AGRICULTURAL SYSTEMS

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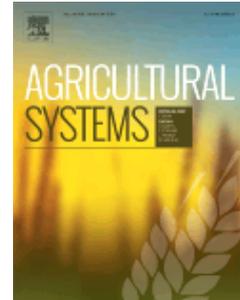
DESCRIPTION

Agricultural Systems is an international journal that deals with interactions - among the components of **agricultural systems**, among hierarchical levels of agricultural systems, between agricultural and other **land use systems**, and between agricultural systems and their **natural, social and economic environments**. Manuscripts submitted to *Agricultural Systems* generally should include both of the following:

• substantive natural science content (especially **farm- or landscape-level** biology or ecology, sometimes combined with social sciences), and
• substantive analysis and discussion of the **interactions** within or among agricultural systems components and other systems.

Preference is given to manuscripts that address whole-farm and landscape level issues, via integration of conceptual, empirical and dynamic modelling approaches.

The scope includes the development and application of systems analysis methodologies (**diagnosis**, simulation and mathematical **modelling**, participatory **modelling**, multi-criteria **assessment**, **trade-off analysis**, participatory **design**, etc.) in the following areas:

• agroecology **and the sustainable intensification** of agriculture as well as transition pathways for sustainable intensification;
• decision-making and **resource allocation** in agricultural systems;
• the **interactions** between agricultural and non-agricultural landscapes;
• the multiple services provided by **agricultural systems** from **food security** to **environmental services**;
• **adaptation and transformation of agricultural systems in the era of global change**;
• development and application **of tools and methods** for agricultural systems **design, assessment and management**;
• **innovation systems** and multi-stakeholder arrangements that support or promote change and/ or informs policy decisions; and
• **big data** and the **digitalisation of agriculture** and their effects on agriculture.

The following subjects are *discouraged*:

- econometric, descriptive or other statistical analyses that exclude systems considerations, landscapes, land use change studies, or other economic analyses without substantive natural science content;
- development of typologies unless the typology developed forms the basis for further systems analysis;
- results from crop or livestock trials unless from systems trials or the results address systems issues;
- studies focusing on social or political outcomes that lack a clear systems framework and direct application to agricultural systems (i.e. the farm production system or landscape, their activities or components, their interactions or synergies);
- conceptual frameworks without empirical implementation (unless submitted as a short communication);
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- studies of the operation or efficiency of agricultural or food processing machinery, or of agricultural supply chains without a substantive biological component;
- life cycle analysis (LCA) studies that are primarily descriptive unless LCA is combined with other types of methods that address interactions within agricultural systems or between those systems and their environment.

Such subjects are *not* considered for publication unless they clearly provide substantive and highly generalizable new insights regarding processes operating at farm or landscape levels or describe novel analytical methods applicable to a wide variety of agricultural systems.

The journal publishes original scientific papers, short communications, reviews, perspectives and comments. Review perspective articles and book reviews should only be submitted after consultation with the editors. Review papers generally should focus on the application of specific methods rather than descriptive analyses of agricultural production systems or supply chains.

"Perspective" articles are intended to provide a forum for authors to present a novel viewpoint on any topic falling within the journal's scope. The key feature of Perspectives is that they are future focused and are expected to stimulate discussions within the community. They may build on recent developments (e.g. published articles, conference highlights, or discuss the implications of new concepts and/or methodological approaches) but other topics will be considered. Perspectives are expected to be relatively short (the guideline length is 2000 words) and should include a short abstract, highlights, main text, references) and one figure summarizing the viewpoint or one table supporting the arguments. Perspectives should have an incisive title. Perspectives are primarily submitted following invitation from an Editor, but volunteered articles will be considered. Authors interested in submitting a Perspective article should seek pre-submission advice through the Agricultural Systems journal home page. All Perspective articles will be rigorously peer reviewed under a rapid review process to ensure short a duration between submission and publication.

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AUDIENCE

Agriculturalists, biologists, veterinarians, economists, social scientists and those interested in management and resource use.

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INTRODUCTION

Agricultural Systems is an international journal that deals with interactions - among the components of agricultural systems, among hierarchical levels of agricultural systems, between agricultural and other land use systems, and between agricultural systems and their natural and social environments. In particular, its aim is to encourage integration of knowledge among those disciplines that underpin agriculture. Many contributions will therefore be multi- or inter-disciplinary. Papers generally focus on either methodological approaches to understanding and managing interactions within or among agricultural systems, or the application of holistic or quantitative systems approaches to a range of problems within agricultural systems and their interactions with other systems. Because of the nature of the readership of Agricultural Systems, the contents of papers should be easily accessible (properly introduced, presented and discussed) to readers from a wide range of disciplines.

The scope includes the development and application of systems methodology, including system modelling, simulation and optimization; ecoregional analysis of agriculture and land use; studies on natural resource issues related to agriculture; impact and scenario analyses related to topics such as GMOs, multifunctional land use and global change; and the development and application of decision and discussion support systems; approaches to analysing and improving farming systems; technology transfer in tropical and temperate agriculture; and the relationship between agricultural development issues and policy.

Types of paper
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