Philip K Thornton

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

146 papers	14,651 citations	61 h-index	120 g-index
154 ext. papers	17,534 ext. citations	7 avg, IF	6.85 L-index

#	Paper	IF	Citations
146	Livestock production: recent trends, future prospects. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2010**, 365, 2853-67	5.8	1050
145	Agriculture. Sustainable intensification in agriculture: premises and policies. *Science*, **2013**, 341, 33-4	33.3	957
144	Climate-smart agriculture for food security. *Nature Climate Change*, **2014**, 4, 1068-1072	21.4	770
143	Biomass use, production, feed efficiencies, and greenhouse gas emissions from global livestock systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 20888-93	11.5	626
142	The potential impacts of climate change on maize production in Africa and Latin America in 2055. *Global Environmental Change*, **2003**, 13, 51-59	10.1	553
141	Smart investments in sustainable food production: revisiting mixed crop-livestock systems. *Science*, **2010**, 327, 822-5	33.3	498
140	The impacts of climate change on livestock and livestock systems in developing countries: A review of what we know and what we need to know. *Agricultural Systems*, **2009**, 101, 113-127	6.1	494
139	Climate variability and vulnerability to climate change: a review. *Global Change Biology*, **2014**, 20, 3313-28	11.4	468
138	Greenhouse gas mitigation potentials in the livestock sector. *Nature Climate Change*, **2016**, 6, 452-461	21.4	376
137	Mapping global cropland and field size. *Global Change Biology*, **2015**, 21, 1980-92	11.4	312
136	Climate change mitigation through livestock system transitions. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 3709-14	11.5	305
135	Reducing risks to food security from climate change. *Global Food Security*, **2016**, 11, 34-43	8.3	267
134	Sustainable intensification: What is its role in climate smart agriculture?. *Current Opinion in Environmental Sustainability*, **2014**, 8, 39-43	7.2	266
133	Spatial variation of crop yield response to climate change in East Africa. *Global Environmental Change*, **2009**, 19, 54-65	10.1	264
132	Options for support to agriculture and food security under climate change. *Environmental Science and Policy*, **2012**, 15, 136-144	6.2	243
131	Agriculture and food systems in sub-Saharan Africa in a 4°C+ world. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 117-36	3	234
130	Livestock, livelihoods and the environment: understanding the trade-offs. *Current Opinion in Environmental Sustainability*, **2009**, 1, 111-120	7.2	214

129	Reducing emissions from agriculture to meet the 2°C target. *Global Change Biology*, **2016**, 22, 3859-3864	11.4	203
128	Croppers to livestock keepers: livelihood transitions to 2050 in Africa due to climate change. *Environmental Science and Policy*, **2009**, 12, 427-437	6.2	191
127	Livestock and global change: emerging issues for sustainable food systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 20878-81	11.5	190
126	Farming and the geography of nutrient production for human use: a transdisciplinary analysis. *Lancet Planetary Health, The*, **2017**, 1, e33-e42	9.8	188
125	Fragmentation of rangelands: Implications for humans, animals, and landscapes. *Global Environmental Change*, **2008**, 18, 776-785	10.1	181
124	Potential for reduced methane and carbon dioxide emissions from livestock and pasture management in the tropics. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 19667-72	11.5	177
123	Addressing uncertainty in adaptation planning for agriculture. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 8357-62	11.5	176
122	Livestock and the Environment: What Have We Learned in the Past Decade?. *Annual Review of Environment and Resources*, **2015**, 40, 177-202	17.2	145
121	Adapting to climate change: Agricultural system and household impacts in East Africa. *Agricultural Systems*, **2010**, 103, 73-82	6.1	140
120	Challenges to scenario-guided adaptive action on food security under climate change. *Global Environmental Change*, **2014**, 28, 383-394	10.1	139
119	Integrated crop–livestock simulation models for scenario analysis and impact assessment. *Agricultural Systems*, **2001**, 70, 581-602	6.1	127
118	How resilient are farming households and communities to a changing climate in Africa? A gender-based perspective. *Global Environmental Change*, **2015**, 34, 95-107	10.1	124
117	Generating downscaled weather data from a suite of climate models for agricultural modelling applications. *Agricultural Systems*, **2013**, 114, 1-5	6.1	122
116	Innovation can accelerate the transition towards a sustainable food system. *Nature Food*, **2020**, 1, 266-272	14.4	121
115	Adapting to climate change in the mixed crop and livestock farming systems in sub-Saharan Africa. *Nature Climate Change*, **2015**, 5, 830-836	21.4	116
114	MarkSim: Software to Generate Daily Weather Data for Latin America and Africa. *Agronomy Journal*, **2000**, 92, 445-453	2.2	109
113	Are food insecure smallholder households making changes in their farming practices? Evidence from East Africa. *Food Security*, **2012**, 4, 381-397	6.7	106
112	Spatial weed distribution and economic thresholds for weed control. *Crop Protection*, **1990**, 9, 337-342	2.7	103

111	A method for evaluating climate change adaptation strategies for small-scale farmers using survey, experimental and modeled data. *Agricultural Systems*, **2012**, 111, 85-95	6.1	100
110	Evaluating agricultural trade-offs in the age of sustainable development. *Agricultural Systems*, **2018** , 163, 73-88	6.1	99
109	Transitions in agro-pastoralist systems of East Africa: Impacts on food security and poverty. *Agriculture, Ecosystems and Environment*, **2013**, 179, 215-230	5.7	88
108	Systems dynamics and the spatial distribution of methane emissions from African domestic ruminants to 2030. *Agriculture, Ecosystems and Environment*, **2008**, 126, 122-137	5.7	87
107	High carbon and biodiversity costs from converting Africa wet savannahs to cropland. *Nature Climate Change*, **2015**, 5, 481-486	21.4	85
106	Coping Strategies in Livestock-dependent Households in East and Southern Africa: A Synthesis of Four Case Studies. *Human Ecology*, **2007**, 35, 461-476	2	83
105	Exploring future changes in smallholder farming systems by linking socio-economic scenarios with regional and household models. *Global Environmental Change*, **2014**, 24, 165-182	10.1	82
104	High-resolution and bias-corrected CMIP5 projections for climate change impact assessments. *Scientific Data*, **2020**, 7, 7	8.2	81
103	Climate change adaptation in mixed crop livestock systems in developing countries. *Global Food Security*, **2014**, 3, 99-107	8.3	81
102	Mapping livestock-oriented agricultural production systems for the developing world. *Agricultural Systems*, **2003**, 77, 39-63	6.1	80
101	Analysis of trade-offs in agricultural systems: current status and way forward. *Current Opinion in Environmental Sustainability*, **2014**, 6, 110-115	7.2	79
100	Improved global cropland data as an essential ingredient for food security. *Global Food Security*, **2015**, 4, 37-45	8.3	77
99	Implications of regional improvement in global climate models for agricultural impact research. *Environmental Research Letters*, **2013**, 8, 024018	6.2	76
98	Climate change and the growth of the livestock sector in developing countries. *Mitigation and Adaptation Strategies for Global Change*, **2010**, 15, 169-184	3.9	75
97	Linking agricultural adaptation strategies, food security and vulnerability: evidence from West Africa. *Regional Environmental Change*, **2016**, 16, 1305-1317	4.3	72
96	Linking regional stakeholder scenarios and shared socioeconomic pathways: Quantified West African food and climate futures in a global context. *Global Environmental Change*, **2017**, 45, 227-242	10.1	71
95	The climate-smart village approach: framework of an integrative strategy for scaling up adaptation options in agriculture. *Ecology and Society*, **2018**, 23,	4.1	69
94	Factors affecting the use of fertilizers and manure by smallholders: the case of Vihiga, western Kenya. *Nutrient Cycling in Agroecosystems*, **2007**, 78, 211-224	3.3	68

93	Human population growth and the extinction of the tsetse fly. *Agriculture, Ecosystems and Environment*, **2000**, 77, 227-236	5.7	67
92	Agricultural diversification as an important strategy for achieving food security in Africa. *Global Change Biology*, **2018**, 24, 3390-3400	11.4	66
91	Responding to global change: A theory of change approach to making agricultural research for development outcome-based. *Agricultural Systems*, **2017**, 152, 145-153	6.1	65
90	Implications of future climate and atmospheric CO2 content for regional biogeochemistry, biogeography and ecosystem services across East Africa. *Global Change Biology*, **2010**, 16, 617-640	11.4	65
89	Estimating millet production for famine early warning: an application of crop simulation modelling using satellite and ground-based data in Burkina Faso. *Agricultural and Forest Meteorology*, **1997**, 83, 95-112	5.8	63
88	Bio-economic evaluation of farmers perceptions of viable farms in western Kenya. *Agricultural Systems*, **2006**, 90, 243-271	6.1	63
87	Climate change impacts on selected global rangeland ecosystem services. *Global Change Biology*, **2018**, 24, 1382-1393	11.4	63
86	Scaling up agricultural interventions: Case studies of climate-smart agriculture. *Agricultural Systems* , **2018**, 165, 283-293	6.1	61
85	Integrating diverse methods to understand climate and interactions in East Africa. *Geoforum*, **2008** , 39, 898-911	2.9	61
84	Using the WISE database to parameterize soil inputs for crop simulation models. *Computers and Electronics in Agriculture*, **2007**, 56, 85-100	6.5	58
83	Modelling the impacts of group ranch subdivision on agro-pastoral households in Kajiado, Kenya. *Agricultural Systems*, **2006**, 87, 331-356	6.1	58
82	Quantifying Declines in Livestock Due to Land Subdivision. *Rangeland Ecology and Management*, **2005**, 58, 523-532	2.2	55
81	East African food security as influenced by future climate change and land use change at local to regional scales. *Climatic Change*, **2012**, 110, 823-844	4.5	54
80	The Need for Improved Maps of Global Cropland. *Eos*, **2013**, 94, 31-32	1.5	52
79	Transformation in Practice: A Review of Empirical Cases of Transformational Adaptation in Agriculture Under Climate Change. *Frontiers in Sustainable Food Systems*, **2018**, 2,	4.8	52
78	Is agricultural adaptation to global change in lower-income countries on track to meet the future food production challenge?. *Global Environmental Change*, **2018**, 52, 37-48	10.1	50
77	Is it possible to mitigate greenhouse gas emissions in pastoral ecosystems of the tropics?. *Environment, Development and Sustainability*, **2004**, 6, 91-109	4.5	49
76	Institutional Perspectives of Climate-Smart Agriculture: A Systematic Literature Review. *Sustainability*, **2018**, 10, 1990	3.6	48

75	Use of agro-climate ensembles for quantifying uncertainty and informing adaptation. *Agricultural and Forest Meteorology*, **2013**, 170, 2-7	5.8	48
74	Articulating the effect of food systems innovation on the Sustainable Development Goals. *Lancet Planetary Health, The*, **2021**, 5, e50-e62	9.8	48
73	A framework for priority-setting in climate smart agriculture research. *Agricultural Systems*, **2018**, 167, 161-175	6.1	48
72	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	7.2	47
71	A Computer Program to Analyze Single-Season Crop Model Outputs. *Agronomy Journal*, **1994**, 86, 860-868	2.2	46
70	Spatial and temporal variability of rainfall related to a third-order Markov model. *Agricultural and Forest Meteorology*, **1997**, 86, 127-138	5.8	45
69	A rainfall generator for agricultural applications in the tropics. *Agricultural and Forest Meteorology*, **1993**, 63, 1-19	5.8	44
68	Climate variability and impacts on east African livestock herders: the Maasai of Ngorongoro Conservation Area, Tanzania. *African Journal of Range and Forage Science*, **2004**, 21, 183-189	1.5	43
67	Integrated Modeling and its Potential for Resolving Conflicts between Conservation and People in the Rangelands of East Africa. *Human Ecology*, **2006**, 34, 155-183	2	42
66	Grazing systems expansion and intensification: Drivers, dynamics, and trade-offs. *Global Food Security*, **2018**, 16, 93-105	8.3	41
65	A Computer Program to Analyze Multiple-Season Crop Model Outputs. *Agronomy Journal*, **1995**, 87, 131-136	2.2	41
64	Maize as food and feed in intensive smallholder systems: management options for improved integration in mixed farming systems of east and southern Africa. *Field Crops Research*, **2003**, 84, 159-168	5.5	40
63	Loss and fragmentation of habitat for pastoral people and wildlife in east Africa: concepts and issues. *African Journal of Range and Forage Science*, **2004**, 21, 171-181	1.5	37
62	Application of a Maize Crop Simulation Model in the Central Region of Malawi. *Experimental Agriculture*, **1995**, 31, 213-226	1.7	36
61	Multiple cropping systems of the world and the potential for increasing cropping intensity. *Global Environmental Change*, **2020**, 64, 102131	10.1	35
60	Prioritizing climate-smart agricultural land use options at a regional scale. *Agricultural Systems*, **2017**, 151, 174-183	6.1	32
59	Carbon sequestration and farm income in West Africa: Identifying best management practices for smallholder agricultural systems in northern Ghana. *Ecological Economics*, **2008**, 67, 492-502	5.6	32
58	Cultivation and Conservation in Ngorongoro Conservation Area, Tanzania. *Human Ecology*, **2006**, 34, 809-828	2	32

57	The Inter-Linkages Between Rapid Growth In Livestock Production, Climate Change, And The Impacts On Water Resources, Land Use, And Deforestation. *Policy Research Working Papers*, **2010**,	2.1	32
56	Supporting sustainable expansion of livestock production in South Asia and Sub-Saharan Africa: Scenario analysis of investment options. *Global Food Security*, **2019**, 20, 114-121	8.3	31
55	Elephants or onions? Paying for nature in Amboseli, Kenya. *Environment and Development Economics*, **2008**, 13, 395-414	1.8	31
54	Climate change and variability impacts on grazing herds: Insights from a system dynamics approach for semi-arid Australian rangelands. *Global Change Biology*, **2019**, 25, 3091-3109	11.4	29
53	Multi-objective land use allocation modelling for prioritizing climate-smart agricultural interventions. *Ecological Modelling*, **2018**, 381, 23-35	3	28
52	Interactions between intervention packages, climatic risk, climate change and food security in mixed crop livestock systems in Burkina Faso. *Agricultural Systems*, **2017**, 151, 217-224	6.1	27
51	Is Proactive Adaptation to Climate Change Necessary in Grazed Rangelands?. *Rangeland Ecology and Management*, **2012**, 65, 563-568	2.2	27
50	Using Coupled Simulation Models to Link Pastoral Decision Making and Ecosystem Services. *Ecology and Society*, **2011**, 16,	4.1	27
49	Representative soil profiles for the Harmonized World Soil Database at different spatial resolutions for agricultural modelling applications. *Agricultural Systems*, **2015**, 139, 93-99	6.1	26
48	Locating poor livestock keepers at the global level for research and development targeting. *Land Use Policy*, **2003**, 20, 311-322	5.6	25
47	Can scenario planning catalyse transformational change? Evaluating a climate change policy case study in Mali. *Futures*, **2018**, 96, 44-56	3.6	24
46	Importance of considering technology growth in impact assessments of climate change on agriculture. *Global Food Security*, **2019**, 23, 41-48	8.3	23
45	Spatial Modeling of Risk in Natural Resource Management. *Ecology and Society*, **2002**, 5,		22
44	Facilitating Change for Climate-Smart Agriculture through Science-Policy Engagement. *Sustainability*, **2018**, 10, 2616	3.6	21
43	Household-level Impacts of Dairy Cow Ownership in Coastal Kenya. *Journal of Agricultural Economics*, **2004**, 55, 175-195	3.7	21
42	What can COVID-19 teach us about responding to climate change?. *Lancet Planetary Health, The*, **2020**, 4, e174	9.8	19
41	A Computer Program for Geostatistical and Spatial Analysis of Crop Model Outputs. *Agronomy Journal*, **1997**, 89, 620-627	2.2	19
40	Using Crop Models for Sustainability and Environmental Quality Assessment. *Outlook on Agriculture* , **1992**, 21, 209-218	2.9	18

39	Connecting Women, Connecting Men: How Communities and Organizations Interact to Strengthen Adaptive Capacity and Food Security in the Face of Climate Change. *Gender, Technology and Development*, **2016**, 20, 169-199	1.7	17
38	How much does climate change add to the challenge of feeding the planet this century?. *Environmental Research Letters*, **2019**, 14, 043001	6.2	17
37	Markets and climate are driving rapid change in farming practices in Savannah West Africa. *Regional Environmental Change*, **2017**, 17, 437-449	4.3	14
36	The economic potential of residue management and fertilizer use to address climate change impacts on mixed smallholder farmers in Burkina Faso. *Agricultural Systems*, **2018**, 167, 195-205	6.1	14
35	Science-policy interfaces for sustainable climate-smart agriculture uptake: lessons learnt from national science-policy dialogue platforms in West Africa. *International Journal of Agricultural Sustainability*, **2019**, 17, 367-382	2.2	13
34	Using Biotechnology-Led Approaches to Uplift Cereal and Food Legume Yields in Dryland Environments. *Frontiers in Plant Science*, **2018**, 9, 1249	6.2	13
33	Back to baselines: measuring change and sharing data. *Agriculture and Food Security*, **2014**, 3,	3.1	13
32	How Does Climate Change Alter Agricultural Strategies to Support Food Security?. *SSRN Electronic Journal*,	1	13
31	Grazing lands in Sub-Saharan Africa and their potential role in climate change mitigation: What we do and don't know. *Environmental Development*, **2016**, 19, 70-74	4.1	13
30	Colony dimorphism in bradyrhizobium strains. *Applied and Environmental Microbiology*, **1988**, 54, 1033-8	4.8	12
29	Perspective article: Actions to reconfigure food systems. *Global Food Security*, **2020**, 26, 100432	8.3	12
28	Increases in extreme heat stress in domesticated livestock species during the twenty-first century. *Global Change Biology*, **2021**, 27, 5762-5772	11.4	10
27	The value of climate-resilient seeds for smallholder adaptation in sub-Saharan Africa. *Climatic Change*, **2020**, 162, 1213-1229	4.5	9
26	Can Climate Interventions Open Up Space for Transformation? Examining the Case of Climate-Smart Agriculture (CSA) in Uganda. *Frontiers in Sustainable Food Systems*, **2019**, 3,	4.8	9
25	Food security outcomes in agricultural systems models: Case examples and priority information needs. *Agricultural Systems*, **2021**, 188, 103030	6.1	8
24	A Qualitative Evaluation of CSA Options in Mixed Crop-Livestock Systems in Developing Countries. *Natural Resource Management and Policy*, **2018**, 385-423	0.2	7
23	Conceptual framing to link climate risk assessments and climate-migration scholarship. *Climatic Change*, **2021**, 165, 1	4.5	7
22	In pursuit of a better world: crop improvement and the CGIAR. *Journal of Experimental Botany*, **2021** , 72, 5158-5179	7	7

21	Ngorongoro Conservation Area, Tanzania: Fragmentation of a Unique Region of the Greater Serengeti Ecosystem **2008**, 255-279		5
20	Impacts of heat stress on global cattle production during the 21st century: a modelling study.. *Lancet Planetary Health, The*, **2022**, 6, e192-e201	9.8	5
19	How climate change interacts with inequity to affect nutrition. *Wiley Interdisciplinary Reviews: Climate Change*, **2021**, 12, e696	8.4	4
18	Pathway to Impact: Supporting and Evaluating Enabling Environments for Research for Development **2017**, 53-79		3
17	Is It Possible to Mitigate Greenhouse Gas Emissions in Pastoral Ecosystems of the Tropics? **2004**, 91-109		3
16	Food systems for peace and security in a climate crisis. *Lancet Planetary Health, The*, **2021**, 5, e249-e250	9.8	3
15	COVID-19 pandemic lessons for agri-food systems innovation. *Environmental Research Letters*, **2021** , 16, 101001	6.2	2
14	Perspective: The gap between intent and climate action in agriculture. *Global Food Security*, **2022**, 32, 100612	8.3	1
13	Understanding Climate from the Ground Up: Knowledge of Environmental Changes in the East African Savannas. *Ethnobiology*, **2020**, 221-242	0.7	1
12	Suitability of root, tuber, and banana crops in Central Africa can be favoured under future climates. *Agricultural Systems*, **2021**, 193, 103246	6.1	1
11	Viewpoint: Aligning vision and reality in publicly funded agricultural research for development: A case study of CGIAR. *Food Policy*, **2022**, 107, 102196	5	0
10	Continuity and change in the contemporary Pacific food system. *Global Food Security*, **2022**, 32, 100608	8.3	0
9	How to swarm? Organizing for sustainable and equitable food systems transformation in a time of crisis. *Global Food Security*, **2022**, 33, 100629	8.3	0
8	Socio-Technical Innovation Bundles for Agri-Food Systems Transformation. *Sustainable Development Goals Series*, **2022**, 1-20	0.5	0
7	Altered grazing systems: pastoralism to conventional agriculture **2019**, 257-275		
6	Methods for Environment: Productivity Trade-Off Analysis in Agricultural Systems **2016**, 189-198		
5	Impact Pathways. *Sustainable Development Goals Series*, **2022**, 169-175	0.5	
4	Technical Appendix. *Sustainable Development Goals Series*, **2022**, 187-190	0.5	

3	A Profuse Pipeline of Promising Options. *Sustainable Development Goals Series*, **2022**, 73-158	0.5
2	The State of Agri-Food Systems and Agri-Food Value Chains in 2020. *Sustainable Development Goals Series*, **2022**, 21-45	0.5
1	Socio-Technical Innovation Bundles Tailored to Distinct Agri-Food Systems. *Sustainable Development Goals Series*, **2022**, 159-168	0.5