



Digital Agriculture in Crisis? Platforms, Promises, and Realities

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Keywords: Call For Papers, Digital Agriculture.

1 Introduction

Why are so many digital agricultural platforms launched, yet so few survive? In the wake of a global push toward innovation-led development, digital agriculture has become a favoured intervention model for improving farmers' livelihoods and enhancing global food security (Vahdanjoo et al. 2025, Dayioğlub & Turker 2021). Countless tools, apps, and platforms are launched yearly; with AI-driven solutions now amplifying both expectations and experimentation, yet a striking number vanish shortly after donor funding elapse. For instance, estimates suggest that more than half of digital agriculture apps launched in Sub-Saharan Africa become inactive within three years (Baskaran-Makanju et al., 2021) and of all the apps currently operating on the continent only 15 have exceeded the 1 million registered users mark. In most cases, only 15% of registered users are active users, revealing a sobering gap between innovation hype and on-the-ground realities (Adewopo et al. 2025). These failures are not merely technical - they expose deep structural mismatches between platform design, user needs and capacities, and the broader global and national governance and funding models that sustain digital ecosystems (Ngissah et al. 2025, Klerkx et al. 2019, Cieslik et al. 2018). The accelerating turn toward AI (Cieslik 2025) may intensify existing tensions while also opening new possibilities, raising a critical question: are we witnessing a transformative shift in digital agriculture, or the entrenchment of familiar contradictions under a new technological paradigm?

Building on a growing body of empirical and conceptual scholarship interrogating the persistent 'fail to scale' dilemma (Abate et al. 2023), this Special Issue critically examines why digital platforms continue to exhibit high rates of breakdown, abandonment, and uneven uptake in rural contexts despite persistent claims about their transformative potential for agricultural development (Sarku & Ayamga 2025; McCampbell et al. 2022; Porciello et al. 2022). We invite interdisciplinary contributions - theoretical, empirical, and methodological - that analyse the political, economic, and socio-technical conditions shaping the trajectories of digital platform interventions across Global South contexts. Rather than assuming digitalisation as an inherently scalable pathway to development, the Special Issue seeks scholarship that interrogates processes of experimentation, adaptation, resistance, and failure, and that advances critical perspectives on platformisation, agrarian change, and digital development within contemporary rural transformations.

This Special Issue explores key questions:

Why do digital agriculture initiatives so often struggle to move beyond donor-funded pilot phases, and what does this reveal about the institutional, social, and technological conditions required for sustainability and scale?

How do digital agriculture interventions intersect with wider development challenges - including youth futures, gendered inequalities, and contested knowledge systems - and with what social and political consequences?

In what ways do digital agriculture initiatives reshape relations between technology, governance, and everyday decision-making, whether through design choices, data infrastructures, or institutional adoption?

How do the normative assumptions embedded in ICT4Agr imaginaries influence the ethical, political, and epistemic outcomes of these tools?

This Special Issue brings together interdisciplinary scholarship at the intersection of development studies, science and technology studies, and critical agrarian research, to interrogate the contested role of digital tools in transforming smallholder agriculture (Lajoie-O'Malley et al. 2020). By foregrounding the lived experiences, knowledge systems, and socio-political contexts of farmers, we move beyond linear models of technological diffusion to engage with longstanding debates on state-market relations (Verdonk 2019), infrastructural imaginaries, and the politics of innovation (Qureshi 2023, 2022, Runck et al/ 2022, Rotz et al. 2019). In doing so, the Special Issue revisits and reinvigorates theoretical conversations around agrarian change - including the commodification of farming knowledge (Ngo et al. 2022), the reconfiguration of labour (McCarrick & Kleine 2019), land relations through platformization (Cieslik & Margócsy 2022), and the role of digital infrastructures in shaping new forms of dependency, exclusion, and resistance (Cieslik 2025, Carolan 2023, 2020, Heeks 2022). The collection also speaks to emerging critiques of techno-solutionism within global development policy, inviting a more reflexive and situated understanding of digital agriculture as a deeply political and socio-technical process (Sage 2024, Rothe et al. 2022, Cieslik et al. 2022).

Information Technology for Development has long served as a key platform for advancing critical inquiry into the role of digital technologies in global development, including sustained engagement with issues of inclusion, infrastructure, and innovation in agriculture (Sarku & Ayamga 2025, Jiang et al. 2022, Qureshi 2022, 2023). Building on this rich body of scholarship, this Special Issue aims to take stock of existing debates while pushing the conversation forward - both theoretically and practically - by interrogating the evolving dynamics of digital agriculture within broader structures of power, inequality, and agrarian transformation.

2 Deadlines

All submitted manuscripts will undergo a full double-blind peer review process to ensure academic quality, originality, and relevance to the Special Issue's thematic focus.

- Paper Submission deadline: October 1st, 2026
- Notification of review decision: December 15th, 2026
- Deadline for revised papers: February 1st, 2027
- Notification of final acceptance: April 12th, 2027
- Tentative publication date: May - July 2027

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