



Industry Analysis: Agriculture in Philippines

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EXECUTIVE SUMMARY

This analysis seeks to explore the competitive forces shaping the Philippine agricultural sector through the lens of Porter's Five Forces framework. By centering on the "economic fabrics" phenomenon, in which is seen as interconnected relationships that govern access to resources, markets, and information. This study aims to identify systemic challenges and uncover opportunities for transformative change. Moreover, this paper highlights the critical role of AGREA Philippines in addressing these challenges in Marinduque where they employ "One-Island Economy" model. The analysis provides actionable insights for stakeholders to enhance the livelihoods of Filipino farmers and establish a replicable blueprint for sustainable agricultural development.

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Introduction

Agriculture has long been the lifeblood of the Philippine economy, not just as a means of livelihood for millions but as a cultural and historical backbone that connects generations. With agriculture accounting for 10% of the country's Gross Domestic Product (GDP) and employing approximately 23% of the labor force, its role is indisputable (Philippine Statistics Authority [PSA], 2021). Beyond the numbers, however, lies a story of resilience—one shaped by Filipino farmers navigating systemic barriers, unpredictable climate patterns, and evolving market dynamics.

The Philippines, with its rich biodiversity and fertile lands, holds immense agricultural potential, yet its farmers face critical challenges threatening scalability and sustainability. Climate change disrupts planting cycles, fragmented policies lack cohesive support and limited access to technology and financing widens the productivity gap between rural and urban producers (Climate Change Commission, 2020; Department of Agriculture [DA], 2019; World Bank, 2020). Efforts like the Rice Tariffication Law (Republic Act No. 11203), which introduced tariffs and established the Rice Competitiveness Enhancement Fund (RCEF), and the Agri-Industrial Business Corridors (ABCs), aimed at modernizing production and supply chains, show promise but are insufficient to overcome systemic barriers (Official Gazette of the Republic of the Philippines, 2019; DA, 2021). Farmers remain disadvantaged by climate volatility, policy fragmentation, and economic constraints, limiting their ability to thrive in a rapidly changing landscape.

Through the lens of these farmers, the story becomes one of survival rather than prosperity. Marginalized by middlemen and restricted by inefficient supply chains, many cannot realize the true value of their labor. Especially in the region of Marinduque, where it has faced many challenges across its agricultural industry. This is where AGREA Philippines, a social enterprise founded on sustainability and equity focusing on Marinduque, becomes essential. By bridging critical gaps in the agricultural value chain, AGREA not only empowers farmers but also redefines the role of agriculture in fostering economic resilience and environmental stewardship.

Purpose of Analysis

This analysis seeks to explore the competitive forces shaping the Philippine agricultural sector through the lens of Porter's Five Forces framework. By centering on the "economic fabrics" phenomenon. In which is seen as interconnected relationships that govern access to resources, markets, and information. This study aims to identify systemic challenges and uncover opportunities for transformative change. Moreover, this paper highlights the critical role of AGREA Philippines in addressing these challenges in Marinduque where they employ "One-Island Economy" model. The analysis provides actionable insights for stakeholders to enhance the livelihoods of Filipino farmers and establish a replicable blueprint for sustainable agricultural development.

Significance

The Philippine agricultural sector is at a pivotal crossroads, where systemic issues such as climate vulnerabilities, policy fragmentation, and resource inequities have converged into a pressing need for reform. This analysis offers a roadmap for addressing these issues by emphasizing the importance of a cohesive and sustainable approach to agricultural development.

Policymakers can leverage the findings to design integrated policies that promote long-term sustainability, while agribusiness leaders can identify areas for investment and innovation. Development organizations, including social enterprises like AGREA, stand to benefit from deeper insights into the dynamics of the sector, allowing them to enhance their impact.

Most importantly, this analysis sheds light on the human element of agriculture: the Filipino farmer. It underscores the necessity of empowering farmers with education, technology, and



equitable market access to shift the narrative from subsistence to growth. AGREA's initiatives provide a tangible example of how inclusive and sustainable models can address these challenges, offering hope for a thriving agricultural future (Chua, 2017; Villano, 2019).

Economic Fabric

The term "economic fabrics" encapsulates the intricate web of interdependencies among key stakeholders in the agricultural sector, including farmers, suppliers, buyers, financial institutions, government agencies, and non-governmental organizations (NGOs). This ecosystem operates as a dynamic network, where each entity influences farmers' access to essential resources, such as seeds, fertilizers, and farm machinery, as well as critical services like financial credit, market information, and distribution channels (Department of Agriculture [DA], 2019; Philippine Institute for Development Studies [PIDS], 2019). These interrelationships often dictate not only the productivity of farmers but also their economic resilience and competitiveness in the market (Asian Development Bank [ADB], 2018).

Analyzing the economic fabric is crucial for identifying systemic barriers that hinder progress within the industry. For instance, power asymmetries between farmers and dominant players, such as suppliers or middlemen, often result in exploitative pricing and reduced profitability for farmers (Food and Agriculture Organization [FAO], 2019). Similarly, insufficient collaboration between government bodies and private institutions can exacerbate logistical inefficiencies and limit access to technological advancements (World Bank, 2020). Addressing these issues requires a comprehensive understanding of how these stakeholders interact and the ripple effects of their decisions throughout the value chain.

By unraveling the complexities of the economic fabrics, stakeholders can design targeted interventions that promote equity, enhance resource allocation, and enable sustainable development in the agricultural sector. This perspective not only highlights the interconnected nature of the industry but also underscores the need for collective action to empower farmers and ensure long-term growth (Climate Change Commission, 2020; McKinsey & Company, 2020).

Industry Context

The Philippine agricultural sector remains a critical pillar of the national economy, contributing approximately 9% to the Gross Domestic Product (GDP) and employing 25% of the workforce as of 2024 (Philippine Statistics Authority [PSA], 2024a). Beyond its economic significance, agriculture is deeply embedded in the cultural and social fabric of the Philippines, supporting the livelihoods of millions, particularly in rural areas. However, the sector's performance between 2021 and 2024 underscores both its resilience and its persistent structural challenges.

Agriculture in the Philippines reflects a diverse and fragmented market structure. The production of staple crops such as rice and corn often mirror the dynamics of perfect competition, where smallholder farmers produce homogenous goods and function as price takers in volatile markets. Conversely, the market for high-value crops like organic bananas, specialty coconuts, and cacao operate closer to monopolistic competition, where factors such as branding, certifications, and product differentiation influence competitiveness. Adding to this complexity are input markets dominated by a few key players, creating oligopolistic conditions that inflate production costs and exacerbate challenges for small-scale farmers.

From a production perspective, the sector has shown notable achievements, including record rice harvests and growth across various subsectors. At the same time, it continues to grapple with systemic inefficiencies, a reliance on imported inputs, and environmental vulnerabilities. The following table provides an overview of key metrics and developments in the Philippine agricultural sector from 2021 to 2024:



Category	Historical (2021-2022)	Current (2023-2024)
GDP Contribution	₱1.78 trillion (PSA, 2022a)	9% of total GDP (NEDA, 2024a)
Employment	10.6 million, 24% of workforce (PSA, 2022b)	25% of 49.7 million labor force; Created 500,000+ new jobs in December 2023 (PSA, 2024a)
Sector Growth	-0.3% (DA, 2022)	1.2% growth (DA, 2024a); -2.8% Q3 (PSA, 2024b)
Production Performance	<ul style="list-style-type: none"> Crop: 54% of total output (PSA, 2022c) 	<ul style="list-style-type: none"> Record rice harvest: 20.06 million MT (DA, 2024b) Crops: 2.6% growth in Q4 2023 Livestock: 2.7% growth Poultry: 7.8% growth (PSA, 2024c)
Trade Balance	-	<ul style="list-style-type: none"> Total agricultural trade: USD 24.35 billion Exports: USD 6.43 billion (26.4%) Imports: USD 17.92 billion (73.6%) (DA, 2024c)
Government Support	-	<ul style="list-style-type: none"> 2024 Budget: ₱167.5 billion Focus on modernization and irrigation systems (DBM, 2024)
Major Industry Players	<ul style="list-style-type: none"> AgriNurture, Inc SL Agritech Corporation Kennemer Foods International (SEC, 2022) 	Same key players focusing on: <ul style="list-style-type: none"> Fruit/vegetable production Hybrid rice seeds Cacao cultivation (SEC, 2024)

Despite these gains, trade imbalances remain a significant challenge. In 2023, agricultural trade totaled USD 24.35 billion, but imports constituted a staggering 73.6% of this figure (DA, 2024c). The reliance on imported fertilizers, seeds, and other agricultural inputs not only places financial pressure on farmers but also makes the sector vulnerable to global market fluctuations. The government has responded with a ₱167.5 billion budget for agriculture in 2024, focusing on modernization, irrigation systems, and farmer support programs (Department of Budget and Management [DBM], 2024). While this investment underscores the government's commitment to addressing long-standing inefficiencies, translating policy into tangible benefits for farmers remains an ongoing challenge.

Adding to these systemic challenges is the looming threat of climate change, which remains one of the most significant obstacles for the Philippine agricultural sector. Typhoons, floods, and droughts have become more frequent and severe, disrupting planting cycles, reducing yields, and destabilizing supply chains. Smallholder farmers, who form the backbone of the

industry, are disproportionately affected, often lacking access to climate-resilient technologies, financial safety nets, and infrastructure. These disruptions jeopardize not only farmer livelihoods but also the long-term sustainability of agricultural systems. Another pressing challenge is the difficulty of scaling farmer empowerment initiatives. The diversity of ecosystems, farming practices, and regional needs requires tailored solutions, but fragmented governance and policy misalignment often hinder coordinated action. Without significant investments in infrastructure, stakeholder collaboration, and policy support, the scalability of such models remains limited.

Regional Challenges: Marinduque

Marinduque, part of the Mimaropa region, exemplifies the disparities in agricultural development across the Philippines. With 133,709 hectares under cultivation, Mimaropa is a major rice-producing region (Mindoro Today, 2024). However, Marinduque's agricultural productivity has been disproportionately affected by historical environmental degradation and recurring climate events.

The 1993 and 1996 Marcopper mining disasters caused extensive ecological damage in the province, releasing approximately 1.6 million cubic meters of mine tailings into a 27-km river system and adjacent coastal areas. This contamination disrupted irrigation systems, significantly reducing rice productivity and damaging crops along riverbanks (Social Watch, 2005; EEPSEA, 2024). These legacy issues continue to impact farming systems and livelihoods today.

In recent years, Marinduque has faced compounding challenges due to climate change. Severe weather events in 2023 alone caused PHP 770 million in damages to the province's agricultural sector, straining its fragile economy. Additionally, El Niño's prolonged dry spells have exacerbated water shortages, affecting irrigation and crop yields. These events, combined with increased pest populations and altered geographic distributions of agricultural pests, pose a significant threat to smallholder farmers who lack access to adaptive technologies (Insects, 2021).

The region's vulnerabilities are further compounded by a projected national decline in palay production to 19.3 million metric tons in 2024—a 3.63% drop from 2023 levels (Halili, 2024). For Marinduque, which relies heavily on rice farming, these trends highlight the urgent need for targeted interventions to strengthen agricultural resilience and diversify economic opportunities.

Agrea

Agrea was born from a need to fix what many saw as a broken system. A Philippine agricultural landscape defined by structural inefficiencies, unstable supply chains, and the isolation of smallholder farmers. Determined to reimagine how farming communities thrive, Agrea's "One-Island Economy" model first took shape in Marinduque, blending sustainability and equitable economic growth to address these entrenched challenges head-on. By empowering over 500 farmers and transitioning 300 hectares to sustainable practices, Agrea demonstrates that transformative change is possible, even in places once overlooked.

This mission came into sharp focus during the COVID-19 pandemic, when Agrea launched the Move Food Initiative (MFI) to bridge urgent gaps in the disrupted food supply chain. This initiative facilitated the distribution of over 160,000 kilograms of fruits and vegetables from more than 7,400 farmers to nearly 52,000 families, ensuring continuous market access despite lockdown restrictions. MFI exemplifies how Agrea adapts to crises, reinforcing its commitment to safeguarding farmers' livelihoods.



Beyond crisis management, Agrea integrates modern farming techniques, direct market linkages, and tailored microfinancing options to support farmers holistically. The organization also prioritizes climate-resilient practices and community education, empowering farmers to tackle challenges such as volatile weather and limited resources. Through training programs, Agrea fosters local leadership, enabling farmers to share knowledge and sustain long-term growth.

Despite these successes, Agrea's regional focus highlights the limitations faced by social enterprises. While impactful, the organization's reach remains confined, emphasizing the need for systemic support and government collaboration. To replicate Agrea's achievements across the Philippines, significant investments in infrastructure, policy alignment, and multi-stakeholder partnerships are essential. These efforts will ensure that the lessons learned in Marinduque are carried across the archipelago, creating a more resilient and inclusive future for Philippine agriculture.

Porter's Forces Industry Analysis

To gain a nuanced understanding of the challenges within the Philippine agricultural sector, Porter's Five Forces framework offers a structured approach to analyze competitive pressures and systemic issues impacting farmers and stakeholders. This analysis also highlights the impact on Filipino farmers and AGREA's critical role, showcasing how its strategic interventions address each competitive force to foster a resilient and sustainable agricultural ecosystem.

1. Threat of New Entrants

The Philippine agriculture sector is increasingly threatened by the liberalization of agricultural imports, particularly due to policies like the Rice Tariffication Law (RA 11203). These policies have significantly reduced barriers to importing staple goods such as rice, onions, and garlic. As a result, imported products—often subsidized or produced more efficiently in other countries—flood the market at prices up to 30% lower than local produce (Philippine Institute for Development Studies [PIDS], 2020). This influx of cheaper imports creates intense competition, leaving local farmers struggling to maintain their market share and diminishing their already slim profit margins (Chua, 2017).

The impact of this force on farmers is severe. The erosion of profitability occurs as local producers are forced to lower their prices to compete with imports, often leading to unsustainable earnings. Additionally, many farmers lose access to traditional markets as consumers increasingly prefer lower-cost imported products (DA, 2021). This situation can trap farmers in cycles of debt, making it difficult for them to repay loans or invest in productivity improvements (PIDS, 2020). Agrea plays a crucial role in addressing these challenges. The organization actively advocates for protective measures such as import quotas and seasonal tariffs to shield local farmers from import surges during peak harvests (DA, 2021). Furthermore, Agrea supports farmers in producing high-value crops like organic vegetables and specialty cacao, which cater to premium markets. Through consumer education initiatives, Agrea also highlights the cultural and nutritional value of Philippine agricultural products, fostering greater local support and appreciation.

2. Threat of Substitute

A growing trend towards plant-based diets and synthetic food alternatives poses a long-term substitution threat to traditional agricultural products in the Philippines. Alternatives such as lab-grown meat and plant-based proteins appeal particularly to urban, health-conscious consumers, creating new competition for staples like meat, dairy, and rice (World Bank, 2020).



The impact on farmers is moderate. Traditional products face declining demand as consumers shift towards these alternatives (FAO, 2019). Many farmers lack the knowledge or resources necessary to transition to alternative crops that align with emerging consumer trends, leaving them economically vulnerable. Those who are reliant on staples like rice are particularly at risk of declining incomes as substitute products capture market share (PIDS, 2020). Agrea addresses these challenges by facilitating research and training on alternative crops like mung beans and jackfruit that are gaining traction in plant-based food production. The organization also collaborates with innovators in the food industry to connect local farmers with global supply chains, ensuring they benefit from emerging markets. Additionally, Agrea promotes traditional crops by emphasizing their sustainability and nutritional benefits, helping sustain domestic demand.

3. Internal Competition

Internal competition among smallholder farmers in the Philippines often leads to inefficiencies and price undercutting. Many farmers operate independently without access to shared resources or collective bargaining power, which undermines their competitiveness both domestically and internationally (Chua, 2017).

The impact on farmers is high, which includes reduced bargaining power as disorganized smallholders struggle to negotiate fair prices for inputs and produce. This disorganization results in quality variations due to a lack of standardized production processes, limiting access to premium markets (DA, 2021). Furthermore, individual farmers miss opportunities to pool resources or leverage economies of scale, restricting their ability to invest in infrastructure or technology. Agrea's intervention focuses on organizing farmers into geographic clusters that enable them to share resources and standardize production quality. The organization offers training programs on cooperative management and financial literacy, strengthening farmers' economic positioning. By collaborating with local governments and NGOs, Agrea introduces incentives for participation in cooperative models, fostering a culture of collaboration that benefits all involved.

4. Bargaining Power of Suppliers

Suppliers play a vital role in the Philippine agricultural value chain by providing essential inputs such as seeds, fertilizers, pesticides, and machinery. However, reliance on a few large suppliers concentrates market power in their hands, allowing them to dictate prices and payment terms while driving price volatility that adversely affects farmers (DA, 2019). Global supply chain disruptions exacerbate this situation as suppliers pass on increased costs due to rising fuel prices and material shortages (World Bank, 2020).

The impact on farmers is high; high input costs significantly reduce profit margins, leaving little return despite hard work. Limited access to high-quality inputs hampers productivity and lowers overall yields (FAO, 2019). This dynamic often forces farmers into informal lending arrangements that lead to cycles of debt and dependency that further weaken their negotiating power within the agricultural value chain. Agrea addresses this issue through bulk purchasing initiatives that aggregate demand from multiple farmers to negotiate better pricing with suppliers. By creating economies of scale, Agrea reduces per-unit costs for inputs. Additionally, the organization collaborates with input providers to develop long-term partnerships that ensure consistent supply and better payment terms while promoting locally sourced sustainable inputs that support both local economies and environmentally friendly practices (Villano, 2019).



5. Bargaining Power of Buyers

In the Philippine agricultural sector, buyers range from wholesalers and retailers to exporters and large agribusinesses who hold considerable leverage due to their ability to dictate terms and consolidate purchasing power. The dominance of supermarket chains has further skewed this balance in favor of buyers who demand lower prices and stringent quality standards (PSA, 2021).

The impact on the farmers is high. Farmers face several challenges due to this imbalance. They often encounter exploitative pricing practices where buyers demand low prices that do not reflect rising production costs (Chua, 2017). Many also experience delayed payments that disrupt cash flow and hinder reinvestment into future planting cycles. This dependence on a limited number of buyers increases vulnerability to market fluctuations. Agrea works to mitigate these issues by establishing direct market linkages between farmers and institutional buyers such as hotels and restaurants. This approach bypasses intermediaries, ensuring fairer prices for farmers. Additionally, Agrea assists in negotiating contracts that include fair pricing and timely payment terms while facilitating access to diversified markets that reduce reliance on a few large buyers.

6. Complementary

Complementary forces such as government programs, NGOs, and technology providers play a vital role in supporting the Philippine agricultural sector by addressing gaps in infrastructure and resource access. Initiatives like the Rice Competitiveness Enhancement Fund (RCEF) aim to modernize farming practices while NGOs enhance farmer capabilities through training (DA, 2021).

The impact on farmers is moderate. This includes significant gaps in infrastructure and technology that limit productivity and competitiveness. Inconsistent policy implementation can dilute the effectiveness of complementary forces while limited digital literacy hinders the adoption of technologies that could improve efficiency (World Bank & FAO, 2020). Agrea's role includes providing capacity-building training programs focused on sustainable farming practices while facilitating partnerships among stakeholders for better access to tools and funding. Furthermore, Agrea promotes technology adoption tailored to local needs by introducing innovative solutions like mobile platforms for market linkages that enhance productivity and transparency within supply chains.

Recommendations

Building on the comprehensive review of Philippine agricultural policies and initiatives, the following recommendations underscore pathways toward greater resilience and sustainability in the sector.

At the enterprise level, business development strategies should prioritize climate-resilient practices embedded within the AMIA-CREATE framework (Department of Agriculture, 2024a). This entails guiding farmers toward climate-smart technologies and encouraging diversified cropping systems, thereby reducing vulnerability to climate shocks (World Bank, 2023). Equally vital is improving financial access; linking farmers with credit facilities and leveraging the Land Bank of the Philippines' lending programs can ease capital constraints and foster long-term viability (Land Bank of the Philippines, 2024).

From a policy perspective, fully operationalizing the National Agriculture and Fisheries Modernization and Industrialization Plan (NAFMIP) is crucial (NEDA, 2024). Efforts must also bolster the Climate Resilient Agriculture Office's initiatives and enhance cooperation across



national and local government units, ensuring well-coordinated climate adaptation measures that resonate at the community level (Department of Agriculture, 2024b). In parallel, targeted capacity-building interventions—such as hands-on training in climate-resilient techniques and the provision of tailored climate information—will equip farmers to make informed decisions under changing environmental conditions (FAO, 2024).

Lastly, genuine collaboration must remain at the heart of these efforts. Deepening engagement with the Adaptation and Mitigation Initiative in Agriculture (AMIA) and fully supporting the APA project—which aims to uplift the livelihoods of 1.25 million farmers—will help ensure that new technologies and best practices are implemented on day-to-day realities of the people who cultivate our food (Climate Change Commission, 2024). By forging strong partnerships that blend innovation with community-based knowledge, we can ensure that environmental stewardship and economic progress flourish, ultimately creating healthier, more sustainable futures for farming families and the communities they feed (Asian Development Bank, 2024).

Conclusion

Understanding the economic fabrics of farmers within the Philippine agricultural sector is essential for addressing the systemic challenges they face. Through Porter's Five Forces framework, we identify the critical areas where intervention is needed to enhance competitiveness and sustainability. Organizations like Agrea Philippines play a pivotal role in transforming the industry by empowering farmers, promoting sustainable practices, and advocating for supportive policies. This industry analysis sheds light on the obstacles and paves the way for strategic actions that can lead to a more prosperous and resilient agricultural sector in the Philippines.

Case Study: Arrowroot in Marinduque

Arrowroot, locally known as "uraro," is a culturally significant crop in Marinduque, used in traditional Filipino pastries and exported as a niche product. The province accounts for over 70% of national arrowroot production, making it a key livelihood source for local farmers. Despite its potential, the sector faces challenges such as low yields, outdated farming methods, and limited access to high-value markets. The key challenges are:

1. **Low Productivity:** Current farming methods yield only 2.5 tons per hectare, significantly below the 5-ton potential achievable with modern practices.
2. **Processing Gaps:** Lack of efficient milling facilities results in inconsistent flour quality, limiting market appeal.
3. **Market Access:** Farmers are dependent on local traders, receiving minimal returns and missing opportunities to access premium domestic and international markets.

Agrea Philippines identified arrowroot as a strategic crop for its "One-Island Economy" model, which emphasizes sustainable agriculture and economic equity. Agrea's multifaceted approach to arrowroot farming helps farmers improve their productivity, product quality, and market reach. Through targeted training programs, farmers gain access to workshops on modern cultivation techniques, effective pest management, and organic farming practices—all contributing to higher yields and healthier soils. This knowledge transfer is further supported by the development of essential infrastructure, including a community milling facility capable of producing premium-grade arrowroot flour that meets international export standards. Paired with strategic market integration efforts, which connect farmers to lucrative organic and gluten-free



segments, these initiatives empower growers to command premium prices, ultimately strengthening both their economic standing and the long-term sustainability of their farming communities.

The initiative has already demonstrated significant results on multiple fronts. Within just two planting cycles, participating farmers have seen yields surge by roughly 30%, boosting both their output and their confidence in adopting more efficient methods. Improved market access ensures that these farmers can earn 20–25% more per kilogram of arrowroot flour, directly strengthening their livelihoods. Equally important, the shift toward organic farming practices reduces dependency on synthetic inputs and fosters healthier, more resilient soils—laying the groundwork for sustainable long-term production. Beyond immediate gains, the arrowroot initiative stands as a scalable blueprint for similar agricultural interventions elsewhere, offering a path to resilience, prosperity, and environmental stewardship across diverse crops and communities.

The revitalization of the arrowroot industry in Marinduque demonstrates the transformative power of targeted interventions. By addressing systemic challenges in productivity, infrastructure, and market access, Agrea has empowered local farmers to shift from subsistence to sustainability. This case serves as a blueprint for leveraging traditional crops to foster economic and environmental resilience in rural communities.



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