A J Challinor

List of Publications by Year
in descending order

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115 papers	15,020 citations	31949 53 h-index	20343 116 g-index
123 all docs	123 docs citations	123 times ranked	14643 citing authors

#	Article	IF	Citations
1	Probabilistic simulations of crop yield over western India using the DEMETER seasonal hindcast ensembles. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 57, 498.	0.8	52
2	Drought in Northeast Brazil: A review of agricultural and policy adaptation options for food security. Climate Resilience and Sustainability, 2022, 1, .	0.9	26
3	A framework to quantify uncertainty of crop model parameters and its application in arid Northwest China. Agricultural and Forest Meteorology, 2022, 316, 108844.	1.9	4
4	Measuring the Effectiveness of Climate-Smart Practices in the Context of Food Systems: Progress and Challenges. Frontiers in Sustainable Food Systems, 2022, 6, .	1.8	4
5	What do changing weather and climate shocks and stresses mean for the UK food system?. Environmental Research Letters, 2022, 17, 051001.	2.2	4
6	Designing AfriCultuReS services to support food security in Africa. Transactions in GIS, 2021, 25, 692-720.	1.0	9
7	Design of a Soil-based Climate-Smartness Index (SCSI) using the trend and variability of yields and soil organic carbon. Agricultural Systems, 2021, 190, 103086.	3.2	5
8	A farming system typology for the adoption of new technology in Bangladesh. Food and Energy Security, 2021, 10, e287.	2.0	15
9	A framework for examining justice in food system transformations research. Nature Food, 2021, 2, 383-385.	6.2	21
10	Implementation of sequential cropping into JULESvn5.2 land-surface model. Geoscientific Model Development, 2021, 14, 437-471.	1.3	2
11	A new model of ozone stress in wheat including grain yield loss and plant acclimation to the pollutant. European Journal of Agronomy, 2020, 120, 126125.	1.9	8
12	South India projected to be susceptible to high future groundnut failure rates for future climate change and geo-engineered scenarios. Science of the Total Environment, 2020, 747, 141240.	3.9	2
13	Enhanced Leaf Cooling Is a Pathway to Heat Tolerance in Common Bean. Frontiers in Plant Science, 2020, 11, 19.	1.7	49
14	Modelling climate change impacts on maize yields under low nitrogen input conditions in subâ€Saharan Africa. Global Change Biology, 2020, 26, 5942-5964.	4.2	60
15	CGIAR modeling approaches for resourceâ€constrained scenarios: I. Accelerating crop breeding for a changing climate. Crop Science, 2020, 60, 547-567.	0.8	45
16	Global Potato Yields Increase Under Climate Change With Adaptation and CO2 Fertilisation. Frontiers in Sustainable Food Systems, 2020, 4, .	1.8	30
17	The global and regional impacts of climate change under representative concentration pathway forcings and shared socioeconomic pathway socioeconomic scenarios. Environmental Research Letters, 2019, 14, 084046.	2.2	37
18	Global and regional impacts of climate change at different levels of global temperature increase. Climatic Change, 2019, 155, 377-391.	1.7	157

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19	Invited review: Intergovernmental Panel on Climate Change, agriculture, and foodâ€"A case of shifting cultivation and history. Global Change Biology, 2019, 25, 2518-2529.	4.2	59
20	New modelling technique for improving crop model performance - Application to the GLAM model. Environmental Modelling and Software, 2019, 118, 187-200.	1.9	12
21	Emergence of robust precipitation changes across crop production areas in the 21st century. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6673-6678.	3.3	76
22	A Climate Smartness Index (CSI) Based on Greenhouse Gas Intensity and Water Productivity: Application to Irrigated Rice. Frontiers in Sustainable Food Systems, 2019, 3, .	1.8	15
23	Experiences and Drivers of Food Insecurity in Guatemala's Dry Corridor: Insights From the Integration of Ethnographic and Household Survey Data. Frontiers in Sustainable Food Systems, 2019, 3, .	1.8	21
24	Climate change impact and adaptation for wheat protein. Global Change Biology, 2019, 25, 155-173.	4.2	312
25	Data requirements for crop modellingâ€"Applying the learning curve approach to the simulation of winter wheat flowering time under climate change. European Journal of Agronomy, 2018, 95, 33-44.	1.9	6
26	Crop modelling: towards locally relevant and climate-informed adaptation. Climatic Change, 2018, 147, 475-489.	1.7	36
27	Breeding implications of drought stress under future climate for upland rice in Brazil. Global Change Biology, 2018, 24, 2035-2050.	4.2	42
28	Improving the use of crop models for risk assessment and climate change adaptation. Agricultural Systems, 2018, 159, 296-306.	3.2	122
29	TAMSAT-ALERT v1: a new framework for agricultural decision support. Geoscientific Model Development, 2018, 11, 2353-2371.	1.3	19
30	Estimating sowing and harvest dates based on the Asian summer monsoon. Earth System Dynamics, 2018, 9, 563-592.	2.7	22
31	Multimodel ensembles improve predictions of cropâ€"environmentâ€"management interactions. Global Change Biology, 2018, 24, 5072-5083.	4.2	111
32	Contribution of Remote Sensing on Crop Models: A Review. Journal of Imaging, 2018, 4, 52.	1.7	149
33	Transmission of climate risks across sectors and borders. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170301.	1.6	74
34	Assessing uncertainty and complexity in regional-scale crop model simulations. European Journal of Agronomy, 2017, 88, 84-95.	1.9	39
35	Crop model improvement reduces the uncertainty of the response to temperature of multi-model ensembles. Field Crops Research, 2017, 202, 5-20.	2.3	109
36	Effects of diurnal temperature range and drought on wheat yield in Spain. Theoretical and Applied Climatology, 2017, 129, 503-519.	1.3	36

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37	Climate change is predicted to alter the current pest status of Globodera pallida and G.Ârostochiensis in the United Kingdom. Global Change Biology, 2017, 23, 4497-4507.	4.2	41
38	Climate risks across borders and scales. Nature Climate Change, 2017, 7, 621-623.	8.1	54
39	The uncertainty of crop yield projections is reduced by improved temperature response functions. Nature Plants, 2017, 3, 17102.	4.7	170
40	Mapping vulnerability to multiple hazards in the savannah Ecosystem in Ghana. Regional Environmental Change, 2017, 17, 665-676.	1.4	7
41	Integrating Plant Science and Crop Modeling: Assessment of the Impact of Climate Change on Soybean and Maize Production. Plant and Cell Physiology, 2017, 58, 1833-1847.	1.5	49
42	CHARACTERIZING THE RELIABILITY OF GLOBAL CROP PREDICTION BASED ON SEASONAL CLIMATE FORECASTS. World Scientific Series on Asia-Pacific Weather and Climate, 2016, , 281-304.	0.2	2
43	Multi-wheat-model ensemble responses to interannual climate variability. Environmental Modelling and Software, 2016, 81, 86-101.	1.9	50
44	Estimating model prediction error: Should you treat predictions as fixed or random?. Environmental Modelling and Software, 2016, 84, 529-539.	1.9	27
45	Uncertainty of wheat water use: Simulated patterns and sensitivity to temperature and CO2. Field Crops Research, 2016, 198, 80-92.	2.3	47
46	Similar estimates of temperature impacts on global wheat yield by three independent methods. Nature Climate Change, 2016, 6, 1130-1136.	8.1	352
47	Potential negative consequences of geoengineering on crop production: A study of Indian groundnut. Geophysical Research Letters, 2016, 43, 11786-11795.	1.5	18
48	Current warming will reduce yields unless maize breeding and seed systems adapt immediately. Nature Climate Change, 2016, 6, 954-958.	8.1	200
49	Towards a genotypic adaptation strategy for Indian groundnut cultivation using an ensemble of crop simulations. Climatic Change, 2016, 138, 223-238.	1.7	6
50	Timescales of transformational climate change adaptation in sub-Saharan African agriculture. Nature Climate Change, 2016, 6, 605-609.	8.1	199
51	Crop failure rates in a geoengineered climate: impact of climate change and marine cloud brightening. Environmental Research Letters, 2015, 10, 084003.	2.2	41
52	The Impact of Parameterized Convection on the Simulation of Crop Processes. Journal of Applied Meteorology and Climatology, 2015, 54, 1283-1296.	0.6	15
53	South Asia river-flow projections and their implications for water resources. Hydrology and Earth System Sciences, 2015, 19, 4783-4810.	1.9	14
54	Identifying traits for genotypic adaptation using crop models. Journal of Experimental Botany, 2015, 66, 3451-3462.	2.4	57

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55	Crop yield response to climate change varies with cropping intensity. Global Change Biology, 2015, 21, 1679-1688.	4.2	54
56	Comparing the effects of calibration and climate errors on a statistical crop model and a process-based crop model. Climatic Change, 2015, 132, 93-109.	1.7	16
57	Equipped to deal with uncertainty in climate and impacts predictions: lessons from internal peer review. Climatic Change, 2015, 132, 1-14.	1.7	18
58	A statistical analysis of three ensembles of crop model responses to temperature and CO2 concentration. Agricultural and Forest Meteorology, 2015, 214-215, 483-493.	1.9	31
59	Statistical Analysis of Large Simulated Yield Datasets for Studying Climate Effects. ICP Series on Climate Change Impacts, Adaptation, and Mitigation, 2015, , 279-295.	0.4	2
60	Rising temperatures reduce global wheatÂproduction. Nature Climate Change, 2015, 5, 143-147.	8.1	1,544
61	Multimodel ensembles of wheat growth: many models are better than one. Global Change Biology, 2015, 21, 911-925.	4.2	387
62	Farming System Evolution and Adaptive Capacity: Insights for Adaptation Support. Resources, 2014, 3, 182-214.	1.6	54
63	Ensembles and uncertainty in climate change impacts. Frontiers in Environmental Science, 2014, 2, .	1.5	36
64	Making the most of climate impacts ensembles. Nature Climate Change, 2014, 4, 77-80.	8.1	54
65	Impacts of El NiÃ±o Southern Oscillation on the global yields of major crops. Nature Communications, 2014, 5, 3712.	5.8	273
66	A meta-analysis of crop yield under climate change and adaptation. Nature Climate Change, 2014, 4, 287-291.	8.1	1,492
67	Climateâ€driven spatial mismatches between British orchards and their pollinators: increased risks of pollination deficits. Global Change Biology, 2014, 20, 2815-2828.	4.2	57
68	Climate variability and vulnerability to climate change: a review. Global Change Biology, 2014, 20, 3313-3328.	4.2	698
69	Prediction of seasonal climate-induced variations in global food production. Nature Climate Change, 2013, 3, 904-908.	8.1	143
70	Uncertainty in simulating wheat yields under climate change. Nature Climate Change, 2013, 3, 827-832.	8.1	1,021
71	Climate Change Modelling and Its Roles to Chinese Crops Yield. Journal of Integrative Agriculture, 2013, 12, 892-902.	1.7	25
72	Implications of regional improvement in global climate models for agricultural impact research. Environmental Research Letters, 2013, 8, 024018.	2.2	105

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73	The relative importance of rainfall, temperature and yield data for a regional-scale crop model. Agricultural and Forest Meteorology, 2013, 170, 47-57.	1.9	37
74	Use of agro-climate ensembles for quantifying uncertainty and informing adaptation. Agricultural and Forest Meteorology, 2013, 170, 2-7.	1.9	64
75	Influences of increasing temperature on Indian wheat: quantifying limits to predictability. Environmental Research Letters, 2013, 8, 034016.	2.2	36
76	Calibration and bias correction of climate projections for crop modelling: An idealised case study over Europe. Agricultural and Forest Meteorology, 2013, 170, 19-31.	1.9	216
77	Threats to an ecosystem service: pressures on pollinators. Frontiers in Ecology and the Environment, 2013, 11, 251-259.	1.9	980
78	Increasing influence of heat stress on French maize yields from the 1960s to the 2030s. Global Change Biology, 2013, 19, 937-947.	4.2	186
79	Addressing uncertainty in adaptation planning for agriculture. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8357-8362.	3.3	212
80	Simulating maize yield in subâ€‘tropical conditions of southern Brazil using Glam model. Pesquisa Agropecuaria Brasileira, 2013, 48, 132-140.	0.9	9
81	Assessing relevant climate data for agricultural applications. Agricultural and Forest Meteorology, 2012, 161, 26-45.	1.9	70
82	Climate change, agriculture and food security: a global partnership to link research and action for low-income agricultural producers and consumers. Current Opinion in Environmental Sustainability, 2012, 4, 128-133.	3.1	65
83	Intercontinental trans-boundary contributions to ozone-induced crop yield losses in the Northern Hemisphere. Biogeosciences, 2012, 9, 271-292.	1.3	81
84	The socioeconomics of food crop production and climate change vulnerability: a global scale quantitative analysis of how grain crops are sensitive to drought. Food Security, 2012, 4, 163-179.	2.4	75
85	Options for support to agriculture and food security under climate change. Environmental Science and Policy, 2012, 15, 136-144.	2.4	354
86	Forecasting food. Nature Climate Change, 2011, 1, 103-104.	8.1	18
87	Agriculture and food systems in sub-Saharan Africa in a 4^{Â°}C+ world. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 117-136.	1.6	287
88	AN INTEGRATED ADAPTATION AND MITIGATION FRAMEWORK FOR DEVELOPING AGRICULTURAL RESEARCH: SYNERGIES AND TRADE-OFFS. Experimental Agriculture, 2011, 47, 185-203.	0.4	91
89	Increased crop failure due to climate change: assessing adaptation options using models and socio-economic data for wheat in China. Environmental Research Letters, 2010, 5, 034012.	2.2	180
90	The observed relationships between wheat and climate in China. Agricultural and Forest Meteorology, 2010, 150, 1412-1419.	1.9	47

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91	Food Security: Focus on Agriculture. Science, 2010, 328, 172-173.	6.0	16
92	Crops and climate change: progress, trends, and challenges in simulating impacts and informing adaptation. Journal of Experimental Botany, 2009, 60, 2775-2789.	2.4	319
93	Methods and Resources for Climate Impacts Research. Bulletin of the American Meteorological Society, 2009, 90, 836-848.	1.7	39
94	Towards the development of adaptation options using climate and crop yield forecasting at seasonal to multi-decadal timescales. Environmental Science and Policy, 2009, 12, 453-465.	2.4	63
95	Towards a Science of Adaptation that Prioritises the Poor. IDS Bulletin, 2009, 39, 81-86.	0.4	3
96	Ensemble yield simulations: crop and climate uncertainties, sensitivity to temperature and genotypic adaptation to climate change. Climate Research, 2009, 38, 117-127.	0.4	76
97	Carbon Sequestration and Greenhouse Gas Fluxes from Cropland Soils â€“ Climate Opportunities and Threats. Environmental Science and Engineering, 2009, , 81-111.	0.1	5
98	Crop yield reduction in the tropics under climate change: Processes and uncertainties. Agricultural and Forest Meteorology, 2008, 148, 343-356.	1.9	156
99	Use of a crop model ensemble to quantify CO2 stimulation of water-stressed and well-watered crops. Agricultural and Forest Meteorology, 2008, 148, 1062-1077.	1.9	55
100	Development and assessment of a coupled crop?climate model. Global Change Biology, 2007, 13, 169-183.	4.2	103
101	Adaptation of crops to climate change through genotypic responses to mean and extreme temperatures. Agriculture, Ecosystems and Environment, 2007, 119, 190-204.	2.5	149
102	Assessing the vulnerability of food crop systems in Africa to climate change. Climatic Change, 2007, 83, 381-399.	1.7	426
103	Maize yield and rainfall on different spatial and temporal scales in Southern Brazil. Pesquisa Agropecuaria Brasileira, 2007, 42, 603-613.	0.9	21
104	African Climate Change: Taking the Shorter Route. Bulletin of the American Meteorological Society, 2006, 87, 1355-1366.	1.7	205
105	Translating climate forecasts into agricultural terms: advances and challenges. Climate Research, 2006, 33, 27-41.	0.4	219
106	Climate variability, climate change and crop productivity in the tropics. Outlooks on Pest Management, 2005, 16, 71-74.	0.1	0
107	Probabilistic simulations of crop yield over western India using the DEMETER seasonal hindcast ensembles. Tellus, Series A: Dynamic Meteorology and Oceanography, 2005, 57, 498-512.	0.8	66
108	Quantification of physical and biological uncertainty in the simulation of the yield of a tropical crop using present-day and doubled CO 2 climates. Philosophical Transactions of the Royal Society B: Biological Sciences, 2005, 360, 2085-2094.	1.8	53

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109	Aspects of climate change prediction relevant to crop productivity. Philosophical Transactions of the Royal Society B: Biological Sciences, 2005, 360, 1999-2009.	1.8	60
110	Introduction: food crops in a changing climate. Philosophical Transactions of the Royal Society B: Biological Sciences, 2005, 360, 1983-1989.	1.8	155
111	Simulation of the impact of high temperature stress on annual crop yields. Agricultural and Forest Meteorology, 2005, 135, 180-189.	1.9	174
112	Simulation of Crop Yields Using ERA-40: Limits to Skill and Nonstationarity in Weatherâ€“Yield Relationships. Journal of Applied Meteorology and Climatology, 2005, 44, 516-531.	1.7	54
113	Influence of vegetation on the local climate and hydrology in the tropics: sensitivity to soil parameters. Climate Dynamics, 2004, 23, 45-61.	1.7	80
114	Design and optimisation of a large-area process-based model for annual crops. Agricultural and Forest Meteorology, 2004, 124, 99-120.	1.9	239
115	Toward a Combined Seasonal Weather and Crop Productivity Forecasting System: Determination of the Working Spatial Scale. Journal of Applied Meteorology and Climatology, 2003, 42, 175-192.	1.7	100