Learning Brief 3:

Business-to-Business (B2B) Organizational and Marketing Innovations in Nigerian Horticulture

Case-Based Insights of the HortiNigeria Program

'Knowledge product 3' developed by the HortiNigeria-B2B team

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The business-to-business (B2B) activity of the HortiNigeria program concerns the facilitation and brokering of trade and other commercial interactions within the value chain systems of the horticulture sector in Nigeria. In addition, the B2B team collects data and insights from its work for learning purposes, to improve B2B brokering through effective approaches and methods, and by involving relevant partners. This learning brief is the third knowledge product developed by the B2B team.

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Executive summary

The HortiNigeria program (2021–2025), implemented by IFDC in collaboration with Wageningen Research and KIT Institute and funded by the Dutch government, aims to develop a sustainable and inclusive horticulture sector in Nigeria to enhance food and nutrition security. Operating in Kano and Kaduna states in the North and Ogun and Oyo states in the South, the program covers the entire value chain, from production to marketing. Components C1 and C2 focus on productivity, C3 on mobilizing credit, and C4 on marketing (B2B) as well as policy and regulatory support.

Under component C4, the B2B team promotes marketing linkages across the horticulture value chain, addressing substantial unmet domestic demand. Nearly 200 B2B linkages have been brokered, with insights documented for learning and policy guidance. Marketing in Nigeria's horticulture sector is highly dynamic, often informal, and involves complex networks of farmers, aggregators, transporters, brokers, and processors.

The learning brief applies Actor-Network Theory (ANT) to ten case studies across the four states. ANT highlights the role of central actors who initiate, coordinate, and sustain B2B networks, as well as the importance of material elements in enabling network functioning. Using ANT, the brief identifies how organizational and marketing innovations emerge locally, are adapted by actors, and help networks thrive despite challenges such as weak farmer organization, limited supply-demand coordination, non-transparent pricing, logistical constraints, sector informality, and low uptake of digital marketing.

This brief emphasizes organizational and marketing innovations that actors themselves develop to overcome the challenges. Organizational innovations include new forms of farmer organization, collective coordination through agribusiness clusters, associations, and networks anchored around material elements like plastic crates. These innovations strengthen collective action, improve trust, and enable smallholders and other actors to participate more effectively in the value chain. Marketing innovations include shared logistics, collective marketing strategies, digital platforms connecting buyers and farmers, improved pricing mechanisms, and targeting higher-value or niche markets such as certified or organic produce. Together, these innovations increase efficiency, reduce post-harvest losses, expand market access, and enhance overall value chain performance.

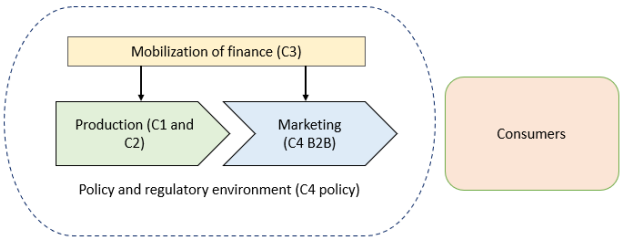
Opportunities for future programs include strengthening farmer entrepreneurship, improving post-harvest handling, expanding digital marketing, investing in logistics and cold storage, and supporting scalable organizational models. Dutch business sectors could contribute as providers of inputs, buyers, and technical partners in logistics, digitalization, and quality assurance—while ensuring local priorities and food security remain central.

By highlighting the creativity and practical solutions of local actors, this brief underscores the importance of organizational and marketing innovations as drivers of more resilient, inclusive, and efficient horticulture B2B linkages in Nigeria.

1. Introduction

The HortiNigeria program (2021–2025), implemented by IFDC in collaboration with Wageningen Research and KIT Institute and funded by the Dutch government, supports the development of a sustainable and inclusive horticulture sector in Nigeria to enhance food and nutrition security. The program operates in Kano and Kaduna states in the North and Ogun and Oyo states in the South. The HortiNigeria program covers the entire value chain, from production to marketing, bringing horticultural produce to consumers.

More specifically, the program components C1 and C2 focus on raising productivity, while component C4 addresses marketing (business-to-business/B2B) as well as the policy and regulatory framework. Component C3 involves mobilizing credit, primarily for production and, to a lesser extent, for marketing.



As the team responsible for the B2B activity under component C4, we promote marketing interactions within Nigeria's horticulture value chain, as there remains substantial unmet domestic demand for horticultural produce (Voice of Nigeria, 2022). We have implemented various activities to strengthen B2B linkages and partnerships among the horticulture value chain actors. Since the start of the project, we have identified a large number of B2B opportunities and brokered nearly 200 B2B linkages/partnerships. In addition, we have collected and analyzed data and insights ad developed to earlier learning briefs as knowledge products of the HortiNigeria program.[1]

Our focus is challenging and complex as the marketing of horticultural produce is highly dynamic and value chains are often informally organized. Moreover, we observed that B2B linkages are rarely limited to direct transactions between two clearly defined firms. Instead, they often emerge as fuzzy and dynamic arrangements that cut across the formal–informal divide, and involve networks of multiple actors such as small producers, aggregators, transporters, informal brokers, farmer groups, and processors (World Bank, 2020; Reardon et al., 2019). There are thus many different ways in which horticultural products reach the market in Nigeria, with underlying structures and logistical mechanisms that are not always visible. The value system is often inefficient, with high levels of spoilage and supply that is poorly aligned with demand. Yet, there are many examples of creative and innovative solutions that value chain actors develop to work around challenges, organize themselves, and reach the market in new ways.

These organizational and marketing innovations are of particular interest to us as a B2B team in this third leaning brief. These innovations are often small-scale and incremental in nature, and are 'invented' and 'owned' by the local chain actors themselves, showing creativity, practicality, and efficiency in seizing opportunities. Within the HortiNigeria program, there are many examples of such innovations, including new forms of organizing farmers, the introduction of plastic crates, digital ways of connecting farmers and buyers, and sharing bulk transport to name just a few. It is worth noting that these are different types of innovations from the more 'radical' technical innovations promoted under HortiNigeria program component C2, which aim to increase productivity through the introduction of new varieties, irrigation systems, chemicals, or planting practices developed by research institutes and universities.

[1] Learning brief 1: *Exploring digital B2B platforms for strengthening the Nigerian horticultural sector* (2023); Learning brief 2: *Types of Business-to-Business (B2B) Linkages in the Nigerian Horticulture sector: Insights from the HortiNigeria program* (2024)

Despite their importance, these organizational and marketing innovations in horticulture B2B are not yet systematically documented. We argue that a deeper understanding of these innovations will help to make the often informal marketing processes and creativity more visible, and to show what these innovative chain actors have done within the context of the HortiNigeria program. Finally, it can help identify remaining gaps that could be addressed by support programs or by involving Dutch expertise in marketing and logistics.

Accordingly, the objective of this brief is to examine how marketing practices are organized within B2B linkage networks in the horticulture sector, and in particular, how value chain actors have developed innovative organizational and marketing solutions to overcome challenges in moving produce from farmers to the market. We also explore what opportunities exist to address current challenges in future programs involving Dutch business sectors.[2] We do not claim to provide a comprehensive representation of innovative B2B marketing practices in Nigeria's horticulture sector, as the sector is diverse and organized differently depending on location, actors, and other factors.

The learning brief is structured as follows. It begins by presenting the approach and methodology used in the study. This is followed by ten case studies illustrating different models of B2B linkage networks. The report then provides an analysis across these cases, highlighting common patterns and key insights. It concludes with overall conclusions and recommendations for practice and policy.

[2] Since the HortiNigeria program is funded by the Royal Netherlands Embassy in Nigeria, we will also consider Dutch development policy, which increasingly prioritizes the involvement of Dutch businesses in Nigeria's horticulture sector. Dutch interests reflect a mix of economic, knowledge-based, and strategic priorities. Against that background, we explore opportunities to address current challenges in future programs involving Dutch business sectors (see further Annex 1).

2. Approach and methodology

2.1 Case study research

As the objective of this learning brief is exploratory in nature, a qualitative approach is most appropriate, as it emphasizes a holistic understanding of meaning and context of the organizational and marketing innovations. We therefore apply a case study research design to gain insight into the real-life situation of horticulture networks and value chains within their specific context. Case studies allow for rich, detailed exploration of complex processes, behaviors, relationships, and events (Yin, 2018).

Analytical lens: Actor Network Theory (ANT)

In literature, the B2B concept usually refers to commercial transactions between two businesses (Anderson & Narus, 1990; Håkansson & Snehota, 1995). However, as we earlier identified in the second learning brief, B2B linkages in the horticulture sector in Nigeria often take the form of networks uniting farmers—frequently informal—with a central actor who initiated and continues to coordinate the network and have access to market outlets. In this third learning brief, we use Actor-Network Theory (ANT) as an analytical lens to understand how both human and material elements interact and form networks that shape B2B linkages and marketing channels in the horticulture value chains.[3]

We believe that ANT is a well-suited analytical lens because it allows us to move beyond one-to-one business relationships and capture the complex web of interactions, including both human actors (farmers, traders, coordinators) and material elements (mobile phones, transport and logistics equipment, plastic crates). ANT emphasizes how actors negotiate, translate, and stabilize networks, which is critical for understanding how innovative solutions emerge. It also allows a holistic view of the network, examining interactions, dependencies, and power dynamics within the system, making it ideal for an exploratory, qualitative study of horticulture B2B linkages.

As an analytical tool, ANT takes the central actor in a network at the starting point of the analysis, focuses on how connections are built, maintained, or broken, highlighting the dynamic and relational nature of social structures. The central actor plays a crucial role as the key coordinator and connector. This actor often initiates the network, facilitates communication and collaboration among members, and helps align goals and resources. By managing relationships and information flow, the central actor ensures the network functions effectively, making it easier to achieve shared objectives and sustain the network over time. ANT helps unpack how informal practices and personal relations co-exist with formal systems. Rather than assuming that B2B networks are stable, ANT traces where and how they are contested, reconfigured, or break down. It is particularly useful in contexts where institutions are weak and roles are negotiated on the fly.

ANT dimensions and the HortiNigeria B2B case analysis

Using the ANT analytical lens for the case descriptions in the chapter 3, we structure the cases by starting with the central actor and describing how the connections (B2B linkages) are developed and maintained. We then examine how the network was formed and how it is maintained and supported by a business model generating revenues. We address the involvement of critical material elements in the network. We also describe the types of organizational and marketing innovations that were introduced and their outcomes for B2B marketing and for the overall efficiency of the horticulture value chain, bringing producers closer to consumers.

[3] Latour, Bruno (2005). Reassembling the Social: An Introduction to Actor-Network-Theory. Oxford University Press.
Callon, Michel (1986). "Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay." In Power, Action and Belief: A New Sociology of Knowledge? (eds. John Law), Routledge & Kegan Paul.

In Chapter 4, we analyze the cases by comparing the ANT dimensions across them and identifying trends and patterns that shed light on how marketing processes are organized and how innovations were taken up in shaping the networks and their outcomes. More specifically, the ANT dimensions we focus on include: (1) central actor, (2) network creation, (3) business model to maintain the network, (4) material elements, (5) organizational innovation, (6) marketing innovation, (7) outcomes of the network, and (8) remaining challenges.

We used a number of cases for the analysis, including both similar and deviant cases. We categorized them into the following types of B2B linkage networks: (1) agribusiness clusters/ABCs supplying local and distant markets, (2) open markets supplying farmer networks, (3) supermarkets supplying farmers' networks, (4) local processing companies, (5) the plastic crates association, (6) innovation business service and support, and (7) the EU–Nigeria Agribusiness Platform. Each category represents a distinct model—ranging from agribusiness-driven to donor-supported cluster approaches—shaped by varying institutional and market environments.

Our analysis procedure involved a matrix approach (see table ..). Case data are represented as columns, allowing comparison across types of B2B linkage networks as units of analysis. The ANT dimensions form the rows. We condensed the rich qualitative material into concise summaries within each cell of the matrix. This allowed us to conduct cross-case comparisons. The matrix made it easy to identify similarities and differences across cases, and we identified trends, contrasts, and deviations across rows and columns.

Table 2.1: Structure of the analysis matrix based on the ANT framework.

	Agribusiness Clusters (ABCs)	Open markets supplying farmer networks	Supermarket supplying farmers' networks	Local processing company	Plastic crates association	Innovation Business Service Support network	EU-Nigeria Agribusiness Platform.
Central Actor							
Network Creation							
Business Model to Maintain the Network							
Material Element							
Organizational Innovation							
Marketing Innovation							
Outcomes							
Remaining Challenges							

The advantages of such a structured cross-comparison are fourfold. It enables the identification of patterns and trends—both similarities and deviations—that may not be evident when analyzing cases in isolation. It supports learning and strategic adaptation by illustrating how certain configurations of actors, tools, and practices lead to more resilient or scalable outcomes. It also facilitates the development of evidence-informed suggestions for follow-up activities in the area of B2B linkage networks. Finally, by offering a comparative view, the matrix helps identify where to invest resources, replicate models, or introduce targeted interventions.

2.2 Data collection

The research employed qualitative data from both primary and secondary sources, gathered from respondents involved in the HortiNigeria program in different capacities. Most of the data was collected through 10 case interviews conducted during the week of July 5–11, 2024, in Oye and Ogun. Additionally, we drew on information from respondents who participated in earlier online interviews conducted between February and March 2023 in Kano and Kaduna. Participant observations were also conducted in fresh markets as part of the data collection process.

All interviews were recorded and transcribed, and together with observation notes, they were incorporated into the case descriptions using a deductive–inductive approach guided by the ANT dimensions of our analytical framework. The case data were subsequently summarized in the ANT matrix using a structured, iterative process.

3. Ten case studies of B2B linkage networks

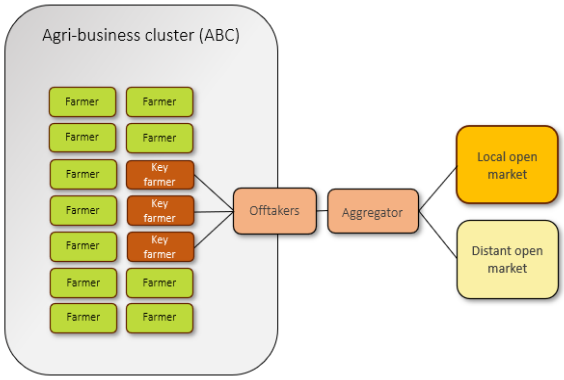
3.1 Agribusiness Clusters (ABCs) supplying local and distant open markets

Case 1: ABC in Kano and Kaduna

Agribusiness Clusters (ABCs) are collaborative, geographically defined ecosystems that bring together a wide range of horticultural value chain actors—including smallholder farmers, processors, input suppliers, marketers and financial institutions. The shared aim of the ABC model is to improve productivity, profitability, and sustainability of horti value chain through better coordination and stronger market linkages.

The ABC model is currently being implemented in the northern states of Kano and Kaduna. Each cluster is typically centered around one or more high-value crops such as tomato, onion, cucumber, pepper, or okra, selected based on agroecological suitability and regional market demand. Clusters are built upon existing production hubs and informal market systems and are gradually formalized through the facilitation of locally embedded actors and support from HortiNigeria.

Figure 3.1: Agribusiness Clusters (ABCs) supplying local and distant open markets



A key feature of the ABC model is the role of coaches, who act as local coordinators and facilitators. Coaches are selected based on their knowledge of the local context and their social credibility among farmers and market actors. Coacjes play a vital role in identifying key actors, building trust, and catalyzing linkages across the value chain. Their responsibilities include supporting the formation of producer groups or cooperatives, organizing stakeholder platforms, coordinating input distribution and marketing activities, and facilitating access to financial services.

ABCs promote both vertical integration—linking producers with processors and off-takers—and horizontal collaboration through the establishment of cooperatives and farmer associations. These associations often coordinate bulk sales, manage shared resources and/or collectively negotiate better terms with buyers. For example, in one cluster, around 500 farmers supply tomatoes to the commercial processor Tomato Jos under formal contracts, receiving inputs and credit in advance of the harvest.

Business-to-business (B2B) events and market engagement platforms are regularly organized to help producers understand buyer expectations and to facilitate direct negotiations. WhatsApp and other simple digital tools are widely used to share market information, schedule meetings, and track transactions, especially in contexts where formal communication channels are limited.

Despite the promise of the model, several challenges continue to affect cluster functioning. Post-harvest losses remain high due to inadequate storage, poor road conditions, and the absence of cold-chain logistics. While some investment has been made in cold rooms and improved packaging, the overall infrastructure gap limits value retention and market access. In some areas, rising profitability has led landowners to reclaim leased land from farmers, undermining production stability and investment in long-term improvements. Heavy reliance on rain-fed cultivation contributes to seasonal market gluts and price crashes. Coaches, in collaboration with seed companies, are promoting the adoption of irrigation systems to support off-season production and more consistent supply. Not all producers are equally integrated into the clusters. Poorer or

illiterate smallholders, as well as those producing in low volumes, often remain excluded due to limited planning capacity or logistical constraints. Ultimately, while some clusters have taken steps to support women's cooperatives and youth-led processing ventures, participation remains uneven.

3.2 Open markets supplying farmer networks

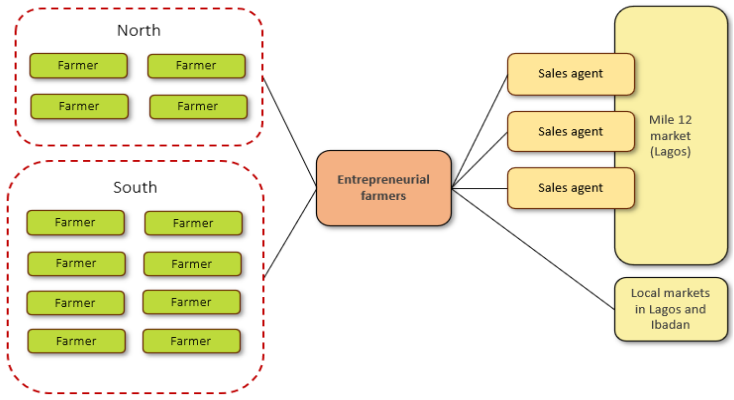
Case 2: Dee Dee farm

Located in the southern region of Nigeria, this Dee Dee farm operates through a well-established network of farmers both in the South and the North. The owner has built strong ties with these farmers and sells their produce on their behalf, taking a margin on each transaction. A key element of her marketing strategy is the network of sales agents she has established at the Mile 12 market in Lagos, one of the largest vegetable markets in the country. Most of the produce is sold at Mile 12 due to the high volume of trade, the certainty that produce will always find a buyer, and the advantage of immediate payment—unlike supermarket or hotel channels that often involve delays. She is now diversifying her markets by also selling in smaller local open markets in Lagos and Ibadan.

Before produce is transported to Mile 12, she and the farmers agree on an indicative price, leaving room for negotiation. She arranges for the transportation from farms to the market, although some farmers opt to transport their goods themselves. Upon arrival at Mile 12, the marketing agents determine the final price based on the prevailing market rates. Typically, the farmers do not grade their tomatoes, but she encourages them to do so, as differences in size directly impact price. She has also promoted the use of irrigation systems, especially among northern farmers, demonstrating the increased income they can earn beyond the rainfed season. As a result, irrigation has now been adopted across her entire farmer network.

She has no interest in exporting produce, citing the ongoing influx of vegetables from Benin and Cameroon. Regarding digital platforms, she believes they are not yet practical for the vegetable trade, which requires rapid decision-making and constant connectivity. The slow speed of existing platforms, limited network coverage in rural areas, and poor mobile data availability make them unsuitable for her operations.

Figure 3.2: Open markets supplying farmer networks



The government has made several promises to support the agricultural sector, but little has materialized in practice. In contrast, she has found WhatsApp to be a highly effective tool in managing her operations. Most farmers now use smartphones, making it easier to coordinate transactions. She uses WhatsApp to post produce demands in group chats, allowing farmers who can supply to respond. During negotiations, she requests photos of the produce to assess quality and documents agreements in chat messages, creating a written record that can help resolve any future misunderstandings.

Transportation remains a persistent challenge, both from the North and the South. The problems include a lack of trustworthy transport providers, roadblocks where informal taxes are collected, high costs of fuel and vehicle hire, and poor handling of produce during transit. She maintains written sales records, which she uses to identify marketing trends over the years. These trends inform her advice to farmers regarding what to plant and when, helping them to plan production more strategically.

At Mile 12, transporters and producers deliver the vegetables, which are aggregated from larger farms and unloaded in the presence of marketing agents and farmer representatives. Prices are negotiated with wholesalers, and hired laborers carry the bags and crates to buyers' stalls. The market authority is responsible for maintaining infrastructure, mediating disputes, collecting taxes on behalf of the government, and overseeing health inspections.

The buyers at Mile 12 are primarily wholesalers who supply smaller retail markets in and around Lagos. Only at the outer sections of the market does some retail trading take place. Tomatoes make up approximately 40% of all produce traded at the market by weight. Bell peppers account for 25%, while the remaining 35% includes cucumbers, habaneros, cabbage, and carrots. The market does not use digital systems; all prices are informally agreed. Although the market authority does collect sales data, it has not used this information to identify seasonal trends or make trade forecasts.

HortiNigeria has played a key role in supporting this business model by organizing meetings among farmers. Initially, there was considerable mistrust between participants. However, due to the credibility and neutral stance of HortiNigeria, the farmers gradually opened up, began to engage more actively in meetings, and started sharing information and experiences about production and marketing.

This process has led to stronger collaboration among them. HortiNigeria also facilitated direct contact between the BCs and the Mile 12 market authority. Thanks to this connection, the BCs can now report problems with marketing agents, and the authority will intervene to help resolve the issue.

Case 3: Farm Help

FarmHelp is an agrodealer that supplies to a network of over 3,000 smallholder vegetable farmers. It provides agricultural inputs, but aggregates and markets produce as will. It also offers training and technical services to farmers in its network. The majority of its revenue comes from the sale of inputs, with the marketing side of the business playing a secondary, though growing, role.

FarmHelp supplies all necessary inputs for vegetable production. It also provides follow-up support throughout the growing cycle, ensuring that farmers have what they need for each stage of cultivation. During harvest, farmers come to FarmHelp to hire or purchase crates for easier transportation of their produce. These crates are also rented out, providing an additional service that reduces post-harvest losses and improves logistics.

Most agricultural inputs in Nigeria are imported from abroad. While FarmHelp itself does not import these products directly, it sources them from local distributors who have already paid for them in U.S. dollars. FarmHelp purchases these goods in Nigerian Naira and supplies them to farmers. One of the company's innovations is its greenhouse, where it grows seedlings on demand for farmers. Farmers choose the seed varieties they want, and FarmHelp raises the seedlings, which are either picked up by the farmers or delivered by a logistics staff member.

To encourage innovation and build trust, FarmHelp has also established demonstration plots where it grows crops such as tomatoes, chili peppers, cucumbers, habaneros, and onions. Many farmers previously believed these crops could not be successfully cultivated in southern Nigeria. The demonstration plots have proven otherwise, showcasing the potential for high yields and improved income from these crops. FarmHelp uses these plots to train farmers on pest and disease management, production techniques, and market-oriented decision-making. Staff members themselves have been trained by organizations such as Navak CropLife and through self-learning, including agricultural programming on television.

Farmers often arrive at FarmHelp without a clear understanding of what they want or need. A significant part of FarmHelp's role is advisory—guiding farmers to select seeds and inputs based on market demand. To do this, FarmHelp plants a wide variety of seed types in its demonstration plots, which allows farmers to see the

expected results before making purchasing decisions. The company encourages farmers to focus on varieties that offer strong market potential, long shelf life, and ease of transportation, helping them match production to consumer preferences and logistical realities.

In addition to providing inputs, FarmHelp aggregates produce from its farmer network and sells it through trusted market agents. About 70% of produce is sold through open markets, while 30% goes to more formal buyers, including supermarkets, hotels, and food courts. While supermarkets offer better prices, they also demand consistent quality and volume, which many farmers struggle to meet. Most smallholders do not grade or sort their produce, missing opportunities to access higher-value markets. FarmHelp is working to identify and support more farmers who are capable of meeting the quality standards of supermarket buyers.

FarmHelp maintains close communication with its network of market agents to stay informed about current demand. It contacts agents daily to determine how many crates are needed and then reaches out to farmers accordingly. A large WhatsApp group with nearly 1,000 farmers enables fast coordination. Farmers receive updates about market demand, required volumes, quality expectations, and delivery times. These digital communications are central to FarmHelp's marketing operations.

To better track supply availability, FarmHelp records what seeds are sold to which farmers. This helps the company predict future availability of produce and align it with buyer needs. In some cases, FarmHelp also accommodates special crop requests. For example, members of the Indian community in Lagos have requested specific vegetables, supplying indigenous seeds to FarmHelp, which then finds farmers willing to grow them. Once harvested, these crops are delivered to the community.

Through its collaboration with HortiNigeria FarmHelp has been able to link farmers to credit. In addition FArmHelp provides input on credit, and repayments are deducted from the farmers' sales revenue when FarmHelp aggregates and sells the produce. This model ensures that farmers have reliable access to inputs while minimizing financial risk.

A key challenge for many farmers remains access to finance. FarmHelp's credit model gives farmers a sense of security, knowing that their harvests will be picked up and sold, rather than wasted. Pricing negotiations, however, are complex. FarmHelp typically agrees on a price margin with the farmer and then gathers price information from both formal and informal sources. The HortiNigeria program provides weekly market price updates, but open market prices can vary, making pricing a time-consuming process. Buyers are not always transparent, and farmers expect timely payments, which puts additional pressure on FarmHelp to make quick decisions.

Although FarmHelp is aware of various digital platforms for agriculture, it currently relies on WhatsApp and Facebook for most of its communication and marketing. Farmers often post photos of available produce on these platforms, making them practical tools for informal trade. Logistics remains a challenge, particularly due to the perishable nature of vegetables. In the past, poorly coordinated deliveries led to spoilage and losses. To address this, FarmHelp introduced a structured logistics schedule, allowing farmers to drop off produce at fixed times. This change has significantly reduced delivery stress and cost.

FarmHelp currently works with one transporter, down from five in the past, when coordination challenges were more frequent. The company now works closely with a single transporter who operates on a clear schedule and has built a trusted relationship with FarmHelp's owner. This trust even extends to social networks—if problems arise, the owner can reach out to the driver's family for accountability.

The HortiNigeria program is widely respected in Nigeria's horticulture sector, and FarmHelp notes that farmers are more willing to participate in meetings and trainings associated with the program. Previously, farmers were reluctant to share information with one another. However, with the creation of networking

platforms under HortiNigeria, there has been a noticeable shift toward greater openness and collaboration. Farmers increasingly recognize that sharing knowledge and experiences benefits everyone in the long run.

She aggregates produce from the farmers she supplies with inputs and sells it to supermarkets. She keeps detailed records of all seed sales to farmers, allowing her to track what crops the farmers in her network are growing and when they are expected to harvest. For her supermarket supply planning, she uses this data to identify potential sources of produce and contacts the farmers accordingly.

Transportation is a major challenge for her. Over the years, she has faced many issues with transporters—including cheating, poor handling of produce, long transport times, and high costs. Currently, she works with a single transporter whom she knows and trusts.]

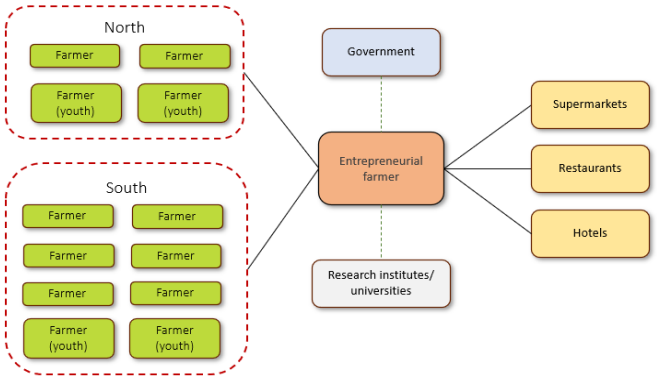
3.3 Supermarket supplying farmers' networks

Case 4: Soilless Farm Lab

Soilless Farm Lab is a large farming enterprise that applies modern horticultural practices and technology. It operates on a sizable plot with open cultivation areas, greenhouses, processing facilities, office buildings, training facilities, and staff housing. One of the key innovations of Soilless is its training-for-youth model, which involves offering a free three-month program for young people to learn horticulture and greenhouse cultivation. Most of the trainees come from rural areas across 31 states in Nigeria. After completing the training, youth can either return to their communities or continue working within the Soilless ecosystem. Many choose to lease one of the 50 greenhouses on the premises, producing premium vegetables that Soilless then markets on their behalf. Soilless recovers the training costs through a margin on these sales. Youth who return home can also sell their produce through Soilless, giving them access to more profitable markets and avoiding exploitation by middlemen. This model has been successful and is now being replicated by others, although often with stricter contractual arrangements.

Soilless generates income in three main ways. First, it sells premium-quality fresh vegetables—such as tomatoes, peppers, and onions—to supermarkets, hotels, and restaurants in Lagos. It does not supply the Mile 12 open market. Second, it provides technical services for setting up greenhouses and farms, including consulting. Third, Soilless has recently expanded into processing vegetables, which provides better margins and more stable pricing compared to fresh produce. Processing also allows for the use of produce that may not meet fresh-market standards due to cosmetic imperfections.

Figure 3.3: Supermarket supplying farmers' networks



Finding reliable partners has been a longstanding challenge. Soilless often needed construction, transportation, or logistics services but found many service providers untrustworthy. This forced the company to do much of the work in-house. However, the founder is aware that taking on too much reduces focus, so Soilless is gradually building a network of trusted partners to outsource essential services like logistics and cold storage construction.

The government has supported Soilless by providing land and promising a certificate of ownership. This certificate is crucial in Nigeria, where most farmland is government-owned and can be reclaimed. With a

certificate of ownership, Soilless would have greater security and better access to finance. The government has otherwise left Soilless alone, which the enterprise values highly.

Collaborating with research institutes has been difficult. These institutes often lack an understanding of commercial agriculture and are not oriented toward supporting business ventures. This disconnect has limited the value of such collaborations.

The entrepreneur behind Soilless sees the potential in digital platforms for marketing produce, especially for the younger generation. However, he recognizes that the vegetable market in Nigeria is still largely informal and relationship-based. Contracts carry little weight in such a trust-dependent system, and face-to-face negotiation remains important. Despite this, the long-term vision includes digitalization to enhance efficiency and reach.

Production at Soilless is relatively stable but is adjusted based on market analysis conducted by business development staff. For example, during the rainy season, Soilless reduces tomato production and focuses on bell peppers, which fetch better prices during that period. The production plan is directly informed by market demand patterns around holidays and seasons.

Maintaining consistent quality and accessing high-quality inputs remain key production challenges. High nutritional value requires expensive inputs, and variation in quality is common among the youth network. Standardization is a persistent issue in the market.

Soilless has explored export markets targeting the Nigerian diaspora, who are eager to access familiar vegetables abroad. Initial efforts through third-party agents were unsuccessful due to lack of transparency, exploitation, and logistical inefficiencies. Soilless produce was mixed with lower-quality products while still being labeled as Soilless, undermining the brand. The bureaucratic burden and perishability of fresh vegetables made the process even more difficult.

To address these challenges, Soilless is now looking to handle exports directly and is seeking reliable agents familiar with EU requirements. Future plans include exporting processed products in powdered form to Dubai and the Middle East, with the aim of earning foreign currency and accessing more stable international markets.

Case 5: Swanscape

After working at the export desk of a commercial bank, the female entrepreneurial farmer transitioned into agriculture with a vision: to grow and export high-quality organic vegetables from Nigeria to international markets. Initially focused on exports to the UK, she soon encountered significant infrastructure constraints at Nigerian airports, combined with bureaucratic bottlenecks and lack of cold chain logistics. Recognizing these limitations, she pivoted to supplying premium supermarkets in Lagos, with a long-term goal of achieving full organic certification and eventually accessing EU markets with organically certified produce.

Today she runs a vertically integrated farming business, sourcing vegetables from a network of 30 partner farmers and complementing this with produce from her own farm, which supplies approximately 40% of total volume. The remaining 60% is sourced from partner farmers—many of whom are entrepreneurial mid-scale growers, not typical smallholders. Her enterprise focuses on premium crops such as tomatoes, sweet peppers, and habaneros, which are harvested and packed with strict quality control.

She also invests in training and coordination, visiting her network of farmers five to six times a year to align on planting schedules, quality standards, and post-harvest practices. A WhatsApp group keeps communication flowing between her and the farmers.

Over the last decade, Adeola has built strong relationships with supermarkets across Lagos. She understands their schedules and quality requirements The supermarkets send their orders on Sunday. Her business

harvests on Monday, clean overnight, and deliver by Tuesday morning. She maintains a packing house in Lagos, staffed and equipped to quickly clean and package vegetables in consumer-ready packs. The products are tailored to meet the expectations of expatriate and high-income Nigerian customers—a market that demands freshness, aesthetics, and reliability.

One of the enterprise's biggest bottlenecks is transportation—particularly moving vegetables from the farm to the city. Perishable crops like tomatoes and peppers are extremely sensitive to delays, and cold trucks are often unavailable or unaffordable. Fuel costs are high, driving up logistics expenses. Heavy rains frequently disrupt road access, especially to and from farms. Transporters exploit urgency, raising prices last minute or refusing service during bad weather.

Despite having small delivery vans in Lagos, she explains that the "first mile" from farm to pack house is still the weakest link.

Because of the perishability of fresh vegetables, farmers are vulnerable to opportunistic pricing by sales agents, who know they can force a sale or reject a delivery outright. To protect her network, Adeola aims to harvest only what can be sold within 24 hours.

Adeola is committed to transitioning to 100% organic farming. She believes this is where real market value lies—particularly in Europe, where consumer demand for African-grown, organically certified produce is increasing. She doesn't want to serve the ethnic market abroad. I want to serve the mainstream organic market with high-quality produce that meets EU standards.

Organic farming is labor-intensive, requiring practices like manual weeding, composting, and non-chemical pest control. Skilled labor is in short supply. Certification costs are high, and regulatory rules are constantly evolving—especially for contract farmers and external suppliers.

While the current focus is domestic, Adeola remains optimistic about future exports. She sees an opportunity in connecting with experienced European buyers—particularly those who understand the African context and are willing to offer guidance and co-invest in quality and compliance.

She sees that there are too many generic platforms and not enough real facilitation. We need help with the hard parts—like getting access to certified buyers, understanding EU requirements, and investing in infrastructure. Her biggest request to development partners is clear "Don't just create platforms. Help us solve the real problems. Help us connect to the buyers, get certified, and get our produce there—because the market is ready."

3.4 Local processing company

Case 6: Olanreforward Foods and Farms Chili powder Processing

The small company in Ibadan with 4 staff produces chili powder in sachets for the local market. The owner-entrepreneur has several state-of-the-art machines that grind and package the chili. For drying the fresh chili, he currently depends on sunlight, which is a limiting factor for production. There are plans to purchase a dryer.

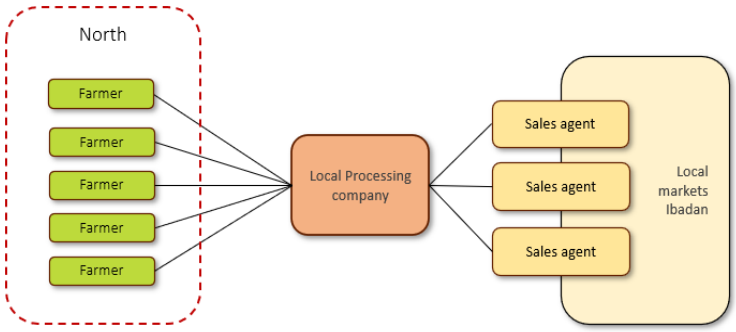
While still a university student, the entrepreneur began processing chili peppers as a side hustle to support his education. What started as a small venture to generate income quickly revealed a strong market demand, sparking his ambition to grow the business into a formal enterprise.

Recognizing the potential, He submitted a proposal to the Tony Elumelu Foundation, which supports young African entrepreneurs. He was awarded $5,000, which enabled him to purchase essential packaging equipment. Following this, he participated in the Federal Government Export Expansion Facility Program (EEFP) targeting SMEs with export potential. Through this program, he secured ₦7 million, allowing him to

significantly expand operations. He also received support from the Nigerian Export Promotion Council (NEPC), which connected him with export-focused opportunities.

From early on, the entrepreneur worked closely with chili pepper farmers in Northern Nigeria. As his business grew, so did their production capacity, in a mutually reinforcing relationship. He maintains a long-term partnership with a lead farmer, whom he considers a trusted ally after working together for 7–8 years.

Figure 3.4: Local processing company



Together, they discuss production volumes and quality standards. Adebayo has encouraged farmers to adopt hotter and more flavorful varieties to differentiate their product from imported alternatives.

Despite growth, production still depends on favorable weather. The company lacks a mechanical dryer, limiting its ability to process during rainy periods. This seasonal constraint affects both volume and consistency. To address this, he is seeking investment to acquire a dryer that would allow year-round production, not only for chili peppers but also for onions, tomatoes, and other crops with seasonal fluctuations.

In recent years, the company has seen steady growth in revenue, though most of its exports are driven by Nigerian diaspora rather than large-scale international buyers. Locally, he personally delivers to wholesalers in open markets, visiting twice a week. He also employs six sales agents in the markets. To raise awareness, he invested in a delivery bus equipped with speakers, which drives through neighborhoods promoting the product directly to consumers—"bringing it to their doorstep."

His latest marketing strategy focuses on niche customers who value natural, high-quality products. He avoids credit sales due to limited working capital and maintains a cash-only policy with both farmers and retailers.

He is now faces growing competition, particularly from members of the Indian community, who import similar but often lower-quality products. He believes his natural, Nigerian-grown product stands out in terms of taste and integrity—but not all consumers recognize the difference. With declining disposable income, many customers now prioritize quantity over quality, making it harder to compete purely on product merit.

Despite these challenges, Adebayo sees immense potential in value-added products like onion powder, tomato powder, and mixed spice blends. The market, he says, is ready—especially during off-seasons when fresh produce becomes expensive.

He has mapped out a detailed distribution plan for Ibadan, covering different parts of the city daily. Expansion into Lagos is underway, though limited by logistics, staffing, and a lack of transport vehicles.

The value of his current facility is estimated at over ₦200 million, but further growth depends on access to finance. Commercial banks, while impressed by the facility during visits, have not offered loans. A recent survival during an economic downturn was only possible thanks to support from his church and individual investors.

He sees HortiNigeria not as a grant provider, but as a key facilitator—to connect businesses like his with financing, equipment, and market intelligence. "We have the market, we have the facility, and we're already creating jobs—what we need is that final push."

The business currently provides employment to several women, including widows, who rely on this income to support their families. Adebayo believes that with the right support—particularly equipment like a dryer, packaging facilities, and working capital—he could significantly expand, tap into international markets, and scale job creation.

3.5 Member-based Association

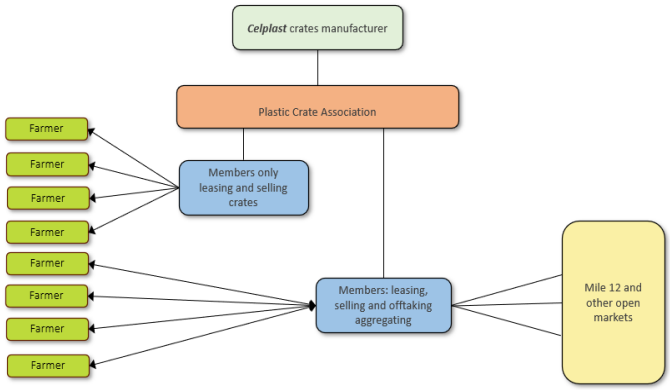
Case 7: Plastic Crates Association and its members.

Using plastic crates to transport tomatoes in Nigeria offers numerous benefits across the entire value chain. Unlike traditional methods such as jute bags or baskets, plastic crates provide better protection for the produce during transportation. This significantly reduces post-harvest losses due to bruising, crushing, or spoilage—common issues when using less sturdy packaging. Plastic crates also facilitate easier stacking and handling during loading and unloading, improving logistics efficiency. Because the crates are reusable and more hygienic, they contribute to better food safety and overall quality preservation. In addition, their standardized size makes it easier to measure and monitor quantities, which supports fairer transactions and potentially more transparent pricing.

The plastic Crates Association is in the middle of coordination the promotion of the use of plastic crates for tomatoes. The Association operates within the tomato value chain, representing traders at Mile-12 and other major produce markets. They piloted crate use at Mile-12, reducing tomato losses during transport from 41–45% (in raffia baskets) to as low as 5%.

The Plastic Crate Association plays a role as an intermediary between offtakers and farmers. The association purchases plastic crates in bulk from the manufacturers. Offtakers and trading companies then enter into agreements with the association to obtain the crates. It is essential for offtakers and trading companies to own plastic crates, as farmers cannot buy them individually. The Plastic Crates Association has around 100 members.

Figure 3.5: Plastic Crates Association



These members are small business owners. On the one hand, there are members whose business model is limited to leasing and selling crates to farmers. On the other hand, another group of members is also involved in aggregation and trading at the market, in addition to leasing and selling crates.

The association has close ties with Celplast Industries Nigeria, a leading Nigerian manufacturer and exporter of plastic products, including plastic crates. Through the association, members can place orders for crates directly with Celplast.

The crates are provided to farmers through a recovery system, ensuring that the crates are returned to the offtakers and trading companies. There is a system in place for distributing the plastic crates to farmers, who

then transport them to the Lagos market. All crates are numbered. The members have contacts with the markets where the farmers with crates sell their produce.

There is still a lot of opportunity to scale up the use of crates. Current estimates indicate that the horticulture sector in the country requires 5 million plastic crates, while only around 1 million are currently available. However substantial investment are necessary.

3.6 Innovation Business Service and Support (IBSS)

Case 8: IBBS with an aggregating function: Eweko

Eweko, through its Integrated Business Support Services (IBSS), is part of the hub system created by the HortiNigeria program—a platform where value chain actors such as farmers, aggregators, buyers, and service providers can meet and collaborate. Founded in 2017, IBSS began as a farming enterprise with a fee-based support services unit. Over time, it evolved into a more integrated model offering technical support, business development, market linkage, and produce aggregation ('skin in the game'). Eweko currently employs over 25 staff across multiple locations.

Eweko facilitates capacity-building programs both independently and in collaboration with development agencies and seed companies. Demonstration plots are used to showcase improved agricultural techniques. This training builds trust among farmers and equips them to engage more confidently with markets. In 2020, Eweko expanded its services to include produce aggregation—transitioning from solely offering support services to actively participating in the value chain. Many farmers and buyers previously lacked mechanisms to find and transact with one another. Eweko now facilitates these connections. Through its aggregation service, Eweko links horticultural producers to buyers. A commission is charged on the aggregated produce, which now contributes 35% of Eweko's income, while the remaining 65% comes from capacity-building and other services.

A major bottleneck for farmers is transportation. Farms are located in rural areas, far from city markets. Most transport providers operate independently and are not integrated into the hub. As a result, vehicles are often overloaded with unrelated goods or passengers, damaging fragile produce. Transport quality is inconsistent, leading to post-harvest losses and quality complaints at the market. Uncoordinated routing leads to inefficiencies—farmers in the same area may unknowingly arrange separate transporters on the same day. Eweko sees an opportunity to coordinate logistics and aggregate produce, making it more cost-effective to use dedicated vehicles. However, this requires timely communication and synchronization of harvests and volumes.

Farmers do not set their own prices; instead, they are subject to daily market fluctuations. The perishability of horticultural produce further pressures farmers to sell quickly, often at unfavorable prices. Eweko must balance negotiations between farmers and offtakers while navigating seasonal price swings, scarcity, or oversupply in the market.

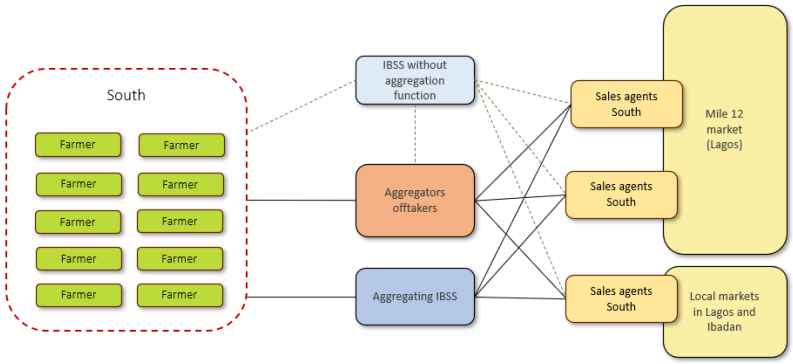
To improve coordination and transparency, Eweko is developing a digital platform designed to connect farmers with buyers, allow farmers to upload expected harvest volumes and timelines, and give buyers early access to upcoming supply. The platform will be free for farmers and will include features such as buyer preferences, weekly market price updates, and logistics coordination. Although still under development, the platform has started onboarding users. In the future, it will also allow farmers to indicate planting dates and projected yields to better coordinate transportation and delivery.

Eweko has made small export shipments to Nigerian communities in the UK and Canada. However, scaling up exports faces significant challenges, including bureaucratic and administrative complexity, difficulty in finding reliable overseas partners, and lack of infrastructure for certification and compliance with export standards.

Most farmers are not producing at scale for export and are hesitant to invest in certification due to the need for detailed record-keeping, required inspections, and the time and effort involved. Group certification could be a more viable option for smallholder farmers.

Eweko has grown from a small farm into a trusted intermediary and technical support provider in Nigeria's horticulture sector. By addressing critical challenges in logistics, market access, and farmer empowerment, Eweko offers a model for inclusive and scalable value chain development.

Figure 3.6: Innovation Business Service and Support (IBSS)



While challenges remain—particularly in logistics coordination and export readiness—Eweko's blended model of on-the-ground support and digital innovation is creating new opportunities for smallholder farmers. As the digital platform matures and coordination improves, Eweko is well-positioned to unlock greater value for both farmers and buyers in Nigeria's horticulture markets.

Case 9: IBBS without aggregation function: Onelife

Onelife is a youth-serving organization dedicated to helping young people and women access the information, linkages, and resources they need to contribute to a more resilient society. Within the HortiNigeria project, Onelife focuses on agribusiness and enterprise development, with a particular emphasis on how young people can engage with and navigate the agricultural value chain.

Horticulture holds strong appeal for youth due to the short production cycles of many crops, which allow for relatively quick returns. Onelife capitalizes on this potential by organizing training sessions for farmers, helping them improve their practices in areas such as input use, farming techniques, and marketing strategies. These sessions often serve as eye-openers, showing young farmers how small changes can lead to significant improvements.

Though Onelife is a nonprofit, it sustains itself through a mixed-income model. Around 64 to 65 percent of its income comes from grants, while the rest is generated through donations, training services, consulting, and the rental of event facilities. Some project-based initiatives are maintained and even monetized after the project ends. For instance, Onelife's human resources and market linkage services—initially developed under HortiNigeria—may continue as paid services in the future.

The organization works with a broad spectrum of youth, from educated young people in suburban settings to marginalized youth in rural areas with limited options. Acting as a connector between people, networks, and market realities, Onelife employs a variety of outreach strategies. These include social media campaigns, mobile applications, and hands-on training sessions that inform youth about agricultural tools like boom sprayers, greenhouses, and drip irrigation, as well as digital marketing techniques. Onelife also connects young people with experts and technology providers to raise awareness and foster motivation around the opportunities available in horticulture.

Recognizing that access to land is a barrier for many young people, Onelife has worked with government partners to secure 10 hectares of protected farmland. This space is designed to be secure and convenient,

addressing youth preferences for ease of access over long-term risk management. Youth interest is often driven more by convenience and visibility than by concerns about future risks, and Onelife's model reflects this reality.

One of the most pressing challenges in the sector is labor. Many farm owners struggle to find skilled workers. Onelife is tackling this issue by developing a human resources framework that connects farms with trained laborers. The organization doesn't just place workers—it trains them to meet agricultural standards, increasing their value and reliability. While this initiative began under HortiNigeria, it has the potential to become a revenue-generating service in the future.

Access to finance is another key area of intervention. Onelife helps young people overcome location-based barriers and facilitates input financing, enabling farmers to receive inputs and repay costs after harvesting and selling their crops. Ensuring timely repayment remains a work in progress and is a continuing focus of the organization.

Although digital marketing tools are still underused in the horticulture sector, particularly among older or less tech-savvy farmers, this is expected to change as more digitally literate youth become engaged. Onelife encourages the use of tools like Google Trends to help farmers identify demand and pricing trends. Over time, the goal is to make these tools a standard part of agricultural decision-making.

Communication along the value chain remains fragmented, and Onelife aims to bridge this gap. Through training and by facilitating learning linkages—especially around service provision—the organization helps improve information flow. It frequently conducts step-down training sessions and brings in external experts who would otherwise be inaccessible to local farmers.

Finally, affiliation with HortiNigeria plays an important role in establishing credibility. Participation in the program signals professionalism and trustworthiness, and many youth and entrepreneurs use this association to build their business profiles and attract further opportunities.

3.7 Digital Platform program

Case 10: EU-Nigeria Agribusiness Platform

The EU-Nigeria Agribusiness Platform is a digital initiative launched in May 2025 to strengthen trade and investment linkages in agriculture between Nigeria and the European Union. It is implemented by Agribusiness Register Limited and funded by the EU. The platform aims to connect agribusinesses, particularly small and medium-sized enterprises (SMEs), in Nigeria and EU member states. In 2025, the HortiNigeria program signed a Memorandum of Understanding with the platform, focusing on enhancing business-to-business (B2B) matchmaking in the horticulture sector.

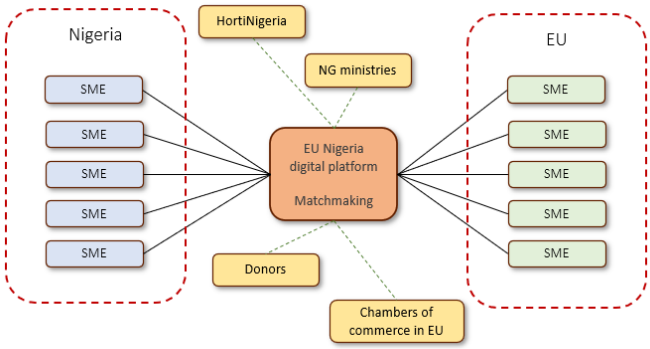
The platform serves as a market gateway, offering tools for business profiling, matchmaking, and verified trading of agricultural commodities. It facilitates connections between buyers and sellers through a digital interface that includes features such as company verification, trade support services, and access to trade missions. Although many services are currently provided free of charge, the platform is expected to shift to a revenue model based on subscriptions, service fees, and commissions. A major trade event is scheduled for October 2025 in Brussels to further strengthen these connections.

Agribusiness Register Limited has distinguished itself by pursuing a coordinated and partnership-based approach. It has secured public-private collaboration, including formal MoUs with European Chambers of Commerce. A national Steering Committee, co-chaired by the Federal Ministry of Agriculture and the Federal Ministry of Trade and Investment, helps align platform activities with broader policy objectives.

The platform also works with important Nigerian stakeholders such as the Federation of Agricultural Commodities Associations of Nigeria (FACA), the National Institute for Standardisation and Assessment in Trade (NISAT), and the Produce and Importers Development Association (PIDA), among others.

Through its partnership with HortiNigeria, the platform gains access to a robust network of horticultural SMEs organized into agribusiness hubs. These hubs are geographically clustered groups of producers and service providers who work together to improve value chain performance. In the South-West alone, HortiNigeria has registered around 2,000 SMEs, with additional clusters emerging in Northern Nigeria.

Figure 3.7: EU-Nigeria Agribusiness Platform



These hubs offer considerable supply potential for European buyers, particularly when supported with branding, certification, and market access tools.

Since its launch, the platform has registered over 250 Nigerian SMEs, with onboarding of European businesses ongoing. The initial focus is on buyers, seed companies, and service providers. Several transactions are currently being developed, and trade missions are being designed to accelerate deal-making. In addition to direct trading, the platform generates revenue through export commissions, subscriptions, knowledge product sales, and brokerage services.

Despite early progress, Nigeria's weak supply chains pose a significant challenge to fulfilling export potential. Low productivity, inconsistent volumes, limited storage infrastructure, and difficulty complying with EU standards continue to constrain growth. The platform is addressing these issues by partnering with NISAT to support certification processes, working with the Ministry of Agriculture to explore production finance, and promoting good agronomic practices across clusters.

There is strong interest from the platform in further collaboration with EU-based institutions. Areas of potential cooperation include market intelligence on buyer preferences and pricing, onboarding of Dutch and European seed companies, support for cooperative branding of Nigerian products, and participation of Nigerian SMEs in international trade events. The platform team currently includes a project director, platform manager, agribusiness specialist, user engagement officer, and IT support staff.

In the coming months, efforts will focus on onboarding more HortiNigeria cluster members, expanding partnerships on the EU side, closing initial transactions, and strengthening capacity-building programs. The platform also aims to contribute to policy dialogue that supports an enabling environment for agribusiness growth. While still in its early stages, the EU-Nigeria Agribusiness Platform shows considerable promise in using digital technology and strategic partnerships to unlock new opportunities for trade and investment in Nigeria's agriculture sector.

4. Analysis across cases

The preceding chapter presented ten cases of horticultural B2B networks operating across Kano and Kaduna states in the North, and Ogun and Oyo states in the South. While the individual case descriptions provided in-depth insights into how each network functions, a cross-case comparative analysis (see matrix in paragraph 2.3) allows us to move beyond description and identify broader patterns and trends within Nigeria's evolving horticulture sector. To this end, we summarized and organized the data for each type of case in the completed matrix presented in Annex 2.

Trends and patterns across the cases within each dimension

Central Actor

Across all cases, a central actor emerges who initiates and sustains the network, playing a prominent coordinating role. We distinguish four types of central actors:

Type of central actors	B2B linkage networks types
Entrepreneurial farmer	– Open markets supplying farmer networks – Supermarket supplying farmers' networks – Local processing company
Business service provider	– Innovation Business Service and Support
Development project	– Agribusiness Clusters (ABCs) supplying local and distant markets – EU-Nigeria Agribusiness Platform
Member-based association	– Plastic crates association

Network creation

In all cases, the process of establishing the network involves aligning partners both at the production and marketing levels. This includes motivating actors to join the network and addressing practical issues related to transportation, as well as ensuring consistency in supply quantity and quality. The commercial transactions have to be attractive for the actors involved. The central actors constantly seek solutions to seize opportunities and address emerging challenges as the network evolves.

Conversely, there are differences across the types of central actors in how the network has been established:

- Entrepreneurial farmers started small, engaging in commercial interactions with a few trusted contacts, and gradually built their networks as new opportunities arose and were taken up. Their networks largely rely on personal contact and mutual trust. Being part of the value chain, the entrepreneurial farmers have 'skin in the game.'
- Business service providers, on the other hand, typically started by offering training and advisory services funded by third parties, often development agencies. They recognized the importance of continuing these services while simultaneously building networks with farmers and assisting them in marketing horticultural produce.
- Development programs represent short-term interventions aimed at establishing new marketing networks that bring producers and buyers together.
- Member-based associations tend to build networks around a critical material element—for example, plastic crates—that serve as a focal point for interaction and coordination.

It is worth noting that HortiNigeria's role in facilitating network creation was frequently mentioned. Several central actors observed that, due to HortiNigeria's credibility and neutral stance, farmers gradually opened up and began engaging more actively in the network. HortiNigeria helped to overcome considerable mistrust between farmers and other actors.

Business model to maintain the network

There are notable differences in the business models applied by the central actors to maintain the networks.

- Entrepreneurial farmers run profit- and growth-oriented businesses, which provide a solid financial basis for the network on the long run, with commercial interactions being central.
- Business service providers and development programs, by contrast, largely depend on project-based funding or fee-based services to network actors. This model tends to be less stable once project funding ends. Although many projects include a sustainability plan with the ambition to achieve long-term financial independence, in practice this is not always realized.
- Member-based associations rely on membership fees and margin services, which can provide a solid basis—provided that membership dues are collected consistently and are sufficient to cover the organizational expenses of the central actors.

Material elements

Material elements play a central role in all the B2B linkage networks presented in the cases. They provide the tangible foundation on which relationships, services, and exchanges are built. Across the different networks, several categories of material elements were frequently mentioned as being critical to their functioning:

- Production-related materials, such as greenhouses, irrigation systems, and other infrastructure that enable farmers to increase and stabilize production.
- Logistics-related equipment, including transport vehicles, cold storage facilities, and plastic crates, which ensure that produce can move efficiently and maintain quality from farm to market.
- Smartphones and mobile technologies, which serve as key communication tools for sharing real-time information on demand, supply, and prices, as well as for coordinating logistics.
- Processing and packaging machines, which add value to products, extend shelf life, and open access to higher-value markets.
- Digital marketing tools, which are gradually being introduced to improve visibility and direct sales, although adoption remains limited and uneven across cases.

The cases reveal important differences in how these material elements are enrolled in B2B networks, and the specific challenges that arise. Entrepreneurial farmers often highlighted transportation as the most critical material factor, as access to reliable vehicles and storage directly determines whether they can deliver produce on time and at the required quality. The case of the plastic crate association illustrates how material elements can even become the foundation for network establishment: the shared need for durable crates created a new organizational structure and recovery system around them. In contrast, for digital trading platforms, the essential material elements are not physical infrastructure but rather digital tools and smartphones, which enable communication, trust-building, and transactions across dispersed actors.

Organizational innovation

The cases highlight several examples of organizational innovations, both on the producers' side and on the buyers' side.

One prominent example is the ABC model, developed by IFDC, which serves as an organizational innovation for structuring farmers and strengthening collective action. Through this model, farmers are able to create value by pooling resources and collaborating in marketing, sharing equipment, arranging transportation, and exchanging information. Another case is the EU platform, which organizes and aligns producing SMEs into hubs that directly connect farmers to buyers. This not only improves coordination but also builds trust and transparency across the chain.

Entrepreneurial farmers also play a pivotal role in driving organizational innovation. Many have established networks of smallholder suppliers by motivating them with services and benefits designed to secure enrollment in the network. These service packages typically include training, input provision (sometimes on credit), and, most importantly, aggregation and marketing of produce. In addition, entrepreneurial farmers often offer access to greenhouse technology or facilitate leasing arrangements for land and greenhouse infrastructure, thereby enabling farmers to expand their production capacity.

The cases also show internal organizational innovations within the enterprises of entrepreneurial farmers. These include the introduction of new storage facilities, processing and packaging units, and improved systems for handling produce—measures that enhance both efficiency and product quality.

Regarding organizational innovation on the buyer side, central actors have developed systems to coordinate logistics and transportation, ensuring that horticultural produce reaches the market more quickly and with reduced losses. They also pay closer attention to proper handling practices, which help maintain product quality. Furthermore, central actors actively reach out to marketing agents, line them up, and establish formal agreements to create a smoother handover and selling process at key market locations. The EU platform similarly takes on an outward-facing role by negotiating with buyers in Europe, often through Memoranda of Understanding (MoUs) signed with buyers and intermediary organizations.

Other innovations include the plastic crates association, which introduced an organizational innovation; the recovery system for plastic crates to reduce losses and improve sustainability. Likewise, the introduction of human resource placement systems provides farmers with better access to organized labor, further strengthening the functioning of these networks.

Together, these examples demonstrate that organizational innovation is occurring at multiple levels—within producer groups, individual enterprises, buyer platforms, and across the wider value chain. Such innovations play an important role in overcoming constraints, building trust, and ensuring that horticultural produce is marketed more efficiently and effectively

Marketing innovation

The cases illustrate a range of marketing innovations that central actors and networks have introduced to expand market access, improve efficiency, and strengthen competitiveness. One of the most visible examples is the role of the ABC in organizing collective marketing activities, such as bulk transport, which enable smallholders to reach distant urban markets, including Lagos. This form of coordinated logistics not only reduces costs but also strengthens farmers' bargaining position by allowing them to sell in larger volumes.

At the same time, supermarkets are increasingly recognized as important new outlets, offering opportunities for higher-value sales compared to traditional markets. Some central actors have even experimented with exports, though these initiatives have so far mainly targeted Nigerian diaspora communities in so-called "exotic markets." Despite this limited scope, small but consistent volumes are already being shipped to the UK and Canada, marking an initial step toward broader international market engagement.

Another strand of innovation focuses on identifying and serving market niches. For example, one central actor aims to position itself around high-quality, natural, and organic products, capturing a growing consumer demand for premium goods. In line with this strategy, several other actors are exploring certification schemes, including organic certification, as part of efforts to improve the consistency of supply, meet increasingly strict buyer requirements, and prepare for EU export readiness. These initiatives signal an important move toward more formalized and quality-driven markets, which could gradually transform the horticultural sector.

Efforts have also been made to improve demand–supply coordination, a critical aspect of ensuring that products reach the market at the right time and in the right quantities. One central actor, for instance, has

started systematically recording which seeds are sold in order to track future production capacity. This information allows the company to predict produce availability more accurately and to align supply more effectively with buyer needs. Such systems reduce mismatches between production and demand, which have long been a challenge in horticultural value chains. In terms of consumer outreach, one example is the use of vans equipped with loudspeakers that drive through neighborhoods.

Marketing innovations are also closely linked to logistics and post-harvest handling. Practical solutions such as the introduction of plastic crates in transport systems and the establishment of new cold storage facilities have improved both the quality and shelf life of produce. These measures reduce losses along the supply chain and make it possible to deliver fresher products to buyers, which in turn enhances competitiveness.

Finally, digital technologies are beginning to reshape how marketing is conducted. Several actors have started to use digital platforms and content tools to support matchmaking between producers and buyers, making transactions more transparent and efficient. While still at an early stage, these tools hold the potential to connect farmers with a wider range of buyers, reduce reliance on intermediaries, and create stronger, data-driven linkages within the value chain.

Taken together, these innovations illustrate how marketing in the horticultural sector is becoming increasingly professional and technologically enabled. They show a gradual but important shift from traditional, informal trade practices toward more structured and market-oriented systems, with central actors playing a key role in driving this transformation.

Outcomes

Enhanced organization and coordination of farmer groups has produced a range of tangible benefits. Improved planning and collective decision-making have increased input availability, allowing farmers to access the right seeds, fertilizers, and other production essentials more consistently. This has enabled more efficient production planning, better timing of planting and harvesting, and ultimately higher productivity at the farm level. Beyond these material benefits, stronger coordination has fostered greater trust and knowledge-sharing among farmers. By exchanging practical insights, market information, and production experiences, farmers are increasingly able to act collectively, solve problems collaboratively, and strengthen their overall bargaining position in the value chain. These developments contribute not only to immediate productivity gains but also to longer-term resilience and sustainability of farmer groups.

Improved organization and coordination, combined with logistical innovations, have also had a major impact on post-harvest management and market access. The introduction of plastic crate rentals, new cold storage facilities, and better transport arrangements has significantly reduced post-harvest losses, improved the quality of produce, and increased the shelf life of horticultural products. These improvements have enabled farmers to access both local and distant markets more reliably, including premium supermarkets that demand higher-quality standards. As a result, the economic efficiency of marketing has increased across the network, enhancing bargaining power for farmers and central actors alike and generating higher revenues. Some central actors have even established steady export links to Nigerian diaspora communities, creating new revenue streams and contributing to broader sector growth. By improving both the quantity and quality of supply, these interventions support more stable and inclusive market systems.

Several initiatives have also successfully promoted youth participation in horticulture, expanding the labor force and increasing the availability of skilled and motivated workers. By providing targeted training, access to finance, and organizational support, these programs have helped young people acquire the technical skills and business knowledge necessary to thrive in horticultural enterprises. Increased youth engagement has not only enhanced labor quality but has also strengthened the sustainability of horticultural production systems. At the same time, these interventions have contributed to steady revenue growth and the creation of jobs, including opportunities for women and widows, generating more inclusive economic benefits. By improving

value chain linkages and market access, these efforts help ensure that the economic gains from horticultural development are broadly shared across communities.

Finally, some central actors are beginning to experiment with digital coordination tools and emerging export activities, laying the foundation for more structured trade with international markets. Digital platforms are being used to track supply and demand, facilitate transactions, and match producers with buyers more efficiently. Early engagement with export markets, alongside improvements in product quality and certification, positions these actors to gradually expand beyond domestic and diaspora markets, potentially integrating Nigerian horticultural products into formal international trade networks. These innovations highlight the sector's ongoing evolution toward more efficient, transparent, and market-oriented systems.

5. Conclusions and recommendations

In this learning brief, we examined how marketing practices are organized within B2B linkage networks in the horticulture sector, and in particular, how value chain actors have developed innovative organizational and marketing solutions to overcome challenges in moving produce from farmers to the market. In this concluding chapter, we summarize our findings, review remaining challenges and highlight opportunities for future horticulture development, which could also involve Dutch business sectors (annex 1).

We used Actor-Network Theory (ANT) as an analytical lens to examine a series of cases of B2B linkage networks across Kano and Kaduna states in the North, and Ogun and Oyo states in the South. Involving ANT enabled us to develop original insights into how these networks emerged and the role of central actors play in motivating and organizing network actors. It also highlighted the importance of material elements, which are important factors in the network formation. Eventually, this approach allowed us to identify organizational and marketing innovations, which were driving the creation of the networks in most cases.

We acknowledge that the research approach underlying this learning brief also has limitations. Exploratory case study research is inherently context-specific, which constrains the generalizability of findings beyond the studied cases. While this approach allows for an in-depth understanding of complex social phenomena, such as horticulture B2B linkage networks, the results are often contingent on the particular settings, actors, and interactions examined.

Moreover, the analysis relied on a matrix structured around ANT, which enabled systematic mapping of actors, their roles, and the relational networks shaping observed outcomes. While the matrix facilitated the identification of patterns and connections across cases, its interpretive nature introduces a degree of subjectivity, as coding and categorization depended on our analytical judgment, potentially influencing the insights derived from the networked interactions.

Key findings on horticulture marketing and B2B linkages

Applying the ANT analytical lens allowed us to summarize the following findings.

A central actor typically initiates and coordinates the B2B linkages network—ranging from entrepreneurial farmers and service providers to development projects and associations. Entrepreneurial farmers build trust-based networks around commercial engagement, service providers expand from training into market linkages, projects create temporary structures, and associations often form around material elements such as plastic crates.

The central actors create B2B linkage networks by aligning partners in production and marketing, motivating participation, and solving issues like transport and supply consistency. Entrepreneurial farmers typically expand trust-based ties, service providers work around funded activities, projects focus on short-term facilitation, and associations organize around shared needs. The importance of HortiNigeria's role in fostering trust was often mentioned by the interviewed central actors.

Sustainability of the B2B linkages network depends on the business model introduced and applied by the central actor. Entrepreneurial farmers, as central actors, operate commercially, providing financial stability. Service providers and projects rely on external funding, which limits durability. Associations use membership fees and service margins, sustainable only if costs are consistently covered.

Materials and non-human elements constitute essential components of B2B linkage networks. Infrastructure and technology form the backbone of networks—greenhouses, irrigation, cold storage, transport, and plastic crates improve efficiency and quality. Smartphones and digital tools aid coordination, while processing and

packaging equipment adds value. In some cases, material elements themselves (e.g., crates) anchor the network.

Regarding organizational innovations (introduced by the central actors) that were critical in shaping the B2B linkage networks, many new forms of connections and agreements have strengthened collective action and coordination. ABCs and the EU platform connect farmers to markets, while entrepreneurial farmers bundle inputs, training, aggregation, and marketing. Buyers introduced logistics upgrades, handling practices, and formal agreements. Other innovations include crate recovery, HR placement, and enterprise-level improvements in storage and processing.

New marketing strategies introduced by the central actors expanded market access and improved efficiency of sales and logistical processes within the horticulture value chain. These marketing innovations included collective marketing through ABCs and entrepreneurial farmers' networks, which reduced costs and enhanced bargaining power. Supermarkets and exports open higher-value markets, while some actors target organic and certified niches. Digital platforms, demand tracking, and better logistics further enhance outcomes.

The creation and maintenance of the B2B linkage network, along with the introduction of organizational and marketing innovations, resulted in a number of outcomes. Networks improved farmer organization, input access, and productivity while reducing losses and raising revenues. They expanded women's and youth participation and strengthened trust. Better logistics enabled higher-value markets, and early digital and export efforts point toward gradual integration into formal and international trade.

Remaining challenges in horticulture marketing and B2B linkages

The insights from the ANT analysis help to understand the remaining challenges in Nigeria context, where there is still significant unmet domestic demand for horticultural produce (Voice of Nigeria, 2022). This was confirmed in the cases: in addition to productivity issues, the marketing channels through value chain B2B linkages are often inefficient, meaning horticultural produce frequently does not reach the market in an optimal way. Below, we discuss the remaining challenges we identified in B2B linkages networks.[4]

1. *Weak farmer organization*

According to the interviewed central actors of the B2B linkages networks, there is still scope to link more farmers to the horticultural value chain by organizing them into networks—particularly structures that build trust and facilitate collective action in marketing. Against this background, there are still relatively few entrepreneurial individuals or organizations in the sector taking up the role of central actors in organizing farmers into B2B linkage networks. Being an entrepreneur involves taking risks, which in the Nigerian context also implies addressing security issues.

2. *Constraints in post-harvest handling*

Many farmers still apply poor post-harvest handling practices, which result in unnecessary losses, spoilage, and low quality at the market. They do not grade or sort their produce, thereby missing opportunities to access higher-value markets. The challenge lies in the lack of knowledge, farmers' limited awareness of the benefits of better post-harvest handling practices, and insufficient resources for storage and packaging equipment.

3. *Limited coordination between supply and demand*

The interviewed central actors put much effort in coordinating the matching of demand and supply, but challenges remain. Farmer production is largely uncoordinated, with limited awareness or information about

[4] Productivity issues and generic constrain such as access to credit are not discussed in this section.

market demand. As a result, harvests often lead to gluts and low prices. Coordinating production plans and aligning them with anticipated demand is therefore essential to prevent market oversupply and price declines.

4. *Non-transparent price-setting*

In the horticulture value chain, price setting is characterized by information asymmetry and unequal bargaining power among actors. This often results in low revenues for farmers. Although there are emerging initiatives, such as the vegetable market price index disseminated weekly by HortiNigeria, the problem of non-transparent price information persists, making it difficult for farmers to obtain reasonable prices.

5. *Limited logistics and transport*

The interviewed central actors report significant challenges related to insufficient material resources for transport and logistics. Limited access to cold storage, crates, or transport means prevents farmers and entrepreneurs from fully seizing market opportunities or meeting buyer requirements in terms of quantity and quality. Poor road infrastructure, high fuel costs, expensive vehicle hire, and informal taxes at roadblocks further increase the cost and complexity of moving produce.

6. *High informality in the sector*

Informality is a defining feature of the horticulture sector in Nigeria and is unlikely to change soon. Bringing produce to market is often done through informal arrangements, without written agreements or contracts. There are few effective formal (legal) mechanisms in case of contract breaches. Operating within this informal context therefore requires building a trustworthy network of producers, farmers, aggregators, transporters, market agents, and others. However, value chain actors can be opportunistic, and the weak organization of trusted partners further complicates reliable collaboration.

7. *Costly certification procedures*

Obtaining certification for marketing purposes is often a challenge because the procedures are costly, hard to access, and administratively demanding, which discourages farmers from pursuing certifications such as organic or export-oriented ones.

8. *Low uptake of digital marketing*

Although central actors and others are increasingly developing digital tools and platforms for marketing purposes—such as matching demand and supply—the adoption remains slow. Many farmers do not possess smartphones or have limited knowledge of, and trust in, these mobile applications. Many initiatives are still in the initial phases of development, making it unclear which system to follow. Several interviewed central actors, whose core business is farming and trading, have limited capacity to support the development of these tools, although they recognize their long-term value.

Opportunities for the development to promote horticulture marketing and B2B linkage networks

Building on the remaining challenges, we conclude the learning brief with presenting opportunities for the development to promote horticulture marketing and B2B linkages. These opportunities address the remaining challenges within the area of marketing and B2B linkages networks.

There are several opportunities related to hardware, materials, and equipment. In ANT terminology, these are considered "material elements." It should be noted that simply providing materials through development interventions is rarely sufficient. For interventions to be effective and sustainable, materials need to be properly owned, managed, and maintained within the network—what ANT refers to as being "enrolled in the network." Too often, development projects distribute materials that are not used as intended, fall into disrepair, or create dependency, rather than strengthening collective responsibility.

We also include suggestions for Dutch business sectors that could play a role in seizing opportunities. More specifically, there are three key areas of Dutch interest:

- As providers of inputs (e.g., seeds), knowledge, or technology to increase productivity.
- As buyers of cash crops, focusing on securing supply, ensuring fair pricing, and building reliable partnerships. However, this second option is not viable at the moment, given the current shortage of vegetables for the Nigerian domestic market.
- Dutch involvement also extends to supporting the commercial and marketing aspects of value chains. This includes logistics, digitalization of marketing, quality assurance systems, pricing mechanisms (e.g., auctions), and more.

However, care must be taken to ensure that commercial interests do not overshadow local priorities, compete with local businesses, or endanger food security in Nigeria.

Table 5.1: Challenges, Opportunities, and Potential Dutch Business Contributions

Remaining challenges	Opportunities for future program interventions	Dutch business sectors that could play a role in seizing opportunities
1. Weak farmer organization	– Strengthen farmer entrepreneurship – Support cooperative and network building – Risk mitigation for new entrepreneurs	– Cooperative development expertise – Entrepreneurship training
2. Constraints in post-harvest handling	– Raise awareness and incentivize good practices – Build capacity in grading, sorting, processing and packaging	– Processing and packaging technology
3. Limited coordination of supply and demand	– Develop digital matching tools – Establish standardized marketing platforms	– Digital marketing technology by agri-digital solutions providers
4. Non-transparent price-setting	– Further disseminate price information – Pilot auction model	– Auction and market expertise (e.g., Naaldwijk)
5. Limited logistics and transport	– Invest in cold storage and logistics – Facilitate financing – Organize horticulture transporters	– Logistics companies – Cold-chain providers
6. High informality in the sector	– Facilitate trust-building platforms (such as the HortiNigeria program) – Strengthen contract enforcement and legal protection	– Dutch agribusiness partners (reputation/trust) – Legal service providers
7. Costly certification procedures	– Develop affordable certification models – Provide training and support	– Certification bodies – Standards organizations
8. Low uptake of digital marketing	– Improve smartphone access – Demonstrate benefits of digital platforms – Engage tech-savvy youth	– Agri-digital firms – Training institutions for youth in digital trade

References

Anderson, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing, 54*(1), 42–58. https://doi.org/10.1177/002224299005400103

Håkansson, H., & Snehota, I. (1995). *Developing relationships in business networks*. Routledge.

Reardon, T., Echeverria, R., Berdegué, J., Minten, B., Liverpool-Tasie, S., Tschirley, D., & Zilberman, D. (2019). Rapid transformation of food systems in developing regions: Highlighting the role of agricultural research & innovations. *Agricultural Systems, 172*, 47–59. https://doi.org/10.1016/j.agsy.2019.01.009

World Bank. (2020). *Enabling the business of agriculture 2020*. World Bank.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Thousand Oaks, CA: Sage Publications.

Voice of Nigeria (2022). "Nigeria's Vegetable Demand Exceeds Supply by 13 Million Metric Tons – Envoy." October 5, 2022. https://von.gov.ng/nigerias-vegetable-demand-exceeds-supply-by-13-million-metric-tons-envoy

Annex 1: Involvement of Dutch Business

Economically, this involves promoting trade and investment opportunities for Dutch companies abroad—particularly by improving access to markets and value chains, and supporting the internationalization of businesses in sectors where the Netherlands has a competitive advantage, such as agri-food, water, logistics, and energy. It also includes leveraging Dutch expertise, technology, and innovation to address global development challenges such as climate adaptation and food security, while fostering partnerships between Dutch knowledge institutions and their counterparts in partner countries.

More specifically, there are three key areas of Dutch interest:

- As providers of inputs (e.g., seeds), knowledge, or technology to increase productivity.
- As buyers of cash crops, focusing on securing supply, ensuring fair pricing, and building reliable partnerships. However, this second option is not viable at the moment, given the current shortage of vegetables for the Nigerian domestic market.
- Dutch involvement also extends to supporting the commercial and marketing aspects of value chains. This includes logistics, digitalization of marketing, quality assurance systems, pricing mechanisms (e.g., auctions), and more.

However, care must be taken to ensure that commercial interests do not overshadow local priorities, compete with local businesses, or endanger food security in Nigeria.

Annex 2: Comparative Matrix of the Ten Cases

	Agribusiness Clusters (ABCs) supplying local distant markets (case 1)	**Open markets supplying farmer networks** (case 2 and 3)	**Supermarket supplying farmers' networks** (case 4 and 5)
Central Actor	The central actor is the local ABC coach engaged by HortiNigeria, who initiated and manages the cluster. In the long run, ABC leadership should become the central actor.	The central actor is the entrepreneurial (and well-educated) farmer with both farming and post-harvest handling facilities, as well as marketing channels to access open markets.	The central actor is the entrepreneurial (and well-educated) farmer with both farming and post-harvest handling facilities, as well as marketing channels to access open markets.
Network creation	Under the HortiNigeria program, the central actor established the ABC by grouping smallholder farmers, setting up an ABC leadership, organizing B2B events, conducting training. At the same time, the central actor facilitated marketing contacts with off-takers and aggregators. The idea is that, in the long run, ABCs will evolve into cooperatives.	The central actor has gradually built its network by creating trust and maintaining contact with farmers through the provision of inputs, related services, and aggregation. It has also developed trusted relationships with a number of market agents by delivering good-quality products as promised.	The central actor has gradually built the network by training and involving youth and supplying small farmers on the one hand. On the other, the central actor expanded formal contracts with (premium) supermarkets. There is ongoing coordination, with close alignment on planting schedules, quality standards, and post-harvest handling.
Business model to maintain the network	The ABC is not an organizational entity with its own business model . The members of the cluster, smallholder farmers, run their own businesses. Once the ABC becomes a cooperative, it is necessary to develop a business model and prepare a budget.	The central actor runs a profit-making business, positioned in the middle of the value chain, and earns revenue through multiple activities, including input supply (seeds), production, aggregation, sales, and transport. The business model is based on supplying large volumes of varying quality—quickly and in bulk to open markets.	The central actor has a profit-making business, positioned in the middle of the value chain, and generates revenue through multiple activities, including input supply, production, aggregation, sales, and transport. The business model is based on delivering high-quality, premium products for high-end consumers.
Material elements	Key material elements in the ABC are mobile phones for communication. In addition, through the ABC, inputs are made available, as well as transportation. Most ABCs, once they become cooperatives, plan to build cold rooms and acquire processing and packaging equipment as key material elements of the ABC.	The central actor has invested substantially in a stock of inputs, greenhouses, irrigation systems, demonstration plots and transport vehicles, which are essential material elements in the network. Mobile phones are used for marketing using plastic crates and for coordinating supply with farmers.	The central actor has invested heavily in material elements such as greenhouses, premium inputs, storage facilities, packing houses with cleaning facilities, and processing equipment to enable high-quality production. Investments also include small delivery vans, cold trucks, and digital communication tools, including social media.
Organizational innovation	1) The ABC is a new form of organization, designed in particular to strengthen collective action, such as sharing equipment and exchanging information about production and marketing issues.	1) The central actor introduced new ways of committing and organizing farmers into its network. 2) To do so, the central actor provides an integrated package of services, including advice (capacity development), input supply, credit facilities, and aggregation/marketing.	1) The central actor organizes farmers and youth by providing training, incubation, and greenhouse leasing to help them become farmers and integrate them into its network of suppliers. 2) The central actor upgraded the organization of production facilities, post-harvest handling, processing, and packaging facilities.
Marketing innovation	1) ABC members initiated collective marketing activities, including organizing bulk transport with other members to distant markets.	1) The use of agent networks to serve the local market. 2) New logistical processes and better coordination with trusted transporters. 3) The central actor records which seeds are sold to better track supply availability for the market. This helps the company predict produce availability and align it with buyer needs.	1) The marketing strategy is increasingly focused on supplying supermarkets with premium products. 2) The central actor has plans for full organic certification and prepares for EU export readiness. 3) The central actor has introduced just-in-time harvest and delivery practices.
Outcomes	Enhanced coordination among ABC members has improved input availability, increased productivity, strengthened post-harvest handling, reduced spoilage, and improved market access to local and distant markets.	Improved access to inputs, more efficient production planning, and higher productivity. Increased trust and knowledge-sharing among farmers. Improved market access, greater bargaining power, and reduced post-harvest losses through crate rentals and logistics improvements.	Involving more youth in horticulture is an important outcome. Training, organizational investment, and input provision have led to higher productivity, stronger internal quality assurance, and expanded processing capacity. The central actor ensures a reliable supply to premium supermarkets in Lagos and continues to grow its market presence.
Remaining challenges	1) ABCs still face substantial post-harvest losses. 2) transportation issues—including poor infrastructure, high expenses, and informal taxes. 3) Within the ABC, unequal participation limits the full potential of the cluster, while land tenure insecurity weakens the stability of the linkage network.	1) Transportation remains a persistent challenge, both from the North and the South. The problems include a lack of trustworthy transport providers, roadblocks where informal taxes are collected, high costs of fuel and vehicle hire, and poor handling of produce during transit. 2) Most smallholders do not grade or sort their produce, missing opportunities to access higher-value markets.	1) The central actor is constrained by transportation challenges. High fuel costs drive up logistics expenses, and heavy rains frequently disrupt road access. 2) Labor is both scarce and expensive. 3) Obtaining certification is difficult, hard to access, and costly.

	Local processing company (case 6)	Plastic crates association (case 7)	Innovation Business Service and Support/IBSS (Case 8)
Central Actor	The central actor is the entrepreneur-owner of the processing company, who has skills, technical knowledge in processing.	The central actor is the Plastic Crates Association (100 small businesses as members), who have purchased crates that they lease to farmers. Some members also aggregate horticulture produce.	The central actor is a small advisory company that conducts farmer training, facilitates market linkages for external projects, and aggregates and sell produce on behalf of the farmers.
Network creation	The central actor had previously gained experience in chili processing and built on long-term partnerships with lead chili pepper farmers in Northern Nigeria. He joined entrepreneur support programs by the government. Over time, the central actor expanded the network with sales agents in local markets for retail and with wholesalers.	The central actor signed a funding agreement with the bank, and purchased crates in bulk for its members from Celplast manufacturing factory. Members have expanded the number of crates and interactions with farmers, farmer groups, and cooperatives for leasing. There are also expanding contacts with local markets to track and trace the crate.	Through setting up demonstration plots and conducting training, the central actor builds trust, organizes and coordinates farmer groups. The farmer groups are made aware of consistency, quality, and quantity requirements. The central actor has expanded its network of buyers in local markets.
Business model to maintain the network	The central actor is a profit-making business focused on processing and selling chili powder and related products.	The members pay a membership fee, and the association earns a small commission from purchasing crates and distributing them to the members.	Initially, the central actor generated revenues from fee-based support services and development agency programs. Aggregating produce from farmers has since been introduced and is becoming increasingly important.
Material elements	The central actor has invested in state-of-the-art grinding and packaging machines, a delivery van to support logistics, a range of packaging sachets, and a reliable cash transaction system to facilitate smooth payments and sales.	The plastic crates are the key material element in this B2B linkage network. The crates are standardized in shape, reusable, and numbered for recovery.	The central actor has invested in a cold storage facility and is developing a digital training platform to connect farmers with buyers. In addition, demonstration plots have been established, and coordination of logistics and transportation is essential to support marketing
Organizational innovation	1) The enterprise has made internal organizational changes, making the processing machines and production processes more efficient.	1) The central actor has established an organizational system for the recovery of crates. This includes an administrative recording system and the engagement of staff from local markets as the main actors in the plastic crate recovery system	1) The central actor introduced coordinating systems to organize logistics and transport produce to the markets more efficiently. 2) The central actor is developing a digital platform designed to connect farmers with buyers, allow farmers to upload expected harvest volumes and timelines.
Marketing innovation	1) The central actor has identified a new marketing niche, focused on high-quality and natural organic products, targeting customers who value these attributes. 2) The central actor now involves sales agents at large local markets for distribution. 3) For direct promotion in neighborhoods, the central actor uses a van with speakers on top, announcing the products while driving through the streets.	1) The central actor increased produce volumes for marketing by reducing spoilage and began serving new markets by incorporating crates into the logistics.	1) The new cold storage facilities enable the central actor to serve the market better by maintaining the quality of the produce. 2) The central actor has started exporting small quantities to markets in the UK and Canada.
Outcomes	Steady revenue growth, job creation (including women and widows), well established market access, established export links with Nigerian diaspora.	There has been a substantial reduction in tomato transport losses, resulting in higher quality and increased revenues. The economic efficiency of marketing has improved significantly, benefiting all actors in the network.	Increased farmer market access, reduced post-harvest losses through improved logistics, emerging digital coordination, modest export activity, and a growing role as a trusted sector intermediary
Remaining challenges	1) The central actor is limited by a lack of capital to purchase mechanical dryers. 2) There is also growing competition from imports, particularly from members of the Indian community, who bring in similar but often lower-quality products.	1) There is still a large unmet demand for crates, as many farmers continue to rely on baskets, which lead to higher losses. 2) The association lacks the finances to invest further in organization and crate procurement.	1) Most farmers are not producing at scale and are hesitant to invest in certification due to the need for detailed record-keeping, inspections, and the associated time and effort. 2) Challenges remain, particularly in logistics coordination, with bottlenecks affecting the movement of produce. 3) Export difficulties include bureaucratic and administrative complexity, difficulty finding reliable overseas partners, and a lack of infrastructure for certification and compliance with export standards.

	Innovation Business Service and Support/IBSS (case 9)	**EU-Nigeria Agribusiness Platform** (case 10)
Central Actor	The central actor is a local NGO conducting farmer training and facilitating market linkages for external projects. It does not engage in aggregation as a commercial partner within the value chain.	The central actor is an EU program funded consultancy company that have set up and manages the EU-Nigeria Agribusiness Platform.
Network creation	The central actor has mobilized farmers in its network by organizing training on productivity and marketing and facilitating B2B linkages. Moreover, to address labor shortages, it has developed a human resources recruitment system that connects farms with trained laborers. The central actor also provides credit through input financing, enabling farmers to receive inputs and repay costs after harvesting and selling their crops.	The central actor is building a local network of produce suppliers (SMEs). In addition, trade missions to Europe are organized to generate interest from European businesses, and public-private partnership collaborations are established with Nigerian and EU agribusiness intermediary organizations (chambers of commerce, associations and standardization bodies, etc.).
Business model to maintain the network	The central actor's income comes from grants, while the rest is generated through donations, training services, consulting, and the rental of event facilities. Human resources and market linkage services—initially developed under HortiNigeria—may continue as paid services in the future.	The central actor is currently paid through the EU project. After the project, it is expected that the platform will continue operating with a revenue model based on subscriptions, service fees, and commissions.
Material elements	As important material elements in the network, the central actor has developed training materials using social media and digital marketing tools to help farmers access markets. It has also secured protected farmland to provide resources that support youth engagement in horticulture.	The digital platform (website and mobile app) has been launched by the central actor is the key material element and includes tools for business profiling, matchmaking, and verified trading of agricultural commodities, company verification, trade support services, and access to trade missions.
Organizational innovation	1) The central actor introduced an HR placement system to connect farmers with trained laborers. 2) The central actor is organizing farmers in its network to provide them with its services and linked them to buyers.	1) The central actor organized SME agribusiness hubs (geographically clustered groups of producers and service providers). 2) The central actor is establishing and aligning a network of European businesses enrolled in the platform. 3) The central actor has signed MoUs with stakeholders to support the network in policy and regulation (e.g., standardization).
Marketing innovation	1) The central actors facilitates B2B linkages by bringing farmers and buyers together.	1) The central actor set up a digital platform and content tools to support matchmaking and facilitate marketing deals.
Outcomes	Improved youth participation in horticulture, enhanced labor quality, increased access to finance, better communication in value chains, and growing credibility via HortiNigeria affiliation	As the platform went live in May 2025, there are not yet outcomes to report other than the 250 Nigerian SMEs onboarded, emerging EU-Nigeria trade deals, strengthened certification support, and some improvements in export readiness.
Remaining challenges	1) The central actor faces challenges in the repayment of credit arrangements with farmers and in the digital adoption of the training and marketing tools it developed. 2) Labor availability is limited, as many farm owners struggle to find skilled workers. 3) Security in the field and theft of yields also pose challenges.	1) Challenges faced by the central actor include limitations in Nigeria's agricultural value supply chains that hinder the fulfillment of export potential. These include low productivity, inconsistent volumes, limited storage infrastructure, and difficulties in complying with EU standards.