



Advancing agribusiness management in a time of transformation: insights from the 2024 IFAMA World Conference

EDITORIAL IFAMR 2024 CONFERENCE SECTION

Ram N. Acharya^a, Mariantonietta Fiore^b, Sudarshan Naidu^c and Loïc Sauvée^d

^a*Professor; Department of Agricultural Economics and Agricultural Business, New Mexico State University,
MSC 3169 NMSU, P.O. Box 30003, Las Cruces, NM 88003-8003, USA*

^b*Professor, Department of Economics, University of Foggia, Foggia, Italy*

^c*Associate Professor, School of Management and Entrepreneurship, Shiv Nadar Institution of Eminence, India*

^d*Director, Institut Polytechnique UniLaSalle InTerACT UP 2018.C102, Beauvais, France*

Abstract

The 2024 IFAMA World Conference convened scholars and practitioners at a pivotal moment for global food and agricultural systems, marked by heightened climate risk, sustainability pressures, and accelerating technological change. This editorial introduces a special conference section of the *International Food and Agribusiness Management Review* featuring five peer-reviewed contributions: three research articles, and two teaching-oriented case studies, presented at the 2024 IFAMA World Conference in Almeria, Spain. Together, these papers address critical challenges in contemporary agribusiness management, including risk management, environmental, social, and governance (ESG) integration, innovation, and strategic decision-making across developed and emerging markets. Drawing on diverse methodologies and industry settings, the collection reflects IFAMA's mission to bridge rigorous research with managerial relevance. This editorial synthesizes the common themes across the contributions and situates them within broader debates shaping the future of food and agribusiness management.

Keywords: agribusiness management; sustainability; ESG; risk management; innovation

¹Corresponding author: acharyar@nmsu.edu

1. Introduction

The International Food and Agribusiness Management Association (IFAMA) has served as a global platform for advancing scholarship, practice, and dialogue at the intersection of food systems, agriculture, and management for more than three decades. Through its annual World Conference and its flagship journal, the International Food and Agribusiness Management Review (IFAMR), IFAMA continues to pursue its mission of bridging rigorous research with managerial relevance across diverse geographic, institutional, and market contexts. This special conference section reflects IFAMA's continued commitment to advancing agribusiness management scholarship that is analytically rigorous and directly relevant to pressing managerial challenges.

The IFAMR conference editions play a particularly important role in this mission. They provide a structured pathway for high-quality conference submissions to be developed into peer-reviewed journal articles, enabling timely, practice-relevant research to reach a broad audience of scholars, educators, executives, and policymakers. These sections capture both the intellectual energy of the IFAMA World Conference and the evolving priorities of global agribusiness management.

The 2024 IFAMA World Conference convened at a moment of profound transition for global food and agricultural systems (Barkema *et al.*, 1991; Boehlje and Gray, 2012). Agribusiness firms across regions and value chains face heightened climate risk, shifting consumer expectations, rising ESG pressures, accelerating digitalization, and evolving policy frameworks that are reshaping opportunities for innovation and value creation from waste streams and byproducts. Managers must simultaneously navigate tighter margins, more complex risk-management instruments, and uneven institutional capacity across developed and emerging markets (Batie, 2008). Against this backdrop, the conference emphasized innovation, resilience, and strategic adaptation to address shared challenges shaping the future of global agrifood systems.

The conference was organized around the overarching theme of Food Security through Innovation and Sustainability, with particular emphasis on four interrelated areas. These included production evolution and transformation, highlighting the role of science, technology, and sustainable practices in meeting future food demand; economic competitiveness, encompassing firm-level strategy, ESG alignment, and access to resources across value chains; sustainability through regulation, reflecting the growing influence of policy, geopolitics, and institutional frameworks; and societal impacts, including food equity, health outcomes, and the cultural dimensions of food systems. Collectively, these themes framed discussions at the conference and are reflected in the papers selected for this IFAMR special section.

This conference section draws on papers accepted through the 2024 IFAMA Conference. The five contributions, three research articles and two teaching-oriented case studies, provide a balanced, forward-looking portfolio. Together, they advance understanding of contemporary agribusiness management by combining analytical rigor, methodological diversity, and strong managerial orientation across multiple sectors and geographic contexts.

2. Synthesis of the Special Section

Taken as a whole, the contributions in this special section highlight several cross-cutting themes central to food and agricultural management today. Together, they illustrate a field increasingly concerned with integrating analytical sophistication, sustainability ambitions, and strategic decision-making under conditions of heightened uncertainty (Scoones *et al.*, 2020).

First, risk management and resilience emerge as foundational concerns. Climate variability, market volatility, and production uncertainty continue to shape decisions at the farm, firm, and value-chain levels. One research article examines how advanced analytical tools can improve the performance of index-based insurance programs, while both case studies address strategic risk arising from concentration, infrastructure constraints, and institutional uncertainty.

Second, sustainability and ESG considerations feature prominently across the contributions, though they manifest differently depending on firm size and context. From a large-scale, vertically integrated pork producer in Brazil to a small digital agriculture enterprise serving farmers in Nigeria, and to an emerging value chain built around the beneficial reuse of dredged sediments from Lake Erie, the papers demonstrate that sustainability is increasingly embedded in competitive strategy rather than treated as an external constraint (Porter and Kramer, 2011).

Third, innovation and differentiation link consumer-facing markets with production-oriented decisions. One research article explores how health and wellness trends in the pet food industry create opportunities for product differentiation, while another demonstrates how verified environmental claims and local resource narratives can generate consumer willingness to pay for circular-economy products, highlighting the strategic importance of credibility, certification, and value-chain coordination.

Finally, the special section reflects methodological diversity and managerial relevance, hallmarks of IFAMR. The research articles employ econometric analysis and portfolio optimization techniques, translating quantitative results into actionable insights for managers and policymakers. The case studies provide richly contextualized decision environments that stimulate classroom discussion and practitioner reflection, particularly around strategic trade-offs in uncertain and resource-constrained settings.

Collectively, these papers illustrate how agribusiness management research can inform decision-making across scales, from individual producers and entrepreneurs to large, integrated firms operating in global markets, while remaining attentive to regional diversity and institutional realities. The following section provides a brief overview of each contribution.

3. Overview of included contributions

3.1 Coverage selection for the annual forage insurance based on robust portfolio optimization methods by Zapata, Xicay, Villavicencio and Abello

Zapata and coauthors address a critical risk-management challenge facing forage producers: how to select index-based insurance coverage that effectively stabilizes farm income under climate uncertainty. Focusing on the United States Annual Forage Insurance Program, the authors introduce robust portfolio optimization approaches that move beyond ad hoc or naïve coverage-selection strategies.

Using historical production, price, and actuarial data, the study evaluates several coverage-selection models, including penalized and ensemble learning approaches, relative to traditional mean–variance methods. The findings show that systematic, data-driven coverage selection can improve out-of-sample performance, reduce income variability, and avoid excessive risk exposure. Importantly, the paper translates technical insights into practical implications, highlighting the need for decision-support tools that help producers and advisors navigate increasingly complex insurance products. For IFAMR readers, the article underscores the growing role of analytics and statistical learning in agricultural risk management.

3.2 Pet obesity causes and product differentiation opportunities in the pet food industry, by Hobbs Jr., Shanoyan and Bergtold

Hobbs and colleagues shift attention downstream in the agrifood system, examining the rapidly growing and highly differentiated pet food industry. Motivated by rising pet obesity rates and increasing consumer demand for health-oriented products, the authors investigate how feeding practices and owner behavior create opportunities for product innovation and market segmentation.

Based on econometric analysis of survey data from dog owners in North America, the study identifies clear relationships between caloric intake, feeding frequency, breed size, and obesity outcomes. These empirical insights are mapped directly to actionable product-differentiation strategies, including low-calorie formulations, breed-specific offerings, pre-portioned packaging, and enhanced consumer education. By explicitly linking empirical findings to managerial decision-making, the article exemplifies IFAMR's emphasis on translating research into strategy and highlights how trends in human food markets continue to influence innovation pathways in adjacent agribusiness sectors.

3.3 Sustainable pork production in the heart of Brazil: The case of Nutribras by Neves, Valerio, Rosalino, Cambaúva and Scare

This teaching case presents Nutribras Alimentos, a vertically integrated pork producer operating in Brazil's Center-West, one of the world's most dynamic agricultural regions. Built on a circular-economy model integrating grain production, animal husbandry, and renewable energy generation, Nutribras represents an ambitious approach to sustainability-driven agribusiness at scale.

The case centers on a strategic dilemma faced by the firm's leadership: whether to pursue further intensification within the pork value chain or to diversify into new proteins and activities to reduce risk exposure. Students and practitioners are invited to weigh cost structures, logistics constraints, ESG commitments, and market uncertainty in a highly competitive global protein sector. The case offers a nuanced view of sustainability-driven strategy, highlighting both its potential advantages and its managerial complexity in capital-intensive agribusiness systems.

3.4 ESG for a small enterprise in an emerging market: AirSmat's innovative approach to sustainable agriculture in Nigeria by Mabaya, Babadara, Jagne and Mubichi-Kut

Mabaya and coauthors examine ESG implementation from a markedly different vantage point: that of a small digital agriculture startup operating in a resource-constrained emerging market. The case explores AirSmat, a Nigerian firm that leverages digital technologies to support farm management, climate-smart practices, and carbon monitoring among smallholder and commercial farmers.

The central tension in the case lies in balancing social and environmental impact with financial sustainability in an environment characterized by limited regulatory incentives for ESG adoption and low willingness to pay. Through its freemium pricing model, partnerships, and digital monitoring systems, AirSmat illustrates how small and medium-sized enterprises can creatively pursue sustainability objectives despite structural constraints. The case is particularly relevant for discussions of entrepreneurship, digital transformation, and inclusive agrifood systems in developing economies.

3.5 Changes in policy and consumer preferences create opportunity for substrate products based on Lake Erie dredged sediments by Sequeira Lezama and Signorini

This research article addresses an emerging sustainability and value-chain challenge shaped by regulatory change and shifting consumer preferences. Focusing on recent Ohio policies that restrict open-water disposal of dredged sediments, the authors examine how Lake Erie dredged sediments can be transformed into value-adding substrate products within a circular-economy framework. Using a mixed-method approach that combines a discrete choice experiment with Ohio consumers and an in-depth case study of the regional mulch and substrate industry, the paper evaluates both demand-side willingness to pay for verified environmental claims and supply-side constraints related to logistics, regulation, and coordination. Results indicate that consumers are willing to pay a premium for locally grounded, verified sustainability claims tied to Lake Erie, though substantial preference heterogeneity underscores the importance of credibility and targeted marketing. By articulating concrete strategies and actionable projects for stakeholders, the study contributes managerial

insights into how policy change, ESG narratives, and value-chain design can jointly enable innovation in environmentally sensitive agribusiness contexts.

4. Concluding remarks

The five contributions in this special section reflect both the intellectual breadth and the applied orientation of the 2024 IFAMA World Conference. Together, they demonstrate how agribusiness management research continues to evolve in response to climate risk, sustainability imperatives, technological change, and shifting consumer expectations, while remaining grounded in real-world managerial decision contexts (Boehlje and Gray, 2012).

More broadly, this collection reinforces IFAMA's distinctive role as a bridge between research and practice. By bringing together studies that span insurance design, consumer-driven product differentiation, circular-economy value chains, ESG implementation, and strategic decision-making across diverse institutional environments, the special section underscores the multifaceted nature of transformation in modern agrifood systems.

As food and agricultural systems confront increasingly complex and interconnected challenges, such engagement will remain essential. The editors encourage readers, whether academics, practitioners, or students, to use these contributions as a foundation for further research, teaching, and informed decision-making, and to remain actively involved in the IFAMA community.

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