Jill E Cairns

List of Publications by Year
in descending order

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73 papers	7,550 citations	66343 42 h-index	102487 66 g-index
73 all docs	73 docs citations	73 times ranked	7712 citing authors

#	Article	IF	Citations
1	Field high-throughput phenotyping: the new crop breeding frontier. Trends in Plant Science, 2014, 19, 52-61.	8.8	1,306
2	Translating High-Throughput Phenotyping into Genetic Gain. Trends in Plant Science, 2018, 23, 451-466.	8.8	525
3	Adapting maize production to climate change in sub-Saharan Africa. Food Security, 2013, 5, 345-360.	5.3	319
4	Linking droughtâ€resistance mechanisms to drought avoidance in upland rice using a QTL approach: progress and new opportunities to integrate stomatal and mesophyll responses. Journal of Experimental Botany, 2002, 53, 989-1004.	4.8	316
5	Rapid breeding and varietal replacement are critical to adaptation of cropping systems in the developing world to climate change. Global Food Security, 2017, 12, 31-37.	8.1	287
6	Metabolic and Phenotypic Responses of Greenhouse-Grown Maize Hybrids to Experimentally Controlled Drought Stress. Molecular Plant, 2012, 5, 401-417.	8.3	251
7	Unmanned aerial platform-based multi-spectral imaging for field phenotyping of maize. Plant Methods, 2015, 11, 35.	4.3	248
8	Identification of Drought, Heat, and Combined Drought and Heat Tolerant Donors in Maize. Crop Science, 2013, 53, 1335-1346.	1.8	247
9	Effectiveness of Genomic Prediction of Maize Hybrid Performance in Different Breeding Populations and Environments. G3: Genes, Genomes, Genetics, 2012, 2, 1427-1436.	1.8	242
10	Metabolite profiles of maize leaves in drought, heat and combined stress field trials reveal the relationship between metabolism and grain yield. Plant Physiology, 2015, 169, pp.01164.2015.	4.8	233
11	Maize Production in a Changing Climate. Advances in Agronomy, 2012, 114, 1-58.	5.2	199
12	Identification of Physiological Traits Underlying Cultivar Differences in Drought Tolerance in Rice and Wheat. Journal of Agronomy and Crop Science, 2009, 195, 30-46.	3.5	196
13	Genome-enabled prediction of genetic values using radial basis function neural networks. Theoretical and Applied Genetics, 2012, 125, 759-771.	3.6	180
14	Climate risk management and rural poverty reduction. Agricultural Systems, 2019, 172, 28-46.	6.1	171
15	Genetic Analysis of Heat Tolerance at Anthesis in Rice. Crop Science, 2010, 50, 1633-1641.	1.8	160
16	Prediction of grain yield using reflectance spectra of canopy and leaves in maize plants grown under different water regimes. Field Crops Research, 2012, 128, 82-90.	5.1	144
17	Conservation agriculture in Southern Africa: Advances in knowledge. Renewable Agriculture and Food Systems, 2015, 30, 328-348.	1.8	126
18	Improvement of Drought Resistance in Rice. Advances in Agronomy, 2009, , 41-99.	5.2	122

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19	Phenotyping for Abiotic Stress Tolerance in Maize^F. Journal of Integrative Plant Biology, 2012, 54, 238-249.	8.5	104
20	Genome-Wide Association Mapping and Genomic Prediction Analyses Reveal the Genetic Architecture of Grain Yield and Flowering Time Under Drought and Heat Stress Conditions in Maize. Frontiers in Plant Science, 2018, 9, 1919.	3.6	102
21	A Novel Remote Sensing Approach for Prediction of Maize Yield Under Different Conditions of Nitrogen Fertilization. Frontiers in Plant Science, 2016, 7, 666.	3.6	98
22	High-Throughput Phenotyping of Canopy Cover and Senescence in Maize Field Trials Using Aerial Digital Canopy Imaging. Remote Sensing, 2018, 10, 330.	4.0	96
23	A framework for priority-setting in climate smart agriculture research. Agricultural Systems, 2018, 167, 161-175.	6.1	95
24	Use of thermography for high throughput phenotyping of tropical maize adaptation in water stress. Computers and Electronics in Agriculture, 2011, 79, 67-74.	7.7	94
25	Infrared Thermal Imaging as a Rapid Tool for Identifying Waterâ€Stress Tolerant Maize Genotypes of Different Phenology. Journal of Agronomy and Crop Science, 2013, 199, 75-84.	3.5	94
26	Gains in Maize Genetic Improvement in Eastern and Southern Africa: I. CIMMYT Hybrid Breeding Pipeline. Crop Science, 2017, 57, 168-179.	1.8	94
27	Beat the stress: breeding for climate resilience in maize for the tropical rainfed environments. Theoretical and Applied Genetics, 2021, 134, 1729-1752.	3.6	92
28	Maize systems under climate change in sub-Saharan Africa. International Journal of Climate Change Strategies and Management, 2015, 7, 247-271.	2.9	91
29	Dissecting Maize Productivity: Ideotypes Associated with Grain Yield under Drought Stress and Wellâ€watered Conditions. Journal of Integrative Plant Biology, 2012, 54, 1007-1020.	8.5	84
30	Comparative Performance of Ground vs. Aerially Assessed RGB and Multispectral Indices for Early-Growth Evaluation of Maize Performance under Phosphorus Fertilization. Frontiers in Plant Science, 2017, 8, 2004.	3.6	80
31	Developing and deploying climate-resilient maize varieties in the developing world. Current Opinion in Plant Biology, 2018, 45, 226-230.	7.1	79
32	Influence of the soil physical environment on rice (Oryza sativa L.) response to drought stress and its implications for drought research. Field Crops Research, 2011, 121, 303-310.	5.1	69
33	Potential benefits of drought and heat tolerance for adapting maize to climate change in tropical environments. Climate Risk Management, 2018, 19, 106-119.	3.2	68
34	Investigating early vigour in upland rice (Oryza sativa L.): Part I. Seedling growth and grain yield in competition with weeds. Field Crops Research, 2009, 113, 197-206.	5.1	67
35	Molecular mapping across three populations reveals a QTL hotspot region on chromosome 3 for secondary traits associated with drought tolerance in tropical maize. Molecular Breeding, 2014, 34, 701-715.	2.1	66
36	Gains in Maize Genetic Improvement in Eastern and Southern Africa: II. CIMMYT Openâ€Pollinated Variety Breeding Pipeline. Crop Science, 2017, 57, 180-191.	1.8	63

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37	Effect of soil mechanical impedance on root growth of two rice varieties under field drought stress. Plant and Soil, 2004, 267, 309-318.	3.7	60
38	Onâ€Farm Yield Gains with Stressâ€Tolerant Maize in Eastern and Southern Africa. Agronomy Journal, 2017, 109, 406-417.	1.8	60
39	Molecular Characterization of a Diverse Maize Inbred Line Collection and its Potential Utilization for Stress Tolerance Improvement. Crop Science, 2011, 51, 2569-2581.	1.8	57
40	Evaluating Maize Genotype Performance under Low Nitrogen Conditions Using RGB UAV Phenotyping Techniques. Sensors, 2019, 19, 1815.	3.8	54
41	Does susceptibility to heat stress confound screening for drought tolerance in rice?. Functional Plant Biology, 2011, 38, 261.	2.1	47
42	Nitrogen fertilizer rate increases plant uptake and soil availability of essential nutrients in continuous maize production in Kenya and Zimbabwe. Nutrient Cycling in Agroecosystems, 2019, 115, 373-389.	2.2	47
43	High-throughput method for ear phenotyping and kernel weight estimation in maize using ear digital imaging. Plant Methods, 2018, 14, 49.	4.3	37
44	Phenotyping Conservation Agriculture Management Effects on Ground and Aerial Remote Sensing Assessments of Maize Hybrids Performance in Zimbabwe. Remote Sensing, 2018, 10, 349.	4.0	37
45	Investigating early vigour in upland rice (Oryza sativa L.): Part II. Identification of QTLs controlling early vigour under greenhouse and field conditions. Field Crops Research, 2009, 113, 207-217.	5.1	34
46	Challenges for sustainable maize production of smallholder farmers in sub-Saharan Africa. Journal of Cereal Science, 2021, 101, 103274.	3.7	31
47	Mapping quantitative trait loci associated with root growth in upland rice (Oryza sativa L.) exposed to soil water-deficit in fields with contrasting soil properties. Field Crops Research, 2009, 114, 108-118.	5.1	29
48	Nitrogen rate impacts on tropical maize nitrogen use efficiency and soil nitrogen depletion in eastern and southern Africa. Nutrient Cycling in Agroecosystems, 2020, 116, 397-408.	2.2	26
49	Identification of donors for low-nitrogen stress with maize lethal necrosis (MLN) tolerance for maize breeding in sub-Saharan Africa. Euphytica, 2019, 215, 80.	1.2	24
50	When the going gets tough: Performance of stress tolerant maize during the 2015/16 (El NiÃ±o) and 2016/17 (La NiÃ±a) season in southern Africa. Agriculture, Ecosystems and Environment, 2018, 268, 79-89.	5.3	20
51	High-Throughput and Precision Phenotyping for Cereal Breeding Programs. , 2013, , 341-374.		17
52	Genotypic variation in maize (Zea mays) influences rates of soil organic matter mineralization and gross nitrification. New Phytologist, 2021, 231, 2015-2028.	7.3	16
53	Gender inclusivity through maize breeding in Africa: A review of the issues and options for future engagement. Outlook on Agriculture, 2021, 50, 392-405.	3.4	16
54	Genomic Tools and Strategies for Breeding Climate Resilient Cereals. , 2013, , 213-239.		13

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55	Potential for Scaling up Climate Smart Agricultural Practices: Examples from Sub-Saharan Africa. Climate Change Management, 2017, , 185-203.	0.8	12
56	Line Ã— tester analysis of maize grain yield under acid and nonâ€acid soil conditions. Crop Science, 2020, 60, 991-1003.	1.8	12
57	Relationship of Line per se and Testcross Performance for Grain Yield of Tropical Maize in Drought and Wellâ€Watered Trials. Crop Science, 2013, 53, 1228-1236.	1.8	11
58	Genetic Diversity among Selected Elite CIMMYT Maize Hybrids in East and Southern Africa. Crop Science, 2017, 57, 2395-2404.	1.8	10
59	Factors preventing the performance of oxygen isotope ratios as indicators of grain yield in maize. Planta, 2016, 243, 355-368.	3.2	9
60	Low-N stress tolerant maize hybrids have higher fertilizer N recovery efficiency and reduced N-dilution in the grain compared to susceptible hybrids under low N conditions. Plant Production Science, 2020, 23, 417-426.	2.0	9
61	Identification of deletion mutants with improved performance under water-limited environments in rice (Oryza sativa L.). Field Crops Research, 2009, 114, 159-168.	5.1	8
62	Revisiting strategies to incorporate gender-responsiveness into maize breeding in southern Africa. Outlook on Agriculture, 2022, 51, 178-186.	3.4	8
63	Diallel analysis of acid soil tolerant and susceptible maize inbred lines for grain yield under acid and non-acid soil conditions. Euphytica, 2017, 213, 1.	1.2	7
64	Increasing Genetic Gains in Maize in Stress-Prone Environments of the Tropics. , 2020, , 97-132.		6
65	Effectiveness of selection at <scp>CIMMYT</scp>'s main maize breeding sites in Mexico for performance at sites in Africa and vice versa. Plant Breeding, 2013, 132, 299-304.	1.9	5
66	Leaf versus whole-canopy remote sensing methodologies for crop monitoring under conservation agriculture: a case of study with maize in Zimbabwe. Scientific Reports, 2020, 10, 16008.	3.3	5
67	Evidence of a plant genetic basis for maize roots impacting soil organic matter mineralization. Soil Biology and Biochemistry, 2021, 161, 108402.	8.8	5
68	New Technologies for Phenotyping. , 2015, , 1-14.		3
69	Phenotyping: New Crop Breeding Frontier. , 2018, , 1-11.		3
70	Toward greater sustainability: how investing in soil health may enhance maize productivity in Southern Africa. Renewable Agriculture and Food Systems, 2022, 37, 166-177.	1.8	2
71	SNP discovery at candidate genes for drought responsiveness in rice. , 2009, , 311-324.		1
72	Phenotyping Conservation Agriculture Management Effects on Ground and Aerial Remote Sensing Assessments of Maize Hybrid Performance in Zimbabwe. Proceedings (mdpi), 2018, 2, 367.	0.2	1

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73	Phenotyping: New Crop Breeding Frontier. , 2019, , 493-503.		0