia (<i>Bassia) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.4	19
60	Protoporphyrinogen oxidase (PPO) inhibitorâ€“resistant waterhemp (Amaranthus tuberculatus) from Nebraska is multiple herbicide resistant: confirmation, mechanism of resistance, and management. Weed Science, 2019, 67, 510-520.	0.8	19
61	An in-frame deletion mutation in the degron tail of auxin coreceptor<i>IAA2</i>confers resistance to the herbicide 2,4-D in<i>Sisymbrium orientale</i>. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	19
62	Response of Amaranthus spp. following exposure to sublethal herbicide rates via spray particle drift. PLoS ONE, 2019, 14, e0220014.	1.1	18
63	Omics Potential in Herbicide-Resistant Weed Management. Plants, 2019, 8, 607.	1.6	17
64	Arg-128-Leu target-site mutation in <i>PPO2</i> evolves in wild poinsettia (<i>Euphorbia) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382 Td	0.8	15
65	A needle in a seedstack: an improved method for detection of rare alleles in bulk seed testing through <scp>KASP</scp>. Pest Management Science, 2021, 77, 2477-2484.	1.7	14
66	Investigating the origins and evolution of a glyphosateâ€resistant weed invasion in South America. Molecular Ecology, 2021, 30, 5360-5372.	2.0	14
67	The quick and the dead: a new model for the essential role of ABA accumulation in synthetic auxin herbicide mode of action. Journal of Experimental Botany, 2020, 71, 3383-3385.	2.4	13
68	Control of Photosystem IIâ€“ and 4-Hydroxyphenylpyruvate Dioxygenase Inhibitorâ€“Resistant Palmer Amaranth (<i>Amaranthus palmeri</i>) in Conventional Corn. Weed Technology, 2018, 32, 326-335.	0.4	11
69	A Trp574Leu Target-Site Mutation Confers Imazamox Resistance in Multiple Herbicide-Resistant Wild Poinsettia Populations from Brazil. Agronomy, 2020, 10, 1057.	1.3	11
70	Managing Herbicide Resistance: Listening to the Perspectives of Practitioners. Procedures for Conducting Listening Sessions and an Evaluation of the Process. Weed Technology, 2018, 32, 489-497.	0.4	10
71	Genomicâ€based epidemiology reveals independent origins and gene flow of glyphosate resistance in <i>Bassia scoparia</i> populations across North America. Molecular Ecology, 2021, 30, 5343-5359.	2.0	10
72	RNAi as a tool for weed management: challenges and opportunities. Advances in Weed Science, 2022, 40, .	0.5	9

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73	Predicting herbicide movement across semi-permeable membranes using three phase partitioning. Pesticide Biochemistry and Physiology, 2019, 159, 22-26.	1.6	8
74	Evolution of EPSPS double mutation imparting glyphosate resistance in wild poinsettia (Euphorbia) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.1	5
75	Winter annual grass control and crop safety in quizalofopâ€resistant wheat cultivars. Agronomy Journal, 2022, 114, 1374-1384.	0.9	5
76	Halosulfuron Absorption, Translocation, and Metabolism in White and Adzuki Bean. Weed Science, 2016, 64, 705-711.	0.8	4
77	Feral rye control in quizalofopâ€resistant wheat in central Great Plains. Agronomy Journal, 2021, 113, 407-418.	0.9	4
78	Cross-resistance to atrazine and metribuzin in multiple herbicide-resistant kochia accessions: confirmation, mechanism, and management. Weed Technology, 2021, 35, 539-546.	0.4	4
79	Rapid photosynthetic and physiological response of 2,4-Dâ€"resistant Sumatran fleabane (<i>Conyza) Tj ETQq1 1 0.784314 rgBT /Ov	0.8	4
80	Dicamba resistance in kochia from Kansas and Nebraska evolved independently. Pest Management Science, 2021, 77, 126-130.	1.7	3
81	The safener isoxadifen does not increase herbicide resistance evolution in recurrent selection with fenoxaprop. Plant Science, 2021, 313, 111097.	1.7	3
82	Sumatran Fleabane (Erigeron sumatrensis) Resistant to PSI-Inhibitor Herbicides and Physiological Responses to Paraquat. Weed Science, 0, , 1-26.	0.8	2
83	Introduction to Pest Management Science special issue for GHRC 2017. Pest Management Science, 2018, 74, 2209-2210.	1.7	1
84	Mechanisms of glyphosate-resistance in common ragweed (Ambrosia artemisiifolia): patterns of absorption, translocation, and metabolism. Weed Science, 0, , 1-27.	0.8	1
85	Cover Image, Volume 74, Issue 5. Pest Management Science, 2018, 74, i.	1.7	0
86	Back Cover: Cover Image, Volume 74, Issue 10. Pest Management Science, 2018, 74, ii.	1.7	0
87	Applications of Genomics in Weed Science. , 2017, , 185-217.		0