China Agricultural Economic Review

Guest editorial: High-value agriculture for rural transformation: practices, impacts and policy implications

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Abstract

Purpose – The special issue aims to advance understanding of how and under what conditions high-value agriculture (HVA) can drive inclusive, sustainable and resilient rural transformation.

Design/methodology/approach – This special issue adopts a structured narrative synthesis approach to examine how HVA contributes to rural transformation, sustainability and resilience across developing and emerging economies. The papers span multiple countries (China, Indonesia, Nepal, Sri Lanka and India) and a wide range of high-value systems, including horticulture, tea, integrated aquaculture–cropping, industrial crops, innovation-intensive inputs and livestock.

Findings – Across the 18 papers included in the special issue, the evidence paints a consistent picture: HVA can be a powerful engine for rural transformation but its gains hinge on institutions, capabilities and risk management and can be unevenly shared. Key findings from this special issue include: (a) HVA can reduce poverty and narrow the urban–rural income gap through clustering and value-chain upgrading, but its benefits are uneven, (b) improving farmers' cognition through targeted training and information, together with social learning from neighbors, reduces chemical input use and promotes climate adaptation and value-adding behaviors in high-value crops such as pears, grapes, bananas and vegetables, while risk aversion consistently dampens these positive effects, (c) empowering women, cooperative membership and using dedicated extension services significantly promote sustainable and climate-smart practices in high-value tea farming, (d) climate conditions shape whether R&D complements or substitutes for trade in high-value seed potatoes, while collective and cluster-based marketing significantly improve prices and household welfare for rubber farmers, (e) capitalization boosts green efficiency mainly among medium- and large-scale pig farms, while climate variability and forage land availability strongly shape livestock output and resilience and (f) integrating public, peer and digital information improves output and reduces risk in high-value agricultural systems such as shrimp–rice co-culture.

Originality – This special issue is among the first to provide a systematic, multi-country synthesis of how high-value agriculture shapes rural transformation through behavioral, institutional and climate-related mechanisms, rather than focusing solely on average income or productivity effects.

Practical implications – The findings of this special issue suggest that HVA can be an effective instrument for rural transformation only when policies move beyond product promotion toward capability- and institution-building. First, governments and development agencies should treat cooperatives, extension services and digital platforms as delivery mechanisms, not add-ons, using them to translate knowledge, ecological assets and climate information into sustained changes in farmers' practices – particularly for smallholders, elderly farmers and resource-constrained households. Second, the evidence highlights the need for differentiated, place- and scale-specific interventions, including labor-saving mechanization where non-farm employment crowds out HVA, targeted capitalization and regulation for medium- and large-scale livestock systems and climate- and crop-specific support for innovation-intensive inputs such as seed potatoes. Third, practitioners should anticipate distributional trade-offs – including elite capture, spatial advantages and gendered responses – by embedding inclusion safeguards such as targeted training, service vouchers and gender-sensitive extension to prevent HVA from widening intra-rural inequality. Finally, integrating risk management and resilience tools, such as combining public, peer and digital information, promoting climate-smart practices and strengthening land and market institutions, can help farmers stabilize returns and invest confidently in high-value systems, ensuring that HVA contributes to sustainable and inclusive rural development in practice rather than in expectation.

Paper type Guest editorial

China Agricultural Economic Review
Vol. 18 No. 3, 2026
pp. 437-453

e-ISSN: 1756-1388
p-ISSN: 1756-137X
DOI 10.1108/CAER-08-2026-630

1. Introduction

High-value agriculture (HVA) refers to the cultivation and production of agricultural products that generate substantially higher economic returns than traditional staple crops such as maize, rice and wheat. HVA typically includes specialized crops (e.g. fruits, vegetables, tea and other horticultural products), edible fungi, livestock and dairy products, aquaculture and other differentiated agricultural systems driven by market demand, nutritional value and export potential (Birthal *et al.*, 2013; Chidawanyika *et al.*, 2025; Maertens *et al.*, 2012; Quisumbing *et al.*, 2015; Rao *et al.*, 2006; Samoraj *et al.*, 2024). By combining market-oriented production with technological upgrading and, increasingly, sustainability-oriented practices, HVA has emerged as a central pathway for rural transformation in developing and emerging economies. As a result, HVA has become a focal point in both academic research and policy debates on how agriculture can contribute to inclusive and sustainable rural development.

A large empirical literature has shown that shifting from staples to high-value products (horticulture, tea/coffee, livestock, aquaculture and specialty crops) is commonly associated with higher farm revenues and profits, improved technical efficiency and stronger market participation (Bennike *et al.*, 2025; Chongtham *et al.*, 2025; Cramer *et al.*, 2022; Hailu *et al.*, 2025; He *et al.*, 2025). Many studies also emphasize value-chain upgrading effects, including better quality differentiation, branding, contract farming, integration into processing/retail/export channels and spillovers into local employment in trading, logistics and processing (Narrod *et al.*, 2009; Quisumbing *et al.*, 2015; Roy and Thorat, 2008; Tian *et al.*, 2022; Tsolakis *et al.*, 2023). In general, these studies suggest that high-value agriculture can act as a powerful engine of rural transformation – linking farm-level productivity gains with value-chain upgrading and broader local economic development – provided that supportive institutions, infrastructure and inclusive market access are in place.

Despite significant research on HVA, several questions remain unanswered. These include, for example, (1) to what extent does the expansion of HVA reduce rural poverty and narrow the urban–rural income gap? (2) What strategies can be used to improve farmers' input use performance, climate adaptation and value-adding behaviors in high-value crop systems? (3) What instruments can be used to promote sustainable and climate-smart practices in high-value farming systems, particularly in labor- and management-intensive crops? (4) How do climate conditions and collective marketing arrangements affect the international trade in high-value tube and industry sectors? (5) How does farm capitalization influence green efficiency and productivity across different scales of high-value livestock production? and (6) How can we improve farm performance in complex high-value agricultural systems? Finding answers to these questions is crucial for identifying when and how HVA can serve as an inclusive engine of rural transformation rather than a driver of new inequalities and for designing policy instruments that translate market opportunities into broad-based income gains and a narrower urban–rural divide.

Against this backdrop, we organised a special issue on "*High-value Agriculture for Rural Transformation: Practices, Impacts and Policy Implications*" in the *China Agricultural Economic Review (CAER)* journal to collect high-quality research papers with strong policy relevance. By bridging household-, farm-, regional- and policy-level perspectives and covering crops, livestock, aquaculture and integrated systems, this special issue aims to clarify when and how HVA contributes to inclusive rural development, identify key risks and trade-offs and derive policy-relevant insights for designing context-specific strategies that align productivity growth with equity, sustainability and resilience objectives.

Finally, 18 papers were selected after a rigorous peer-review process and published in this special issue. Together, these papers examine how HVA – across crops, livestock and integrated systems – shapes and is shaped by, the key processes of rural transformation in Asia, including structural change, market integration, technological upgrading, institutional support, digitalisation and climate adaptation. Overall, these contributions offer a nuanced, multi-country understanding of when HVA serves as an engine of inclusive growth and

sustainability – and when complementary institutions, infrastructure and capability-building are necessary to ensure that HVA-led transformation is both equitable and resilient.

The structure of this special issue editorial is as follows: Section 2 introduces the collected manuscripts and provides an overview of the papers presented at the international conference specifically organised for this special issue. Section 3 summarises the key findings of the 18 papers included in the issue, followed by a discussion of their policy implications in Section 4. The final section offers a brief concluding remark.

2. Collected manuscripts and the ADBI international conference

2.1 Summary of collected manuscripts

A total of 120 manuscripts were submitted to the Special Issue, with corresponding (submitting) authors representing 18 countries and regions (Figure 1), indicating strong international interest and broad scholarly participation. China accounted for the largest share, contributing 77 manuscripts (about 64%), underscoring its highly active research community in this field. India ranked second with 16 submissions (approximately 13%), followed by Indonesia with 5 submissions (about 4%) and Taiwan with 3 submissions (around 3%). Several countries – including Sri Lanka, South Korea, Pakistan, Australia and New Zealand – contributed two manuscripts each. At the same time, Nigeria, Burundi, Bangladesh, the Philippines, Turkey, Hong Kong, Cambodia, Malaysia and Tanzania each submitted one manuscript. Overall, the distribution reveals a strong concentration of submissions from China and India alongside meaningful participation from Asia, Oceania and Africa, highlighting both the regional depth and the global relevance of the Special Issue's theme.

2.2 Research focus and product coverage in HVA studies

Table 1 presents the research focus and product coverage of the 120 articles collected for this special issue. Among them, 58 were not relevant to HVA at all, while 15 studies referred to general HVA without specifying particular products. Among the rest, 34 focus on high-value crops (including fruits, vegetables, beverage crops, spices and seed inputs), 8 on livestock, 2 on aquaculture and integrated systems and 3 on industrial or specialty agriculture. Overall, the distribution of studies reveals a strong concentration on crop-based HVA – especially fruits and beverage crops – while livestock, aquaculture, integrated systems and specialty agriculture receive relatively limited scholarly attention.

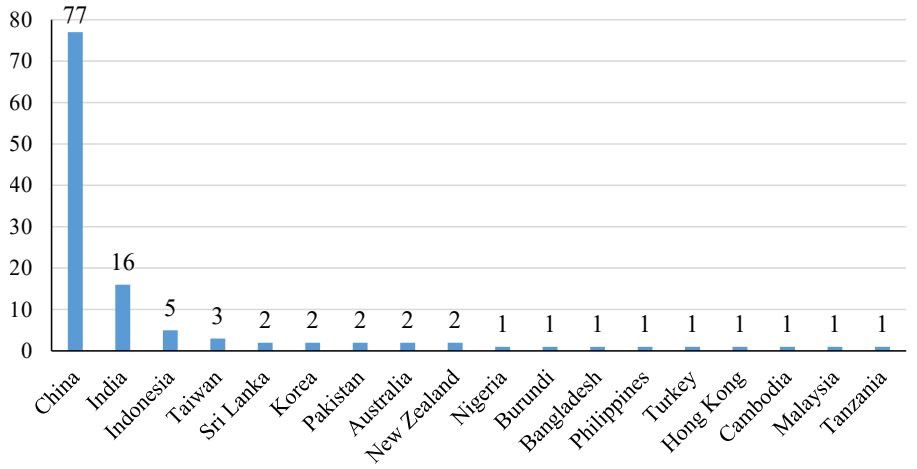

Figure 1. Distributions of received submissions by submitting authors' nationalities

Table 1. Research focus and product coverage of 120 articles collected in this special issue

Topics	Category	Specific items	Number of papers
Topics not relevant	–	–	58
General HVA	–	–	15
High-value crops	Fruits	Pear, Grape, Banana, Litchi and Organic Passion Fruit	10
	Vegetables	Vegetables (general), Lettuce and Chili	4
	Beverage and leaf crops	Tea and Coffee	11
	Spices	Cumin, Spice and Cardamom	4
	High-value inputs	Seed Potato and Biofortified bean seeds	2
	Grain and legume HVA	Bean and Maize	3
High-value livestock	Meat and Livestock	Pig, Pork, Beef cattle, Livestock and Meat Duck	6
	Dairy products	Milk	2
High-value aquaculture and integrated systems	High-value aquaculture	Shrimp	1
	Integrated systems	Shrimp–Rice Co-Culture Rice	1
Industrial and specialty agriculture	Industrial crops	Rubber and Cashew nut	2
	Specialty agriculture	Bee	1

Among papers focusing on high-value crops, fruits receive substantial attention, with 10 papers focusing on crops such as pear, grape, banana, litchi and organic passion fruit, reflecting strong research interest in perennial, market-oriented horticulture. Beverage and leaf crops, particularly tea and coffee, constitute another major subgroup, with 11 papers that highlight their economic importance, export orientation and relevance to smallholder livelihoods. In contrast, vegetables (including general vegetables, lettuce and chili) and spices (such as cumin and cardamom) receive comparatively less attention, with four papers each, while high-value inputs (seed potato and biofortified bean seeds) and grain and legume HVAs (bean and maize) remain underrepresented.

Among papers discussing high-value livestock, most focus on meat and livestock production, including pigs, pork, beef cattle, meat ducks and general livestock systems, indicating a stronger emphasis on animal protein value chains. Only two papers examine dairy products, specifically milk, suggesting that high-value dairy systems remain a relatively underexplored area compared with meat-oriented livestock production.

Studies on high-value aquaculture and integrated systems are notably scarce, with only two papers identified. One focuses on shrimp aquaculture, while the other examines an integrated shrimp–rice co-culture system, pointing to emerging but still limited academic interest in integrated, resource-efficient production systems that combine aquatic and crop components. Finally, industrial and specialty agriculture represents the smallest body of work, with just three papers. Two studies focus on industrial crops such as rubber and cashew nut, while one examines specialty agriculture, specifically beekeeping. This limited coverage suggests that, despite their potential contribution to diversification, resilience and rural incomes, industrial and specialty agricultural systems remain marginal in the current HVA literature.

At the stage of selecting papers for this special issue, we first desk-rejected 58 papers that are not relevant to HVA. Then, we rejected 22 papers that met the aims and scope of the CAER journal in general and the special issue in particular, but were of poor overall quality. Of 40 papers sent for external review, 23 were invited to revise and resubmit to the special issue and 5 were rejected at this stage. Finally, 18 papers were accepted for publication in the special issue.

2.3 Selected presentations

The guest editors from Lincoln University (New Zealand) and the Asian Development Bank Institute (ADBI) (Japan) co-organised an in-person international conference on "*Innovations for Sustainable Agriculture and Rural Development*" on 22–25 September 2025. The special issue "*HVA for Rural Transformation: Practices, Impacts, and Policy Implications*" was organized as a session on 22 September 2025 (Day 1) at the conference. ADBI provided both physical and financial support for the conference. The guest editors invited 23 authors to present at the conference and 17 ultimately committed to present their papers. Because this special issue is collaborated with the CAER, a journal published in association with China Agricultural University (CAU) (Beijing, China) and the Chinese Association for Agricultural Economics, we invited four staff members who represented the CAER journal and CAU to attend the conference and to serve in various roles at the conference, including session chairs and speakers. These included Prof. Baozhong Su (Editorial Co-ordinator & Executive Editor of CAER), Prof. Qihui Che (Associate Editor of CAER), Dr Yitian Xiao (Editorial Assistant of CAER) and Assoc. Prof. Xiaoshi Zhou.

Each of the 17 presentations was allocated 20 min. Speakers delivered a 15-min overview of their manuscripts, followed by a 5-min open discussion with other conference participants. This well-structured format fostered meaningful knowledge exchange among presenters and attendees. Notably, presenters benefited from the constructive feedback, which enabled them to enhance the quality of their manuscripts for potential publication.

3. Summary of published articles

As a result of a rigorous double-anonymised reviewing process, the special issue accepted 18 papers for publication. These papers collectively examine how HVA contributes to rural transformation across developing countries by analyzing farmers' participation decisions, productivity and income effects, inequality and poverty outcomes and the roles of institutions, mechanization, non-farm employment, information and policy interventions in shaping sustainable and inclusive agricultural development.

3.1 General HVA

Understanding whether HVA and related rural transformation pathways can deliver broad-based and inclusive development is central to contemporary development policy, as growth that is not inclusive risks leaving disadvantaged regions and households behind. This special issue brings together five papers that examine the distributional and structural implications of HVA across diverse country contexts. Specifically, one paper focuses on how HVA-driven transformation influences rural poverty outcomes in Indonesia. Three papers provide complementary county- and household-level evidence from China on the redistributive consequences of HVA development, with particular attention to the urban–rural income gap and intra-rural inequality. The final paper examines how non-farm employment interacts with HVA participation in Nepal.

3.1.1 HVA-driven structural transformation and rural poverty. Shalahuddin *et al.*'s (2026) paper, "*The Proximity-Poverty Dynamic: High-value Agriculture, Infrastructure, and Rural Development in Indonesia*", investigates whether proximity to HVA export clusters reduces rural poverty in Indonesia and how local infrastructure conditions shape this relationship, explicitly challenging the conventional "growth-pole" assumption in rural development. The authors construct a novel dataset that combines geolocated HVA-exporting firms (identified from TradeMap and Google Maps), village-level administrative poverty records (PODES, 2021) and detailed road-network data from OpenStreetMap, covering virtually all Indonesian villages. Methodologically, the study applies a multi-stage spatial–econometric strategy, including hot-spot detection (Getis–Ord Gi*), network-based distance measures and a doubly robust Inverse Probability Weighted Regression Adjustment (IPWRA) model to address

selection bias and non-linearities, complemented by interaction and threshold analyses. The key findings reveal a proximity–poverty paradox: villages located closer to HVA export clusters exhibit higher, rather than lower, poverty levels, consistent with enclave-style development and endogenous firm location in low-cost, disadvantaged areas. However, improved road infrastructure significantly attenuates this adverse association, especially in Indonesia's less-developed outer islands, indicating that connectivity can convert enclave risks into more inclusive outcomes. Overall, the paper cautions against one-size-fits-all HVA-led growth strategies and highlights the need for place-based, infrastructure-complementing policies to ensure that agricultural modernization translates into inclusive rural development.

3.1.2 HVA development and urban–rural income gap. Li *et al.*'s (2026) paper, "*From Clusters to Transformation: How High-Value Agricultural Clusters Narrow the Urban–Rural Income Gap in China*", examines whether and how the development of high-value agricultural (HVA) clusters contributes to narrowing the urban–rural income gap in China from the perspective of the entire industry chain. The study uses balanced panel data on 1,200 Chinese counties for 2014–2022, combining policy information on nationally supported HVA clusters with socioeconomic and structural indicators. It exploits the staggered rollout of HVA cluster policies as a quasi-natural experiment and applies a staggered difference-in-differences (DID) framework with county fixed effects and city–year interactive fixed effects. The results show that HVA cluster development significantly reduces the urban–rural income gap, with an average decline of about 1.7% relative to non-cluster counties. Mechanism analyses reveal that this effect primarily operates by improving agricultural technological levels, extending industrial supply chains and cultivating agricultural product brands. Further heterogeneity analyses indicate that the income-gap-narrowing effect is stronger in eastern regions and in areas with higher levels of financial development. Overall, the findings highlight the pivotal role of HVA clusters in promoting rural industrial upgrading, increasing farmers' incomes and advancing inclusive agrarian transformation in China.

Guo *et al.*'s (2026) paper, "*Can High-value Agriculture Narrow the Urban-Rural Income Gap? A Policy-based Evidence from China*", investigates whether and how HVA can narrow the urban–rural income gap (URIG) in China, using the implementation of the Characteristic Agricultural Product Advantageous Areas (CAPAs) policy as a quasi-natural experiment. The authors employ a staggered difference-in-differences (DID) model with two-way fixed effects, supplemented by event-study analyses, robustness checks and mechanism regressions to analyze an unbalanced county-level panel dataset covering 1,723 counties from 2014 to 2022. The key findings show that CAPAs significantly reduce the URIG by increasing rural incomes rather than affecting urban incomes. This effect operates mainly through production factor empowerment (retaining higher-quality local labor and increasing agricultural capital investment), agricultural branding (enhancing geographical product brands and rural brand innovation) and upgrading agricultural entities (promoting cooperatives and leading agribusinesses). Moreover, the income-equalizing effect is heterogeneous: CAPAs focused on grain and economic crops, as well as livestock, significantly narrow the URIG; forestry-oriented CAPAs tend to widen it; and horticultural and aquatic CAPAs show insignificant effects. Finally, the policy impact is substantially stronger in regions with complementary institutions such as socialized agricultural services, rural e-commerce, agricultural credit and insurance, highlighting the importance of policy synergies in leveraging HVA for inclusive rural development.

Wang *et al.*'s (2026) paper, "*Does High-value Agriculture Exacerbate Rural Household Income Inequality? Evidence from China's National Advantageous Agricultural Product Zones Policy*", examines whether the promotion of HVA exacerbates rural household income inequality in China, using the National Advantageous Agricultural Product Zones (NAAPZ) policy as a quasi-natural experiment. The analysis is based on four waves (2016–2022) of household panel data from the China Family Panel Studies (CFPS), merged with county-level information on the phased rollout of the NAAPZ policy, yielding more than 29,000 household–year observations. The study employs a staggered difference-in-differences

framework combined with a double machine learning (DML) estimator, allowing for flexible control of high-dimensional household and regional covariates and addressing potential model misspecification. The key findings show that the NAAPZ policy significantly increases rural household income inequality, as measured by the Kakwani index. Mechanism analyses reveal that better-educated, digitally connected households and those located in township or county centers disproportionately benefit through entrepreneurship and non-farm employment opportunities, consistent with elite capture and core–periphery dynamics. Further heterogeneity analysis indicates that crop-oriented and city-level NAAPZ programs are associated with stronger inequality effects, while livestock-oriented and county-level initiatives show no significant impact. Overall, the paper highlights a policy paradox: while HVA promotion supports agricultural upgrading, it may unintentionally widen intra-rural income disparities if complementary inclusive measures are not in place.

3.1.3 Non-farm employment, mechanism constraint and HVA participation. Chen *et al.*'s (2026) paper, "*Facilitating or Inhibiting? The Impact of Non-Farm Employment on High-value Agriculture Participation in Nepal*", examines whether non-farm employment facilitates or inhibits rural households' participation in HVA in Nepal, with particular attention to the role of agricultural mechanization as an underlying mechanism. The analysis uses nationally representative microdata from Nepal's National Sample Census of Agriculture 2021/22, covering more than 330,000 rural farm households. The study applies a two-stage residual inclusion (2SRI) model to address endogeneity in non-farm employment decisions, combined with Sobel mediation tests, interaction models and heterogeneity analyses across terrain, income structure and HVA crop categories. The key findings show that non-farm employment significantly reduces the likelihood of HVA adoption, lowers HVA land-use intensity and decreases crop diversity, reflecting binding labor and supervision constraints. However, agricultural mechanization strongly promotes HVA participation and partially mediates these negative effects, weakening or even offsetting the adverse influence of non-farm employment. Heterogeneity analyses further reveal that the inhibitory effects are strongest in hill and mountain areas and for labor-intensive HVA crops, highlighting the importance of context-specific, mechanization-supported strategies for inclusive HVA development in Nepal.

3.2 Crop- and system-specific HVA

3.2.1 Fruits and vegetables. HVA encompasses a wide range of crop systems that differ markedly in production technologies, risk exposure, market characteristics and behavioral constraints, implying that pathways toward sustainable and inclusive transformation are inherently crop-specific. Reflecting this diversity, four papers in this special issue examine farmers' decision-making across distinct HVA systems in China – pears, grapes, bananas and vegetables – each highlighting a critical stage of the agricultural value chain and a corresponding behavioral mechanism.

Liu *et al.*'s (2026) paper, "*Natural Enemies, Farmer Cognition, and Pesticide Use: Micro Evidence from China's Pear Producing Regions*", investigates how natural enemies, as an ecological control input, influence farmers' pesticide use behavior in high-value pear production and how this relationship is conditioned by farmer cognition and risk attitudes. The study draws on original micro-level data from 327 pear farmers across three major producing provinces in China (Hebei, Shandong and Hubei), combining household surveys, orchard-level ecological monitoring and an incentivized lottery experiment to elicit farmers' risk preferences. The authors employ ordinary least squares regression models with interaction terms, using pesticide expenditure per mu and spraying frequency as outcome variables, with clustered standard errors and robustness checks including alternative cognition measures and ecological indicators. The results show that higher farmer cognition significantly reduces pesticide costs and application frequency. At the same time, natural enemy density alone does not lower pesticide use unless farmers recognize and trust its ecological role. Importantly,

natural enemies positively moderate the effect of cognition, amplifying pesticide reductions among more ecologically aware farmers. In contrast, risk-averse farmers spray more frequently, reflecting precautionary behavior in the face of uncertainty. Overall, the findings highlight that effective reduction of pesticide dependence in high-value orchard systems requires not only improving ecological conditions but also strengthening farmers' cognitive capacity and behavioral responses, with important implications for ecological extension and sustainable pest management.

Yu *et al.*'s (2026) paper, "*How Neighbourhood Effects Shape Farmers' Grape Storage Decisions: The Moderating Role of Risk Aversion*", investigates how neighbourhood effects influence farmers' storage decisions for high-value agricultural products, using grape growers in China as a case study, with particular attention to the moderating role of risk aversion and heterogeneous storage motives. The study is based on original field survey data collected in 2022 from 627 grape growers in Beizhen City, Liaoning Province. Methodologically, it employs Probit and Tobit models to analyse farmers' storage participation and storage quantity, supplemented by instrumental-variable estimations, robustness checks and interaction models to address endogeneity and moderation effects. The key findings show that both neighbourhood storage behaviour and neighbourhood e-commerce participation significantly and positively affect farmers' likelihood of storing grapes and the amount stored. However, risk aversion weakens these positive neighbourhood effects, indicating that more risk-averse farmers are less responsive to social signals. Further heterogeneity analysis reveals that neighbourhood storage behaviour has a stronger impact on distress-oriented storage farmers, while neighbourhood e-commerce participation plays a larger role for strategic, opportunity-oriented farmers. Overall, the paper highlights the importance of social networks and behavioural traits in shaping value-enhancing storage decisions for HVA, and provides policy insights to improve post-harvest management and market stability.

Huang *et al.*'s (2026) paper, "*Information Intervention Effects on Farmers' Adaptation to Climate Change: A Randomized Controlled Trial among Banana Farmers in China*", investigates whether and how climate information interventions delivered through short-form videos affect farmers' willingness to adopt climate adaptation strategies, using banana farmers in China as a case study. The study is based on primary survey data collected from 261 banana farmers in Hainan Province, China, during 2024, who were randomly assigned to a control group or one of two treatment groups. The authors employ a Negative Binomial Regression model to analyze the count-based intensity of farmers' willingness to adopt, and complement it with a mediation model to test the role of climate cognition. The results show that both types of information intervention significantly increase farmers' willingness to adopt climate adaptation strategies, with crop-specific interventions having a slightly stronger effect. In particular, farmers receiving crop-specific and general climate information exhibit adoption willingness levels that are 55.3% and 53.7% higher, respectively, than those in the control group. Further analysis reveals that climate cognition plays a significant mediating role and that female farmers respond more strongly to information interventions. Overall, the findings highlight the effectiveness of targeted, digitally delivered climate information in promoting adaptive capacity among smallholder farmers and offer important policy implications for climate-smart agricultural extension.

Qiu *et al.*'s (2026) paper, "*The Impact of Government Agricultural Training on Fertilizer and Pesticide Expenditures among Vegetable Farmers in China*", examines whether government agricultural training can promote the dual reduction of fertilizer and pesticide expenditures among vegetable farmers in China and thereby support the sustainable transformation of HVA. The analysis uses four waves (2019–2022) of the Rural Fixed Observation Points Survey (RFOPS) administered by China's Ministry of Agriculture and Rural Affairs, covering thousands of vegetable-farming households across 31 provinces. The study applies a two-way fixed effects panel model, complemented by robustness checks using PSM–DID, alternative training measures and instrumental-variable (IV) estimations, as well as detailed mechanism and heterogeneity analyses. The key findings show that participation in

government agricultural training significantly reduces fertilizer and pesticide expenditures by about CNY 210 and CNY 133 per mu, respectively, while also lowering total production costs and increasing farm and household incomes. Mechanism analyses reveal that these effects operate mainly through greater participation in efficiency-driven production modes (such as cooperatives and mechanized operations) and increased adoption of green production technologies (including precision irrigation, soil testing, formulated fertilization and conservation tillage). Moreover, the training effects are stronger among less educated, full-time, non-elderly and larger-scale farmers, underscoring the importance of targeted training programs to advance environmentally sustainable, economically viable high-value vegetable production in China.

3.2.2 Leaf crops. HVA systems are increasingly expected to deliver not only economic returns but also environmental sustainability and climate resilience, particularly in developing countries where smallholders face multiple production and institutional constraints. Using smallholder tea cultivation in Sri Lanka as a representative high-value agricultural system, four papers in this special issue provide complementary micro-level evidence on how household decision-making, collective organization, extension services and climate-smart practices shape sustainable and resilient outcomes.

Shen *et al.*'s (2026) paper, "*Women's Decision-Making Power and Its Impact on Input Use and Economic Returns: Evidence from Sri Lanka's Tea Sector*", examines how women's decision-making power affects input use and economic returns in Sri Lanka's smallholder tea sector, a representative high-value agricultural system. The study relies on original household survey data collected in 2025 from 678 tea-producing households across Sri Lanka's up-, mid- and low-country regions. It applies a Conditional Mixed Process (CMP) model, combining a fractional Probit specification for decision-making power with outcome equations for inputs and returns and uses district-level female Internet use as an instrumental variable, complemented by robustness checks using propensity score matching and heterogeneity analysis by farm size. The results show that greater women's decision-making power significantly increases fertilizer and pesticide expenditures, particularly among small farms and is also associated with higher tea yields and revenues, with income effects being more pronounced on larger farms. Overall, the findings suggest that empowering women enhances managerial effectiveness and economic performance in high-value tea production, while also underscoring the need for gender-sensitive training in sustainable input management to balance productivity and environmental concerns.

Zhang *et al.*'s (2026) paper, "*Driving Sustainable Tea Production: How Cooperative Membership Influences the Adoption of Environmentally Friendly Practices in Sri Lanka*", investigates how agricultural cooperative membership influences the adoption of environmentally friendly practices (EFPs) among smallholder tea farmers in Sri Lanka. The analysis is based on original household survey data from 745 tea-farming households, collected across Sri Lanka's up-country, mid-country and low-country regions in 2025. The study employs a Conditional Mixed Process (CMP) model with an instrumental variable – local cooperative availability – to correct for endogeneity and it is also further supplemented with robustness checks, heterogeneity analysis by income group and mediation analysis. The key findings show that cooperative membership significantly increases the likelihood of adopting all three EFPs and raises the number of EFPs adopted, with particularly strong effects among low-income farmers. Mechanism results indicate that price satisfaction partially mediates this relationship, highlighting the importance of market incentives alongside knowledge diffusion and credit access. Overall, the paper demonstrates that cooperatives play a crucial, pro-poor role in promoting environmentally sustainable practices in high-value tea production systems.

Hu *et al.*'s (2026) paper, "*The Dedicated Agricultural Extension Service and Adoption of Climate-Smart Agriculture Practices: Evidence from Smallholder Tea Farmers in Sri Lanka*", investigates whether and how dedicated agricultural extension services (DAES) promote the

adoption of climate-smart agriculture (CSA) practices among smallholder tea farmers in Sri Lanka. The empirical analysis is based on original cross-sectional survey data from 785 smallholder tea households, collected in 2025 across Sri Lanka's up-country, mid-country and low-country tea-growing regions. The study employs an instrumental-variable-based two-stage residual inclusion (2SRI) model combined with an ordered-response framework. It supplements the analysis with disaggregated, robustness (PSM and IPWRA) and practice-specific estimations. The key findings show that DAES significantly increases the number of CSA practices adopted and positively affects mulching, soil conservation and agroforestry, though it has no impact on cover cropping. The effects are stronger for elderly farmers, asset-poor households and small- and large-scale farmers and easier access to agricultural specialists further enhances CSA adoption. Overall, the paper highlights the critical role of personalized, accessible extension services in accelerating climate-smart transitions in high-value tea production systems in developing countries.

Li's (2026) paper, "*Adoption of Climate-Smart Agriculture Practices and Climate Resilience in Teal Cultivation: Micro-level Evidence from Sri Lanka*", examines whether and how the adoption of climate-smart agricultural (CSA) practices enhances the climate resilience of HVA, using smallholder tea cultivation in Sri Lanka as a representative case. The analysis relies on original survey data from 753 smallholder tea farmers across Sri Lanka's up-country, mid-country and low-country tea-growing regions. Methodologically, the study employs a Conditional Mixed Process (CMP) model to jointly estimate CSA adoption intensity and climate resilience outcomes while addressing both observed and unobserved endogeneity, using peer climate change perceptions as an instrumental variable. The results show that adopting more CSA practices significantly reduces both the likelihood and magnitude of climate-induced tea yield losses: one additional CSA practice lowers yield-loss incidence by about 16.4% and reduces yield loss by roughly 90 kg per acre. Further analyses indicate that these resilience-enhancing effects are stronger among elderly farmers and those operating medium-to-large farms and that CSA adoption also reduces drought and flood incidence and excessive fertilizer use. Overall, the findings highlight the critical role of CSA practices in strengthening the climate resilience of high-value agricultural systems and provide strong policy support for scaling up CSA adoption in tea-producing regions vulnerable to climate change.

3.2.3 Tube and industrial crops. HVA spans a wide spectrum of products, ranging from innovation-intensive inputs embedded in global trade networks to perennial cash crops marketed primarily through domestic institutions, each facing distinct constraints and opportunities. Reflecting this diversity, two papers in this special issue examine the determinants and consequences of market integration in different HVA systems.

Lee *et al.*'s (2026) paper, "*Gravity of Innovation: How R&D Capacity and Climate Suitability Shape International Seed Potato Trade*", investigates how climate suitability and agricultural R&D capacity jointly shape international trade in seed potatoes, a high-value and innovation-intensive agricultural input, to uncover whether R&D acts as a complement to or substitute for trade under different agro-ecological conditions. The study constructs a large bilateral panel dataset covering 556,094 country–pair–year observations across 24,178 country pairs from 2000 to 2022, combining UN Comtrade seed potato trade data with climate variables, agricultural R&D expenditure and standard gravity controls. It applies a structural gravity model estimated using Poisson Pseudo-Maximum Likelihood (PPML) with high-dimensional fixed effects, incorporating interaction terms between CSI and R&D to capture climate-contingent effects. The key findings show that importer-side agricultural R&D significantly increases seed potato imports, reflecting its role as absorptive capacity. Still, this effect weakens and turns negative as climate suitability improves, indicating a shift toward domestic self-sufficiency in climatically favorable regions. Export performance, by contrast, is driven primarily by agro-ecological endowments rather than R&D. Overall, the results demonstrate that climate suitability and innovation capacity interact in shaping global seed potato trade and imply that one-size-fits-all seed system and R&D policies are unlikely to be

effective, underscoring the need for climate-specific and context-dependent strategies in high-value agricultural development.

Sendhil *et al.*'s (2026) paper, "*Determinants of Marketing Channel Selection by High-Value Natural Rubber Producers in India: Evidence from a Large-Scale Household Survey*", examines the determinants of marketing channel selection among high-value natural rubber producers in India and assesses how different channel choices affect price realization and household welfare. The analysis uses nationally representative unit-level data from the 77th Round of the NSSO Situation Assessment Survey (2019), drawing on a cleaned sample of 1,085 rubber-growing households across six Indian states. The study employs a Multinomial Logit (MNL) model to analyse channel choice, followed by a Multivalued Treatment Effect (MVT) approach – implemented through doubly robust estimators – to estimate the causal impacts of different channels on prices and welfare outcomes. The key findings show that although most rubber producers sell through local markets due to convenience, cluster-based marketing channels offer significantly higher prices (about 7–8%) and substantially higher household consumption expenditure (around 20%), while private and government channels are associated with lower returns. Education, farm size, caste, access to extension services, FPO membership and participation in rural employment schemes significantly influence channel choice. Overall, the paper highlights the welfare-enhancing potential of collective, cluster-based marketing for high-value rubber producers and underscores the importance of strengthening farmer organizations and market institutions to improve smallholder livelihoods.

3.2.4 Animal husbandry. High-value livestock agriculture plays an increasingly important role in food security, income generation and environmental sustainability. Yet, its performance and resilience depend critically on production organization, factor intensification and exposure to climate and land constraints. Reflecting this diversity, two papers in this special issue examine high-value livestock systems from distinct but complementary angles.

Hua *et al.* 's (2026) paper, "*The Capitalization of China's Pig Industry and its Impact on Green Total Factor Productivity*", examines how capitalization in China's pig industry affects green total factor productivity (GTFP), to uncover both the magnitude of this effect and the underlying mechanisms across different farm scales. The study uses provincial panel data from 2016 to 2023 covering pig farms of different sizes across China and draws on multiple official data sources, including cost–income statistics, pollution coefficients and fiscal and industrial indicators. The authors first measure GTFP using a global super-efficiency SBM model with undesirable outputs and a Malmquist–Luenberger index and then estimate the impact of capitalization using two-way fixed-effects models, complemented by moderation models, panel threshold models and extensive robustness checks (including dynamic system GMM and quantile regressions). The key findings show that capitalization significantly enhances GTFP on large- and medium-scale pig farms but has no statistically significant effect on small-scale farms. Mechanism analysis reveals that industrial agglomeration and government support strengthen the positive effect of capitalization, particularly for large-scale farms, while threshold results indicate a nonlinear, increasing marginal effect of capitalization for medium-scale farms once a critical level is reached. Overall, the paper highlights that capitalization can be an effective driver of green productivity in pig farming, but its benefits are highly scale-dependent, underscoring the need for differentiated and targeted policies to support inclusive and sustainable livestock transformation in China.

Mohapatra *et al.*'s (2026) paper, "*Climate and Land Use Dynamics in India's Livestock Industry*", examines how climate variability and land-use change jointly shape production and population dynamics in India's high-value livestock sector, with a particular focus on vulnerable rainfed mixed systems. The study uses a rich panel dataset covering 301 districts across 15 Indian states over 1990–2017, compiled from ICRISAT and multiple official sources. It employs a System Generalised Method of Moments (System GMM) estimator, complemented by PCSE and Driscoll–Kraay robustness checks, to estimate both short- and long-run elasticities. The key findings show that forest cover and pastureland significantly boost milk production and non-poultry livestock populations, with strong complementarity

effects, while fodder availability enhances meat output and poultry numbers. Climate variables display pronounced nonlinear impacts: temperature follows an inverse-U relationship, with optimal productivity around 33–35 °C; rainfall deviations significantly reduce meat and egg output and livestock populations; and moderate evapotranspiration supports productivity up to critical thresholds. Rising income and population density further drive livestock expansion through demand effects. Overall, the paper highlights that sustaining high-value livestock production under climate change requires integrated land management, feed security and climate-adaptive policies, rather than isolated interventions.

3.2.5 Integrate HVA system. HVA increasingly extends beyond single-crop systems to integrated and information-intensive production models, where managing both output performance and production risk is central to farmers' livelihoods. Reflecting this evolution, one paper in this special issue focuses on high-value shrimp–rice co-culture systems in China, a representative form of integrated HVA that combines aquaculture and crop production while exposing farmers to heightened technical and market risks.

Zhu *et al.*'s (2026) paper, "*Combinations of Information Sources and the Output and Risks in High-Value Rice: Evidence from Shrimp–Rice Co-Culture Systems*", investigates how farmers' combinations of information sources affect output performance and production risk in high-value shrimp–rice co-culture rice (SRR) systems in China. The study uses original household survey data from 1,624 shrimp–rice co-culture farmers collected across 16 counties in Hubei Province over three waves (2021, 2023 and 2024). It first estimates SRR output and risk using a flexible stochastic production function estimated via moment methods. Then it employs a Multinomial Endogenous Switching Regression (MESR) model to identify causal effects and average treatment effects across different information combinations. The key findings show that, relative to relying solely on public-sector information, farmers who combine digital platforms with either public-sector or neighbor information achieve significantly higher output, lower volatility and reduced downside risk, while only young and well-educated farmers benefit fully from integrating all three sources. Overall, the paper highlights the importance of strategic information integration for stabilizing and enhancing performance in complex, high-value agricultural systems such as shrimp–rice co-culture.

4. Summary of key policy implications

The 18 HVA-focused studies in this special issue collectively show that HVA can be a powerful pathway for rural transformation – raising incomes, extending value chains and narrowing urban–rural gaps – but that its distributional outcomes are highly contingent on who can participate and where value is captured. Across contexts, the evidence suggests that HVA upgrading may widen intra-rural inequality, as better-educated, digitally connected, or geographically advantaged households are more able to access modern markets, finance, information and entrepreneurship opportunities, while remote and resource-constrained farmers face higher entry barriers. The policy implications developed from the key findings of the papers in the special issue are presented below.

4.1 Designing inclusive policy frameworks for HVA-led rural transformation

Evidence from China shows that HVA expansion – through clusters and regionally specialized production – can significantly reduce rural poverty and narrow the urban–rural income gap by enhancing productivity, extending value chains and strengthening agricultural branding. However, the Indonesian case cautions that proximity to HVA export clusters does not automatically translate into local welfare gains and may even exacerbate poverty in the absence of adequate infrastructure and local linkages. These findings suggest that policymakers should move beyond one-size-fits-all, growth-pole strategies and instead adopt context-specific approaches that combine HVA promotion with investments in rural connectivity, inclusive value-chain integration and local employment generation.

While HVA policies raise average incomes, household-level evidence from China indicates that benefits may disproportionately accrue to better-educated, digitally connected and geographically advantaged households, thereby widening intra-rural inequality. The findings highlight the need for inclusive targeting mechanisms, such as differentiated subsidies, pro-poor cooperative support and capacity-building programs for smallholders, remote farmers and labor-constrained households. Without such measures, HVA-led modernization risks reinforcing elite capture and spatial polarization.

Evidence from Nepal demonstrates that non-farm employment can crowd out HVA participation by tightening labor and supervision constraints, especially for labor-intensive crops and in mountainous regions. At the same time, agricultural mechanization emerges as a key mediating mechanism that can offset these constraints and enable households to remain engaged in HVA. These findings highlight that policies should promote accessible and service-based mechanization models, particularly for smallholders and terrain-constrained regions, rather than relying solely on ownership-based approaches.

4.2 Designing behavior-smart and inclusive policies for HVA

Evidence from China's fruit and fresh-produce sectors shows that farmers' cognition, information access and risk perceptions critically shape both production and post-harvest decisions. Higher ecological cognition in pear farming significantly reduces pesticide use – especially where natural enemies are abundant – while risk aversion leads to precautionary over-spraying; similarly, crop-specific climate information delivered through short-form videos effectively enhances banana farmers' willingness to adopt climate adaptation by improving climate cognition and social learning in grape production promotes storage and value retention, albeit with weaker effects among more risk-averse farmers. Taken together, these findings imply that policies for HVA should move beyond technology- or infrastructure-centric approaches and prioritize behaviorally informed, differentiated interventions: integrating nature-based solutions with ecological literacy training, scaling low-barrier digital and locally tailored climate advisories and complementing cold-chain investments with "soft" institutions such as demonstration farmers, cooperative-led services and risk-reducing market mechanisms. Such an integrated approach can lower cognitive and perceived-risk barriers, ensure wider and more equitable uptake of green and climate-smart practices, and enhance both environmental sustainability and value-chain resilience.

Evidence from national panel data in China shows that government-provided agricultural training can achieve "dual reductions" in both fertilizer and pesticide use among vegetable farmers by accelerating the adoption of green technologies and efficiency-enhancing services such as mechanized and socialized operations. However, these benefits are significantly stronger among better-educated, younger, full-time and larger-scale producers, indicating that the impacts of training are highly uneven across farmer groups. This pattern implies that while agricultural training is a powerful policy instrument for promoting sustainable intensification in HVA, its current design risks reinforcing intra-rural inequality. To ensure broader and more equitable gains, policymakers should redesign training systems to be more inclusive – shifting toward modular, field-based and service-linked programs tailored to smallholders and elderly farmers and pairing training with complementary support such as service vouchers or targeted cost-sharing – so that disadvantaged farmers can translate knowledge into practice rather than being left behind in the transition toward greener production.

4.3 Designing institutional and climate-aligned pathways for sustainable HVA

Household-level evidence from Sri Lanka's high-value tea sector shows that sustainability transitions are most effective when institutions, incentives and services move together: cooperative membership and dedicated agricultural extension services (DAES) substantially increase adoption of environmentally friendly and climate-smart practices, with the largest gains among low-income, elderly and asset-constrained farmers and with price satisfaction

mediating these effects – signaling that market rewards and collective services are complementary. These findings imply that governments should treat cooperatives and DAES as core "delivery platforms" for green transformation by expanding inclusive membership, upgrading cooperatives' capacity to provide credit and technical support, improving last-mile access to specialists and aligning tea pricing and quality premiums with verified environmental performance so that sustainability remains economically attractive for poorer households. Additional evidence from Sri Lanka indicates that adopting more climate-smart practices sharply reduces both the incidence and magnitude of climate-induced yield losses, delivering sizable resilience and income payoffs; this points to high returns from targeted climate adaptation in HVA when policies bundle "software" (training, risk communication, digital climate services, peer learning) with "hardware" (secure land tenure, better land-transfer governance and specialist access) to enable confident, long-term investment. Finally, gender-responsive policy design is essential: while women's decision-making power raises yields and revenues, it can also increase chemical input use – especially on smaller farms – implying a two-handed approach that expands women's agency and market access while scaling gender-sensitive IPM and sustainable input training to avoid unintended health and environmental risks.

The findings show that climate suitability is the primary driver of international seed potato competitiveness, while agricultural R&D plays an asymmetric but strategic role: in climatically constrained countries, higher R&D strengthens absorptive capacity and significantly increases seed potato imports (by about 20–23%), facilitating access to advanced genetics and embedded technologies, whereas in climatically favorable countries, R&D reduces import dependence by enhancing domestic self-sufficiency. From a government perspective, these findings imply that seed policy should explicitly align R&D investment with agro-ecological endowments: countries with poor climate suitability should prioritize R&D that supports testing, certification and effective use of imported seed, alongside trade facilitation and quality infrastructure, while countries with favorable climates should channel R&D toward breeding, disease control and controlled-environment seed production to build export capacity. In addition, the strong role of precipitation as a binding climatic constraint highlights the need for climate adaptation policies – such as targeted breeding and resilient production systems – to safeguard seed supply under climate change. Overall, the results suggest that seed potato trade is not merely a market outcome but a policy lever for food security and technological diffusion, requiring coordinated investments in climate-informed R&D, certification systems and trade institutions to strengthen the resilience of high-value agricultural input systems.

4.4 Designing scale-sensitive and climate-resilient policies for livestock in HVA

Evidence from China's pig sector suggests that "capitalization" can be an important pathway to greener productivity growth – but only once farms reach a viable scale. Capitalization significantly raises green total factor productivity (GTFP) in large- and medium-scale pig farms, while effects for smallholders are statistically insignificant; moreover, industrial agglomeration and government support further strengthen capitalization's productivity gains and marginal effects rise nonlinearly for medium farms. These findings imply that policymakers should avoid uniform "scale-up" mandates and instead (1) prioritize financing, infrastructure and compliance support for farms that have crossed basic organizational/scale thresholds (2) use cluster-based planning (e.g. environmentally managed livestock zones), to leverage agglomeration spillovers and (3) deploy differentiated instruments for smallholders – such as contract production, shared manure treatment and service outsourcing – so that environmental upgrading does not become an exclusionary barrier.

Finally, India's livestock evidence shows land-use buffers (forest cover, pasture, fodder area) materially support livestock outputs and populations, while climate variability creates nonlinear temperature effects and strongly negative impacts from rainfall deviations on meat/

egg output over the long run. These combined findings suggest a coherent policy package: strengthen collective marketing institutions and price-risk management tools; invest in seed regulation, varietal testing and climate-contingent R&D that complements (rather than replaces) trade where ecological constraints bind; and mainstream "nature-based" forage and landscape strategies (fodder systems, pasture restoration, agroforestry/forest buffers) as part of climate-resilient livestock and HVA planning.

4.5 Designing complementary information systems for sustainable HVA

Evidence from China's shrimp–rice co-culture shows that sustainable intensification hinges not only on technology but also on how farmers combine information channels. Relative to relying only on public information, integrating public-sector guidance with digital platforms delivers the strongest synergy – boosting output while reducing volatility and downside risk – whereas combining three sources can reduce risk without necessarily raising output, partly due to information redundancy; the benefits also differ by education, age, part-time status, social capital and farm scale. These results suggest policies should move beyond "more information is better" and instead build curated, complementary information ecosystems: strengthen authoritative public extension for green production standards, embed real-time weather/pest/price services into trusted digital tools and design tiered digital-plus-extension packages for older, less educated and part-time farmers who face binding cognitive and time constraints.

5. Concluding remarks

This special issue advances our understanding of HVA as a multifaceted and increasingly central pathway of rural transformation in Asia – one that can generate substantial welfare gains, but also carries risks of uneven inclusion and sustainability trade-offs. Across diverse contexts and commodities, the papers in this special issue collectively show that HVA can substantially reduce poverty, narrow income gaps and contributes in achieving higher economic status for the economy. Many Asian countries could pursue HVA to improve rural livelihoods while contributing to economic growth and prosperity. Still, their benefits are highly uneven and strongly conditioned by place, infrastructure, institutions and household capabilities. Farmer cognition, social networks and risk attitudes shape input reduction, post-harvest decisions and climate adaptation in China's fruit and vegetable systems. Women's empowerment, cooperative membership and dedicated extension services strengthen the adoption of environmentally friendly, climate-smart practices in the high-value tea sector, thereby improving resilience and performance. Innovation capacity, climate suitability, capital intensity and land–climate dynamics jointly shape competitiveness and green productivity in seed potato trade and high-value livestock systems, reinforcing the need for differentiated policies across HVA types and production environments. Productivity and sustainability gains in high-value livestock systems are highly conditional, while climate variability and land-use complementarities nonlinearly govern livestock output. Beyond single-crop systems, evidence from shrimp–rice co-culture underscores that strategic combinations of information sources can simultaneously raise output and reduce downside risks, but also reveals an emerging "capability gap" in digital integration. Finally, taken together, the findings caution against one-size-fits-all HVA strategies and instead point to an integrated policy agenda that combines targeted infrastructure and market institutions, inclusive human capital and organizational support and climate-smart and green transitions – so that HVA-driven growth is not only faster but also fairer and more resilient.

Acknowledgments

We want to thank all the authors who submitted papers to the special issue and the reviewers who reviewed the manuscripts on time. We acknowledge the Asian Development Bank Institute (ADBI) for

supporting the in-person international conference, "*Innovations for Sustainable Agriculture and Rural Development*," held on 22–24 September 2025. Special thanks to Dr Raja Rajendra Timilsina (ADBI), Prof. Qihui Chen (CAU), Prof. Tetsushi Sonobe (National Graduate Institute for Policy Studies (GRIPS), Japan), and Prof. Baozhong Su (CAU), who chaired the conference sessions. We also appreciate the ADBI supporting team (Mami Nomoto, Chiisye Toki, and Dr Ngawang Dendup) and other conference participants who contributed substantially to the conference.

References

Bennike, R.B., Nielsen, M.R. and Smith-Hall, C. (2025), "Do high-value environmental products provide a pathway out of poverty? The case of the world's most valuable fungus (Ophiocordyceps sinensis)", *Environmental Development*, Vol. 56, 101281, doi: 10.1016/j.envdev.2025.101281.

Birthal, P.S., Joshi, P.K., Roy, D. and Thorat, A. (2013), "Diversification in Indian agriculture toward high-value crops: the role of small farmers", *Canadian Journal of Agricultural Economics*, Vol. 61 No. 1, pp. 61-91, doi: 10.1111/j.1744-7976.2012.01258.x.

Chen, C., Hua, C., Timilsina, R.R. and Hu, D. (2026), "Facilitating or inhibiting? The impact of non-farm employment on high-value agriculture participation in Nepal", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 548-570, doi: 10.1108/CAER-06-2025-0334.

Chidawanyika, F., Omuse, E.R., Agutu, L.O., Pittchar, J.O., Nyagol, D. and Khan, Z.R. (2025), "An intensified cereal push-pull system reduces pest infestation and confers yield advantages in high-value vegetables", *Journal of Crop Health*, Vol. 77 No. 1, p. 40, doi: 10.1007/s10343-024-01107-3.

Chongtham, I.R., Shahi, S., Chikkanjegowda, M., Boraiah, O. and Badiger, S.M. (2025), "The impact of shifting from subsistence to cash crops on the livelihoods of the Soliga tribe in India", *Current Agriculture Research Journal*, Vol. 12 No. 3, pp. 1106-1115, doi: 10.12944/CARJ.12.3.06.

Cramer, C., Di John, J. and Sender, J. (2022), "Classification and roundabout production in high-value agriculture: a fresh approach to industrialization", *Development and Change*, Vol. 53 No. 3, pp. 495-524, doi: 10.1111/dech.12708.

Guo, Z., Lu, M. and Su, L. (2026), "Can high-value agriculture narrow the urban-rural income gap? A policy-based evidence from China", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 503-521, doi: 10.1108/CAER-06-2025-0299.

Hailu, C., Canali, G. and Tabaglio, V. (2025), "High-value farm product transformation in contract marketing: evidence from smallholder farmers in central Ethiopia", *Environment, Development and Sustainability*. doi: 10.1007/s10668-025-06720-4.

He, J., Xiong, S. and Wang, Z. (2025), "Crop booms at subtropic frontiers: smallholder coffee production and agrarian change in Southwest China", *Journal of Rural Studies*, Vol. 118, February, 103672, doi: 10.1016/j.jrurstud.2025.103672.

Huang, E., Yang, Q., Sun, H. and Zhu, Y. (2026), "Information intervention effects on farmers' adaptation to climate change: a randomized controlled trial among banana farmers in China", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 617-637, doi: 10.1108/CAER-06-2025-0304.

Li, X., Xue, H. and Geng, X. (2026), "From clusters to transformation: how high-value agricultural clusters narrow the urban–rural income gap in China", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 482-502, doi: 10.1108/CAER-06-2025-0332.

Liu, Z., Wen, L. and Geng, X. (2026), "Natural enemies, farmer cognition and pesticide use: micro evidence from China's pear producing regions", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 571-596, doi: 10.1108/CAER-06-2025-0322.

Maertens, M., Minten, B. and Swinnen, J. (2012), "Modern food supply chains and development: evidence from horticulture export sectors in Sub-Saharan Africa", *Development Policy Review*, Vol. 30 No. 4, pp. 473-497, doi: 10.1111/j.1467-7679.2012.00585.x.

Narrod, C., Roy, D., Okello, J., Avendaño, B., Rich, K. and Thorat, A. (2009), "Public-private partnerships and collective action in high value fruit and vegetable supply chains", *Food Policy*, Vol. 34 No. 1, pp. 8-15, doi: 10.1016/j.foodpol.2008.10.005.

Qiu, Y., Li, J., Li, X. and Si, W. (2026), "The impact of government agricultural training on fertilizer and pesticide expenditures among vegetable farmers in China", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 638-661, doi: 10.1108/CAER-06-2025-0331.

Quisumbing, A.R., Rubin, D., Manfre, C., Waithanji, E., van den Bold, M., Olney, D., Johnson, N. and Meinzen-Dick, R. (2015), "Gender, assets, and market-oriented agriculture: learning from high-value crop and livestock projects in Africa and Asia", *Agriculture and Human Values*, Vol. 32 No. 4, pp. 705-725, doi: 10.1007/s10460-015-9587-x.

Rao, P.P., Birthal, P.S. and Joshi, P.K. (2006), "Diversification towards high value agriculture role of urbanisation and infrastructure", *Economic and Political Weekly*, Vol. 41 No. 6, pp. 2747-2753.

Roy, D. and Thorat, A. (2008), "Success in high value horticultural export markets for the small farmers: the case of Mahagrapes in India", *World Development*, Vol. 36 No. 10, pp. 1874-1890, doi: 10.1016/j.worlddev.2007.09.009.

Samoraj, M., Çalış, D., Trzaska, K., Mironiuk, M. and Chojnacka, K. (2024), "Advancements in algal biorefineries for sustainable agriculture: biofuels, high-value products, and environmental solutions", *Biocatalysis and Agricultural Biotechnology*, Vol. 58, April, 103224, doi: 10.1016/j.bcab.2024.103224.

Shalahuddin, A., Rajendra, M.A. and Massie, N.W.G. (2026), "The proximity-poverty dynamic: high-value agriculture, infrastructure and rural development in Indonesia", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 454-481, doi: 10.1108/CAER-06-2025-0329.

Tian, K., Dietzenbacher, E. and Jong-A-Pin, R. (2022), "Global value chain participation and its impact on industrial upgrading", *World Economy*, Vol. 45 No. 5, pp. 1362-1385, doi: 10.1111/twec.13209.

Tsolakis, N., Harrington, T.S. and Srai, J.S. (2023), "Leveraging automation and data-driven logistics for sustainable farming of high-value crops in emerging economies", *Smart Agricultural Technology*, Vol. 4, December 2022, 100139, doi: 10.1016/j.atech.2022.100139.

Wang, Y., Wang, B., Wang, X. and Bai, X. (2026), "Does high-value agriculture exacerbate rural household income inequality? Evidence from China's national advantageous agricultural product zones policy", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 522-547, doi: 10.1108/CAER-06-2025-0323.

Yu, X., Yang, X. and Sun, X. (2026), "How neighbourhood effects shape grape farmers' storage decisions: the moderating role of risk aversion", *China Agricultural Economic Review*, Vol. 18 No. 3, pp. 597-616, doi: 10.1108/CAER-06-2025-0301.