JAST (Journal of Animal Science and Technology) TITLE PAGE

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ARTICLE INFORMATION	Fill in information in each box below
Article Type	Review article
Article Title (within 20 words without abbreviations)	Policy Strategies for Overseas Grain Asset Acquisition and Domestic Supply Integration in South Korea: A Review
Running Title (within 10 words)	Policy Strategies for Overseas Grain Assets and Domestic Supply Integration
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Competing interests	No potential conflict of interest relevant to this article was reported.
Funding sources State funding sources (grants, funding sources, equipment, and supplies). Include name and number of grant if available.	Not applicable.
Acknowledgements	Not applicable.
Availability of data and material	Upon reasonable request, the datasets of this study can be available from the corresponding author.
Authors' contributions Please specify the authors' role using this form.	Conceptualization: Hur TW Data curation: Hur TW, Oh SH Formal analysis: Hur TW, Oh SH Methodology: Hur TW, Oh SH Software: Hur TW, Oh SH Validation: Hur TW, Oh SH Investigation: Hur TW, Oh SH Writing - original draft: Hur TW, Oh SH Writing - review & editing: Hur TW, Oh SH
Ethics approval and consent to participate	This article does not require IRB/IACUC approval because there are no human and animal participants.

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Policy Strategies for Overseas Grain Asset Acquisition and Domestic Supply Integration in South Korea: A Review

Abstract

This study examines policy strategies to support overseas agricultural asset acquisition by domestic firms and to promote their integration with domestic supply chains in South Korea. Amid increasing global food demand, market volatility, and supply uncertainties driven by climate change and geopolitical risks, ensuring stable grain supply has become a critical national priority. Given Korea's heavy dependence on grain imports and low self-sufficiency rates, overseas agricultural development has emerged as a key strategy to enhance food and feed security and industrial competitiveness.

This study analyzes current policy frameworks and identifies limitations in supporting domestic firms' overseas expansion. It highlights the need to prioritize strategic commodities—such as wheat, soybeans, maize, palm oil, and cassava—based on their significance to domestic food and feed systems. Furthermore, the study emphasizes the importance of strengthening global value chains by expanding investment beyond production to include processing, distribution, and logistics.

To enhance the effectiveness of overseas agricultural investments, this study proposes tailored policy support based on firm size and investment type. For large-scale enterprises, integrated supply chain development is essential, while for small and medium-sized enterprises, support should focus on local settlement and gradual expansion. In addition, the study underscores the importance of linking overseas production with domestic demand through institutional mechanisms, including consultative platforms and preferential allocation systems.

A key contribution of this study is the proposal of a loss compensation system to facilitate stable domestic importation during supply crises. By establishing clear operational guidelines and compensation mechanisms, the government can encourage private sector participation and strengthen crisis response capacity. Moreover, the study suggests long-term policy directions, including the integration of agricultural ODA programs, promotion of youth participation, and the establishment of stable financial support frameworks.

Overall, this study provides comprehensive policy recommendations to enhance the resilience and sustainability of Korea's grain supply system by fostering stronger linkages between overseas agricultural investments and domestic supply chains.

Keywords: Overseas agricultural investment; Food and feed security; Grain supply chain; Policy support; Strategic commodities; South Korea

Introduction

Since the early 21st century, rapid population growth, coupled with urbanization and rising income levels, has led to a sustained increase in global food demand [1,2]. Grains, in particular, serve not only as staple foods for human consumption but also as essential inputs for livestock feed, bioenergy production, and various industrial applications. Consequently, they are widely recognized as strategic resources that are closely linked to national economic stability and industrial competitiveness [3-6]. In this context, ensuring a stable supply of grain resources has emerged as a critical challenge extending beyond firm-level strategies to encompass national food and feed security concerns [4, 6].

Despite these global trends, South Korea continues to exhibit a relatively low grain self-sufficiency rate, while the international grain market is increasingly characterized by price volatility and supply uncertainty driven by climate change, geopolitical tensions, and growing global demand [2, 6-9]. Such conditions pose persistent risks to the domestic grain industry, complicating efforts to secure stable raw material supplies and maintain price competitiveness. Given Korea's heavy reliance on grain imports, fluctuations in the global market directly influence firms' production planning and cost structures [10].

Domestic grain-specialized firms are developing strategies to mitigate these challenges through the acquisition of overseas production bases and grain-related assets. These strategies include direct investment in overseas farms and processing facilities, long-term supply agreements, and the development of global distribution networks and logistics infrastructure [11]. Such approaches not only enhance firm-level profitability but also contribute to stabilizing raw material supply across the domestic industry [11, 12]. Moreover, these overseas asset acquisition strategies go beyond mere investment, strengthening firms' risk management capabilities in response to uncertainties in the global grain market and creating synergistic effects by facilitating grain inflows through linkages with the domestic industrial ecosystem.

Recent studies further highlight that outward foreign direct investment (OFDI) aimed at securing raw materials can positively affect both domestic industrial competitiveness and supply chain resilience [13, 14]. The acquisition of overseas grain assets by domestic firms extends beyond mere raw material imports, carrying strategic significance by enabling the simultaneous acquisition of technology, information, and operational know-how through integration with global production networks. This strategic orientation is expected to play a pivotal role in enhancing the long-term sustainability and competitiveness of the domestic grain industry. Against this backdrop, this study aims to provide an in-depth analysis of overseas asset acquisition strategies employed by domestic grain-specialized firms and to propose practical measures for linking these strategies to the promotion of domestic grain inflow. In this review, domestic import integration is defined as the institutional, logistical, and commercial mechanism that connects grain volumes secured by Korean firms through overseas agricultural investment with domestic import, distribution, and utilization systems, thereby enabling their effective incorporation into Korea's food and feed supply chains.

To this end, this study evaluates the effectiveness of overseas grain asset acquisition and its integration with domestic supply chains. It also discusses policy implications for strengthening food and feed supply chain resilience, reducing feed supply risks, and supporting the stable development of Korea's livestock production system.

1. Policy Measures to Support Domestic Firms in Overseas Asset Investment

1) Support for supply chain development to ensure the stable procurement of strategic commodities

This section examines policy measures to support domestic firms in securing strategic commodities through overseas grain asset investment. In particular, it focuses on supply chain development, regional diversification, and value-chain expansion as key conditions for stable procurement of food and feed grains.

The volume of overseas-secured strategic commodities by South Korea was estimated at 2.08 million tons in 2021 and 2.14 million tons in 2022. The total area developed for overseas agricultural resources reached 290,000 ha in 2021, and only seven firms possessed large-scale supply bases—defined as those with over 10,000 ha of farming operations or large-scale distribution and processing facilities [15]. To support domestic firms in overseas asset investment, policy support should be concentrated on strategic commodities identified through analyses of import dependency, global and domestic market conditions, supply chain dynamics, and potential impacts on domestic prices [14-17]. In this study, key food and feed security commodities such as major grains (wheat, soybeans, and maize), along with essential food industry inputs including oil palm (edible oils) and cassava (starch), are prioritized.

South Korea is the world's seventh-largest importer of major grains, importing approximately 17 million tons annually, while its self-sufficiency rates for wheat, soybeans, and maize remain extremely low at 0.7%, 5.9%, and 0.8%, respectively [3, 12, 18]. Palm oil and cassava also depend entirely on imports, with global supplies highly concentrated in a few exporting countries: Indonesia and Malaysia account for about 90% of palm oil exports, while Thailand and Vietnam account for about 81% of cassava exports [19]. These commodities are expected to remain strategically important due to their uses in food, bioenergy, industrial materials, and feed [15, 16].

Given these conditions, priority support should be provided to firms entering sectors related to these strategic commodities. When implementing overseas expansion support programs for the agri-food industry (e.g., loans and subsidies), priority should be given to firms dealing with strategic commodities. Because investment in strategic commodities requires substantial initial capital and involves supply-chain risks, preferential interest rates can reduce entry barriers for private firms and encourage diversified overseas procurement. Currently, preferential interest rates are applied only to grains (1.5% for grains vs. 2.0% for other commodities), and there is a need to extend this preferential treatment to all designated strategic commodities [12,15].

Strategic commodity development should also be closely linked to domestic demand. While a consultative body among grain firms currently exists, it is necessary to establish commodity-specific councils. These councils can facilitate demand–supply matching through field visits, explanatory meetings, tariff-rate quota (TRQ) allocations, and demand-linked production support [12,15]. For firms seeking entry into strategic commodity sectors, proactive information provision should be strengthened, along with the expansion of advisory services in overseas investment, agricultural technologies, and management. Platforms such as the Overseas Agriculture Forum and the Integrated Information Platform for Overseas Agricultural Resource Development should be actively utilized to support firms engaged in overseas agricultural expansion.

Securing a stable supply of strategic commodities requires the diversification of overseas investment regions, the expansion of new strategic hubs, and the stabilization of existing operations. Currently, overseas investment is concentrated in the Russian Far East and Southeast Asia; however, there is a need to diversify into regions such as the Americas, the CIS (Commonwealth of Independent States), and Oceania. Notably, 15 firms have already expanded into regions beyond these traditional areas [12]. Table 1 summarizes the current countries of operation, target regions for diversification, and market entry strategies for each strategic commodity. In addition, supporting the diversification of supply bases beyond farm establishment and operation—such as distribution, processing, refining, and bioenergy—can enhance resilience to agricultural export restrictions and strengthen domestic import capacity. While previous investments have primarily focused on production, future strategies should expand into value-chain activities such as processing, refining, storage, export terminals, and inland and maritime logistics [15].

Policy efforts should strengthen forward and backward global value chains by expanding support beyond overseas production to include storage, processing, export terminals, and inland and maritime logistics. Figure 1 illustrates this value-chain approach, showing how overseas grain production should be linked with distribution, logistics, and domestic importation. Government programs, including the Overseas Grain Distribution Network Support Program and the Agri-Food Industry Overseas Expansion Support Program, should be coordinated to support an integrated framework connecting overseas grain production, distribution, and domestic import [12].

Stepwise expansion strategies should identify priority stages across the supply chain, such as export elevators, production bases, aggregation and processing facilities, and logistics networks [12,20,21]. In addition, government programs related to agricultural inputs, technology commercialization, and seed development should be linked with firms expanding overseas. Relevant industry associations should jointly establish a consultative platform to promote cooperation across upstream and downstream sectors, develop expert pools in diversified regions, and provide integrated online and offline consulting services [12].

2) Tailored Investment Support by Scale and Mode of Overseas Expansion

Policy support should prioritize key sectors according to the scale of overseas expansion in order to strengthen Korea's still-developing grain and feed procurement system. In particular, large-scale firms should be supported in rapidly developing integrated production and distribution networks for strategic commodities, while simultaneously strengthening domestic supply chains. Initial entry should be directed toward strategic commodities, particularly grains, while the selection of support beneficiaries for large-scale investments should be contingent upon alignment with designated strategic commodities. In addition, policy efforts should promote the development of new supply bases for strategic commodities by supporting capital-intensive segments across the entire supply chain, including storage, distribution, and processing, beyond primary agricultural production [3, 4, 16].

According to the Fourth Comprehensive Plan for Overseas Agricultural Resource Development, the settlement rate of overseas-investing firms (active firms relative to registered firms) is targeted to increase from 30.1% in 2021 and 29.7% in 2022 to 40% by 2027. The government plans to strengthen overseas expansion support programs—including land and facility acquisition, pre-investment assessments, and consulting services—to facilitate the stable establishment of firms abroad [16]. These measures should be linked with domestic demand to facilitate routine imports, secure emergency import channels, and support inspection and quarantine procedures [12, 16]. In addition, loan-related constraints, such as the cap on application frequency and restrictions on large firms' first-quarter participation, should be eased to support large-scale facility investments [16].

Policy support for small- and medium-sized enterprises (SMEs) should prioritize stable local establishment while promoting gradual entry into strategic commodity sectors and domestic supply integration. For SMEs, support should focus on locally adapted varieties, agricultural technology assistance, long-term contract farming with domestic firms, and stable market access. Government programs should also actively support entry into non-strategic sectors—such as fruit, horticulture, and livestock—as part of preferential measures to promote SME participation [12, 16].

Given that many domestic firms are still in the early stages of overseas expansion and exhibit diverse operational models, tailored support based on the mode of entry is required.

For production-oriented investments, local adaptation technologies should be supported through institutions such as the Korea Program on International Agriculture (KOPIA), alongside efforts to link overseas production with domestic demand to ensure stable business operations [16, 22]. Technical support should prioritize the dissemination of locally adaptable high-quality varieties, the enhancement of productivity through advanced technologies (e.g., IT-based smart farming systems), and the development of locally appropriate cultivation, storage, and post-harvest practices [23, 24].

For distribution- and processing-oriented investments, policy support should focus on expanding pre-investment assessments and expert consulting, while actively promoting linkages with domestic demand to facilitate the smooth importation of secured volumes [25]. Because these investments involve complex infrastructure decisions, such as storage facilities, export elevators, logistics hubs, and port access,

sufficient feasibility assessment is essential before investment. The current support ceiling for pre-investment assessments should be increased from KRW 100 million to KRW 200 million, and the allowable assessment period extended from six to nine months. This adjustment is necessary because distribution- and processing-oriented investments require detailed feasibility assessments of storage capacity, logistics routes, port access, local regulations, quarantine requirements, and domestic demand linkages. To translate these assessments into actual import flows, consultative platforms with domestic food and feed companies should be established to improve demand matching and facilitate the absorption of imported volumes. Low-interest financing under the Overseas Grain Distribution Network Support Program, which aims to secure five overseas grain distribution sites by 2027, can further reduce logistical bottlenecks and strengthen the linkage between overseas procurement and domestic food and feed supply chains [12].

2. Policy Measures to Promote Domestic Import Integration

The Fourth Comprehensive Plan for Overseas Agricultural Resource Development outlines a phased approach to strengthening domestic import integration, including the establishment of a loss compensation system, consultative platforms with domestic demand-side firms, and legislative revisions for strategic commodities such as oil palm and cassava [12,16].

1) Implications for Livestock Feed Security and Animal Production

A substantial share of South Korea's imported grains is used as livestock feed, making overseas grain supply disruptions directly relevant to animal production [12, 18]. Price increases in maize, wheat, and soybean meal can raise compound feed costs, thereby affecting livestock production costs, farm profitability, and the stability of meat, milk, and egg supply [10, 26]. In Korea's livestock sector, maize and soybean meal are major components of compound feed, and changes in their import prices can directly affect feed formulation costs and production margins. Therefore, securing overseas grain supplies and linking them to domestic feed demand can help stabilize livestock production under international market disruptions. Accordingly, overseas grain asset acquisition and domestic import integration should be understood not only as food and feed security measures, but also as strategic instruments for strengthening feed security and stabilizing livestock production. From this perspective, policy measures such as loss compensation, minimum stockholding requirements, and coordination platforms with domestic feed companies are important for reducing feed supply risks and improving the resilience of Korea's livestock sector. Table 2 summarizes the linkages between key imported feed-related commodities, livestock production, and policy responses.

2) Establishment and Effectiveness of a Loss Compensation System

South Korea imports over 17 million tons of grain annually, with more than 80% of imports handled by global grain majors and Japanese trading firms [15,18]. South Korea's total grain import value exceeds

KRW 5 trillion, with 33% for food use and 67% for feed, accounting for approximately 10% of agricultural output and 18% of agricultural value added. In 2021, amid rising global grain prices driven by COVID-19 and poor harvests in South America, total grain imports increased to KRW 6.9 trillion, representing a 30.7% increase compared to 2019. In particular, Kim et al. (2022) reported that, based on an analysis of the impact of imported grain price fluctuations on domestic consumer prices, maintaining the elevated global grain price levels observed in March 2022—following the Ukraine war—would lead to price increases relative to March 2021 of 23% for feed, 10% for livestock products, 15% for processed foods, and 2.6% for food services [26, 27]. Although this estimate reflects the 2022 price shock, it provides an illustrative case of how geopolitical disruptions can increase international grain market volatility and transmit risks to Korea's food and feed supply chains. To address such volatility and ensure compliance with mandatory domestic import requirements during crises, loss compensation for firms is essential for establishing a stable, privately driven national grain and feed procurement system.

In response to a legislative reform recommendation issued by the Ministry of Government Legislation in August 2020, the government amended the Overseas Agricultural and Forestry Resources Act in October 2024, to establish a legal basis for loss compensation to facilitate the smooth domestic importation of overseas agricultural resources during emergencies, and has implemented corresponding revisions to subordinate regulations (enforcement decree and rules). However, additional guidelines are still needed to define compensation criteria, eligible entities, covered losses, and procedures for emergency import orders [28, 29].

Under the international grain crisis warning system, MAFRA, KRCC, and KOARDA coordinate import preparation, review, and execution according to crisis stages. Supplementary Table 1 summarizes the current procedure for import orders related to loss compensation, including preparation, review, issuance and execution, compensation assessment, objection procedures, and payment. However, the effectiveness of emergency import orders has been limited by the absence of detailed compensation criteria and operational guidelines [12,15].

Accordingly, a Loss Compensation Review Committee should be established to assess eligibility, calculate direct and indirect losses, and determine compensation amounts based on clear criteria and supporting documentation [6,29,30].

3) Strengthening Linkages Between Importing Firms and Overseas Agricultural Enterprises

Although current guidelines focus on coordination for emergency imports, consultative mechanisms between domestic demand-side firms and overseas agricultural enterprises should be institutionalized to expand transactions under normal conditions and strengthen their role. In addition, linkages should be reinforced by supporting producers with suitable seeds and cultivation technologies, while granting preferential TRQ allocations to demand-side firms. In the long term, domestic end-users should be encouraged to participate in overseas agricultural development to strengthen integration and alignment

between grain procurement and domestic demand. The Japanese experience provides a relevant benchmark, wherein Zen-Noh—the largest feed grain end-user—established the Zen-Noh Grain Corporation (ZGC) in the United States in 1979 to engage in grain distribution activities [31].

4) Review of Stockpiling and Maintenance Measures to Address Supply Instability During Emergencies

The international grain crisis response manual defines the Alert stage based on a set of detailed criteria, including domestic production shocks, import disruptions arising from poor harvests or export restrictions in major exporting countries, and logistical constraints. The threshold is met when the price of a single major grain commodity exceeds the previous year's or five-year average by more than 50%, or when two or more commodities increase by more than 30%. At this stage, stockpiling priorities are established, and the implications for domestic food supply and price stability are evaluated. Unlike rice, which has a relatively high self-sufficiency rate and is already managed under a public stockpiling system, import-dependent grains such as maize, wheat, and soybeans require a separate stockpiling and emergency utilization framework because they are essential for food processing and compound feed production [4,32].

Overseas agricultural development firms involved in major grains should be granted priority access and preferential treatment across all agri-food overseas expansion support programs. To stabilize domestic supply during emergencies, these firms should also be encouraged to maintain minimum stock levels under normal conditions. In addition, policy measures should examine whether grains used for bioenergy feedstocks can be redirected to food and feed uses during crises [1,32,33].

5) Establishing a Stable Support Framework for Overseas Agricultural Development and Domestic Import Enterprises

Given the long-term nature of overseas agricultural development, sustained and stable support is essential for achieving tangible outcomes. However, government funding has fluctuated considerably, increasing from KRW 24 billion in 2009 to KRW 35.5 billion in 2013, before declining to KRW 7.4 billion in 2020 [12,15,16]. This volatility indicates the need for stable financing mechanisms that go beyond annual public budget allocations.

As an alternative, a public–private agri-food fund or other sustainable financing mechanisms should be considered to support overseas grain infrastructure [15,16]. In addition, the Supply Chain Stabilization Fund, established under the Supply Chain Basic Act, could be used to provide financial support, such as loans, to firms engaged in overseas agricultural development.

Policy measures should focus on strengthening the capacity of implementing organizations and enhancing inter-agency coordination. In particular, the capacity of organizations such as OARDA and KRCC should be reinforced through staff training in finance, global grain markets, and corporate consulting. Specialized institutions with expertise in fund and financial management, such as the Korea Agricultural

Policy Insurance and Finance Service, should also be incorporated into future financing mechanisms [12,16].

3. Lessons from Past Experiences and International Benchmarks

Previous overseas agricultural development efforts in South Korea have produced limited outcomes despite repeated policy plans. The settlement rate of overseas agricultural development firms remained around 30.1% in 2021 and 29.7% in 2022, and the government aims to increase the firm settlement rate to 40% by 2027 [16]. In addition, overseas-secured strategic commodities were estimated at 2.08 million tons in 2021 and 2.14 million tons in 2022 [15]. These indicators suggest that past policies have not yet fully resolved challenges related to local settlement, stable procurement, and effective linkage with domestic food and feed demand [15,16].

International benchmarks indicate that overseas grain asset acquisition is effective only when production, storage, logistics, and domestic food and feed demand are institutionally connected [11,33]. The Japanese case shows that ODA, diplomatic negotiation, infrastructure support, and private-sector participation can be linked to long-term food and feed security [30,31]. However, given South Korea's relatively limited overseas grain trading and logistics base, such models should be selectively adapted rather than directly replicated. Therefore, future policy should move beyond the expansion of overseas investment itself and focus on measurable outcomes, including firm settlement rates, repatriation volumes, crisis-period import execution, and linkages with domestic food and feed demand.

4. Strategies for Establishing a Long-Term and Stable Support Framework

Beyond domestic import integration, a stable institutional foundation is required to sustain overseas agricultural development and ensure the long-term use of overseas-secured grain resources within domestic supply chains.

1) Enhancing Linkages and Cooperation with Agricultural ODA (Official Development Assistance) Programs

Japan has recognized the strategic importance of agriculture and adopted a long-term "global supply" vision, securing overseas farmland to ensure domestic food supply stability while extending its reach into international markets. In 2009, the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Foreign Affairs established the Overseas Investment Promotion Committee for Food and feed security, which has since facilitated intergovernmental investment agreements, improvements in host-country investment conditions, infrastructure development, and technical assistance in coordination with ODA programs [34,35]. In particular, Japan places emphasis on negotiating with exporting countries to secure exemptions from export bans and restrictions. This case is relevant to South Korea because it shows how ODA, diplomatic negotiation, and infrastructure support can be linked to long-term food and feed security.

However, given South Korea's relatively limited overseas grain trading and logistics base, this model should be adapted selectively to support local partnerships and grain logistics infrastructure.

In parallel, South Korea should form an inter-agency coordination platform involving major agricultural ODA institutions—such as MAFRA, RDA, KOPIA, the Korea Forest Service, the Korea Rural Economic Institute, and KRCC—along with the OARDA, to enhance information exchange and integrate stakeholder perspectives. In addition, the potential for linking ODA programs with overseas agricultural development firms should be explored [35]. Over the long term, ODA frameworks should incorporate public–private partnership (PPP) mechanisms to develop integrated collaboration models among government, public institutions, and private enterprises [35,36]. A cooperative framework should be established by leveraging overseas public institutions, such as KOPIA centers, to facilitate collaboration in overseas agricultural development and enable the sharing of local information, market conditions, and locally adapted farming technologies.

2) Promoting Youth Participation in Overseas Agricultural Development

Higher education programs should integrate field-based training at overseas agricultural development enterprises into their curricula, while, over the medium to long term, establishing dedicated courses addressing overseas agricultural investment, including corporate establishment, land acquisition, and human resource management [16]. To support young farmers and professionals, structured programs should combine university education, field training, expert-led instruction, and consulting on pre-investment assessments. These programs can facilitate overseas entry and help generate successful cases of youth-led agricultural development [16].

Overseas youth support programs should prioritize the selection of candidates who have completed specialized training under initiatives such as the "Overseas Agricultural Internship Program" to enhance success rates. Training should cover all stages of overseas expansion, including pre-entry assessment, localization, management, distribution, reinvestment, capital recovery, and exit strategies, as well as international grain market analysis. Participation should also be extended to employees of overseas agricultural development firms.

3) Strengthening Information Provision, Consulting and Outreach

An information platform should be established to support overseas expansion by providing comprehensive data on local legal, institutional, and policy frameworks, as well as market conditions, best practices, and operational challenges. To this end, the existing "Overseas Agricultural Resource Development Integrated Information Platform," established in 2022, should be upgraded to incorporate up-to-date information from local public institutions, embassies, and established firms, while being integrated with other support programs such as online consulting and remote technical assistance [12,16].

A comprehensive online–offline consulting support system should be established to address practical challenges faced by overseas-entering firms. This system should include regularly updated manuals covering production, distribution, management, administration, and legal procedures, as well as real-time consulting and remote technical support.

To build social understanding and encourage firm participation in overseas agricultural development, a two-stage outreach strategy should be implemented—comprising (i) an awareness-raising phase and (ii) an engagement phase—as outlined below [16]. Table 3 summarizes this two-stage communication strategy, while Table 4 provides examples of Japan's public education and outreach materials on food and feed security. In the first stage, public communication efforts should focus on disseminating information on food self-sufficiency and food and feed security through media and social networking platforms. In the second stage, successful overseas agricultural cases, support programs, and practical limitations should be shared with current and prospective firms through briefing sessions and mobile-based information channels linked with KOARDA.

4) Strengthening Post-entry Monitoring and Performance Management

To improve the settlement rate and long-term sustainability of overseas-entering firms, post-entry monitoring and performance management should be strengthened. Systematic monitoring should begin at the pre-entry evaluation stage and continue after overseas establishment through business plan reviews, field inspections, and cooperation with relevant associations. When operational constraints are identified, targeted consulting and technical support should be provided to improve firm performance and business continuity [15,16].

Reporting requirements for participating firms, including initial business plans and reports on suspension or withdrawal, should also be refined to support more effective long-term management. In addition, regular refresher training on ESG, performance management, and overseas business operations should be introduced to enhance firm capabilities and ensure effective post-entry oversight [16,37].

5) Institutional Reforms to Address Emerging Areas in Overseas Agricultural Development

Institutional frameworks should be updated to reflect recent developments in overseas investment and to promote greater private sector participation. For example, although provisions exist under Chapter 3 of the Overseas Agricultural and Forestry Resources Development Act regarding overseas agricultural investment companies, these have become largely inactive due to the absence of actual investment entities and the lack of regulatory updates since the 2015 revision. Given the need for large-scale and long-term capital investment in overseas agricultural development, investment trusts could help mobilize private capital and distribute investment risks among multiple investors. Accordingly, revisions are required, including the introduction of provisions related to investment trusts and the clarification of definitions for dedicated investment companies.

Furthermore, legislative reforms should be pursued to support entry into emerging areas of overseas agricultural development, such as food processing and bioenergy [28,38]. While current regulations limit target resources to agricultural and livestock products (e.g., soybeans, bioenergy feedstocks), consideration should be given to expanding the scope to include processed agricultural products and food items (e.g., soybean flour, soybean meal, soybean oil, and other processed soybean products) [38].

Conclusion

Global food and feed grain supply chains have become increasingly vulnerable to geopolitical shocks, climate-related disruptions, export restrictions, and international price volatility [2,4,7-9,39,40]. For South Korea, where a large share of grain demand depends on imports, these disruptions are not limited to the food sector but directly affect compound feed costs, livestock production, farm profitability, and the stability of animal-source food supply [10,41].

This review examined policy strategies for linking overseas grain asset acquisition with domestic supply chains in South Korea. Although overseas agricultural development policies have been implemented through successive government plans, the current system still lacks a fully integrated framework linking overseas procurement, domestic importation, stockpiling, and crisis response [15,16,32]. This limitation reduces the practical effectiveness of overseas grain asset acquisition, particularly when secured volumes are not effectively connected to domestic food and feed demand [11,15,20,33].

To address this gap, three policy directions are particularly important. First, support for overseas investment should prioritize strategic commodities essential for domestic food and feed supply, including wheat, soybeans, maize, oil palm, and cassava [3,12,15,16]. Policy support should extend beyond production to include storage, processing, logistics, export terminals, and transportation networks, thereby strengthening the linkage between overseas-secured grain and domestic demand [11,15,33].

Second, domestic import integration should be strengthened through institutional mechanisms that reduce firm-level risks during supply crises. A practical loss compensation system is needed to encourage firms to comply with emergency import requirements when international grain markets are disrupted. In addition, coordination platforms between overseas-investing firms and domestic food and feed companies, preferential support for firms maintaining minimum stock levels, and clear crisis-response guidelines would improve the stability of domestic grain inflows [15,32].

Third, a long-term support framework should be established by linking agricultural ODA, public–private partnerships, information systems, post-entry monitoring, and legal reforms [16,35,36]. These measures can improve local settlement, enhance firm capabilities, and support the development of overseas grain logistics infrastructure. Institutional reforms should also reflect emerging areas such as food processing and bioenergy, as well as financing mechanisms that mobilize private capital and distribute investment risks [28,38,42].

Overall, this review contributes by reframing overseas grain asset acquisition not merely as an overseas agricultural investment policy, but as a strategic mechanism for strengthening food and feed supply resilience and stabilizing livestock production in South Korea. Future policy should focus on consistent implementation, stronger private-sector engagement, and institutional arrangements that ensure overseas-secured grain resources are effectively utilized within domestic food and livestock feed supply chains.

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Tables and Figures

Table 1. Diversification strategies of entry regions for strategic commodities

Strategic Commodities	Current Countries of Operation	Target Regions for Diversification	Market Entry Strategies
Wheat, Soybean, Maize (Corn)	United States, Russia, Ukraine, etc.	• Northeast Asia: Russian Far East, etc. • Europe: Ukraine, CIS countries, etc. • North America: United States, Canada, etc. • South America: Brazil, Argentina, etc. • Oceania: Australia, etc.	• Northeast Asia, Oceania: Expansion of support for large-scale production-oriented enterprises • North America, South America, Europe, Oceania: Entry centered on distribution-oriented enterprises and establishment of strategic partnerships with global grain majors
Oil Palm	Indonesia	• Southeast Asia: Indonesia, Malaysia, etc.	• Southeast Asia: Expansion of support for production-oriented overseas agricultural development enterprises; support for entry into palm oil refining and processing sectors
Cassava	Cambodia, Vietnam	• Southeast Asia: Cambodia, Vietnam, Thailand, Myanmar, etc.	• Southeast Asia: Formation of production-oriented overseas agricultural development enterprise consortia; support for distribution and processing businesses linked to actual domestic demand

Source: Ministry of Agriculture, Food and Rural Affairs (2023), The 4th Comprehensive Plan for Overseas Agricultural Resource Development

556 Table 2. Linkages between imported feed-related commodities, livestock production, and policy responses

Feed-related commodity	Main livestock relevance	Potential impact of supply disruption	Policy implication
Maize	Major energy source in compound feed	Higher feed formulation costs and increased production costs	Stable overseas procurement and minimum stockholding
Soybean meal	Major protein source in compound feed	Increased protein feed costs and reduced farm margins	Securing overseas supply and linking with feed companies
Wheat	Feed ingredient and food-processing grain	Competition between food and feed uses during crises	Emergency allocation and import coordination
Cassava	Alternative starch and feed ingredient	Increased pressure on substitute feed resources	Diversified sourcing and demand-linked procurement
Oil palm / palm oil by-products	Food industry input and possible feed-related by-products	Indirect effects on feed and food industry costs	Strategic commodity support and processing linkage

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559 Table 3. Two-stage public communication strategy for overseas agricultural development

Stage	Key Communication Content
Awareness Stage (Stage 1)	• Production and dissemination of card news and infographics on food self-sufficiency and food security via media and SNS • Hosting UCC contests related to the necessity and ideas of overseas agricultural development
Engagement Stage (Stage 2)	• Enhancing domestic firms' interest through media and SNS by sharing successful overseas agricultural development cases, support programs, achievements, and limitations • Holding briefings on overseas expansion and support programs for (prospective) overseas agricultural firms • Operation of a mobile promotional channel for overseas agricultural development information* * Operated in cooperation with the KOARDA; providing information, consulting services, and support for identifying ADSF.

560 KOARDA: Korea Overseas Agro-Resources-Development Association; ADSF: Actual Demand-Side
561 Firms
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564 Table 4. Example of major public education and outreach materials on food and feed security in Japan

Method	Title	Key Educational Content
Pamphlet	"Do You Know Japan's Food Situation?"	Information on food self-sufficiency and food and feed security that the general public should be aware of
Pamphlet	"The Strength of Japanese Food"	Easy-to-understand educational material on Japan's food self-sufficiency and food and feed security, specifically designed for elementary school students
Video	"What Is Food Self-Sufficiency?"	An explanatory video that presents food self-sufficiency indicators in an accessible manner by assessing Japan's potential food production capacity

565 Source: Ministry of Agriculture, Food and Rural Affairs (2023), The 4th Comprehensive Plan for
566 Overseas Agricultural Resource Development
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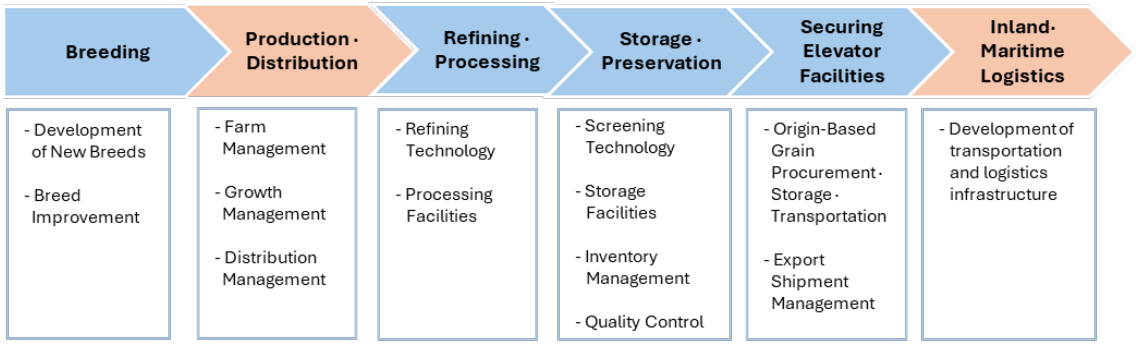

Figure 1. Example of enhancing the global value chain

573 Supplementary Table 1. Current Procedure for Implementing Import Orders Related to Loss Compensation

Stage	Responsible authority	Timing of implementation	Key actions
Import "Preparation"	MAFRA (KRCC and KOARDA)	International Grain Crisis Alert: "Caution" level	Establish the Import Consultation Committee, including government, relevant agencies, demand-side firms, and suppliers. Assess supply–demand conditions, including available supply volumes and domestic demand.
Import "Review"	MAFRA (Import Consultation Committee)	International Grain Crisis Alert: "Warning" level	Convene the Import Consultation Committee. Assess the necessity of issuing an import order. Deliberate on import targets, volumes, prices, timing, and loss compensation. Finalize the import order, including target commodities, volumes, prices, and timing.
Issuance and execution of import order	MAFRA (KRCC and KOARDA)	International Grain Crisis Alert: "Warning" or "Severe" level	Decide whether to implement the import order. Issue and deliver the import order. Provide necessary support for implementation.
Issuance and execution of import order	OADO, ADSF	Upon issuance and receipt of the order	Conclude export–import contracts in accordance with the import order. Conduct shipment and receipt procedures. Submit implementation reports.
Issuance and execution of import order	OADO, etc.	Application for loss compensation	Terminate the emergency import order immediately upon resolution of the crisis. Provide fair compensation for losses incurred by complying with the import order, including differences between international market prices at the time of order issuance and actual import prices, as well as costs incurred from cancellation or termination of pre-existing contracts. Submit claims for loss compensation with claim forms and supporting documentation.
Loss compensation framework	MAFRA (Loss Compensation Review Committee)	Assessment of loss compensation	Calculate and assess loss compensation amounts. If necessary, request expert appraisal, evaluation, and investigation of compensation items related to commodities, trade, and logistics. Determine compensation criteria, eligible entities, and compensation amounts, including direct and indirect losses. Convene the Overseas Agricultural and Forestry Resource Development Deliberation Committee, if necessary.
Loss compensation framework	MAFRA	Notification of decision	Determine and notify eligibility for loss compensation and the compensation amount within 60 days.
Loss compensation framework	OADO, etc.	Objection procedure	Submit objections within 30 days from the date of notification. Reassess, decide, and notify the result within 14 days from the date of application.
Loss compensation framework	MAFRA	Payment of compensation	Pay loss compensation within 30 days from the date of notification.

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575 Source: Ministry of Agriculture, Food and Rural Affairs (2025). MAFRA: Ministry of Agriculture, Food and Rural
576 Affairs; KRCC: Korea Rural Community Corporation; KOARDA: Korea Overseas Agro-Resources-Development
577 Association; OADO: Overseas Agricultural Development Operators; ADSF: Actual Demand-Side Firms
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