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The 9th International Conference on Marketing and Retailing**FOOD INSECURITY: EXPLORING THE CHALLENGES FACES
BY YOUTH AGROPRENEUR**

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Abstract

Following the COVID-19 Pandemic and the war in Ukraine, the global food supply chain problem has become a hot topic of discussion today. Few countries-imposed food trade restrictions to increase domestic supply. As an urgent measure, Malaysia should revitalize and strengthen the agricultural sector to feed this country's growing population. Therefore, this study aims to explore the challenges faced by the youth agropreneur in Sabah, Malaysia. Focus Group Interviews with the youth agropreneur across five divisions in Sabah were conducted. A total of 26 youth agropreneurs were interviewed to investigate the challenges they are currently facing. The findings indicate a number of challenges faced by the youth agropreneurs. They include but are not limited to: i) high cost of agricultural input, ii) lack of market access and weak distribution channels, iii) low adoption of modern technology, iv) issues related to government assistance and implementing agencies, v) inadequate infrastructures and facilities, vi) lack of capital and resources, vii) climate change and natural causes, and viii) lack of knowledge and skills in agriculture. The study's findings provide insightful direction to policymakers to take further action to overcome the challenges faced by the agropreneurs. This can be done through, i) price control on agricultural input, ii) strengthened market access and distribution network, iii) effective talent development strategies, iv) adoption of modern technology and smart agriculture, v) financial and non-financial assistance, vi) provision of basic infrastructure and agricultural facilities, and vii) strengthened effectiveness and efficiencies of related agencies.

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1. Introduction

Food insecurity exists when people lack appropriate quantities of safe and nutritious food to maintain an active and healthy lifestyle. This may be due to a lack of food availability and insufficient purchasing power (Stewart & Roberts, 2012). The current global conditions where food insecurity has become prominent due to a series of crises such as the conflict in Ukraine, the COVID-19 Pandemic, the climate crisis, and rising costs in agricultural input. In the same vein, a few countries-imposed food trade restrictions to increase domestic supply. Since 80 percent of the world's population resides in countries dependent on food imports to maintain an adequate food supply, many confront food insecurity (Lehikoinen et al., 2021). Similarly, the Sustainable Development Report states that food security remains the major challenge in Malaysia. According to the Sustainable Development Report 2022, the Goal Score stagnates or increases at less than fifty percent of the needed rate, indicating that there is little effort or ineffective measures for addressing food security challenges in Malaysia.

Although Malaysia is ranked 39th in the 2021 Global Food Security Index, there is much to improve as food production growth in Malaysia remains slow (Jomo & Tan, 2019). The nation's increasing reliance on imported food has increased annual costs by more than RM50 billion (Department of Statistics Malaysia, 2022). High dependence on imported food threatens developing countries, particularly in food security and surge in food prices. Food price increases significantly impact vulnerable households, making them more likely to experience hunger and poverty. As one of Malaysia's poorest states, Sabahans generally feel the effects more than the rest of the country. Accordingly, Sabah needs a comprehensive food security policy that addresses affordability, accessibility, availability, safety, nutrition, and emergency and supply disruptions.

Therefore, this study aims to explore the challenges faced by youth agropreneurs in Sabah, Malaysia. Identifying the challenges encountered by agropreneurs is essential for food security because it helps to address the underlying issues impeding agropreneurs' capacity to produce enough food to meet the needs of a growing population. Understanding the obstacles faced by farmers, such as lack of access to resources, limited access to markets, and bad weather conditions, can lead to the creation of more appropriate and successful targeted policies and initiatives. Unfortunately, there is limited research conducted on this area. Besides, youth agropreneur participation is low as most individuals involved in farming are aged 50 years and above (Ahmad, 2020). Hence, more youths should be involved in the agricultural sector as younger farmers are usually more productive and therefore capable of achieving higher profitability, more versatile, adaptive, inclined to adopt technology, and tend to promote diverse agricultural activities (Akrong & Kotu, 2022). However, this appears to be not the case in Malaysia. Therefore, a study on agropreneur challenges that focus on the youth is critically important. Apparently, this is part of the succession plan in the agricultural sector to ensure food security and increase the productivity of the agropreneur. The fact is that youth agropreneur can and will serve as one the key agents of change for the industry and the communities.

2. Literature Review: Challenges Faced by Agropreneurs

2.1. High Cost of Agricultural Input

Agricultural inputs are defined as resources that are used for farming. Specifically, it can be divided into three categories (i) technological resources such as fertilisers and equipment; (ii) natural resources, such as irrigation and soil fertility; and (iii) human resources such as labour and services (Peterman et al., 2014). The agricultural input is vital in ensuring higher productivity and efficiency, protection of crop losses, increasing food quality, and vector disease control, among others (Aktar et al., 2009).

Previous research indicates that the increase in labour cost in farming causes an obstacle to the financial viability and sustainability of food production among agropreneurs. In addition, it limits agropreneurs from expanding their farm due to lack of workforce (Bruce & Som Castellano, 2017). Besides labour cost, higher fertiliser costs result in farmers using less fertiliser, which lowers food production. Lack of fertilizer has a negative nutritional impact on plants, which affects food availability, food quality, rural income, and the livelihoods of the poor (Stewart & Roberts, 2012). The effects are anticipated to be more severe in developing nations where smallholders have less access to capital and cannot afford to purchase expensive fertilizer.

2.2. Lack of Market Access and Weak Distribution Channels

Access to agricultural markets and an efficient distribution channel choice have been the subject of extensive research. Several studies have reported that access to agricultural markets and distribution channel choice is crucial for agricultural development (Musitini & Muroiwa, 2019; Usman & Callo-Concha, 2021; Zhu et al., 2022). The distance, duration, and travel expenses to the nearest market frequently determine market access. Greater access to the market is key to enhancing the well-being of the rural population in many low and middle-income countries (UNDP, 2012). Likewise, choosing the right distribution channel is crucial for bringing smallholders out of poverty and improving food security (Mgale & Yunxian, 2020) because it directly affects their income (Mmbando et al., 2015).

However, despite the vast market opportunities, smallholders face several challenges (Tilburg & Schalkwyk, 2012). Smallholder's participation in the market is mainly affected by overwhelming transaction costs (Kaganzi et al., 2009), lack of market information (Wiggins & Keats, 2013), and lack of understanding of fundamental market dynamics like seasonal price fluctuations as a result of limited market information (Tadesse & Bahiigwa, 2015). This gives smallholders less bargaining power and fewer distribution channel options (Omiti et al., 2009). Consequently, the emergence of new channels, like electronic marketing, presents a further obstacle for smallholders, as this pattern is growing globally. Big data, the IoT, and blockchains, are among the new technologies reshaping the distribution of agricultural produce.

2.3. Low Adoption of Modern Technology

Takahashi (2023) have stated that the emergence of enhanced crop varieties and the widespread use of mobile phones, which are predicted to lower transaction costs, are examples of changes that encourage the adoption of new agricultural technologies. Unfortunately, there is low adoption of modern technology in the agriculture sector. Even if the technologies are available, they might not be widely adopted due to restrictions on credit and other factors (Magruder, 2018).

Shiferaw et al. (2015) stated that many farmers do not use these promising and welfare-improving technologies. The unimpressive performance of the agricultural sector is a result of smallholder farmers' slow adoption of inputs and technologies that increase productivity (Chinseu et al., 2019). Adopting innovative technologies is expected to play a big part in creating sustainable agricultural systems which promise to increase food security (Bukchin & Kerret, 2020).

2.4. Inadequate Infrastructures and Facilities

Infrastructure is defined as the organisational structure and physical amenities the community needs. These infrastructures include industries, buildings, roads, bridges, health services, governance, and many others (O'sullivan et al., 2003). Sustainable agricultural development sustainable rural economy requires access to productive infrastructures such as land, roads, electricity, marketing facilities, irrigation facilities, small-scale agro-processing technologies, specialized agricultural careers across the value chains, and others (Obert, 2012).

Unfortunately, the constraints to agricultural development are inadequate irrigation facilities, post-harvest losses, the rigid land tenure system, and poor road infrastructure (Frederick, 2011). Moreover, the agriculture sector has been unable to realize its full potential due to inadequate supportive infrastructures such as poor storage facilities, poor road network, inadequate supply of electricity; weak producer organizations; lack of collateral and access to credit facilities, and ineffective marketing information (Adebayo, 1999).

Furthermore, communication infrastructure and internet connectivity is critical for the proper functioning of agricultural automation. Poor connectivity is widespread even in some rural areas in high income countries. Investments should also target associated enabling infrastructures, such as public datasets on weather forecasts and calendars for crop and livestock production (FAO, 2022).

2.5. Lack of Capital and Other Resources

Access to financial resources is critically essential for rural development and sustainable development goals, and allowing smallholders to borrow and save will eventually increase their access to other available economic opportunities (Fletschner, 2009). There is evidence that financial resources can help smallholder farmers increase agricultural productivity as well as help them better manage the risks associated with climate change and apply adaptation strategies, including participating in non-farm activities (Khandker & Koolwal, 2014). The use of financial resources for agricultural production is essential in Malaysia since agricultural production has remained relatively stagnant in recent decades and facing a heightened threat of climate change, reducing food security within the household. Moreover, in

order to expand the farms, agricultural diversification would need more machinery, recruiting and training more workers, thus, increasing both labor and capital (Davis et al., 2021).

Unfortunately, despite its significance, agriculture is still regarded as a secondary sector compared to other industries that are more well-liked and more appealing for employment, especially among younger generations, such as manufacturing, services, and the public sector (Abd et al., 2022). Financial institutions like commercial banks have very little exposure to the agricultural sector that might restrain them from offering financial investment to this sector (Olvermann et al., 2023). With limited understanding of business opportunities and risks in agriculture this has created a financing gap and prevented banks from providing adequate support and funding to the sector.

3. Climate Change and Natural Causes

Climate change is regarded as changes in the usual climate patterns, for example, the rise in temperature and intense precipitation that caused environmental disasters at regional and global scales. Among the climate change contributors are burning fossil fuels and greenhouse gas emissions. Of late, this phenomenon is beginning to affect the production in agriculture and fisheries sectors, especially in the tropic (Cinner et al., 2022). Its direct impact is on plant growth as it is greatly influenced by climate variables such as air temperature, water availability, and solar radiation (Anderegg et al., 2013). Moreover, at a macro level, Mora et al. (2015) reported that potentially by 2100 tropical areas could lose up to 200 suitable plant-growing days per year due to climate change.

Other pertinent issues are pests and disease infestation, whereby the temperature is the most important environmental factor affecting insect population dynamics (Skendžić et al., 2021) and disease incidences (Burdon & Zhan, 2020). In Malaysia, a study by Alam et al. (2014) found that a 1% increase in temperature leads to a 3.44% decrease in current paddy yield and 0.03% decrease in paddy yield in the following season. Meanwhile, a study by Zabawi (2010) stated that if rainfall or temperature increased by 15%, rice yield would fall by 80%. Furthermore, extreme climate change brings heavy rainfall causing physical damage due to floods and landslides. Undeniably climate change has become an enemy to agriculture and food security.

3.1. Lack of Knowledge and Skills in Agriculture

One of the critical elements for entrepreneurial success and sustainability is entrepreneurial knowledge (Wu et al., 2008). Knowledge is understanding or awareness of something, such as descriptions, facts, or material (Morris, 1998). Entrepreneurial knowledge enables entrepreneurs to understand, observe, and innovatively use information. Entrepreneurial skills are defined as the capability to make something new by contributing their fullest efforts and time (Hisrich & Peters, 2002). There is a continual need to intensify existing knowledge and develop skills to cope with the changes in the environment. Solomon (2007) defines entrepreneurship as an ongoing process involving numerous talents, skills, and knowledge. Similarly, Okafor and Amalu (2010) stated that characteristics such as confidence, leadership, and managerial skills are crucial to enable entrepreneurs to access new markets.

According to Asenso-Okyere and Mekonnen (2018), one of the challenges among farmers is a lack of exposure to the newest appropriate technologies and limited awareness of relevant innovation opportunities. Olomola and Nwafor (2018) also stated that most farmers use old-fashioned farming systems, lack familiarity with contemporary methods, and still use ineffective farming practices. Che et al. (2020) studied Nigeria's agriculture crisis and found that rural farmers are generally uneducated and lack modern knowledge and training. Similarly, Devkota et al. (2023) stated that a lack of general education will negatively affect the farmers and that training is crucial for profitable farming. Thus, training programs should be designed and organised on sites so farmers can get modern knowledge about farming methods. Various parties, such as the government, universities, or other relevant institutions, should assist the farmers to more readily adopt modern methods (Che et al., 2020). Recent studies have recognized the need for financial education and literacy among business owners and entrepreneurs (Li & Qian, 2019). According to Rasheed and Siddiqui (2019), one of the most critical skills in new venture creation and development are skills for financial management. Similarly, Drexler et al. (2014) stated that it is essential for entrepreneurs to exhibit a high level of financial literacy due to the complex decision-making activities concerning the acquisition and usage of financial resources.

4. Research Methodology

4.1. Research Design

Data collection was done in May 2022. Five focus group interviews were conducted among youth agropreneurs in Sabah's five divisions: West Coast Division, Interior Division, Kudat Division, Sandakan Division and Tawau Division. According to Morgan (1996), focus group interview is perceived to be a "cost-effective" and "promising alternative" in participatory research. Focus group interviews offer an in-depth understanding of the participants. Each focus group interview consists of 5 to 6 youth agropreneurs from the age of 22 until 40 years old. The ideal focus group size for most topics is five to six people (Jayasekara, 2012). A total of 26 participants were involved in the interviews. The participants consist of youth agropreneurs in Sabah who have been agropreneur for at least three years and plant food crops such as vegetables and fruits. The questions were about their background, motivations to be involved in agropreneurship, challenges, opinions about the existing policies, and future suggestions for further improvement.

5. Participants' Profile

The participants' profile as shown in Table 1 revealed that most participants are males (81%), aged 30-40 years old (81%), with the majority having at least SPM holders. Most of the participants have an income between RM1000 to RM3999 in a month. Additionally, the participants have been agropreneur between 3 to 9 years (88.5%). Further profiling of the participants indicates that a majority of them (57.7 %) planted vegetables, followed by fruits and paddy, and planted various crops such as vegetables and fruit. Lastly, only 46.2% of the participants ever received financial assistance from the government and its agency.

Table 1. Participants Profile (n=26)

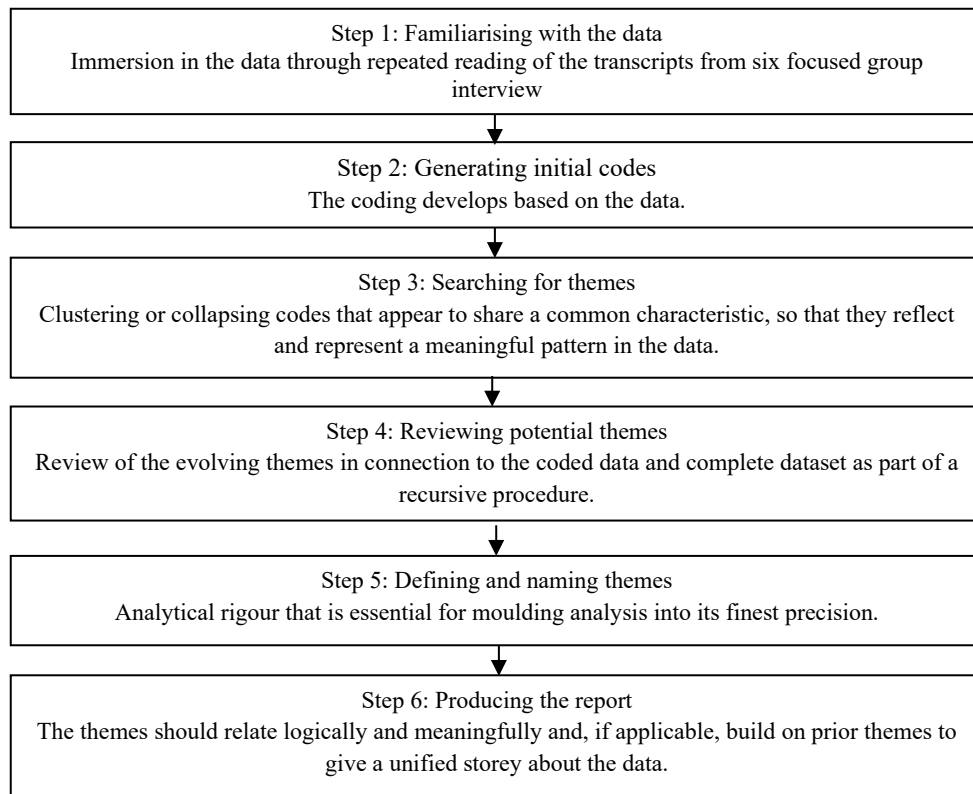
Relevant dimension Profile	Number/Percentage
Gender	81% (21) Male 19% (5) Female
Age	19% (5) between 20 and 29 years 81% (21) between 30-40 years
Educational Level	3.8% (1) with primary school 54% (14) with SPM 42% (11) with Diploma and Bachelor Degree
Monthly Income	62% (16) between RM1000-RM3999 19% (5) between RM4000-RM6999 8% (2) between RM7000-RM9999 12% (3) RM10000 and above
Experience (years)	88.5% (23) between 3 to 9 years 11.5% (3) 10 years and above
Types of Crops	57.7% (15) Vegetables 34.6% (9) Fruits 3.8% (1) Paddy 3.8% (1) Mixed
Received Financial Assistances	46.2% (12) Yes 53.8% (14) No

5.1. Methods of Data Analysis

The present qualitative study employs a semi-structured interview as the principal method for data gathering. The major questions asked were: “What are the challenges you are currently facing?” and “What are the effects of those challenges?” In order to deepen the interview, probing questions and exploratory questions such as “What do you mean?”, “Can you give some examples?” and “can you further explain?,” and probing questions such as “can you explain why some people, especially the youth, are not interested in the agricultural sector?” and “what do you dislike about working in the agricultural sector? Were also asked. Simultaneously, data were collected and processed, and the interview concluded when the topics were reached and the data were completed. On the basis of the qualitative content analysis proposed by Graneheim and Lundman (2004), the data from the sound recorders were transcribed and read multiple times to determine the agropreneurs' general perception. Following identifying semantic units within the transcription of the interviews, main codes were derived from the data. Codes were categorised into sub-themes based on their similarities and differences, and then themes were categorised.

5.2. Thematic Analysis

This study utilised the method of thematic analysis to find and analyse patterns, themes, and perspectives that emerge from the data. It entails dividing the data into smaller, more manageable parts and systematically analysing these parts to uncover themes (Daly et al., 1997). This study uses the framework from the most widely used version of Thematic Analysis that was developed by Braun and Clarke (2006, 2012). There are six-step processes involved as shown in Figure 1.



6. Results

Table 2 presents the findings of the study related to the challenges and effects faced by Youth Agropreneurs. There are eight challenges identified based on the Focus Group interviews conducted from the 26 participants.

Table 2. The Challenges faced by the Youth Agropreneurs and its Effect

Challenges faced by Agropreneurs	Effects
Increase In the Cost of Agricultural Input	<ul style="list-style-type: none"> ● Reduce the size of their agricultural area and the number of crops to be planted ● Less efficient and take longer time to get the work done due to not being afforded to pay for the workers.
Lack of Market Access and Weak Distribution Channels	<ul style="list-style-type: none"> ● Dumping of agricultural products such as watermelons and bananas ● Selling at a lower price due to intense competition with limited market size ● Difficulty restarting the planting process due to lack of working capital
Lack of Financial Access and other Resources	<ul style="list-style-type: none"> ● Lack of capital to expand the agricultural activities ● Lack of heavy machinery to loosen the soil ● Too dependent on Peninsular Malaysia to supply seeds (e.g., mushrooms)
Low Adoption of Modern Technology	<ul style="list-style-type: none"> ● Lack of productivity and inefficient ● Youth are not interested in agriculture because of the intensive use of traditional cultivation

Challenges faced by Agropreneurs	Effects
Issues Related to Government Assistance and Implementing Agencies	<p>methods.</p> <ul style="list-style-type: none"> ● Some of the assistance does not reach the targeted group ● Lack of awareness among the youth agropreneur of the assistance available to them ● Lack of consultants or experts to guide the agricultural process ● The employees of the district agencies lack knowledge about the service and aid provided, which led to the failure of its promotion. ● Some of the assistance provided was inappropriate for a specific farming activity. ● Unreasonable funding eligibility with strict terms and conditions led to incomplete paperwork and non-compliance.
Climate Change and Natural Causes	<ul style="list-style-type: none"> ● Decreased in agricultural yield ● Plants and fertigation polybags were carried away by the flood. ● Some plants, such as leafy vegetables, do not grow during the rainy season. ● Fruit size decreases during the dry season. ● Strong winds destroy the hydroponic site. ● Food shortages ● Crop damage
Inadequate Infrastructures and Facilities to Support the Agricultural Sectors	<ul style="list-style-type: none"> ● The lack of farm roads makes it difficult for farmers to transport farm inputs and other services and send out their agricultural products for sale. ● Inadequate and non-existent farm roads hamper the expansion of crop cultivation areas. ● Poor infrastructure and lack of facilities affect agricultural productivity and impede or slow the agricultural sector. ● Machinery unavailability resulted in manual soil loosening work, which is less effective in ensuring soil fertility.
Lack of Knowledge and Skills in Agriculture	<ul style="list-style-type: none"> ● Slowed agricultural development process compared to other countries where knowledgeable individuals fill the void in this field.

7. Discussion on Findings

7.1. Increase in the Cost of Agricultural Input

The price of agricultural inputs has increased, particularly for fertilizers, pesticides, agricultural equipment, and labor costs. The agropreneurs claimed that Sabah's agricultural input price is far higher than Peninsular Malaysia's. This is one of the contributing factors to low income among agropreneurs. High production costs in agriculture lead to many farmers reducing their agricultural area due to being unable to cover the cost. Some of their counterparts had even left the sector altogether. Due to their

inability to pay for labour, youth agropreneurs must perform most of the farm tasks themselves. Consequently, they are inefficient and slower in completing their work. Labor shortages have severely impacted the agricultural and farming industry, affecting food security and the agropreneurs' well-being.

7.2. Lack of Market Access and Weak Distribution Channels

Youth agropreneur face significant challenges in accessing markets to sell agricultural products. They are restricted by the remote location and high transportation costs. Moreover, the state lacks the necessary logistics and supporting facilities, such as efficient transportation systems and collection centers. Not only that, the youth agropreneurs claimed that due to the limited market, competition from other farmers who grow the same crop from or import agricultural products from neighboring countries such as Indonesia leads to an oversupply of agricultural products. Along with it, food commodities have no ceiling price enforced by the government. Thus, the price of food commodities fluctuates. For example, the intermediaries set the price of chili, vegetables, and others at the farmer's market. Therefore, there is instability in the agropreneurs income. In addition, the non-existent of a comprehensive database for agropreneurs in Sabah makes it challenging to monitor and implement appropriate marketing strategies suitable for their products.

7.3. Lack of Capital and other Resources

The youth agropreneurs have difficulty expanding their farms due to a lack of capital and limited land. Some rent other people's land or use the government reserve land. They also face issues with the landlord when there is no formal agreement between them. Consequently, they are uncertain about the rental period, causing them to doubt whether to plant more crops or otherwise. They also have difficulty obtaining government assistance because there is no agreement with the landlord or government. They had a lower profit margin because they had to pay land rent.

7.4. Low Usage of Modern Technology

Although the global population has to be fed and is projected to exceed 9.7 billion by 2050, the agriculture sector has been the slowest to adapt and remains the least digitised industry in the world (Subramaniam, 2021). In the same vein, the results from this study found that Sabah is lagging compared to other states in Malaysia in terms of technology adoption. As a result, low agricultural technology usage leads to low productivity and income. The labor-intensive traditional farming techniques make the agricultural sector less attractive to the youth. Among the challenges in adopting modern technology are the unavailability of technology, lack of technical knowledge, information fragmentation, higher implementation costs, and poor network connectivity to support smart technologies.

7.5. Issues Related to Government Assistance and Implementing Agencies

The youth agropreneurs appear to be unaware of the function of each of the agencies and the type of funding available since there are numerous agencies with separate federal and state jurisdictions. At the same time, interagency coordination among these implementing agencies is unclear. Moreover, it lacks

strategic coordination to implement development projects efficiently. In addition, some district agency personnel lack the expertise and knowledge on the services and assistance provided. In many circumstances, this fails to promote available aid. Obviously, communication plays a critical role in the government and agencies' strategies to boost the agricultural sector.

7.6. Inadequate Infrastructures and Facilities

As the poorest state in Malaysia and the second largest state, Sabah still lacks basic facilities and infrastructure such as proper roads, electricity, water resources, machinery, drainage system, irrigation facilities, and other processing agricultural facilities. The state's limited economic prosperity is partly attributable to a lack of access to reliable infrastructure. Farmers depend on rainwater during drought season, the plants lack water, and the output is less or does not survive. As most of the farms are located far away from the main road, and there is an unavailability of farm roads, sending out their agricultural products for sale and delivery of farm inputs and other services is difficult. Furthermore, inadequate and non-existent farm roads hamper the expansion of crop cultivation areas, negatively impact agricultural output, and retard the agricultural sector. Hence, it compromised food security and economic growth in many ways.

7.7. Lack of Capital and Resources

Due to a lack of finance and the rising price of agricultural inputs, the young agropreneurs are unable to develop their farm further. In the same vein, not all agropreneurs own the land. Some rent other people's rent or use the government reserve land. They also face issues with the landlord when there is no formal agreement between them. Consequently, they are uncertain about the rental period, causing them to doubt whether to plant more crops. They also have difficulty obtaining government assistance because there is no formal agreement with the landlord or government. They had a lower profit margin because they had to pay land rent.

7.8. Climate Change and Natural Causes

The changes and unpredictable weather patterns over the last five years have reduced the yield and incurred higher costs to address the effects of prolonged dry weather and unusually heavy rains. Farmers are, in particular, unable to grow vegetables during the rainy season. The flood that occurred from December 2021 until May 2022 caused a big loss to agropreneurs when their crops were washed away by the flood. They suffered a significant loss and needed to start all over again. Consequently, there was a food shortage, such as vegetables and fruits. Since farms are typically located in remote areas, the farmers also have to deal with wild animals like monkeys or squirrels that eat their crops like bananas, mango, and coconuts. Crops damaged by wildlife cause significant economic loss, and non-human primates can also be nuisances to farmers, following their ingenuity in crop-raiding strategies.

7.9. Lack of Knowledge and Skills in Agriculture

Although the agricultural sector is involved with science, technology, biology, chemistry, physics, and others, the labour force in the agricultural sector is generally dominated by the less educated. Hence, slowed agricultural development process compared to other countries where knowledgeable individuals fill the void in this field. The youth agropreneurs rely heavily on traditional methods passed on from generation to generation. Traditional agricultural practices only can supply the family's needs. Likewise, youth in remote areas typically lack information regarding government assistance.

8. Conclusion and Recommendations

In order to address the challenges faced by the agropreneurs, especially the youth, immediate policy action should be implemented to ensure food security, sustainability of the agricultural industry and reduce poverty incidence in Sabah. The policy for youth agropreneur is highly needed to make the agricultural sector more attractive to the youth, to make it a more promising sector, and to be more profitable. Therefore, in consideration of the challenges faced by agropreneurs, the following action need to be taken i) to implement price control on agricultural input, ii) strengthening the market access and distribution network for smallholders to reliably sell more products, leading to sustainable increases in agropreneurs' income, iii) effective talent development strategies to ensure sufficient and competent labour force, iv) to encourage the adoption of modern technology and smart agriculture to address the problems such as limited use of land for agricultural activities, low productivity, disease, and pest infestation and lack of labour, v) to revise and add more appropriate financial and non-financial assistance, vi) facilitate the provision of basic infrastructure and agricultural facilities such as farm road, bridges, availability of electricity and water, and crop processing facilities to increase the value-added of the agricultural output and its marketability, and vii) strengthening the effectiveness and efficiencies of related agencies as it is the key factors to moving forward in the agricultural sector. Therefore, there is an urgent need to improve and strengthen the roles of implementing agencies in the state. Among the suggestions are strengthening the efforts in promoting the roles of agencies, continuously training the existing staff, engaging with stakeholders, farmers, and agropreneurs in every policy development, establishing one-stop centers for agricultural consultancy services and broadening strategic partnerships and collaborations with inter-agencies and industry entities. Minimizing the challenges in agricultural sectors is the responsibility of all parties; agropreneurs, policies, social support, and strategic partnership with the industry. If these factors are strengthened and implemented, the chances to succeed will be higher, ensuring food security, enhancing the sustainability of the agriculture sector, and reducing poverty, especially in rural areas.

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