

Study ID	Authors	Year	Title	DOI
S001	Altieri et al.	2015	Agroecology and the design of climate change-resilient farming systems	10.1007/s13593-015-0285-2
S002	Andersen	2017	The farming system component of European agricultural landscapes Effects of technical interventions on flexibility of farming systems in Burkina Faso: Lessons for the	10.1016/j.eja.2016.09.011
S003	Andrieu et al.	2015	design of innovations in West Africa	10.1016/j.agsy.2015.02.010
S004	Belmin et al.	2022	Designing agroecological systems across scales: a new analytical framework	10.1007/s13593-021-00741-9
S005	Bergez and Therond	2019	Agroecological Transitions From Theory to Practice in Local Participatory Design Introduction	10.1007/978-3-030-01953-2_1
S006	Bitzer and Bijman	2015	From innovation to co-innovation: An exploration of African agrifood chains	10.1108/BFJ-12-2014-0403
S007	BLAKE	1992	SUSTAINABLE AND INCREASED FOOD-PRODUCTION Performance of co-designed diversified Mediterranean cropping systems: Hybridizing stakeholders'	
S008	Blanc et al.	2024	knowledge and modelling data Reflexive Interactive Design and its Application in a Project on Sustainable Dairy Husbandry	10.1016/j.eja.2024.127282
S009	Bos et al.	2009	Systems The FARMSCAPE approach to decision support farmers', advisers', researchers' monitoring,	
S010	Carberry et al.	2002	simulation	
S011	Ceppa	2011	Thinking by Connections and the Dynamics of Nature for Food Production A framework for designing multi-functional agricultural landscapes: Application to Guadeloupe	10.1007/978-94-007-0186-1_1
S012	Chopin et al.	2017	Island A methodology for multi-objective cropping system design based on simulations. Application to	10.1016/j.agsy.2016.10.003
S013	Colbach et al.	2017	weed management	10.1016/j.eja.2017.04.005
S014	Connor	2004	Designing cropping systems for efficient use of limited water in southern Australia Evaluating a space for co-innovation: Practical application of nine principles for co-innovation in	10.1016/j.eja.2004.07.004
S015	Coutts et al.	2017	five innovation projects	10.1177/0030727017708453
S016	de Bon et al.	2013	Emerging Networks to Foster Agroecology in Tropical Horticulture Iterative design and evaluation of rule-based cropping systems: methodology and case studies. A	
S017	Debaeke et al.	2009	review	10.1051/agro:2008050
S018	Dedieu	2009	Qualification of the adaptive capacities of livestock farming systems A new method to co-design agricultural systems at the territorial scale - Application to reduce	10.1590/S1516-35982009001300039
S019	Della Rossa et al.	2022	herbicide pollution in Martinique Systematic design and evaluation of crop rotations enhancing soil conservation, soil fertility and	10.1016/j.agsy.2021.103337
S020	Dogliotti et al.	2004	farm income: a case study for vegetable farms in South Uruguay	10.1016/j.agsy.2003.08.001
S021	Dogliotti et al.	2014	Co-innovation of family farm systems: A systems approach to sustainable agriculture	10.1016/j.agsy.2013.02.009
S022	Dumont et al.	2014	Forty research issues for the redesign of animal production systems in the 21st century	10.1017/S1751731114001281

S023	Duru	2013	Combining agroecology and management science to design field tools under high agrosystem structural or process uncertainty: Lessons from two case studies of grassland management	10.1016/j.agsy.2012.09.002
S024	Duru and Le Bras	2020	Crises environnementales et sanitaires : des maladies de l'anthropocène qui appellent à refonder notre système alimentaire	10.1051/cagri/2020033
S025	Eastwood et al.	2022	Farmer-centred design: An affordances-based framework for identifying processes that facilitate farmers as co-designers in addressing complex agricultural challenges	10.1016/j.agsy.2021.103314
S026	Edwards	2007	Research approaches to support development	
S027	EDWARDS et al.	1993	THE ROLE OF AGROECOLOGY AND INTEGRATED FARMING SYSTEMS IN AGRICULTURAL SUSTAINABILITY	
S028	Fassio	2017	Food events as complex cultural systems for territorial reconnection: the case study of Terra Madre	10.1080/21683565.2017.1322660
S029	Firoozzare et al.	2023	Identifying the Best Strategies for Improving and Developing Sustainable Rain-Fed Agriculture: An Integrated SWOT-BWM-WASPAS Approach	10.3390/agriculture13061215
S030	Flores and Villalobos	2018	A modeling framework for the strategic design of local fresh-food systems	10.1016/j.agsy.2017.12.001
S031	FRANCIS and MADDEN	1993	DESIGNING THE FUTURE - SUSTAINABLE AGRICULTURE IN THE UNITED-STATES	
S032	Friederichsen et al.	2013	Adapting the innovation systems approach to agricultural development in Vietnam challenges to the p	10.1007/s10460-013-9433-y
S033	Gaba et al.	2015	Multiple cropping systems as drivers for providing multiple ecosystem services from concepts to des	10.1007/s13593-014-0272-z
S034	Guan et al.	2024	Multi-Span Greenhouse Energy Saving by External Insulation: System Design and Implementation	10.3390/agriculture14020281
S035	Harris et al.	2016	Delineating the Southwest British Columbia Bioregion for Food System Design and Planning: A Practical Approach	10.5304/jafscd.2016.064.010
S036	Himmelstein et al.	2016	Sustainable intensification: a multifaceted, systemic approach to international development	10.1002/jsfa.7831
S037	Hirooka	2010	Systems approaches to beef cattle production systems using modeling and simulation	10.1111/j.1740-0929.2010.00769.x
S038	Hossard et al.	2024	Co-design of diversified cropping systems in the Mediterranean area	10.1016/j.eja.2023.127050
S039	Jamar et al.	2016	Co-design and establishment of innovative fruit-based agroforestry cropping systems in Belgium	10.17660/ActaHortic.2016.1137.48
S040	Jame and Cutforth	1996	Crop growth models for decision support systems	
S041	Jeuffroy et al.	2022	Design workshops for innovative cropping systems and decision-support tools: Learning from 12 case studies	10.1016/j.eja.2022.126573
S042	Johnson et al.	2008	Use of computer simulation to teach a systems approach to metabolism	10.2527/jas.2007-0393
S043	Juventia et al.	2022	Spatio-temporal design of strip cropping systems	10.1016/j.agsy.2022.103455
S044	Kantar et al.	2025	Computational design for more engaged, impactful, and dynamic agricultural research	10.1002/csc2.70034

S045	Kathiresan	2007	Integration of elements of a farming system for sustainable weed and pest management in the tropics	10.1016/j.cropro.2005.11.015
S046	Keating et al.	2003	An overview of APSIM, a model designed for farming systems simulation Flowers strips and herbal living mulch as an innovative approach to the design of farming systems	
S047	Klimek-Kopyra et al.	2024	for sustainable crop production OBJECT-ORIENTED SYSTEM-DESIGN FOR NATURAL-RESOURCE DECISION-SUPPORT -	10.1016/bs.agron.2024.02.001
S048	KOLLASCH and TWERY	1995	THE NORTHEAST DECISION-MODEL	
S049	Kropff et al.	2001	Systems approaches for the design of sustainable agro-ecosystems	
S050	Köksal and Tekinerdogan	2019	Architecture design approach for IoT-based farm management information systems	10.1007/s11119-018-09624-8
S051	König et al.	2012	Analysing agricultural innovation systems a multilevel mixed methods approach	
S052	Lacombe et al.	2018	Designing agroecological farming systems with farmers_ A review A protocol for the conceptualisation of an agro-ecosystem to guide data acquisition and analysis and	10.1016/j.agry.2018.06.014
S053	Lamanda et al.	2012	expert knowledge integration	10.1016/j.eja.2011.07.004
S054	Lauri et al.	2016	Interdisciplinarity and multiagent interactions for innovations in horticulture - paradigms beyond t Growing camelina as a second crop in France_ A participatory design approach to produce	10.17660/ActaHortic.2016.1137.37
S055	Leclère et al.	2018	actionable knowledge	10.1016/j.eja.2018.08.006
S056	Mackay-Smith et al.	2025	An integrative approach to silvopastoral system design: perspectives, potentials and principles	10.1080/00288233.2023.2298922
S057	Mahdei	2005	A SWOT analysis of medicinal plant production in Iran	
S058	Malézieux	2012	Designing cropping systems from nature	10.1007/s13593-011-0027-z
S059	Martin et al.	2011	Diagnosis and simulation: a suitable combination to support farming systems design	10.1071/CP10361
S060	McCann et al.	2005	Improved manure management and utilization: A systems approach	10.1079/RAF2004101
S061	Meng and Fan	2023	TRANSFORMING CHINESE FOOD AND AGRICULTURE A SYSTEMS PERSPECTIVE	10.15302/J-FASE-2023493
S062	Merot and Belhouichette	2019	Hierarchical Patch Dynamics Perspective in Farming System Design	10.3390/agronomy9100604
S063	Meunier et al.	2022	Interplay: A game for the participatory design of locally adapted cereal-legume intercrops	10.1016/j.agry.2022.103438
S064	Meynard	2017	L'agroécologie, un nouveau rapport aux savoirs et à l'innovation	10.1051/ocl/2017021
S065	Meynard et al.	2023	Unravelling the step-by-step process for farming system design to support agroecological transition	10.1016/j.eja.2023.126948
S066	Mir and Quadri	2009	Decision Support Systems Concepts, Progress and Issues - A Review A serious game to design integrated crop-livestock system and facilitate change in mindset toward	10.1007/978-90-481-2716-0_13
S067	Moojen et al.	2022	system thinking	10.1007/s13593-022-00777-5
S068	Moraine et al.	2014	Farming system design for innovative crop-livestock integration in Europe Co-design and assessment of cropping systems for developing crop-livestock integration at the	10.1017/S1751731114001189
S069	Moraine et al.	2016	territory level	10.1016/j.agry.2016.06.002

S070	Nelson and Stroink	2014	Accessibility and viability A complex adaptive systems approach to a wicked problem for the local f	10.5304/jafscd.2014.044.016
S071	O'Grady et al.	2021	Service design for climate-smart agriculture	10.1016/j.inpa.2020.07.003
S072	Parrott et al.	2003	Design considerations for the implementation of multi-agent systems in the dairy industry	
S073	Paul et al.	2022	Crop-livestock integration provides opportunities to mitigate environmental trade-offs in transition Creating a Design Framework to Diagnose and Enhance Grassland Health under Pastoral Livestock	10.3929/ethz-b-000517311
S074	Pereira et al.	2022	Production Systems Beyond agricultural innovation systems? Exploring an agricultural innovation ecosystems approach	10.3390/ani12233306
S075	Pigford et al.	2018	for niche design and development in sustainability transitions Technological and ecological approaches to design and manage sustainable greenhouse production	10.1016/j.agry.2018.04.007
S076	Poncet et al.	2015	syste	10.17660/ActaHortic.2015.1107.5
S077	Prost	2021	Revitalizing agricultural sciences with design sciences Designing agricultural systems from invention to implementation_ the contribution of agronomy.	10.1016/j.agry.2021.103225
S078	Prost et al.	2018	Lessons from a case study	10.1016/j.agry.2018.04.009
S079	Puech et al.	2021	Collective design of innovative agroecological cropping systems for the industrial vegetable sector A Systems Analysis and Conceptual System Dynamics Model of the Livestock-derived Food System	10.1016/j.agry.2021.103153
S080	Queenan et al.	2020	in South Africa: A Tool for Policy Guidance Combining expert knowledge and models in participatory workshops with farmers to design	10.5304/jafscd.2020.094.021
S081	Queyrel et al.	2023	sustainable weed management strategies Analyzing co-design of agroecology-oriented cropping systems: lessons to build design-support	10.1016/j.agry.2023.103645
S082	Quinio et al.	2022	tools	10.1007/s13593-022-00772-w
S083	Quinio et al.	2022	Cognitive resources to promote exploration in agroecological systems design	10.1016/j.agry.2021.103334
S084	Rapidel et al.	2009	Experiment-based prototyping to design and assess cotton management systems in West Africa	10.1051/agro/2009016
S085	Rapidel et al.	2015	Analysis of ecosystem services trade-offs to design agroecosystems with perennial crops Design and modeling of sustainable bioethanol supply chain by minimizing the total ecological	10.1007/s13593-015-0317-y
S086	Ren et al.	2013	footprint in life cycle perspective Designing cropping systems adapted to smallholder farmers. The case of Conservation Agriculture	10.1016/j.biortech.2013.07.119
S087	Ribeiro et al.	2015	in t	10.1684/agr.2015.0740
S088	Richard et al.	2020	A farmer-oriented method for co-designing groundwater-friendly farm management	10.1007/s13593-020-00622-7
S089	Rijswijk and Percy	2015	Farming within limits using an agricultural innovation systems approach to identify barriers and op A participatory whole farm modelling approach to understand impacts and increase preparedness to	
S090	Rodriguez et al.	2014	climate change in Australia	10.1016/j.agry.2013.04.003
S091	Rossing and Heong	1997	Opportunities for using systems approaches in pest management	

S092	Rossing et al.	1997	Model-based explorations to support development of sustainable farming systems case studies from Fr	
S093	Rudnick et al.	2021	A farm systems approach to the adoption of sustainable nitrogen management practices in California	10.1007/s10460-021-10190-5
S094	Salembier et al.	2018	Genealogy of design reasoning in agronomy_ Lessons for supporting the design of agricultural systems	10.1016/j.agtsy.2018.05.005
S095	Salembier et al.	2021	A theoretical framework for tracking farmers' innovations to support farming system design	10.1007/s13593-021-00713-z
S096	Salembier et al.	2023	Exploring the inner workings of design-support experiments: Lessons from 11 multi-actor experimental networks for intercrop design	10.1016/j.eja.2022.126729
S097	Schaap et al.	2013	Participatory design of farm level adaptation to climate risks in an arable region in The Netherlands	10.1016/j.eja.2013.02.004
S098	Schiere et al.	1999	Design of farming systems for low input conditions principles and implications based on scenario st	
S099	Scholberg et al.	2010	Cover Crops in Agrosystems Innovations and Applications	10.1007/978-90-481-8741-6_3
S100	Selbonne et al.	2023	Co-Design and Experimentation of a Prototype of Agroecological Micro-Farm Meeting the Objectives Set by Climate-Smart Agriculture	10.3390/agriculture13010159
S101	Selbonne et al.	2023	How to Measure the Performance of Farms with Regard to Climate-Smart Agriculture Goals? A Set of Indicators and Its Application in Guadeloupe	10.3390/agriculture13020297
S102	Sempore et al.	2016	Supporting better crop-livestock integration on small-scale West African farms: a simulation-based a	10.1080/21683565.2015.1089966
S103	Shao and Marwa	2024	Blockchain-enabled smart contracts for enhancing seed certification transparency: A design science approach	10.1016/j.atech.2024.100651
S104	Singh et al.	2020	Integrated farming system approach for enhanced farm productivity, climate resilience and doubling farmers' income	10.56093/ijas.v90i8.105884
S105	Staver et al.	2001	Designing pest-suppressive multistrata perennial crop systems: shade-grown coffee in Central America	
S106	Tanaka et al.	2002	Dynamic cropping systems An adaptable approach to crop production in the great plains	10.2134/agronj2002.0957
S107	Tanure et al.	2013	Bioeconomic model of decision support system for farm management. Part I: Systemic conceptual modeling	10.1016/j.agtsy.2012.08.008
S108	ten Napel et al.	2011	A conceptual approach to design livestock production systems for robustness to enhance sustainability	10.1016/j.livsci.2011.03.007
S109	Tittonell et al.	2010	FIELD-A summary simulation model of the soil-crop system to analyse long-term resource interactions	10.1016/j.eja.2009.05.008
S110	Tixier et al.	2008	SIMBA, a model for designing sustainable banana-based cropping systems	10.1016/j.agtsy.2008.02.003
S111	Toffolini et al.	2016	Indicators used by farmers to design agricultural systems: a survey	10.1007/s13593-015-0340-z

S112	Toorop et al.	2020	Using a positive deviance approach to inform farming systems redesign_ A case study from Bihar, India	10.1016/j.agry.2020.102942
S113	Turner	2021	Soil as an Archetype of Complexity: A Systems Approach to Improve Insights, Learning, and Management of Coupled Biogeochemical Processes and Environmental Externalities	10.3390/soilsystems5030039
S114	Uyan et al.	2013	A Spatial Decision Support System design for land reallocation: A case study in Turkey	10.1016/j.compag.2013.07.010
S115	van der Lee et al.	2022	Theoretical positions and approaches to resilience assessment in farming systems. A review	10.1007/s13593-022-00755-x
S116	van Herck et al.	2020	Crop design for improved robotic harvesting: A case study of sweet pepper harvesting	10.1016/j.biosystemseng.2020.01.021
S117	van Weeghel et al.	2021	Good animal welfare by design: An approach to incorporate animal capacities in engineering design	10.1016/j.agry.2021.103154
S118	Vorlicková	2020	Sborník 2020 final	
S119	Wang et al.	2020	FASE-20337-WEL 289..295	10.15302/J-FASE-2020337
S120	Woltering et al.	2024	Supporting a systems approach to scaling for all; insights from using the Scaling Scan tool	10.1016/j.agry.2024.103927
S121	Zhu et al.	2011	Challenges and models in supporting logistics system design for dedicated-biomass-based bioenergy industry	10.1016/j.biortech.2010.08.122