A Model of Thai Agricultural Co-Operative Product Development and Marketing for Niche Markets

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Abstract

This article focused on Thai agricultural co-operative product development and marketing for niche markets. Based upon practical experience at Phak Hai Agricultural Co-Operative Ltd., and using branding strategies and niche marketing concept, "On-Wan rice product development model was developed. The "On-Wan Rice Brand" was successfully distributed in niche markets, such as hospital patients, elderly people, and health – concerned people in both traditional and modern marketing channels.

Keywords: rice, product development, agricultural co-operatives, niche markets

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Introduction

One of the most powerful tools used to end severe poverty, boost shared prosperity, and feed nine billion people in the world by 2050 is agricultural development (World Bank, 2015). Growth in the agricultural sector is about two to four times more effective in raising incomes among the poorest compared to other sectors, particularly for 78 percent of the world's poor who live in rural areas and depend mainly on farming to make a living. Agriculture. is also crucial for economic growth. However, agriculture driven growth and poverty reduction, as well as global food security, are currently at risk. Agriculture is more vulnerable to climate change than any other sectors. A warming climate could cut crop yields by more than 25 percent.

As far as rice production and consumption were concerned, annual global rice consumption was approximately 437 million metric tons (MT) on average for the last five years. In less-developed countries, increasing per capita income typically resulted in decreased per capita rice consumption because increased income led to dietary diversification and an ability to purchase more expensive foods. China and India accounted for 51 percent of the world's consumption of rice in 2011, being the two largest rice consumers in the world. (Foreign Agriculture Services, 2015)

Generally speaking, agriculture in Thailand was highly competitive, well-diversified, and specialized. Rice was the most important agricultural export of Thailand in the world market. Thailand was a main source of the United States' imported rice, being valued at $436.4 million in 2012, a four percent increase from 2011.

Agricultural co-operatives could be regarded necessary catalysts to enhance economic benefits. They improved farners' bargaining power in the marketplace, helped reduc costs of production, and provided such services as marketing, all of which were essential for success in agriculture. (Suwandee, et al., 2013) . For these reasons, agricultural co-operatives should be established in regions where there were a weak and/or failing market, high input costs, and a lack of input and product marketing services (Ortmann and King, 2006).

Research Objectives

This paper aimed mainly to analyze the supply chain of rice, using Phak Hai Cooperative Ltd. as a case study, i.e, rice farming process, rice product development, branding strategy and marketing.

Methodology

Besed on data collected from Phak Hai Agricultural Co-operative in Ayutthaya province, the methodology of this research were classified into 2 parts. The first part dealed with seeking the appropriate rice variety that was able to tolerate floods annually. The second part was concerned with applying business strategies: stories, images and associations to form the marketing model to increase sell volume of the rice product.

History of the Phak Hai Agricultural Co-Operative

The Phak Hai Agricultural Co-operative was located at 217/1 Moo 4, Tambon Phak Hai, Ampher Phakhai, Ayutthaya Province. It was registered with the Ministry of Agriculture and Cooperatives under the Co-operative Act on October 1, 1970. The Co-operative was established by merging 39 co-operatives with the intention to help and strengthen its members. As of April 30, 2012, there were 1,975 members. The available working capital was approximately 89 million baht while the shared capital was almost 18 million baht. There were 14 people in the administrative committee, 15 people being responsible for management, and three people in charge of co-operative inspectors. In addition, it had advisors providing suggestions on such matters as agriculture in general, production, and marketing. The majority of the co-operative members were farmers. The planting areas for the major rice crop and the second rice crop were 72,000 and 8,000 rais, respectively. The major rice production areas were normally a natural buffer zone, a water retention area from the Chao Phraya River and the Noi River, or the so – called “Monkey Cheek” area. During the flooding season, the cultivated areas were reduced to only 8,000 rais. Farmers who were affected by the disastrous flood were unemployed and usually were forced to leave their homes to seek employment in the industrial sector in Ayuttaya or elsewhere. The co-operative also played a role in alleviating these farmers from the burden of the flood damage.

Rice Farming

During 2011 and 2012, there were nearly 4,160 families registered as farmers in the Phak Hai area. There were 69,130 rais (11,060 hectars) of rice fields that could be planted twice a year. The major rice crop was grown from June to October while the second rice crop from November to March annually. The yield of each crop was approximately 50,745 metriction, which was estimated to

worth approximately 507 million baht. Therefore, the total value of production was approximately 1.015 billion baht per year. There were 2,000 households registered as Phak Hai Agricultural Co-operative members. The total area of rice fields was roughly 64,000 rais which was about 93 percent of the total planted area in Phak Hai.

In 2013, the Co-operative owned a 200 ton-per-day rice mill, a 140 ton-per-day fluidized bed paddy dryer, and a 30 ton-per-day seed screening plant. The National Center for Genetic Engineering and Biotechnology (BIOTEC), under the National Science and Technology Development Agency (NSTDA) and the Ministry of Science and Technology, provided the budget for the paddy dryer and the seed screening plant. The Co-operative was self-sufficient when it was able to produce Homchonlasit paddy seeds in the ratio of 550 tons per 1,000 rais. The ability to produce the paddy seeds helped to reduce paddy production cost, the total of which was approximately 250 baht per rai. In the past, farmers had to buy paddy seeds from outside. In addition, Farmers used 15 kilograms of paddy seeds per rai, a reduction from the previous 25 kilograms per rai. Moreover when a flooding disaster took place, they were able to harvest at least 320 kilograms per rai or approximately 40 percent of the average yield.

In the past, Thai farmers collected paddy seeds from their fields for plantation in the following year. This activity, which had been practiced continuously from the time of their ancestors, resulted in the deterioration of the quality of paddy seeds, low productivity and poorer grain quality.

Rice Varieties.

Facing floods every year, a suitable flood-tolerant local rice variety was investigated to isolate the gene responsible for flood endurance, high yield, and good grain quality, plus pest/disease resistance. Using the technique known as “marker-assisted backcrossing”, scientists transferred the water tolerance trait of interest into commercially valuable local rice varieties, without losing any useful characteristics, which made these varieties prevalent among rice farmers (Clayton, 2010). The Rice Gene Discovery Unit (RGDU), a joint laboratory between the National Center for Genetic Engineering and Biotechnology (BIOTEC) and Kasetsart University, played an important role in Thailand’s rice research activities. The researchers identified valuable characteristics for rice breeding, including tolerance to antibiotics, advancing Thai’s rice agriculture through

molecular breeding with regard to stresses like submergence, drought, and salinity. They also recognized other useful characteristics, including resistance to diseases, e.g., bacterial leaf blight, blast, and pest, as well as those characteristics that improved rice quality and nutritional value. The genes and quantitative trait loci (QTLs) controlling these useful characteristics were identified and used in molecular-marker assisted selection rice breeding programs to create new and improved rice varieties. Two rice varieties that were commonly targeted for improvements were the jasmine rice called Khao Dawk Mali 105 (KDML 105) and the glutinous jasmine rice (RD6), both of which were highly adaptable to the rain-fed lowland areas of Thailand. Molecular breeding programs in Thailand so far have produced many improved rice varieties. Among them, three showed great promises: Homali 80, Homcholasit, and Thanyasirin. Homali 80, an improved version of KDML 105, was tolerant to flash floods and could survive being submerged for as much as three to four weeks. It could be planted only during the wet season,though. Homcholasit was also derived from KDML 105 and was tolerant to flash floods (Toojonja and Lanceras-Siangliw, 2013).

Homcholasit rice with flash flooding resistance was bred from IR57514 with a resistant gene and KDML105. Biomarkers were used in order to select rice seeds with superior quality, such as flash flooding tolerance, satisfying flavor, ease of cooking, and non-photoperiod sensitivity. In addition, the selected seed could be planted for more than one crop per year. Homcholasit rice could endure flooding for two to three weeks and yield 900-1,000 kilograms per rai. Therefore, this variety is suitable for the central land that normally faces flash floods.

In 2009 the National Center for Genetic Engineering and Biotechnology (BIOTEC) began to transfer the technology needed to enhance the quality of seed production, from registered seeds to certified seeds, to the farmers who were members of the Phak Hai Agricultural Co-operative. This project boosted the farmers' capability to produce these registered seeds by themselves. Farmers planted paddy stalks into submerged fields and laboriously harvest the ears of the paddy. The Technology transferred to farmers by NSTDA and BIOTEC was helpful in that it alleviated the distress of the Co-operative's members and people who faced a flooding problem,

resulting in sufficient income for their families

Branding and Niche Marketing Strategy

Branding accounts for one of the most important aspects of business strategies. Branding is sometimes considered to be merely an advertising function. In addition, many managers and business writers hold the view that branding is about the management of product image. It is also a supplementary task that can be isolated from the main business of product management. There are three forms of branding: stories, images, and associations. Stories and images are the more potent sources of brand culture. Brand stories and images have plots and characters. They rely heavily upon metaphor to communicate and spur our imaginations. Thinking of a brand is associated with the residue of these stories and images. We may overlook the specifics of a product story but still attribute some product characteristics to the brand (Holt, 2003; Thompson, et al., 2006). Moreover, organic farming and specialty agricultural productions are some ways used to create a differentiated product offering, a brand which commands a premium pricing, for example, special rice for diabetics, fortified milk, and organic vegetables. However, the advantage of a differentiated product is lost with increased competition. Eventually, every agricultural brand needs to find a distinct differentiator to retain its niche (Lakshmi, 2013).

There are three basic requirements that co-operatives must satisfy in order to form the foundation for an effective marketing program. First, there needs to be a well-thought-out plan which utilizes a niche strategy and has a competitive orientation. Second, the plan and its supporting programs should be market-oriented rather than producer-oriented. Third, co-operatives must have management personnel who are experienced with value-added products, possessing broad expertise and perspective, as they strive to be value-added marketers (Hardesty, 1992). Niche markets are created as consumers become more sophisticated and can afford to pay a premium for exotic, novel, or specialty products. These new types of “lifestyle” products, i.e., those that fulfill the needs of an elite consumer group, have created a new market segment, namely niche products. Specialty coffee produced from a limited number of farms is an example of a product that is in such scarce supply that it can command a price many times higher than mainstream coffee products (Ferris, 2012). Thus, Niche market is an

attractive opportunity available to small businesses forced to compete against the scale economies that larger competitors are able to achieve. In agricultural sector, there are a few of the alternative product choices sought by specific consumer segments. Exploring niche markets is representative of the set of management strategic choices, as niche marketing provides creative managers with a means to use new management skills and marketing strategies while creating new revenue streams (Dawn, 2012).

The Phak Hai Agricultural Co-operative Ltd. created the stories and image strategies under the brand "On-wann," which in the Thai language means less sugar, or less sweetening. In addition, the stories of the flooded area and healthy food were identified on the product's package. The modern (right figure) and traditional (left figure) packaging are compared in the figure below:

Figure 1. Comparison between Traditional and Modern Packaging

Marketing Development Model

The Phak Hai Agricultural Co-operative Ltd. would be regaraed as an ideal co-operative. Its products were sold in department stores and in general wholesale and retail shops under the brand "On-wann." In addition, the Co-operative brought members together. They were self-sufficient throughout the whole process as they planted, collected, transformed, sold and consumed their products. The Co-operative's marketing strategies foused on the niche markets and merit perception. For example, the Co-operative's target customers were hospital patients, elderly people, and healthy people. It also created merit perception by supporting and purchasing farmers' products planted in the flooded areas. Buyers were satisfied from supporting the farmers and healthy

health from the consumption of nourishing rice. The Co-operative aimd to support its members by promoting productivity and enhancing marketing capability. The activities started from preparing the superior quality of rice seeds, arranging budgetary and production factors, transforming products, and selling products to members and nearby communities. The increased revenue was returned to the Co-operative and its members. Members' participation was the foundation of the Co-operative. Therefore, group participation led to shared benefits for the members and the Co-operative's longevity. As a result, the members of the co-epperative were increasingly engagd in rice farming as their main activity.

Conclusion

Phak Hai Agricultural Co-operative Ltd. was a case study of a product development and marketing model for realizing economic benefits. The Co-operative was located on the flooded area, and farmers at that time were often unemployed and mostly encountering poverty. They investigated the rice varieties which had the characteristics of flood endurance and pest resistance. The Homcholasit rice seed was provided by the National Center for Genetic Engineering and Biotechnology (BIOTEC). In addition, BIOTEC transferred the technology to enhance the quality of seed production so that the seeds could tolerate flooding for two to three weeks with a yield of 900-1,000 kilograms per rai. Branding was created in the form of modern packaging under the brand "On-wann," which described all stories and product features. Healthy food and merit perception became the popular aspects of this product which was launched into the niche markets, such as hospitals and nursing homes. Moreover, the product was sold in wholesale and retail businesses in national and international trading. As a result, the Co-operative earned an increasing return and gained more registered members.

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