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Industry Analysis Report: Agriculture in Myanmar

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EXECUTIVE SUMMARY

This case study focuses on Myanmar's agriculture sector. It holds immense potential for economic growth and food security, but faces challenges including political instability and volatile export markets. Large-scale agricultural companies like MAPCO, through partnerships with small farmers, are critical for driving modernization and building resilience. This requires leveraging existing advantages, addressing systemic issues, and pursuing opportunities such as crop diversification and establishing new product channels.

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Introduction

Country and Industry

Agriculture is one of Myanmar's most important industries, contributing 14.87% to the country's GDP as of 2019 (MMSIS, 2022), with most of its population relying on this industry for their livelihood (Okamoto, 2017); as of 2023, 46.2% of workers were employed by the agriculture industry, though only 5.8% of all agricultural workers were wage workers (Sinha Roy & Van Der Weide, 2024), indicating that most agriculture is performed by "informal" small farmers, rather than large companies. Until 2019, Myanmar had 118 developed agriculture farms; this number plummeted to 28 in 2020 (MMSIS, 2023), further demonstrating that most agriculture in Myanmar is informal among individual farmers or small groups of farmers.

The country's fertile land, favorable climate, and significant water resources present immense potential for agricultural development. However, systemic challenges like insecure land tenure, poor infrastructure, and fragmented markets hinder the sector's growth for many independent farmers. Despite over 16% of land being suitable for agriculture (*Myanmar Arable Land 1961-2024*, n.d.), agricultural productivity is low, with the amount of rice that gets harvested in a day being nearly one-third of Cambodia's productivity, and over 20 times lower than Thailand's production. Furthermore, Myanmar has the lowest rice production profits across all Asian rice production territories (World Bank Group, 2019), indicating that the agricultural sector is not capable of taking advantage of its natural resources for economic growth.

The industry mainly produces rice, beans, maize, and oilseeds, with rice paddy accounting for 45.7% of harvested land and 53.4% of production value in 2019. Beans and pulses, however, generate more in exports and earned USD 1,046 million in the 2015 – 2016 fiscal year (Flanders Investment and Trade Yangon, 2020).

The industry has been steadily growing, with a real GDP growth rate of 2.4% in 2021, an increase from the growth rates of 1.2%, 2.0%, and 2.3% in 2018, 2019, and 2020 respectively (World Bank, 2019), though this is likely to weaken due to conflict and a moderation in global rice prices (Economist Intelligence Unit, 2024).

Agriculture also contributes greatly to Myanmar's exports, with 35% of e-commerce exports in 2017 (International Trade Centre, & Alibaba, 2018) and USD 5.17 billion of commodities exported in 2022 (WTO, 2024) coming from agriculture and agricultural products respectively. Regionally, exports target nearby Asian nations such as Thailand, Vietnam, and China.

Market Structure

Agriculture in Myanmar has a hybrid industry structure between perfect competition and an oligopoly for differently sized players.

For small independent farmers, there is little to no potential for distinction, meaning that this part of the industry demonstrates perfect competition. Furthermore, IFPRI (2024) found that insecurity is correlated to reduced input availability and higher costs, which further decreases profitability for independent paddy farmers. As independent farmers cannot price higher and have relatively high marginal costs, they have virtually no market power, so their long-run profitability goes to zero.

Larger companies appear to exist in an oligopoly for the export market. Building up a large firm in a country like Myanmar takes a significant pooling of resources where it may be hard to accumulate them, making the ease of entry hard. While these larger firms are not able to charge higher prices in the market (especially as many of these crops are commodities), they can lower their marginal costs down enough with their economies of scale to have market power. As such, their long-run profitability does not go to zero.

Unit of Analysis

MAPCO (Myanmar Agribusiness Public Company), established in 2012, is one of the country's leading agribusiness firms, existing in the oligopoly sphere of the market structure. The company focuses on modernizing agriculture through investments in mechanization, value chain enhancements, and export diversification. Its activities include rice milling, fertilizer sales, agrochemical distribution, and international trade (Myanmar Agribusiness Public Company (MAPCO), 2024). MAPCO's operations run through contract farming, in which the company works with smallholder farmers across Myanmar to provide them with financing, machinery, and other resources and support. This allows MAPCO to maintain a consistent supply of rice for processing in their rice mills (Myanmar Agribusiness Public Company (MAPCO), n.d.). In the 2023 – 2024 fiscal year, MAPCO made 25.77 billion kyats in revenue but only achieved a profit of 0.04 billion kyats (Myanmar Agribusiness Public Company (MAPCO), 2024).

The majority of MAPCO's income (86%) is associated with the export of rice, beans, and corn; local sales of these crops only make up 3% of income. 64% of MAPCO's exports by weight are sent to China, with 26% going to other ASEAN countries (Bangladesh, the Philippines, Malaysia, Indonesia). 3% of exports by weight go to the Czech Republic and Estonia, with another 7% towards Mozambique. (The company continues to pursue markets in other African countries (Myanmar Agribusiness Public Company (MAPCO), 2024).) As such, MAPCO's geographic scope of competition is concentrated in China and Southeast Asia, meaning that it is not only competing with other Myanmar agricultural companies with exports, but also with other countries that export to these regions, making the geographical scope for a company like MAPCO quite extensive.

9% of MAPCO's income comes from local sales of fertilizer and other agricultural chemicals, while 2% is associated with rice mills (both as a good through the machinery itself and as a service through offering to perform the actual processes of milling and drying), which covers the agricultural technology part of the industry, rather than agriculture specifically (Myanmar Agribusiness Public Company (MAPCO), 2024).

Challenges and Opportunities

Political Instability

As with virtually all industries in Myanmar, the biggest shift to affect the agricultural industry was the 2021 coup d'état that put the SAC in power. Prime Minister Min Aung Hlaing (2024) mentioned in a speech that "the current government has been emphasizing production of agriculture and livestock sectors concerning the majority of citizens." The SAC has chosen to focus on bananas and palm oil, as well as setting ambitious rice production targets, but Aung Tun (2022) argues that these goals are "unrealistic and controversial." Furthermore, the military has blocked off trade and transportation in some regions, including the transportation of food, which has raised costs (Bissinger, 2024) and destabilized the market. The ensuing conflicts have also directly affected the lives of small farmers: troops have burned farmers' houses and assets, some farmers have sold their farms for guns, and internally displaced people from Rakhine State cannot return to their farms (Aung Tun, 2022). Larger companies, on the other hand, typically have varying degrees of relationships with the SAC, thereby regulating the impact that the government may have on their operations.

Export reliability has been compromised as regional and international buyers perceive Myanmar as a high-risk supplier, leading to fewer long-term contracts and reduced market (Myanmar Agribusiness Public Company (MAPCO), 2024).

Market Volatility

An article in *Frontier* (2023) argues that the junta's erratic economic policies, focused more on political control and foreign currency reserves than the health of industries and markets, has created instability in the export market. The USDA has predicted that these policies will decrease exports. As a result, international buyers may move towards more stable suppliers,

thereby increasing the threat of buyers. Furthermore, other international competitors may move to claim even more of Myanmar's sales as agricultural firms are forced to reduce their exports, increasing the threat of competitors in turn.

As of August 2024, Myanmar 5% broken white rice was more competitive than comparable varieties from Thailand, Vietnam, and Pakistan, due to decreasing demand, higher shipping costs, and the depreciation of the kyat. Nevertheless, export license challenges, payment issues, and the same high shipping rates negatively affected insider sentiment for Myanmar rice (Deval, 2024).

Mechanization

Mechanization has become an increasing opportunity as farmers seek to overcome labor shortages, increase efficiency, and become more resilient to extreme weather (Okamoto, 2017). The adoption of advanced agricultural machinery, such as combine harvesters and grain dryers, can significantly boost efficiency by reducing dependence on manual labor and increasing yields through better post-harvest handling and lower crop losses (Lhing, 2022).

Several challenges have affected this adoption, however. Firstly, smaller machines have been damaged during weather events such as Cyclone Nargis. Secondly, inadequate land consolidation and farm roads in poor condition have prevented farmers from fully adopting the use of combine harvesters (Okamoto, 2017). Furthermore, government schemes to increase mechanization through combine harvesters have not spread sufficiently outside the capital (Boughton et al., 2024). As such, while mechanization options are increasingly available in Myanmar and could significantly improve agricultural productivity and resilience, various factors are hindering their adoption for small farmers.

Industry Participants

Buyers

While MAPCO specifically focuses on international buyers, especially to Thailand, Vietnam, and China, the split between domestic and international sales overall depends on the type of crop. Rice is predominantly consumed by the domestic market, whereas pulses are mainly exported (World Bank Group, 2019). (Primary purchasers in international markets, of course, vary from crop to crop.)

Within Myanmar, crop traders purchase agricultural produce from farms and distribute them to "food processors, exporters, commodity exchange centers, and urban food markets" (Goeb et al., 2020).

Suppliers

Myanmar's domestic suppliers are few and mainly consist of small-scale providers of seeds, tools, and machinery. Suppliers for agricultural chemicals are mainly international, with Myanmar importing about 80% of its fertilizers from China, Thailand, and Malaysia (*Burma (Myanmar) Agriculture Fertilizer*, 2022).

One major local supplier is Myanma Awba, which proclaims itself as the nation's largest agricultural technology manufacturer and distributor, focuses on "crop protection, crop nutrition and high-quality seeds" to help rural farmers (*Myanma Awba*, n.d.). Due to limited technological capabilities, however, most other companies cannot meet the demands of large-scale producers like MAPCO.

Agricultural supplies in general are heavily imported from global markets like China, Thailand, and India. These suppliers hold significant bargaining power due to Myanmar's dependency on imports and lack of domestic alternatives. In addition, multinational agritech firms such as Corteva (Corteva Agriscience, 2019) have begun operating in Myanmar.

A company that takes a mixed approach to agricultural supply is Good Brothers' Co. Ltd. (GBS) (*Good Brothers' Co. Ltd. (GBS)*, n.d.), which initially specialized in machinery imports, but has since diversified to also sell energy equipment (such as solar panels and batteries; these appear to be imported) and agrichemicals, which is distributed by a joint venture with

GBS and Yuntianhua Co. Ltd from China. As such, GBS represents a way in which Myanmar businesses are attempting to bridge the gap between domestic and international capabilities.

Competitors

Many producers compete for the same market, especially in rice and beans production. The Myanmar International Trade Center (n.d.) lists 42 companies besides MAPCO that are registered for rice exports to China. The Myanmar Pulses, Beans, Maize and Sesame Seeds Merchants Association (2023) reports 325 other companies registered to export beans and pulses globally. These Myanmar companies must go on to compete not just with each other, but other companies from other nations seeking to further expand into these global markets. This competition is intense due to undifferentiated products and price wars, reducing profitability for all players.

Other large agricultural players in Myanmar include Dagon Agriculture Group Ltd, founded in 1999 as a subsidiary of the Dagon Group, which uses both their own commercial rice farms and contract farming systems, touting a 50:50 benefit-sharing ratio between farmers and the Group for the latter (Dagon Group, 2015). Similarly, Ayer Shwe Wah, encompassing industries as diverse as logistics and healthcare services (*AYER SHWE WAH Group of Companies in Yangon Myanmar*, 2021), was the first private company to obtain a rice export permit in Myanmar in order to export to Singapore and Belgium (The Irrawady, 2011).

Outside Myanmar but around ASEAN, Thailand and Vietnam are well-established agricultural exporters in the region. They leverage advanced technology, better infrastructure, and established trade networks, giving them a competitive edge over Myanmar producers (Ministry of Agriculture, Livestock and Irrigation, 2018).

Potential Entrants

The instability of Myanmar's general economy and geopolitical situation has made it hard for potential entrants to emerge. Foreign companies are less willing to expand operations into Myanmar due to the limited opportunities and challenges of operating in Myanmar. Furthermore, most independent farmers lack the resources to fully expand to the size of a MAPCO and become a key player in the industry.

Substitutes

Within agriculture, substitutes are harder to identify. As crops like rice and beans are diet staples for many people across MAPCO's markets and are therefore more price inelastic (as of 2011, the price elasticity of demand for rice in China was -0.115 (Lu et al., 2011)), the threat of substitutes is less of a concern. Since crops like rice and pulses form the core of many people's diets, consumers are less likely to switch to other crops despite price fluctuations.

While few agricultural crops can serve as substitutes for the types of crops that MAPCO produces, and while MAPCO's output is relatively inelastic, it is worth investigating the potential for other substitutes outside of agriculture. Imported processed foods, such as ready-to-eat meals or packaged staples, may serve as substitutes for agricultural crops. These products appeal to consumers in export markets due to convenience and long shelf life.

Competitive Forces Analysis

Bargaining Power of Buyers (Strong)

International buyers have high bargaining power because agricultural crops are mainly standardized with a wide selection of options across the global market. While there are different types and grades of crops such as rice, there are many other agricultural firms, especially outside Myanmar, able to offer these same crops. In fact, in 2019, China released regulations that narrowed the grading specifications (Attaché Report (GAIN), 2019), forcing companies like MAPCO to ensure that their products comply in order to continue tapping into these foreign markets.

The USDA has predicted that erratic government policies will decrease exports. As a result, international buyers may move towards more stable suppliers, thereby increasing the threat

of buyers. Furthermore, buyers do not have any significant switching costs between crops from different countries, further increasing their bargaining power.

The main advantage that Myanmar agricultural firms may have over international buyers is the fact that goods like Myanmar 5% broken white rice were more competitive than comparable varieties from Thailand, Vietnam, and Pakistan (Deval, 2024). This advantage, however, is more intrinsic to the industry rather than an individual company like MAPCO. Similarly, with China considering importing more agricultural products from Myanmar (Myanmar News Agency, 2024), more agricultural companies may stand to benefit from easier access to the Chinese market, though once again, MAPCO might not specifically benefit compared to other companies here.

Bargaining Power of Suppliers (Moderately Strong)

Myanmar's agriculture sector heavily relies on imported inputs, including fertilizers, seeds, agrochemicals, and advanced machinery. Domestic production of these essential inputs is minimal due to limited technological capabilities and high production costs. The International Trade Administration (2022) has even identified that while Myanmar has high natural gas resources, which is used to manufacture ammonia for fertilizer, the country does not have a competitive advantage for fertilizer production. In fact, their conclusion is clear: this gap "presents a market opportunity for high-quality American fertilizer companies" (International Trade Administration, 2022).

International agrichemical suppliers have higher bargaining power as they are not limited to selling only in Myanmar, so they do not need to prioritize this market. With this dependence on international suppliers, local agrichemical suppliers like Myanma Awba have a bargaining power advantage as farmers' and agricultural companies' options for buying locally are limited. Furthermore, when supplier options are limited, the threat of obsolescence decreases significantly, giving suppliers even greater bargaining power as agricultural companies cannot threaten to switch to better products.

The increasing instability in Myanmar may result in local suppliers of agrichemicals becoming less competitive compared to international suppliers. This gives these larger international suppliers with even more economies of scale further advantages, knowing that the local market will take even more time to catch up to them. Since international suppliers of agrichemicals have even more bargaining power, the threat of suppliers is getting stronger. Furthermore, with Myanmar has a whole aiming to increase its fertilizer imports from 1.047 million tons to 1.6 million tons from the 2023 – 2024 fiscal year to the 2024 – 2025 fiscal year (Xinhua, 2024) – double the amount from the previous year – the agricultural industry's reliance on international suppliers is only set to grow.

According to the International Trade Organization (2023), however, Myanmar fertilizer importers and manufacturers have started considering producing organic fertilizer locally in response to import restrictions, increasing prices, supply chain problems, and environmental issues. As such, the increasing trend for imports may potentially reverse should the local agrichemical industry find ways to successfully meet substantial portions of demand.

A larger company like MAPCO with more economies of scale and financial resources, however, is more able to tap into different suppliers in a way that less profitable independent farmers with fewer financial resources cannot. As will be elaborated further in the Recommendations section, MAPCO has announced projects and subsidiaries to help them have more control with obtaining fertilizer and machinery. This would help MAPCO to weaken the bargaining power that suppliers have over them by expanding their options. In addition, since MAPCO mainly grows rice, a crop for which farmers typically use their own seeds in Myanmar instead of exporting, the company is less prone to being affected by supplier power in this aspect.

Rivalry Among Existing Competitors (Strong)

As noted earlier, there are hundreds of companies in Myanmar seeking to export agricultural goods alongside MAPCO. The threat of competitors supplying crops in the global market is strong as Myanmar is competing in an international market with an expanded pool of players, especially from countries with more robust agricultural industries that may have advantages

that Myanmar companies cannot access. While MAPCO may have advantages over other local competitors, these relative advantages may not be sufficient across international markets. Furthermore, in the wake of further instability in Myanmar and shifting trade policies, other international competitors may move to claim even more of Myanmar's sales as agricultural firms are forced to reduce their exports, increasing the threat of competitors in turn.

Threat of New Entrants (Weak)

Since economic and geopolitical conditions make it hard for potential entrants to set up operations and establish themselves in Myanmar, the threat of potential entrants is weak for larger firms. In fact, the amount of total foreign investment in Myanmar has significantly decreased since the start of the 2021 coup (Open Development Myanmar, 2024), indicating the unattractiveness of starting businesses in Myanmar.

Even for local potential entrants, there are several barriers to entry. Firstly, Myanmar has had a track record of land issues, with farmers struggling to demand their land rights. 745 cases of confiscation, 565 involving the military, were recorded in 2013. Furthermore, also in 2013, only 25% of land that had been leased to private companies had actually been used or developed for agriculture (Okamoto, 2017). These challenges with land tenure make it harder for new entrants to get the grounding they need in the industry.

Alongside this, financing is a challenge for most local industries. Microfinancing has arisen in Myanmar as a potential solution for helping farmers get the funding they need (Okamoto, 2017). Before 2020, the microfinance sector had rapid growth, with client growth from 1 million to 6 million over 2012 to 2012, eventually reaching about 17% of all Myanmar adults. Microfinancing organizations are important in Myanmar because they choose to grant small loans without collateral in rural areas, unlike banks (The World Bank, 2024).

Since the COVID pandemic and the 2021 coup, however, lending to populations to need has significantly decreased, with the Pact Global Microfinance Fund, which covered 25% of microfinancing loans in Myanmar, stopping operations in June 2023 (The World Bank, 2024). In addition, the Myanmar Registration Law of 2022 banned NGOs from providing microfinance services in Myanmar (Hein Htoo Zan, 2023). Furthermore, the government has suspended farm credits, which previously provided farm subsidies, due to various banking and credit crises (Aung Tun, 2022). With the decreasing amount of financing options, new entrants are finding it increasingly challenging to gain the capital needed to enter the marketplace, let alone establish themselves. This especially applies to smaller independent farmers.

On the other end of the operating scale, MAPCO was one of the first companies on the Yangon Stock Exchange in 2015 (Kyaw, 2016), managing to participate in equity financing alongside other investing and financing activities to generate the cash needed for operations (Myanmar Agribusiness Public Company (MAPCO), 2024). An established company at MAPCO's scale has the ability to obtain financing in ways that other small companies and potential entrants do not. In fact, MAPCO's contract farming model allows them to further reduce the threat of new entrants by allowing them to cooperate with smaller farmers instead.

As such, the threat of new entrants towards MAPCO is low. This may begin to change in the near future, however: in December 2024, Myanmar's Union Minister for Agriculture hosted the Secretary General of the ASEAN-China Center to discuss agricultural opportunities between Myanmar and China (Myanmar News Agency, 2024). While these opportunities primarily revolved around ways to help Myanmar, this meeting could be a sign that Chinese companies may want to increase foreign direct investment in Myanmar, thereby serving as a warning of future potential entrants.

Threat of Substitutes (Weak to Moderate)

Within Myanmar, a focus group study by Downs et al. (2018) of consumers in different class settings found that "consumers preferred fruits, vegetables and red meat compared with highly processed snack foods." For now, agricultural products appear to be preferable to processed foods, though this may change. With rising incomes in Myanmar and the regions to which it exports, there has been increased demand for higher-value crops and processed

foods in turn ("The Development of Agriculture in Myanmar," 2023). These may be seen as potential substitutes to crops like rice down the line, though it is unclear at this point how this will affect Myanmar's agricultural industry. As such, in the long run, the threat of substitutes is currently low but may increase if Myanmar does not appropriately diversify the types of crops being grown.

Opportunities from Complements (Moderate)

Myanmar's cheap broken rice is typically used for the production of animal feed, beverages, rice starch, and flour (Climate Smart Rice, 2022). Depending on the compositions of these products, the potential for complements to broken rice is high. For example, barley would serve as a complement to broken rice for brewing drinks (Industrias Ralda, 2020). This sort of analysis expands to other agricultural crops: for example, lentils, pulses, and beans could be complements with other ingredients not produced by Myanmar's agricultural industry en masse that are used to make curries in target markets like India. As such, the widespread nature of complements in the agricultural industry gives MAPCO the chance to take advantage of various market trends.

Furthermore, as food, beverages, and other related industries producing complements grow or shrink, the potential for complements varies. For example, with malting barley production and exports in Australia increasing to meet the growing demand for alcohol in ASEAN (Department of Agriculture, Fisheries and Forestry, 2023), companies that produce broken rice stand to benefit alongside the complement product of malting barley. The potential for complements is tempered by the fact that a company like MAPCO, which focuses on a few core crops, is less likely to be able to bundle these crops together in order to provide its own complements. At this time, it remains unclear how MAPCO would work together with a company growing barley to effectively tap into this complementary nature.

Recommendations for MAPCO

Diversify International Markets

Companies like MAPCO have been able to respond to trade challenges by expanding their potential network of foreign customers. In its most recent annual report, MAPCO stated that it exports not only across Asia, but also to Eastern European countries and Mozambique; furthermore, they are working to expand their potential export market across other nations (Myanmar Agribusiness Public Company (MAPCO), 2024). By both expanding and diversifying their client pool, MAPCO is not only able to tap into more sources of demand, but also spread out their risk associated with export issues from any one country or region, allowing them to stay ahead. MAPCO can continue to expand further into these new markets and diversify in order to strengthen this advantage and mitigate the effects of potential price volatility and trade restriction challenges in any individual market.

Focus on Vertical Integration Efforts

MAPCO has announced plans to establish an NPK fertilizer facility and urea fertilizer plants, allowing them to manufacture their own fertilizer (Myanmar Agribusiness Public Company (MAPCO), n.d.). If MAPCO were able to increase their self-reliance for fertilizer, they could decrease their marginal costs, thereby giving them increased market power. With this advantage, MAPCO would be in a dominant position within the oligopoly. Furthermore, with MAPCO investing in new high-tech machinery and equipment (Myanmar Agribusiness Public Company (MAPCO), n.d.), they would be able to increase their efficiency and further drive down their marginal costs. In addition, continued emphasis on vertical integration would reduce the company's reliance on suppliers, reducing the bargaining power these suppliers may have and putting MAPCO in a stronger position in turn. Whether these advantages would help MAPCO to push other competitors out of the oligopoly remains to be seen.

Further Develop Mechanization Efforts

MAPCO has increased the mechanization of its processes through its special-purpose subsidiary company, MAPCO Engineering & Contracting Co Ltd (MAPCO E&C)., which has helped to import, install, and commission various pieces of equipment such as 10 parboiling rice mills, 50 column grain dryers, and 50 color sorters (Myanmar Agribusiness Public

Company (MAPCO), n.d.), likely due to their economies of scale allowing them to independently have a specialized company focused on engineering and mechanization. The company should continue to further develop these operations in order to gain a competitive advantage. Since the company model is built on processing rice from contract farming through rice mills, MAPCO's ability to distinguish itself further lies in the processing services it can perform, making improved mechanization a core part of its strategy. Furthermore, as already noted, this increased efficiency gives MAPCO increased market power in turn.

Implement Methods of Product Differentiation

MAPCO should continue investing in quality improvements through advanced milling technologies and certifications (e.g., organic, non-GMO). With organizations such as Golden Ground and Future Organic Farms seeking to encourage the adoption of organic farming techniques (Mevout, 2018), more farmers might be able to differentiate themselves from the rest of the market, not just in terms of being able to distinguish their product, both also potentially using the story of their product to increase added value. This added value would be strengthened with farmers displaying certifications, such as Good Agricultural Practices (GAP), to prove the safety and cleanliness of their products (Ronan, 2020). If organic fertilizers become more readily available domestically as stated earlier, the pathway to organic farming becomes clearer in Myanmar.

These initiatives can help the company target premium markets particularly in developed Asian countries like Singapore, Japan, and South Korea, reducing reliance on price-sensitive buyers. These markets demonstrate consistent demand for high-quality, certified agricultural products and willingness to pay premium prices for safety and quality standards (Rakuten Insight, 2023), especially as these countries do not have developed agricultural industries and are therefore reliant on imports.

While implementing these strategies may be easier for independent smaller farmers than a larger company like MAPCO, being able to diversify their portfolio of products may help them target markets they may not have been able to previously penetrate. Perhaps MAPCO could test this approach by diversifying small parts of their output with a handful of farmers, then going on to expand production should this strategy prove successful.

Establish Complement Product Channels and Crop Diversification

Given the wide range of possibilities for complements with agricultural goods, MAPCO should find ways to take advantage of these complements. With its current array of crops, there is some potential for complements between rice, beans, and maize as people eat these foods together. While it will likely take some capital and logistic investments in order to fully accomplish this, it may be in MAPCO's best interest to diversify its crop portfolio further. In the case of broken rice for brewing, this may look like growing barley and bundling both products together.

By investing in crop diversification, MAPCO can enhance the resilience of its supply chain and meet the evolving preferences of consumers. Diversifying beyond traditional staples can introduce new complementary products, targeting both local and international markets. For example, incorporating high-value crops such as fruits and vegetables alongside rice, beans, and maize, especially ones that best complement this current output, can create a more robust product offering. This strategy aligns with global trends, where diversified agricultural systems are increasingly recognized for their economic and environmental benefits (Berkeley Food Institute, 2023).

Vietnam's experience with agricultural diversification serves as a valuable model for other countries, including Myanmar. According to Nguyen (2017), small farmers in Vietnam have started to grow cash crops, supported by government policies focused on economic performance. In turn, food security and rural livelihoods have benefited. This emphasizes how diversification can lead to sustainable agricultural development, potentially leading Myanmar to a more positive agricultural future.

The challenge for MAPCO, however, is to identify how crop diversification will contribute to its overall strategy and operations. Through contract farming, MAPCO may have the flexibility to find farmers that are willing and able to grow the crops that it wants to pursue. Alternatively,

MAPCO could partner with companies that already produce complements in order to leverage these opportunities in trade. This partnership opportunity would be less complicated and less resource-intensive for MAPCO, but they would have to share the increased profits from this opportunity.

Conclusion

Despite its immense potential, Myanmar's agriculture sector faces significant challenges and opportunities, dealing with political instability and volatile export markets, which have held back its potential productivity. Companies like MAPCO, with their economies of scale and other advantages granted at their size, as well as their collaboration with small farmers across the nation, play a critical role in driving modernization and resilience. By leaning into their existing advantages, addressing systemic issues, and leveraging further opportunities like crop diversification, MAPCO can help Myanmar unlock the sector's potential for sustainable development and economic growth.

Furthermore, establishing complementary product channels can enhance market presence and foster deeper connections between producers and consumers. Learning from successful examples in Vietnam, which has benefited from agricultural diversification and supportive government policies, Myanmar can implement similar strategies to strengthen its agricultural framework. By embracing crop diversification, mechanization, and other modern practices, Myanmar can build a resilient agricultural sector that not only meets domestic needs, but also positions itself competitively in global markets, both those with which they are familiar and those that may be new opportunities. This holistic development can significantly contribute to the country's economic prosperity and food security.

References

Myanmar Agribusiness Public Company (MAPCO). (n.d.). https://www.mapco.com.mm/

MMSIS. (2022). GDP contribution in Myanmar in 2019, by sector (in trillion Myanmar kyat) [Graph]. In *Statista*. Retrieved November 07, 2024, from https://www.statista.com/statistics/1063582/myanmar-value-gdp-contribution-by-sector/

Okamoto, I. (2017). Agriculture. In A. Simpson, N. Farrelly, & I. Holliday (Eds.), *Routledge Handbook of Contemporary Myanmar* (pp. 192–201). Routledge.

Sinha Roy, S., & Van Der Weide, R. (2024). *Development reversed: Poverty and labor markets in Myanmar*. World Bank.

International Trade Centre, & Alibaba. (April 13, 2018). Distribution of e-commerce exports from Myanmar in 2017, by major types [Graph]. In *Statista*. Retrieved November 16, 2024, from https://www.statista.com/statistics/899029/myanmar-e-commerce-export-distribution/

WTO. (2024). Myanmar: Export of commodities in 2022 (in billion U.S. dollars) [Graph]. In *Statista*. Retrieved November 16, 2024, from https://www.statista.com/statistics/823022/export-of-commodities-from-myanmar/

World Bank. (October 10, 2019). Real GDP growth of the agriculture sector in Myanmar from 2015 to 2021 [Graph]. In *Statista*. Retrieved November 07, 2024, from https://www.statista.com/statistics/992352/myanmar-real-gdp-growth-agriculture-sector/

Economist Intelligence Unit. (2024). One-click report: Myanmar.

MMSIS. (2023). Number of developed agriculture farms in Myanmar from 2012 to 2021 [Graph]. In *Statista*. Retrieved November 07, 2024, from https://www.statista.com/statistics/1067875/myanmar-number-developed-agriculture-farms/

Flanders Investment and Trade Yangon. (2020). *Agriculture in Myanmar*.

Dagon Group. (2015, May 8). *Agriculture & Plantation - Dagon Group*. Dagon Group - Regarded Groups in Myanmar. https://dagon-group.com/business/agriculture-plantation/

AYER SHWE WAH Group of Companies in Yangon Myanmar. (2021, December 21). Ayer Shwe Wah Group of Companies. https://www.aysw.com.mm/

The Irrawady. (2011, January 28). Above it all. *The Irrawady*.

Myanma Awba. (n.d.). https://awba-group.com/

Corteva Agriscience. (2019, August 8). *Corteva launches its brand in Myanmar to serve farmers better with the newest innovation in seed and crop protection technologies*. AgNews. https://news.agropages.com/News/NewsDetail---31506.htm

Good Brothers' Co. Ltd. (GBS). (n.d.). https://www.gbs.com.mm/

Min Aung Hlaing. (2024, March 30). *SAC Chairman Prime Minister Senior General Min Aung Hlaing delivers speech at SAC Meeting 2/2024*. SAC Meeting 2/2024, Myanmar.

Bissinger, J. (2024, November 5). *Myanmar's agricultural sector under the SAC: an uncertain future*. Fulcrum. https://fulcrum.sg/myanmars-agricultural-sector-under-the-sac-an-uncertain-future/

Aung Tun. (2022, March 1). *Agriculture in a State of Woe Following Myanmar's 2021 Military Coup*. ISEAS-Yusof Ishak Institute. https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2022-20-agriculture-in-a-state-of-woe-following-myanmars-2021-military-coup-by-aung-tun/

Boughton, D., Thawnghmung, A. M., San, C. C., Aung, N., & Okamoto, I. (2024). Agriculture and Rural Livelihoods: Incipient Progress Aborted. In A. Simpson & N. Farrelly (Eds.), *Myanmar: Politics, Economy and Society* (2nd ed.).

Hein Htoo Zan. (2023, June 27). Myanmar junta drives largest micro lender out of business. *The Irrawady*.

Myanmar Agribusiness Public Company (MAPCO). (2024). *Annual Report 2023-2024*.

Kyaw, K. P. (2016, January 6). *Myanmar's tycoons unfazed by NLD victory*. Frontier Myanmar. https://www.frontiermyanmar.net/en/myanmars-tycoons-unfazed-by-nld-victory-2/

Deval, A. (2024, August 28). Platts-assessed Myanmar 5% Broken rice price slides to one-year lows. *S&P Global*.

World Bank Group. (2019). *Myanmar Rice and Pulses: Farm Production Economics and Value Chain Dynamics*.

Goeb, J., Zu, A. M., Zone, P. P., Synt, N. L. K., Boughton, D., & Maredia, M. K. (2020). Monitoring the impact of COVID-19 in Myanmar: Agricultural Commodity Traders - Synopsis of results from three survey rounds through early August 2020. In *CGIAR*.

Burma (Myanmar) agriculture fertilizer. (2022, October 6). International Trade Administration | Trade.gov. https://www.trade.gov/market-intelligence/burma-myanmar-agriculture-fertilizer

World Integrated Trade Solution. (n.d.). *Myanmar Maize seed imports by country | 2021 | Data*. https://wits.worldbank.org/trade/comtrade/en/country/MMR/year/2021/tradeflow/Imports/partner/ALL/product/100510

IFPRI. (2022). *Rice productivity in Myanmar: Assessment of the 2021 monsoon and outlook for 2022*. https://themimu.info/sites/themimu.info/files/documents/Assessment_Rice_Productivity_in_Myanmar_IFPRI_May2022.pdf

Myanmar International Trade Center. (n.d.). *List of Registerated Myanmar companies for rice import to China*. https://mitcygn.blogspot.com/p/list-of-registerated-myanmar-companies.html

Myanmar Pulses, Beans, Maize and Sesame Seeds Merchants Association. (2023, May 22). *GACC List of registered enterprises to export products from Myanmar (Bean and Pulses)*. MPBMSMA - MYANMAR PULSES, BEANS, MAIZE & SESAME SEEDS MERCHANTS ASSOCIATION. https://www.mpbmsma.org/gacc-list-of-registered-enterprises-to-export-products-from-myanmar-bean-pulses-1/

Lu, Q., Miao, S., & Wailes, E. J. (2011). China's rice supply and trade: constraints and potential. In *IEEE Conference Publication | IEEE Xplore*.

IEEE. https://ieeexplore.ieee.org/document/5882106

WTEx. (June 8, 2024). Rice exports in the Asia-Pacific region in 2023, by country or territory (million U.S. dollars) [Graph]. In *Statista*. Retrieved November 30, 2024, from https://www.statista.com/statistics/1350504/apac-rice-exports-by-country/

Climate Smart Rice. (2022). *Climate-smart rice in Myanmar*. https://sustainablerice.org/wp-content/uploads/2023/09/Myanmar-CSR-Project-Report_LESSONS-LEARNED-Dec-2022.pdf

Industrias Ralda. (2020, July 21). *Broken rice and types of broken rice*. https://www.iralda.com/en/products/broken-rice/

IFPRI. (2024). *Rice Productivity and Profitability in Myanmar: Assessment of the 2023 Monsoon*. https://cgspace.cgiar.org/server/api/core/bitstreams/936f7604-8196-4a87-b376-c49c963da063/content

Frontier. (2023, May 30). *Continued instability brings mixed fortunes for rice growers*. Frontier Myanmar. https://www.frontiermyanmar.net/en/continued-instability-brings-mixed-fortunes-for-rice-growers/

The development of agriculture in Myanmar. (2023, August 20). *Myanmar*. https://www.researchinmyanmar.com/insight/the-development-of-agriculture-in-myanmar

Downs, S. M., Glass, S., Linn, K. K., & Fanzo, J. (2018). The interface between consumers and their food environment in Myanmar: an exploratory mixed-methods study. *Public Health Nutrition*, *22*(06), 1075–1088. https://doi.org/10.1017/s1368980018003427

Department of Agriculture, Fisheries and Forestry. (2023, February 23). *Growing demand for agricultural produce in South-East Asia*.

Rakuten Insight. (October 16, 2023). Share of consumers who buy organic food in Asia as of September 2023, by country or territory [Graph]. In *Statista*. Retrieved December 12, 2024, from https://www.statista.com/statistics/1420163/asia-share-of-consumers-purchasing-organic-food-by-country/

Mevout. (2018, February 24). *Organic Agriculture Initiatives in Myanmar – Mevout*. https://www.mevout.com/organic-agriculture-initiatives-in-myanmar/

Ronan, D. J. (2020, November 27). Making Myanmar's markets work for safe farmers. *The Irrawady*. https://www.irrawaddy.com/opinion/guest-column/making-myanmars-markets-work-safe-farmers.html

Open Development Myanmar. (2024, May 31). *Foreign Direct Investment in Myanmar*. https://opendevelopmentmyanmar.net/topics/foreign-direct-investment-in-myanmar/

Lhing, N. N. (2022). Impacts of Microfinance Program on Rural Households in Myanmar: An application of logistic Regression model. In T. Nanseki & T. Nanseki (Eds.), *Agricultural Innovation in Asia*. Springer Singapore.

Ministry of Agriculture, Livestock and Irrigation. (2018). *Myanmar Agriculture Development Strategy and Investment Plan (2018-19 ~ 2022-23)*.

Attaché Report (GAIN). (2019, April 3). *China: national standard for rice*. USDA Foreign Agricultural Service. https://fas.usda.gov/data/china-national-standard-rice

Myanmar News Agency. (2024, December 10). MOALI Union Minister receives ASEAN-China Centre Secretary-General. *The Global New Light of Myanmar*. https://www.gnlm.com.mm/moali-union-minister-receives-asean-china-centre-secretary-general/

Nguyen, H. Q. (2017). Analyzing the economies of crop diversification in rural Vietnam using an input distance function. *Agricultural Systems*, *153*, 148–156. https://doi.org/10.1016/j.agsy.2017.01.024

Xinhua. (2024, June 2). *Myanmar aims to import 1.6 mln tons of fertilizer in FY 2024-2025*. https://english.news.cn/20240602/9a8daedf29814ccc95118ad099981c3e/c.html

International Trade Administration. (2022, October 6). *Burma (Myanmar) agriculture fertilizer*. https://www.trade.gov/market-intelligence/burma-myanmar-agriculture-fertilizer

International Trade Administration. (2023, August 29). *Burma (Myanmar) Agribusiness Organic fertilizer*. https://www.trade.gov/market-intelligence/burma-myanmar-agribusiness-organic-fertilizer

Myanmar Arable Land 1961-2024. (n.d.). MacroTrends. https://www.macrotrends.net/global-metrics/countries/MMR/myanmar/arable-land

Berkeley Food Institute. (2023, June 22). *What are diversified farming systems? - Berkeley Food Institute*. https://food.berkeley.edu/about-us/research-groups/center-for-diversified-farming-systems/what-are-diversified-farming-systems

ChatGPT references

https://chatgpt.com/share/675b7a8d-0ec0-8009-a440-a7ab5f7e0e1f

https://chatgpt.com/share/675b8ad7-5064-800a-9ced-b9b3851801cc

https://chatgpt.com/share/675b8aee-894c-800a-9376-2f387216af7b

https://chatgpt.com/share/675b8afd-cc34-800a-bccf-793f81129b85