Research article

Adaptation Strategies to Changing Environment by an Organic Farm in Laguna, Philippines

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Abstract With the increasing awareness of consumers for an alternative lifestyle and the enactment of the Organic Agricultural Act of 2010, more and more farmers are expected to shift to organic farming (OF) in the Philippines. However, shifting to OF and maintaning an organic farm are not easy tasks due to various issues such as lack of knowledge on suitable production technologies, unstable supply, lack of markets, intensive labor inputs and difficulty in controlling weeds, pests and diseases to name a few. Despite these issues, some organic farms were able to sustain operations. This study aims to determine different farm business strategies that enabled C Farm (CF) to remain in business and continue to grow given the changing business environment. This paper does not limit its scope to the strategies adopted by CF to cope with climate changes, but this also focuses on the changes in business strategies despite the challenges in the economic, technological and socio-cultural environment. The case study approach is done through in-depth interviews with company owners, multiple site visits and observations. Furthermore, evaluation of the opportunities and threats in a business environment was also done to identify suited strategies implemented by CF. This study is a significant tool for potential OF investors in determining best practices in the OF business. Farm visits and key informant interviews revealed that CF was able to adopt innovative production, marketing, financing and community relationship strategies, which are the key factors in business survival and growth. Positioned as an agritourism farm, it was able to deal with the presssures of the external environment by integrating farm operations; crafting strategies to increase and sustain production through ecological means; adopting keen market sensing strategies; increasing financing through joint ventures and strengthening community relations by involving them in the various financing and operations activities.

Keywords organic farming, investment strategies, extension services, Philippines

INTRODUCTION

Conversion to organic farming (OF) has become a prevalent trend all over the world due to increasing market awareness, growing demand for organic products, and support of the government through government policies and push for organic agriculture. In addition, more stakeholders of the food chain, including the farmers have become involved. However, Gliessman (2009) explains that success in conversion is based on ability of the farmer to operate the farm and to adjust to other factors (e.g. extension, market development, prices) of the food system, which are often beyond his/her control. In other words, it is more than just changing the inputs. This also entails changes in strategies in the food chain and compliance with regulatory and certification policies. In the case of the Philippines, organic certification is not an easy process. Amekawa (2013) adds that certification does not generally

guarantee market access. In most cases, access to market is ensured even before organic farms apply for certification.

OF has been practiced in the Philippine since early 60s, however, the advent of Green Revolution in the mid 60s has successfully influenced many farmers to use chemical fertilizers and pesticides to increase farm productivity. Renewed OF interest started in the 1980s initially by NGOs, farmers, and academe (Nakanishi, 2014). Since then, increased number of small-scale farms have been developed. This has caught the attention not only of the health enthusiasts but also the government, which recognized the importance of OF. With the recent enactment of the Organic Agricultural Act of 2010, more and more farmers are expected to shift to OF. According to the National Organic Agriculture Program (NOAP), organic agriculture covers about 40,000 has, which are managed by about 76,500 farmer-beneficiaries in 2013 (Caneda, 2014). Although the scale is still considered small, NOAP added that its main targets are to increase total area, increase production volume, expansion in markets, increase number of certified farms and processors, and increase number of organic agriculture adopters. However, shifting to OF and maintaining an organic farm are not easy tasks due to various issues such as lack of knowledge on suitable production technologies; unstable supply; lack of markets; intensive labor input; and difficulty in controlling weeds, pests and diseases. Another issue related to shifting to OF is the availability of the organic farm to sustain operations and be resilient given the demands and challenges of the new business environment. According to Milestad and Darnhofer (2003), resiliency will highly depend on the learning and adaptation ability from current issues and conditions.

OBJECTIVE

This study aims to determine how an organic farm business was able to cope with the various challenges in term of the implemented strategies to sustain operations despite changes in the business environment. It should be noted that the environment refers not only to natural factors but also includes socio-cultural and economic aspects, which affect the farm (Fujimoto, 2014). Lessons from these experiences may help other farmers to attain growth and resilience in their OF business. Moreover, this study is a potential tool useful for future OF investors to determine the best practices in the OF business. It should be noted that this paper may not be able to thoroughly explain all aspects, but aims to provide an outline for further research.

METHODOLOGY

This study used the case study approach based on the collected qualitative and quantitative data. This focuses on the experience of C Farm (CF), which has been operating in the town of Majayjay, Laguna Philippines since 2006. The town of Majayjay, which is located about 120 km South of Metro Manila, is endowed with characteristics that are favorable for vegetable production. Primary data were gathered from farm visits and key-informant interviews conducted in February and May 2014. The May 2014 interviews were recorded using an IC recorder, and transcribed in order to fully capture the details.

RESULTS AND DISCUSSION

Profile of C Farm

Table 1 shows the development of CF, which was initially established in 2006 as a hobby farm towards achieving an alternative lifestyle. Located near the Majayjay falls, CF started in a 0.77 ha farm lot. Without any knowledge and experience on farming, the family initially planted fruit bearing trees such

as *santol* (*Sandoricum koetjape*), *makopa* (*Syzygium samarangense*), *bayabas* (*Psidium guajava*), *dalandan* (*Citrus aurantium*), mangosteen (*Garcinia mangostana*), langka (*Artocarpus heterophyllus*) and sampalok (*Tamarindus indica*) among others.

While waiting for the trees to bear fruit and so as not waste the time and space, CF started producing traditional vegetables and herbs for home consumption. The vegetables produced then (e.g. eggplant, okra, squash, bitter gourd) were mainly used for *Ilocano* dishes such as *pinakbet* (i.e. mixed vegetables sauteed/steamed with shrimp or fish paste), which is highly preferred by the household head, who hails from the province of Ilocos located in Northern region of the Philippines.

By 2008, the farm also started planting salad greens (e.g. lettuce) initially for home consumption but expanded towards commercial farming for all its farm produce in response to the demand. Relatives, friends and aquaintances frequently visited the farm and it is through these visits that the company owner of a group of restaurant chains became CF's first partner in 2009. This initial partnership involved supplying four (4) branches of its Italian restaurant for the vegetables and herbs demand. By 2010, CF was able to penetrate and establish a market in Mercato Central, Taguig City, Metro Manila. In the same year, CF was also duly accredited by the Department of Tourism as the *First Agritourism Destination in the Philippines*, since they also have been offering recreational activities (e.g. pick-and-pay, fish-and-pay, feeding the animals) and accommodation facilities. These have resulted to more partnerships with other hotel, restaurant and catering service (HORECA) outlets and other initiatives (e.g. life at the farm tour, wellness tour).

Currently, CF has expanded to 5 hectares, and more expansion is on the way to keep up with the increasing demand. It produces 20 tons of vegetables and herbs per month, 80% of which is lettuce . It is a common practice of CF to produce vegetables based on the contract with the clients. In other words, there is assured market for whatever they plant. Production is planned for each client. However, CF also reserves about 20% of production as buffer for new clients. With regards to organic certification, CF is duly certified by the Negros Island Organic Certification Services (NICERT).

Table 1 Highlight on the development of C Farm

Year	Events
2006	Established as a hobby farm
2008	Started commercial production of organic produce
2009	Supplied a restaurant for the first time (4 branches to 18 branches in 2014)
	Achieved "Zero-Waste Farming"
2010	Started marketing at Mercato Central, Global City, Taguig
	Accredited as the *First Agritourism Destination in the Philippines*
2012	Ventured on more partnerships with other HORECA outlets
	Established a website
	Started the "Building a Greenhouse" program
	Awarded as the Most Outstanding Farm in the Philippines by President Aquino

Source: Key informant interview, May 2014

Adaptation Strategies

Since its establishment, CF has been facing a series of opportunities and threats that it has successfully responded to. It has been able to adapt to its environment, hence its growth, sustainability and resilience through the years.

Integrated Farming Operations

CF meets market demands, and grows and sustains its business through integrated farming operations. This is also a way of dividing risks and keeping costs to a minimum since all businesses in the farm

support each other. The farm does not incur logistics and transaction costs in sourcing organic fertilizers because this is also produced in the farm. Some raw materials for organic fertilizers come from the crops and animals that the farm grows. It was observed that the output of one business group (organic fertilizer) is used as inputs to another business group (crop production). The integrated farm consists of high value crop production, culinary herbs, free-range poultry and livestock, aquaculture, vermiculture and orchard. It also has service facilities such as restaurants, training rooms and lodging areas, which support their tour and private extension activities. Fig. 1 shows the organizational structure showing the different businesses.

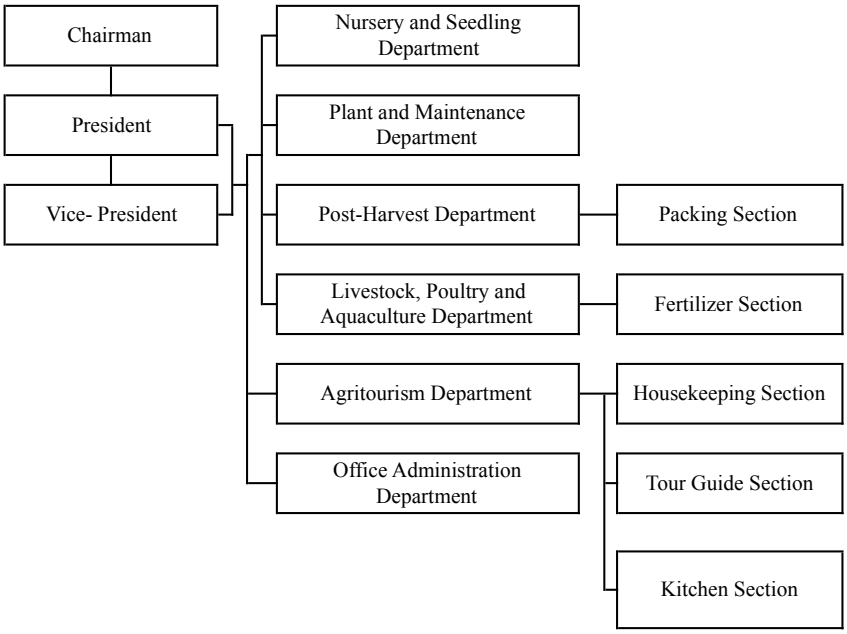

Fig. 1 Organizational structure of C Farm
Source: Key informant interview, May 2014

Market Networking Strategies

One of the challenges in the OF business is keeping connected with good markets. CF is able to maintain good relationships with a group of restaurants chain-company, which is its first institutional buyer. CF also formed a marketing partnership with a high-end retail chain store selling organic products. CF exclusively supplies organic pork, chicken and eggs to this company. Aside from these two big buyers, they also serve prominent hotels and other smaller regular buyers in Metro Manila. Keeping connected with these markets and continuous search for future markets are some advantages of CF.

Sharing of Information and Technologies

Traditionally, Filipino farms do not often share trade-secrets such as farm technologies and other information. This is not the case for CF as this farm openly shares their OF experience and business. CF builds relationships with communities and potential organic farmers by sharing technologies and market information. Seminars and trainings are conducted in the farm where OF as a business and lifestyle is showcased. This is a farm extension activity where CF as a private entity actively takes part since 2010. With this strategy, CF is also able to source agricultural produce from these new farmers during times when the farm produce cannot meet the volume requirements of the market. Moreover,

CF is creating notable impact in the community as increasing number of local and foreign people learn the OF processes and their long-term benefits to health and the ecology as a whole.

In addition, with its accreditation as the private extension service provider of the Agricultural Training Institute (ATI) under the Department of Agriculture (DA), CF is in the position to also further expand its networks with the government, educational institutions and other agencies interested in the OF system.

Investment Partnering through Joint Venture Arrangements

Majayjay Town, where the farm is located, has approximately 10 months of rain. This kind of weather adversely affects vegetable production. To meet the increasing demand for vegetables, CF realized the need to find alternative ways to adapt to the condition of the natural environment by putting up greenhouses. However, the family was not financially capable due to limited capital. One growth and sustainability strategy that they implemented at this point is to encourage partnership and investment into the farm.

In 2012, CF initially targeted and invited Overseas Filipino Workers (OFWs) to be business partners for its "Building a Greenhouse" program under joint venture (JV) arrangements. CF assumed that OFWs have the capital, the willingness to invest and the interest in organic production, but do not have the time and knowledge to engage in farming. In this JV arrangement, investors fund the building of greenhouses within the farm, while CF does the actual production and marketing operations. CF and the investors share the profit 50:50 every quarter. The advantage of this arrangement aside from profit share is that the investor does not do actual farming operations while CF does not need to invest in greenhouse facilities. In six (6) months after the announcement in its official website, CF was able to fill up its farm with greenhouses. The first venture partners were an engineer in Africa and a doctor in USA, both of whom, the owners do not know personally. Investment partnering, an innovation strategy adopted by CF, is now being practiced by other organic farms.

Recent JV offerings are agritourism development and multi-purpose hall project in response to the need for expansion of the farm and agritourism operations, and establishing a training center, respectively. Through investment partnering, organic farms are able to cope with the financial challenges in business operations.

Capitalizing and Promoting Health Consciousness

The trend towards a healthy and alternative lifestyle is what prompted CF to invest in OF. It is projected that this trend will continue on a long term. Consumers are realizing the importance of good health and are more conscious of the negative effects of synthetic chemicals used in agricultural production. The green revolution that was previously seen as the solution to food crisis is now being associated with many health issues. This is also demonstrated in India where the Green revolution increased productivity and export potential to the degradation of the ecosystem. It has caused irreversible poisoning of the environment and is seen to adversely affect future generations (Vaarst, 2010). CF continuously promotes health consciousness among its network of buyers and the larger community as well. Health consciousness campaign is part of the overall OF showcase, which is emphasized in the seminars and farm tours that CF is conducting.

Positioning the Farm as an Agritourism Farm

The change in the positioning of CF from just an organic farm to an agritourism farm has provided opportunities for the farm to widen its reach and serve more people through community activities. CF

is able to showcase its OF model, which it willingly shares with its visitors. As an agritourism farm, it offers tour and learning packages for OF enthusiasts.

CONCLUSION

An organic farm's growth and sustainability is determined by its ability to adapt to the challenges of the external environment. A key adaptation strategy implemented by CF is integrating farm business operations. Small organic farmers may not be able to adapt this strategy but there is always that possibility that they can connect with CF or similar farms by participating in their farm extension program. An innovation that CF adapted to enable the farm to grow and respond to its increasing demand is through investment partnering. CF as an agritourism farm has a strategic advantage, since trend towards ecology-based farming and health consciousness will continue in the next several decades.

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