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Marketing Hand-milled Rice in Thailand: Creating a Self-sustainable Future for the Village of Mae Khong Khaa



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Abstract

A group of rural Thai women needed more money from selling the rice they grow to pay for schooling and healthcare. Our goal was to provide the Raks Thai Foundation with a marketing plan to increase rice sales and a program on marketing to educate the villagers. Using interviews, surveys, and direct observations we identified the rice's characteristics and target markets. We produced a marketing plan, product logo, brochure, and an educational program. We believe our plan has wider applicability.

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Executive Summary

Rural villages in northern Thailand once relied on poppies and the opium drug trade for income. After the eradication of poppy production about thirty years ago, Thailand faced an economic crisis due to foreign debt, causing farmers to lack sufficient earnings. The government, in response, allowed farmers to acquire loans. The northern village of Mae Khong Khaa received a loan, but was incapable of paying off their debt. As a solution, the government introduced cash crops as a revenue source, so a large corporation entered Mae Khong Khaa and instructed the villagers to grow corn. Although the villagers have since then paid off the loan, they currently still depend on selling corn to the company to obtain income. The corn the villagers grow is not edible, thus they are required to sell it.

Mae Khong Khaa villagers rely on the Raks Thai Foundation to buy, package, and sell their hand-milled mountain rice. In the past ten years, the villagers have begun paying for healthcare to increase their lifespans and have also been required by law to pay for their children's education; thus, the need for more money to pay for these added costs has developed. The Raks Thai Foundation's long-term goal is to show the villagers that they can become self-sustainable and make a sufficient income by growing the crops they want to eat, such as rice, and selling the excess on their own. However, the foundation has not found a reliable way to accomplish this goal so the villagers can pay for their education and healthcare. The villagers use traditional milling methods to hull the rice, which damages the grain and makes it unappealing to consumers and the foundation has been relying on personal business connections to sell the rice.

Studies on the improvement of marketing of rice have been conducted and served as guides for our project. These assessments helped us support the Raks Thai Foundation's long term goal: educate and provide a steady income for Mae Khong Khaa so they can become independent of large corporations.

The goal of this project was to provide the Raks Thai Foundation with a marketing plan for the Mae Khong Khaa rice, and to begin to educate the Mae Khong Khaa villagers on the importance of marketing so that they can gain a reliable and better income from the sale of their rice.

To address this goal, our team identified four measurable objectives:

- Determine the project direction by assessing the importance of several problems surrounding Mae Khong Khaa's rice production, processing, and marketing.
- Identify marketing attributes of the Mae Khong Khaa rice.
- Identify new target markets for the Mae Khong Khaa rice.
- Identify marketing mediums that could be used to increase sales of the Mae Khong Khaa rice.

To fulfill the four objectives, our group utilized several research techniques, which included surveys, interviews, and observations. The following findings were identified after conducting extensive research and fieldwork.

Finding 1: The most beneficial path to increasing Mae Khong Khaa's income is marketing.

The project team determined that marketing was the fundamental path to increasing the income of Mae Khong Khaa. The village women do not have a proper understanding of their hand-milled rice in a market setting and do not understand the current competition and how their rice can be marketed to be sold more consistently and for a higher price. We concluded that an educational conversation with the women's cooperative that showed them how marketing can increase both their rice sales and their total income would be beneficial.

Finding 2: The key strengths of the Mae Khong Khaa rice are the milling techniques and the nutritional value of the product.

Finding 3: There are several target consumer groups who have interest in the different characteristics of the Mae Khong Khaa rice.

The project team identified groups that would have interest in the rice. After interviewing with a marketing expert, we focused on physical markets and their respective customer bases. The project team determined that the farmer's market at K-Village in Bangkok and Ton Payorn Market in Chiang Mai are potential introduction markets for the Mae Khong Khaa rice. Restaurants were also determined to be a viable option for selling the rice.

Finding 4: Internet advertisements, as well as an effective packaging design are beneficial to target consumers.

The project team concluded that Internet advertisements would be feasible considering budget limitations. Out of Internet advertisements, a Facebook page or YouTube channel would be effective. It was determined that a brochure would increase income, and in terms of improved packaging, nutritional information and information on the product in a language other than Thai should be included.

Marketing Plan

We have developed a marketing plan, which includes a current product profile, information on how to introduce the product to a specific market, and effective marketing mediums including a marketing brochure and logo.

Based on the results of our research, we have identified recommendations for the Raks Thai Foundation and the villagers of Mae Khong Khaa, which are as follows:

- 1) We recommend that the Raks Thai Foundation uses a marketing plan to increase sales of the Mae Khong Khaa rice.**

We suggest that the Raks Thai Foundation begin to implement our plan immediately.

- 2) We recommend that the Raks Thai Foundation conduct nutritional testing on the rice.**

We recommend the Raks Thai Foundation finance the nutritional testing of the rice at an accredited facility because the nutritional information is very important for our potential customers. The Central Lab Thai and Chiang Mai University food science lab are options that can be considered for rice testing. We suggest that the Raks Thai Foundation test the rice for basic nutritional values such as calories, fiber, protein, fat, sugar, etc., as well as specific vitamins and minerals such as magnesium, thiamin, phosphorus, and Vitamin B6 because brown rice tends to contain more of these nutrients than white rice. Additional information on this recommendation can be found in the marketing plan appendix.

- 3) We recommend that the Mae Khong Khaa villagers eliminate the use of chemical fertilizers and pesticides on their crops in fields where rice is grown.**

One way to dramatically increase the price of a food item is to label and sell it as organic. The villagers should stop using pesticides and chemical fertilizers so that those already in the soil can disappear over time. We recommend that the Raks Thai Foundation help the villagers apply for organic verification GAP, Organic Standard, or FDA approval in the future.

- 4) We recommend the Raks Thai Foundation perform a production analysis of rice and an economic review of the current crop production in Mae Khong Khaa.**

We recommend the Raks Thai Foundation perform a monthly evaluation of the rice production per household. This analysis will help the foundation keep records about the village's agricultural development in the future.

- 5) We recommend the Raks Thai Foundation promote an educational plan to teach the villagers of Mae Khong on marketing concepts and stress increased rice production.**

We recommend that the Raks Thai Foundation educate the Mae Khong Khaa villagers about marketing and stress the importance of increasing production of the rice. By increasing the production, the villagers will gain a higher income from their rice.

- 6) We recommend the Raks Thai Foundation implement a profit distribution system if a significant increase in rice sales has been made.**

We recommend that the Raks Thai Foundation implement their plan to distribute the profit from rice in three parts, instead of keeping all of the profit in a central loan system.

Our goal was to provide the Raks Thai Foundation with a marketing plan and to educate the Mae Khong Khaa villagers on the importance of marketing their rice. Our team conducted extensive research and fieldwork that is the basis for our results and recommendations to the Raks Thai Foundation and the villagers of Mae Khong Khaa. If our deliverables and recommendations are implemented, they can be re-evaluated and improved upon by the Raks Thai Foundation to provide the Mae Khong Khaa villagers with the highest income possible. If successful, this plan can also be applied to other rural villages of northern Thailand with the purpose of building a stronger, more independent Karen ethnic community.

1.0 Introduction

Rural villages in northern Thailand once relied on poppies and the opium drug trade for income (Khun Wisit, personal communication, Feb. 21, 2013). After the eradication of poppy production thirty years ago, Thailand faced an economic crisis, causing farmers to lack sufficient earnings. In response, the government allowed farmers to acquire loans. Many villages were unable to pay their loans off on time, so the government introduced a cash crop system as a new revenue source. Large corporations began to enter villages, instructing them to grow cash crops such as corn and cabbage. As a result, farmers have reduced the volume of subsistence crops grown for self-consumption, such as rice, and began growing cash crops that corporations claim to have a larger profit margin. While many villages have paid off their loans, they still rely on external companies for income. As the country developed, farmers began paying for healthcare to increase their lifespans and were also required by law to pay for their children's general educations; thus, the need for an external source of income to pay for these additional costs developed. Although the farmers involved in this cash crop system believe it to be a viable solution, annual commodity price fluctuations in the market have often caused farmers to not make enough money, forcing them to obtain jobs in cities for extra income. In addition, this cash crop system encourages rural villages to switch from a traditional crop rotation, which retains the nutrients in the soil, to annually using the majority of available fields to satisfy corporate demands, degrading the soil quality. Because of these changes in both business and agricultural techniques, farmers have become dependent on the government, agribusiness companies, or middlemen to purchase their crops. In contrast to these large corporations' goals, there are smaller organizations attempting to enable farmers to restore their self-sustainability.

The village of Mae Khong Khaa in northern Thailand is not economically self-sufficient and relies on large corporations for income (Khun Wisit, personal communication, Jan. 28, 2014). They also rely on the Raks Thai Foundation to buy, package, and sell their traditional mountain rice. The Raks Thai Foundation, a non-profit organization in Thailand, aids a women's cooperative in the village by selling their surplus manually milled rice. The Raks Thai Foundation's long-term goal is to show the villagers that they can become self-sufficient and make an adequate income by growing more of the crops they want to eat, such as rice, and selling the surplus to earn money. However, the foundation has not found a reliable way to accomplish this goal so that the villagers can pay for their education and healthcare expenses. The villagers use traditional milling methods to hull the rice, which breaks some of the rice grains and may make it unappealing to some consumers and the foundation has been relying on personal business connections to sell the rice.

There are examples of food marketing successes when introducing a new product to the market (Startup Overseas, 2013). To successfully advertise food, mass media and verbal communication have been used to capture the attention of the target consumer. In Thailand, people have become increasingly interested in leading healthy lifestyles, and the number of

organic food products has risen in the past seven years (Edwardson, 2013). Over the past forty-five years, improvements in the marketing of rural produce in Thailand have mainly been due to the Royal Projects (United Nations Office on Drugs and Crime, 2008). The Royal Projects were initially created to eliminate poppy production on rural farms by introducing new crops. The Royal Projects holds contracts with farmers by guaranteeing to buy and sell their produce, helping farmers to rise above the poverty level. To date, most marketing studies in Thailand have been designed to identify ways to reduce the number of people living in poverty through long-term marketing aid.

Despite this recent push in rural farming aid, there are few examples of non-profit, village-based marketing successes in Thailand. The Mae Khong Khaa rice has been introduced to small, local farmer's markets by the Raks Thai Foundation in Chiang Mai; however, the Raks Thai Foundation has not been able to identify more reliable target groups of consumers for the Mae Khong Khaa rice, nor determine the most effective marketing techniques that could be utilized to maximize the value and sale of the rice. The foundation is also unsure how to educate the villagers on the importance of marketing and whether marketing knowledge could positively impact the villagers' future.

The goal of this project was to provide the Raks Thai Foundation with a marketing plan for the Mae Khong Khaa rice, and to begin to educate the Mae Khong Khaa villagers on the importance of marketing so that they can gain a reliable and better income from the sale of their rice. This study focused on finding a solution that the villagers could sustain in the future. Overall, we aimed to determine a way to market the uniqueness of the rice to increase its sales and thus increase farmers' incomes. The project team established several objectives to achieve our goal: determine the project direction by assessing the importance of several problems surrounding Mae Khong Khaa's rice production, identify marketing attributes of the Mae Khong Khaa rice, identify a new target market for the Mae Khong Khaa rice, and identify marketing media that could be used to increase sales of the Mae Khong Khaa rice. We conducted interviews, surveys, archival research, and direct observations to carry out our project. Through this project, we helped the Mae Khong Khaa villagers take a preliminary step in becoming economically self-sufficient by introducing them to the concepts of marketing and by providing the Raks Thai Foundation with a plan to market the rice. We believe the findings from this project could be applied by the Raks Thai Foundation to surrounding Karen villages, allowing these villages to develop a dependable economic future for themselves.

2.0 Literature Review

In order to understand the marketing challenges that small-scale farmers face, this chapter describes the importance of marketing for small-scale farmers and how to target the ideal customers for the produce that they grow. We review the history of crop substitution and talk about opium production in Thailand, the current research and programs that have been implemented to attempt to stop poppy production, and how the ban on opium led to the introduction of cash crops. We describe a large corporation's part in the market economy of small-scale farmers and discuss possible strategies and techniques to be used by small-scale farmers to market their produce themselves. We describe our project's location, the Karen village of Mae Khong Khaa, and discuss the history, geography, education, and traditions of the Karen hill tribe people as well as the similarities and differences of their rice farming and processing methods with those used in other parts of Thailand. The current market for the Mae Khong Khaa rice is discussed as well as some of the nutritional attributes of hand-milled mountain rice.

2.1 Crop Substitution

Crop substitution is a practice that identifies legal crops that can replace income made from illegal narcotic crops, providing farmers with the assistance needed to grow the legal crops. Substitution is not limited to changing from one crop to another. The program can also be considered successful if the farmer abandons the illegal crop.

Illegal drug plants are still a concern around the world. Plants range from marijuana to poppies and coca leaves (Tucci, 1998). About 140 million people worldwide consume drugs made from these plants. The growth and sale of these crops affects both a country's population and economy. Many families that grow poppies rely on the sale of this crop for half their income. Research shows that there is a link between farmers that grow the plant and farmers that use the drug. In the 1980s, many governments in countries that had a large illegal crop industry became involved in crop substitution as an effort to cut down on national exports of these crops. Governments persuaded farmers to switch to other crops for health, education, and profit benefits. In many cases the government provided additional startup support. Areas of Latin America such as Bolivia have introduced crop substitution programs that have proven successful in decreasing illicit crop growth.

The Bolivian government turned to crop substitution in the late 1980s to early 1990s due to the growing drug market. Until 1987, Bolivian farmers had been growing coca leaves, which are used to produce cocaine. Ninety-five percent of the Chapare region of Bolivia was made up of coca farmers. At the peak of coca growth, 92.5% of agricultural income in the country and roughly a quarter of the gross domestic profit came from the sale of coca leaves (Lee, 1993). The crop substitution program was implemented as a voluntary compensation program for farmers

who agreed to eliminate coca from their production system. Farmers were reported to receive \$2,000 dollars per acre of coca they eliminated, equaling roughly \$5,000 per hectare. Between 1988 and 1992, Bolivia reported the eradication of 23,000 hectares of coca at a cost of 45 million dollars (Lee, 1993). As seen by the long-term success of Bolivia's program, illicit drug growth can be reduced over time along with an increase in the well-being of the country and its citizens (Neuman, 2012).

In Thailand, crop substitution was initiated because of drug trafficking of opium poppies and the impact poppies had on the country (Crooker, 1988). Poppies used to be grown for medical use within the hill tribe villages of northern Thailand (Plant Cultures, 2014). However, over time, drug lords came and began trading goods with the villagers for their poppy crops (Khun Nut, personal communication, Feb. 20, 2014). The trades with the drug lords contributed to the increased production and consumption of opium throughout Thailand and surrounding countries. Thus, in the 1980s, there was a huge push to eliminate poppy growth.

The growth of poppy was thought of as the "medicine from God" before it was used for recreational use (Plant Cultures, 2014). Poppies were mainly used as a sedative to relax muscles, decrease pain, suppress coughs, and was commonly used to treat many illnesses such as liver and kidney problems, diarrhea, and asthma. However, over time, people realized that they could produce opium from poppies. Opium is a highly addictive drug and can be processed again into morphine and heroin. The addictions to these drugs led to its recreational use around the world (PBS, 1998).

In the 1600s, Great Britain took over parts of India and created the East India Company, a company that aimed to create opium drug connections with Asia, in particular China. Thailand had remained distant from Britain for years; however, by 1852 King Mongkut of Thailand gave in to British pressure and gave up control of Thailand's opium trade to Chinese dealers and other traders (Linter, 2000). Although most opium was grown in China prior to the 1950s, throughout this decade opium production boomed in the golden triangle, consisting of northern parts of Laos, Burma, and Thailand (Crooker, 1988). Opium was indirectly promoted as a way to prevent communist infiltration from Burma and prevent hill-tribe insurgencies. Over time, farmers in Northern Thailand created connections with drug traffickers who traded medicine and clothes in exchange for poppies. Farmers recognized that they could use small plots of land to grow large amounts of poppies. For every acre of poppies grown, farmers could produce seven to thirteen pounds of opium. The connections with drug traffickers made many farmers dependent on their trades and international demand.

In 1959, Thailand implemented a law which made poppy production illegal because of its addictive properties of opium and the growing drug trade (United Nations Office on Drugs and Crime, 2008). However, when opium was banned, farmers did not stop their poppy production. Thailand's government began the slow elimination of the crop in 1984, which covered 8,777 hectares at the time, recognizing that the reason farmers were producing opium was not because

they were criminals but as a means to survive and make a sufficient income. The government persuaded farmers that they receive minimal income from drug traffickers because drug traffickers made the majority of the money from the drug trade. Thus there was an opportunity to introduce alternative ways to earn income in the highlands.

The Royal Projects in Thailand were created as one solution to help eliminate opium production by introducing alternative crops for poppies and constructing a marketing strategy to help farmers rise above the poverty level (United Nations Office on Drugs and Crime, 2008). The Royal Projects began in 1969 when King Bhumibol visited a farm and introduced peaches as a crop to demonstrate that growing peaches was more profitable than growing poppies. The King saw that as a result, farmers earned more money than they did when they had grown poppies. The King soon formulated a plan of traveling to various farms to introduce non-native crops for tribes to grow in place of poppies. Realizing that there was a poverty crisis in Thailand, the King instructed the government officials not to destroy poppy fields until a village was able to sustain a living off of alternative crops. To aid in the success of the projects, development centers around Thailand were opened where farmers could go to learn various farming techniques such as how to grow the new crops. This program continued to expand as policies on opium were strengthened. There are several main contributors to the push to strengthen opium laws (Crooker, 1988):

1. When World War II ended, Chinese nationalist troops entered Thailand and offered to protect the hill-tribes from communist insurgencies as long as the Chinese could introduce poppy growth to the villages. By the 1970s the Thai government was disappointed with the nationalists acting against Burmese communist insurgencies and did not believe that the drug trade was beneficial to the countries well-being.
2. The spread of heroin addiction among United States troops in South Vietnam led to the United States telling Thailand to strengthen its laws against opium.
3. As U.S troops left in 1975, they left behind large amounts of cheap heroin and drug addiction problems in Bangkok.

Although the Royal Projects were started before any of these three factors occurred, without these the projects would not have been as successful (United Nations Office on Drugs and Crime, 2008). By 2007, there were thirty-eight functioning development centers for the Royal Projects and the program was able to reach about 10% of the total highland farming population. Currently, once sponsored crops are grown, the Royal Projects buys the crops directly at a set price and then sells them. The highest quality produce receives the “Royal Project” label and is sold in Royal Project stores and other grocery chains. For example, Figure 1 shows a Royal Projects rice product that is sold at a Royal Projects store in Chiang Mai

International Airport. This half-milled rice is sold in 1 kg vacuum-sealed bags for 50 baht and includes directions in Thai and English on how to cook the rice.



Figure 1: A zoomed-in view of a rice package sold by the Royal Projects in Chiang Mai International Airport

Royal Projects' produce is popular in western restaurants and hotels in Thailand because they are able to purchase non-native crops locally (United Nations Office on Drugs and Crime, 2008). To date, over 150 non-native alternative crops have been brought into Thailand, some being more successful than others. The projects have become so extensive that the Highland Research and Development Institute was created to aid in the program's success. In 2000, the average Royal Project participant earned 60,000 baht per year. Although the projects have eliminated opium production in every Royal Project village, the biggest problem for the projects is that they do not reach about 90% of the highland farmers. Many tribes do not wish to change their traditions and participate in the projects. The King hopes that through education, social services, and a better infrastructure, the Royal Projects can spread across the Highlands.

The Royal Projects can only expand so fast, and the 90% of farmers that the Royal Projects have not reached are in need of aid (United Nations Office on Drugs and Crime, 2008). The Royal Projects cannot reach out to more farming communities on their own due to limited resources and the size of the upland population. It is necessary for other organizations to identify successful marketing strategies for current products produced in villages to improve their quality of life and inhibit the return of poppy cultivation and the drug trade.

Aside from the Royal Projects, another initiative to help farmers stay away from poppies as their major crop occurred in 1997, when an economic crisis occurred. As a preventative measure, the government helped farmers during the economic crisis to assure that farmers did not fall back into poppy growth. The economic crisis led to a loss of many jobs; however, few

jobs were lost in the agricultural sector (Jitsanguan, 2001). In fact, most people who lost their jobs in urban areas began to work in agriculture. With the increase of people and production in agriculture, more competition arose. Farmers could no longer sustain themselves and sell their products on their own in a competitive market.

In order to aid these small-scale farms, the Thai government provided loans and suggested that farmers improve their fields by creating irrigation systems or any other means that would increase production (Japan International Cooperation Agency, 1999). The government loans were only offered for a limited amount of time; thus some farmers had still not settled into their agricultural activities when the time came to pay the government back (Khun Wisit, personal communication, Jan. 28, 2014). Therefore, the government provided them with the opportunity to participate in cash crop production and use profits from these cash crops to pay back the government. The large corporations that introduced these small farms to cash crops supplied them with seeds, fertilizers, and pesticides to support production and to produce quality produce.

In Thailand, cash crops include but are not limited to rice, sugar cane, cassava, soybeans, and corn. Large corporations such as CP work as the intermediary between the farmers and consumers (Oguoma, 2010). They set the price of the product based on cost of transportation, storage, and profit of the product. There are both advantages and disadvantages to villages working with middlemen.

Middlemen can bring products to large markets where there are people who can afford and are willing to pay higher prices for a product (Oguoma, 2010). They are also able to identify economies that buyers and sellers cannot. Middlemen take away a percentage of the income from the farmers. In addition, many cash crops have fluctuating market prices so farmers do not make consistent incomes (Khun Wisit, personal communication, Feb. 20, 2014). Middlemen receive production cost and a significant profit from products they present to the market, and the funds do not always get transferred back to the farmers (Oguoma, 2010). Also, the middlemen are not deterred by product spoilage because they have more than enough money to support further sales. Specifically, large corporations that are middlemen limit the amount of income the farmers receive and earn for themselves any additional profit.

2.2 Marketing for Small-Scale Farms

This section reviews some of the basic marketing practices in order to promote small-scale farmers' produce. We provide general information on best practices on how to introduce a product to the market and the best media and methods to promote the product.

In order to introduce a new marketing strategy into a foreign culture, several characteristics of the community must be determined (Magagna, 1991). To ensure that a marketing plan is not offensive to a culture, one must determine the jurisdiction of the

community, local traditions and identity, the material's production, and the community institutions must be determined. Listed below are the concepts that should be assessed in order to introduce a marketing plan:

Jurisdiction of community: The cohesiveness of a rural community can be assessed by observing the mechanisms through which decisions are made (Magagna, 1991). Some communities may be more open to discussion in resolving problems and embracing new technologies and ideas, while others may depend on a leader to make decisions that the rest of the community follows

Local tradition and identity: Strong communities have similar interests and a more cohesive sense of identity resulting in more unified decisions, including marketing techniques (Magagna, 1991). Sometimes, several communities in a region may decide to work together due to a lack of individual resources and money. In this case, the traditions of each community must be respected.

There are several successful projects in the world that concentrate on working with a community to develop a marketing plan for rice. A study in the Philippines by Agdeppa (2011) focused on a basic marketing development plan for the rice industry. Agdeppa stated that to develop an effective marketing strategy for rice, one should include the identification of networks for product launching. The producer must identify potential organizations that may support the rice and bring stability to the vision of the product. The organization could be a group of stakeholders that provide an analysis of the effects the product has in the market. The organization could be government supported if the product is provided with government subsidies. Lastly, the producer, stakeholders, and any organizations involved must assess social media and identify the best marketing media for the product. Agdeppa believes that if these strategies were implemented throughout the world, there would be further improvement in the rice industry in terms of increased retail sales and incomes for farmers.

Agdeppa's concepts proved valid in Indonesia where the government has helped producers market their organic rice to increase profit (MacRae, 2011). Since 2003, the Indonesian government has implemented a marketing strategy based on "community participation" (MacRae, 2006). Community participation is related to the concept of participatory development, which engages local people to aid in the development of ideas in order to enhance a project. After Indonesian economists analyzed how important tourism and international markets were to agriculture, they decided to build customer relationships through the portrayal of the community, the principles of democracy, equity, partnership, and protection of the vulnerable. The government set its standards high and obtained knowledge of consumer values, from which they based their marketing strategy. Since 2009, the country has invested eight billion rupiah in raising awareness of organic methods. In addition, the government made an effort to connect with farming villages and aid them by increasing social services and educating them on healthy lifestyles. In response, more farmers in Indonesia have switched to

organic farming; the yield of organic rice has been about 7.5 tons annually per hectare since 2004. These marketing strategies have advanced Indonesia as a worldwide exporter of agricultural products.

When implementing a marketing strategy, the market of interest must first be understood in order for the marketing strategy to be created. To enter a new food product into the market, it is important to be knowledgeable about similar products already established in the market that may become future competitors (Pace, 2010). It is unrealistic to think that a new product can compete with large chains and brand names. To sell a new product, it is helpful to develop a background story that customers can relate to by placing a product's development history on the food package. Once the packaging is finalized, the next step is to determine where the product will be sold. Thai people value face-to-face interaction, so introducing a new product at a farmers' market could lead to strong rapport and loyalty with customers. Another option is to find a store similar to stores in the Whole Foods chain in the U.S.A., which is willing to sell products of farmers. Whole Foods effectively sells new products because they give food samples and coupons to customers when they introduce the food in their stores. When introducing a new product, Pace (2010) suggests waiting six to nine months for the food to establish a foundation in the market. After this time period, assessments can then be made as to whether or not the product is successful and whether changes in marketing techniques are necessary.

The best way for producers to sell their product within Thailand is to gain an understanding of the culture and become aware of the beliefs and superstitions of the target population (Startup Overseas, 2013). Thailand has a predominantly Buddhist population. Buddhists believe that selfishness and desire bring suffering, and that kindness and compassion bring happiness and well-being. According to Startup Overseas, advertising that is "belittling or cruel would conflict with the ethos of many Thais" (para. 8).

A company must invest in resources to decide how to attract target consumers when entering a product into the market (MIT, 2002). Products can be assessed through a mixed marketing method that consists of the "4P's:" price, production, promotion, and profit. The product must be periodically reassessed to ensure that the needs of the target market are met as company and consumer tastes change over time.

Product: A product is what a company wants to introduce to consumers (Mind Tools, 2014). The more information that a company knows about their product, the more they can discover selling points to market to customers. A company has to determine whether or not a product's life cycle can satisfy customer needs, which includes four phases; introduction, growth, maturity, and decline.

Price: The price is the amount of money that customers pay to purchase a product (Mind Tools, 2014). Price is a key factor that affects the demand and sale of a product. To set the price of a product, customers' perceived value of the product should be determined and considered.

Place: The location of the product should be clearly visible to consumers (Mind Tools, 2014). A company has to determine what distribution channels target customers actively access. An optimal place can be determined by observing where competitors sell their products and what type of marketing strategy they are using to sell the product.

Promotion: Promotion is the way a company delivers a message to a customer (Mind Tools, 2014). Promotions include, but are not limited to, advertising materials, sales promotions, and public relations with customers. To achieve the best outcomes from promotions, companies must assess factors that alter consumers' views. For example, health conscious consumers will be more willing to buy a rice product that has nutritional information on the package than a package that does not have the information.

In addition to the 4Ps, there are specific marketing strategies and techniques that can be used to increase sales of a product. These include advertisements in newspapers, radio, television, and other marketing media (Polvanich, 1972). Advertising through television is the most popular way to gain favor in the Thailand market. In 2008, television infomercials commanded 58% of the advertising market and were the most-used form of promotion (Startup Overseas, 2013). Today, there are six free television channels and thirty user-fee channels in Thailand. Three of these channels broadcast infomercials 24-hours a day.

A range of mass media should be used to create successful advertisements for rice, including verbal communication (Startup Overseas, 2013). Many companies do not handle their own marketing and instead hire advertising agencies; however, face-to-face interaction and personal contact is the most effective marketing tool used within Thailand. To be successful, sellers must understand that relationships with customers are vital to business and take time to develop them.

Aside from mass media, marketing a product goes back to the packaging design at the market. Branding a product helps enhance the consumer appeal of the package (Entrepreneur Media Incorporation, 2014). If customers have positive reactions to a logo, they are more likely to buy the product because it is a sign that a company is well established in the market. There are three types of logos: logos that are font-based, logos that are abstract symbols, and logos that describe a company through pictures. The best logo option for a start-up company is a logo that describes the company through pictures.

When creating a logo, there are several factors to consider (Entrepreneur Media Incorporation, 2014). A logo should be able to be shrunk and expanded, and also distinguishable in black and white color. Logos that capture the uniqueness of a company through original artwork are generally more successful. Logos should have the potential to remain "current" for approximately twenty years so that the logo does not need alterations, and should be cost-effective and feasible to produce. It is advisable for a start-up company to consult a professional logo designer instead of creating one by themselves.

After a logo has been created, food labels should be considered as another marketing strategy to promote a new product (John Hopkins School of Public Health, 2010). Certifications on food, especially organic and other health related certifications, help consumers make smart choices. Advertisements for healthy food are also effective ways to promote the product's nutrition benefits. Ads for fruits, vegetables, and grains are not as common because there are not as many ways to add value to the products in terms of convenience and taste compared to competitors in the snack food industry. There are several certifications that have been successfully used in the food industry such as Leaf Marque and Fairtrade, whose descriptions are provided below.

The Leaf Marque is a label that certified farms can put on their food products (Leaf Marque, 2013). It is an internationally recognized label and is available to use in Thailand. By using the label, members promise that they grow their produce in a way that is environmentally-friendly.

The Fairtrade label certifies that small-scale businesses and farmers receive fair deals from purchasers and middlemen, and that they also meet social and environmental international policies (Fair Trade International, 2011). To a consumer, it means that they are purchasing a product that was produced and traded fairly among all parties involved and that their money is directly helping to decrease poverty in developing countries (EcoLabel Index, 2014). The Fairtrade mark is available in Thailand. Minimum prices and premiums for rice in Thailand for Fairtrade certification can be found on Fairtrade International's website.

Similar to Leaf Marque and Fairtrade, there are also organic agricultural certifications that farmers can receive to increase profit (United Nations Office on Drugs and Crime, 2008). The Good Agricultural Practices Standard and Organic Standards are the most well known in Thailand and have shown success over time. The descriptions of these standards are given below.

The Good Agricultural Practices Standard (GAP) is a standard for which farmers in Thailand can be certified (United Nations Office on Drugs and Crime, 2008). The standard mandates that only a certain amount of pesticides can be used, and they have to be predetermined as "safe." After purchasing pesticides, farmers must label, store, and keep track of when and how they use the pesticides. In 2007, 5189 farmers held the GAP standard, and they are checked once a month for continued compliance. Following this standard is important to farmers because they can sell their crops for higher prices in markets and receive a more substantial income as a result.

The Organic Standard differs from the Good Agricultural Practices Standard in that no pesticides are allowed on crops (United Nations Office on Drugs and Crime, 2008). "Pesticide-free" can be a significant marketing tool for farmers because they can fetch prices of 20-80% higher than non-organic produce in the market. If organic farming is successful, the profits are significant, and farmers actually save money in the growing process because they do not need to purchase chemicals. However, following the organic standard is difficult for farmers because many are uninformed on the topic.

There are many other food certifications that can be placed on a food package that are not regulated that can help increase profit (John Hopkins School of Public Health, 2010). Examples of these are “gluten-free” or “high fiber” that may explain the general nutritional value of a food. When properly used, these labels can quickly inform a consumer of a product’s unique characteristics.

It takes time and money to receive some of these certifications and small-scale farmers do not have all the necessary funds to do so (United Nations Environment Programme, 2013). A common problem among small-scale farms is that the farmers do not have the time or resources to find a market that will support the best price for their crops. They tend to settle for low prices either because they need an immediate source of money to pay for things such as children’s education and healthcare, or because they do not understand the current selling price of their crops, often times both. Another barrier in marketing for small-scale farmers is the means of physically getting their product to the market. Transportation presents specific problems, such as road conditions out from the farm or the condition of the vehicles used to bring the produce to the market.

2.3 Mae Khong Khaa Village

The villagers of Mae Khong Khaa are Karen people and continue to carry out practices of previous generations. In order to understand the current status of the village it is necessary to research the history of the village and the villagers’ flexibility as different parts of their livelihood changed over time.

The history of the Karen people in Thailand cannot be understood without first looking at the Karen in Burma. All Karen villages in Thailand have different accounts of their past due to a lack of centralized history, but most villagers know that they came from either the north or west of Asia (Buadaeng, 2007). The Karen people in Burma were facing oppression by the Burmese government, which resulted in the people’s migration to Thailand. The differences between the Karen in Burma and Thailand are easy to identify. In Burma, the people are activists and outspoken in politics. In comparison, in Thailand, the Karen are quiet; they seldom speak out against the Thai government and have been left alone in the past. Buadaeng (2007) writes that most Karen have a “relatively positive view of their people’s pre-modern treatment by the [Thai] kings” (p. 83).

During the 1950s, the Thai government turned their attention towards the Karen (Buadaeng, 2007). With the rise of the Communist Party of Thailand, (CPT) the government feared that the party would seek followers in the northern villages and eventually be strong enough to overthrow the government. In order to prevent this, the government implemented several programs to try to unite and spread a sense of nationalism within the Karen and the entirety of the northern farming villages. With the creation of these programs came the spread of Thai culture through the hill tribes.

Primary education in Thailand became mandatory in 1921 (Buadaeng, 2007). Since then, schools have been established in rural areas to give primary education to these people. In 1999, Thailand implemented a formal education act. The act stated that all children had the right to education without discrimination. In 2005, the act was reaffirmed and stated that all children must receive schooling, ensuring hill tribe education.

Today there is still prejudice against the hill tribes including the Karen, stemming from their past production of poppies (Buadaeng, 2007). Since opium became illegal in 1959, there have been programs like the Royal Projects that have given farmers alternative crops to grow rather than poppies. Although there have been improvements, there is still work to be done. Since the 1980s, the Karen people have begun to take more of an interest in how they are perceived by Thais in the lowlands. They have started to receive higher education, work themselves into positions in the Thai government, and adopt the Thai lifestyle.

In Karen villages the slash and burn method of agriculture is still used regardless of the encouragement from the Thai government to implement a practice that does not involve deforestation (Khun Wisit, personal communication, Jan. 28, 2014). Overall, the villagers have accepted the standard Thai education, which shows that they strive to connect their culture with the rest of Thailand. Despite certain traditional practices, the villagers have shown that they are flexible, and this is essential when introducing new ideas to the people our project concerns.

The village of Mae Khong Khaa is located within Doi Inthanon National Park in Chiang Mai province in Mae Chaem district (Khun Wisit, personal communication, Jan. 28, 2014). The location of the village can be seen in Figure 2. The forest is a food source for the villagers, which includes mushrooms, bamboo shoots, and various herbs. The villagers obtain water from a nearby mountain watershed stream system for household consumption. During the rainy season, transportation is difficult due to muddy, unpaved roads into and out of Mae Khong Khaa. Because of the remote location, most of the Mae Khong Khaa villagers do not have substantial resources or easy access to schools, stores, and health care.



Figure 2: A map of the Mae Chaem District where the village of Mae Khong Khaa is located (Google Maps, 2014b)

The village of Mae Khong Khaa is composed of eighty-three households. Most of the villagers are farmers who grow rice for their own family usage (Khun Wisit, personal communication, Jan. 28, 2014). There is a village president and vice-president who are elected officials. Farmers can only grow rice crops once a year during the rainy season because of the need for plenty of rain to water the crop. The villagers of Mae Khong Khaa have access to 2672 acres for farming, 288 acres of paddy field, and 60 acres for gardening.

Traditionally, farmers in the village grew all of their own food for consumption, which resulted in relative independence from the outside world (Khun Wisit, personal communication, Jan. 28, 2014). The villagers grew crops such as cabbage, rice, peanuts, corn, and spices and planted them all in the same field together. The large range of crops helped to both support farmers' lives and keep the necessary nutrition in the soil. The farmers used a rotation system where they changed the field in which they grew crops every year to allow fallow fields to regain nutrients.

Over the past twenty years, farmers have relied on large corporations to buy some of their crops in order to pay for their children's education and family's healthcare (Khun Wisit, personal communication, Jan. 28, 2014). These corporate middlemen have convinced the villagers to produce cash crops such as corn and cabbage instead of their traditional food items. They now grow crops on every field every year, which degrades the soil quality. The villagers in Mae Khong Khaa make most of their income from selling a cash crop, corn; however, the price of corn fluctuates regularly and is thus unreliable as a source of income. Since the corn is not for

direct human consumption but rather used to produce livestock feed, they must sell the corn. The villagers use their income to purchase food for consumption, but if they do not make enough money, they will find city jobs to support their families.

Besides cash crops, the villagers grow two varieties of rice; two types of mountain rice and one type of paddy rice, Buewaa. The mountain rice comes in two different species, Bueki and Buesuekee (Khun Wisit, personal communication, Jan. 28, 2014). The villagers refer to this rice as “sweeter, softer, and having more fragrances” compared to the paddy rice. Mountain rice is usually grown without chemical fertilizers or pesticides, but it is not organic due to the past use of chemical fertilizers and pesticides in these fields, the residues of which have remained in the soil.

The Buesuekee mountain rice is the rice that is processed and produced for the Raks Thai Foundation, our project sponsor who is trying to help the villagers regain economic independence from large corporations (Khun Wisit, personal communication, Jan. 28, 2014). However, the yield per unit area for mountain rice is lower than it could be. The low production yield of mountain rice limits its ability to be able to be marketed to large industries. There is a cooperative formed by sixteen women in the village aged 20-55, with one leader, that hand-mill the mountain rice to sell to the Raks Thai Foundation. This women’s cooperative is part of a rotating credit association, where the income obtained from this rice is put into a “bank” and only the participating women can use the money in the bank. The women borrow money for their children’s education or other necessities and must pay off their loan within one year with 12% interest.

The woman’s cooperative uses a manual milling technique by physically pounding rice in a mortar and pestle. The downward force on the grain forces the husk to separate from the rice (Rice Knowledge Bank, 2009b). This method is labor intensive compared to other machine milling processes, it can damage the rice grains, and it does not completely remove the bran. After the grain is processed, it is winnowed, separating the unprocessed rice, husks, and broken rice. The broken rice is then used for animal feed.

The current production rate for hand-milled rice is estimated at one bucket of unhusked rice every two hours (Khun Wisit, personal communication, Jan. 28, 2014). Currently the maximum amount of unhusked rice the women can process is three buckets per day, which is equal to approximately 16.8 kgs. The villagers of Mae Khong Khaa claim that the conversion yield from raw rice to milled rice is 35%, producing approximately 0.8 kg of milled rice per bucket. The brown rice product contains a bran and germ layer that shortens the life expectancy of the rice to approximately six to eight months. This short shelf life can be compared to the longer shelf life of white rice, which is up to five years (Eat By Date, 2012).

2.4 Marketing and the Villagers of Mae Khong Khaa

The villagers of Mae Khong Khaa currently depend upon the Raks Thai Foundation to market their mountain rice (Khun Wisit, personal communication, Jan. 28, 2014). Using the Raks Thai Foundation's current marketing techniques as a basis, appropriate new strategies for their rice promotion could be developed.

The Raks Thai Foundation packages the rice and then sells Mae Khong Khaa rice to a middleman, Khun Chalerm, who then sells it at farmers' markets near Chiang Mai University and JJ market (Khun Wisit, personal communication, Jan. 28, 2014). Khun Chalerm does not sell the rice for his own profit, but does so because he wants to support Mae Khong Khaa and other rural communities (Khun Chalerm, personal communication, Jan. 29, 2014). He orders about 60 kilograms of rice per month at 35 baht per 1 kg bag and then sells it at 40 baht per 1kg bag.

Today, the Raks Thai Foundation is the villagers' main means of transporting and packaging their rice (Khun Wisit, personal communication, Jan. 28, 2014). The Raks Thai Foundation has identified barriers between themselves and the villagers due to the villager's limited understanding of Thailand's food market. The foundation believes that if profits from selling rice could be increased, the villagers might be more willing to return to crop rotation and reinstate rice as their major crop for income. If this were to happen, the development and future of the village would not be so dependent on large corporations.

2.5 Rice as a Marketable Product

As of January 2014, the Raks Thai Foundation had not identified consistent consumers for Mae Khong Khaa rice. The foundation depended on favors from friends in order to sell the village's product. However, they had a clear vision of the future of village; using the increased income from rice to reduce corn production and increase the amount of rice the villagers are willing to product. They have concluded that rice is the best crop to wean farmers away from selling cash crops to corporations. The main reason for this decision is that the rice market is relatively stable in Thailand (Index Mundi, 2014). Figure 3 shows the current stable market of rice, despite the economic decline in 2008 and the current decrease this year due to another politic situation involving the farmers and the government. If the village starts to produce more rice, this constant market will provide the villagers with a stable income from year to year. Rice is also an important part of Thai culture, making it an ideal product as there is a high demand for it in the country.



Figure 3: The Thai nominal price quote of 5% broken grain white rice (Index Mundi, 2014)

Rice has fed more people over a longer period of time than any other crop, and is a staple food source for millions of people due to its adaptability to many climates (Gwinner, 1990). The rice market in Thailand is essential to the economy of the country as well as its culture (IRRI, 2013d). Rice occupies over half of the arable land and is a principal food of all economic classes (IRRI, 2013e). The country is one of the largest exporters of rice worldwide, selling countless varieties of their popular food staple. Kwanchai A. Gomez (2001), Board Member of the Thai Rice Foundation, states that rice “is the root of [Thai] civilization” (para. 1). Rice is a fundamental food, and most Thais eat rice with every meal. In the Thai Language, the literal translation of the word “breakfast” in English is “morning rice” (Ajarn Sumalee, personal communication, Nov. 25, 2013). Likewise, a rough translation of “dinner” is “evening rice.” Rice is valued in Thailand, and local people believe rice should not be wasted. From childhood, Thais are taught to not waste leftover rice but instead use it in various recipes. In addition, the rice plant and uneaten rice are used by Thais to “sleep on rice straw, drink rice liquor and offer rice to their gods” (Gomez, 2001, para. 1).

Rice acts as a source of calories for over half the world’s population (Encyclopedia of Life, 2013). More than a billion people in the world depend on rice for their livelihoods. In Asia, 90% of the rice produced is grown on more than 200 million rice farms. Most of these farms are small, indicating that a large percentage of Asian jobs are in agriculture. Even those who are not dependent on rice production for employment are dependent on the calories and food source that rice provides. As the population of the world increases, the International Rice Research Institute, or IRRI (2013e), states that in order to keep rice prices at a stable level, an additional eight to ten million tons of rice need to be produced annually.

In general, the nutritional content for rice is calories, not specific vitamins and minerals (USDA, 2013a). However, some varieties of rice contain more amounts of crucial nutrients compared to others, which can be used as a marketing tool to promote a brown rice product over a white rice product. One cup of brown rice provides some of the important vitamins needed to

meet recommended daily intake levels in order to remain healthy (SELF Nutrition Data, 2013). The nutritional value of brown rice is approximately the same among different brands. One cup of brown rice meets 88% of the daily-required intake of magnesium. Magnesium is important for teeth and bone health, blood clots, and muscle contraction. A magnesium deficiency can lead to seizures and an inability to metabolize Vitamin D. One cup of brown rice also meets 15% of the daily requirement of Vitamin B6, which is needed for the body to metabolize amino acids. A deficiency in Vitamin B6 can lead to confusion and depression (Turley, 2012). One cup of brown rice also contains 16% of the recommended intake of phosphorus, an essential element for strong teeth and bones, energy transfer, and the creation of DNA and RNA (SELF Nutrition Data, 2013). A lack of phosphorus can result in bone and muscle complications. According to the USDA (2013a), compared to white rice, 100 grams of brown rice contains more magnesium, thiamin, phosphorus, fiber, and Vitamin B6. Overall, the vitamins and minerals in brown rice are necessary for normal bodily function and can be used as a marketing tool in promoting a brown rice product over a white rice product.

The type of rice grown in the village of Mae Khong Khaa is a type of brown mountain rice that is hand-milled by the villagers of Mae Khong Khaa (Department of Rice, 2007). The bran and germ that is on part of brown rice contains additional nutrients that white rice lacks. On average, mountain rice contains about 29% more protein than white rice and there is also 6% fewer carbohydrates in mountain rice than white rice. Therefore, the nutrition of the Mae Khong Khaa rice could be a selling point in the market.

2.6 Summary

Despite successes in marketing techniques used by large corporate middlemen such as CP, the Raks Thai Foundation has not been able to successfully implement these strategies to identify a target market for the Mae Khong Khaa rice so that Mae Khong Khaa's women's cooperative can gain a more substantial income from their crop (Khun Wisit, personal communication, Jan. 28, 2014). In the next chapter we explain how we carried out our research to identify a successful marketing plan for the Mae Khong Khaa rice.

3.0 Methodology

The goal of this project was to provide the Raks Thai Foundation with a marketing plan for the Mae Khong Khaa rice, and to begin to educate the Mae Khong Khaa villagers on the importance of marketing so that they can gain a reliable and better income from the sale of their rice.

Our measurable objectives are to:

- Determine the project focus by identifying the most important of the problems surrounding Mae Khong Khaa's rice production, processing and marketing.
- Identify the most appealing marketing attributes of the Mae Khong Khaa rice.
- Identify new target markets for the Mae Khong Khaa rice.
- Identify marketing media that could be used to increase sales of the Mae Khong Khaa rice.

The methods described below were designed to help us achieve each of these objectives.

3.1 Determine the Project Focus

Before visiting the village, the project team researched several potential problems with rural, small-scale rice farming. These problems are included in Appendices W-Z and background section 2.2 of this report. For each of these problems, the project team developed several potential improvements. These improvements were based on where both stakeholders, the Raks Thai Foundation and the villagers of Mae Khong Khaa, wanted us to focus our attention. Our goal for our initial visit to the village was to determine where our help would be most needed. To determine the opinions of both stakeholders, we developed a set of research questions to base our interview questions on. Our research questions were:

- What are the main limitations in the rice processes in the village?
- What does the women's cooperative hope to accomplish in the future with the Raks Thai Foundation?
- What does the Raks Thai Foundation hope to accomplish in Mae Khong Khaa in the future?
- Why did the Raks Thai Foundation get involved with this project?
- What are the barriers to gaining further cooperation from the villagers for this project?
- Do the Mae Khong Khaa villagers see a problem with their rice production, storage and processing strategies/technologies?

Based on these research questions, we developed interview questions for both the Mae Khong Khaa villagers, Appendix J, and the Raks Thai Foundation, Appendix K. We chose to interview both of these groups of people because our goal was to design a project with deliverables that satisfied the needs of both stakeholders.

3.1.1 Interview with Elected Officials

To identify the scope of our project, we performed a group interview with the leader of the village, the Vice President of the women's Co-op, and both Khun Tee and Khun Wisit from the Raks Thai Foundation. This interview, shown below in Figure 4, was mainly geared towards the leader of the village, as we aimed to understand the main goals of the Mae Khong Khaa villagers. We also addressed the current loan system in the cooperative and obtained information on how the rice business with the Raks Thai Foundation affects this system. Another main goal for this interview was to obtain initial information on the demographics of the village so that we could familiarize ourselves with the lives of the villagers.



Figure 4: Interview with the leader of Mae Khong Khaa and the VP of the women's co-op

We chose to conduct a semi-structured interview, found in Appendix I, because we did not want the information we gathered to be limited by our questions, as it would be in a more structured interview. A semi-structured interview allowed us to ask the prepared questions, in addition to follow-up questions to gain as much information as possible.

3.1.2 Group interview with the women's Co-op of the Mae Khong Khaa village

To determine the unique growing and processing characteristics of the Mae Khong Khaa rice, we met nine members of the women's cooperative group who sell hand-milled mountain rice to the Raks Thai Foundation. We asked them to participate in a group interview, which can be viewed in Figure 5. Our goal for this interview was to not only understand the goals of the

Mae Khong Khaa women's cooperative members, but to identify their concerns with aspects of the current rice production and processing system. A common problem in entering a community is gaining support from the people. Our initial goal was relevant to our project because if the villagers did not identify a problem related to their rice processes, we would not have the villager's support when identifying solutions to a problem. The questions in Appendix J are focused on finding the goal of the villagers as well as assessing whether they could identify problems in the growing, storing, packaging, and drying aspects of their rice processes. This information allowed the project team to determine where an educational program should focus when introducing the importance of marketing rice.



Figure 5: Interview with members of the Mae Khong Khaa women's co-op

The project team chose to conduct a group interview over individual interviews to create an atmosphere in which all members felt comfortable contributing and to be sensitive to the villagers' time constraints. A semi-structured group interview ensured that the village women were comfortable during the interview and allowed for collaboration amongst them. The participants were encouraged to feed off of each other's answers, which provided stimulation in their responses. In addition, there was a wedding going on in the village the day we were interviewing, and we did not want to take up their time with several lengthy interviews. A semi-structured interview allowed us to ask the prepared questions, in addition to follow-up questions to gain as much information as possible.

3.1.3 Interview with the Raks Thai Foundation

Our goal for interviewing the Raks Thai Foundation was to determine reasons they initiated this project. We aimed to identify their goals for the Mae Khong Khaa village, if they differed from the goals of the villagers, and their plans for the future. We gathered this information in order to focus our project goal so that it satisfied the needs of both the villagers

and the Raks Thai Foundation. The interview lasted for approximately three hours. Our interview questions, found in Appendix K, focused on the Raks Thai Foundation goals for the project team for the village. In addition, we determined the barriers the project team needed to overcome in order to gain further cooperation from the villagers.

We chose to conduct a semi-structured interview because we did not want the information we gathered to be limited by our questions. A semi-structured interview allowed us to ask the prepared questions in addition to follow-up questions to gain as much information as possible.

3.2 Appropriate marketing attributes of the Mae Khong Khaa rice.

The purpose of the second objective was to identify attributes of the Mae Khong Khaa rice that could be used in a marketing plan for the rice. We wanted to identify the rice's marketing attributes so that we could use them as selling points when creating marketing materials for the rice. In addition, we wanted to determine the best population to market the rice to, based on its properties. For example, if we found that the rice was soft, we would be more successful marketing the product to a population that likes soft rice. The team developed specific research questions based on the information we hoped to learn:

- What parts of the growing and processing of the rice set it apart from other types of rice?
- What do the Mae Khong Khaa villagers like about their mountain rice?
- Does hand-milled rice have any special nutritional benefits?
- What makes people initially and repeatedly purchase the rice?
- Does the current packaging appearance facilitate or hinder sales?

From our research questions we developed a set of methods to obtain this information. For each method, we based our interview protocols and survey off of the above research questions, including probes for follow up questions. To identify these attributes and answer our research questions, we facilitated a group interview with the villagers of Mae Khong Khaa, interviewed Khun Chalerm, the middleman between the Raks Thai Foundation and the actual customers, and surveyed potential rice customers. The information obtained identified the rice's unique qualities, which were then used in deciding the best target markets for the rice. The marketing attributes were also used in the rice marketing plan.

3.2.1 Group Interview with the Women Co-op of the Mae Khong Khaa Village

During the interview described in section 3.1, we asked the members of the women's co-op what they liked about their rice and why they prefer their mountain rice (the type of rice sold to the Raks Thai Foundation) rather than their paddy rice. This method revealed differences between the mountain rice and more common varieties of rice. The interview lasted

approximately an hour and a half. The interview protocol can be found in Appendix J. We were given specific growing and processing information for the mountain rice, and we also viewed a demonstration of the rice milling process. This allowed our team to distinguish the differences between hand-milled rice and machine-milled rice methods, which assisted in identifying the rice's marketing attributes such as its unique growth and milling qualities.

3.2.2 Interview with the Raks Thai Foundation Distributor

After obtaining contact information from our initial talk with the Raks Thai Foundation, the project team interviewed Khun Chalerm, the distributor who buys the Mae Khong Khaa rice from the Raks Thai Foundation and sells it to his customer base. The purpose of this interview, shown in Figure 6 below, was to further understand the system the Mae Khong Khaa rice goes through from the village to the consumers, and determine what qualities attract customers to buy the rice. Although our interview questions were based on our research questions, we also obtained additional valuable information about the rice. We discovered why the distributor has trouble selling the rice, which led to his ideas of possible marketing improvements for the rice. He was able to tell us the demographic characteristics of the majority of his customers who buy the Mae Khong Khaa rice. The information he provided gave us ideas on marketing media designed to highlight the unique qualities of the rice, and possible target market groups. The interview lasted approximately forty minutes. This interview can be found in Appendix L.



Figure 6: Interview with Khun Chalerm, the Raks Thai Foundation's distributor

3.3 New target markets for Mae Khong Khaa rice.

The purpose of identifying a new target market for the Mae Khong Khaa rice was to increase the number of consumers the rice was introduced to, potentially further increasing its

sales. One of our goals in finding a new target market was to create a consistent consumer population for the rice and identify a market location that would lead to returning customers. If enough customers purchased the rice consistently once a month, the villagers' annual income would greatly increase (Khun Tee, personal communication, Jan. 28, 2014). The team developed research questions to aid us in completing this objective. These questions are shown below.

- What types of people currently purchase the mountain rice from Mae Khong Khaa?
- What types of people would be most interested in this type of rice?
- What is the range of competitive selling prices for the rice in the markets?
- What are the main characteristics that potential rice consumers look for when purchasing rice?
- What factors are considered to be appealing to potential rice customers?

From these research questions, the project team developed specific methods. We chose to interview the Raks Thai distributor to gain information on the current market, and we surveyed potential rice customers and distributors to further determine new potential markets.

3.3.1 Interview with the Raks Thai Foundation Distributor

In the same interview described in section 3.2, we assessed the different target groups by focusing our questions around the current consumer profile for the Mae Khong Khaa rice. Our goal for this interview was to find reasons why the current Mae Khong Khaa rice customers continue to purchase the rice, and what characteristics of the rice would appeal to different markets. From this information we determined the nationality of people most interested in the rice, which helped us identify three separate potential markets for the Mae Khong Khaa rice. The questions for this part of the interview were based around the first two research questions for this objective and can be found in Appendix L.

3.3.2 Interview with Marketing Expert

Our goal of interviewing Chandra Venkataphathy, a marketing expert at IBM, was to determine how best to approach the markets in our marketing plan. From the interview, the project team aimed to gain insights in basic marketing approaches and best media to be used for a limited budget. Although our interview questions were only to gain insight in the formatting of a marketing plan and successful marketing strategies, Mr. Venkataphathy provided the project team with feedback on the teams marketing plan. This semi-structured interview can be found in Appendix M.

3.3.3 Survey of Potential Rice Customers

The project team gathered information on the rice preferences of potential rice customers in three separate markets. In our surveys, found in Appendices P and Q, we asked about general

food purchasing preferences and rice preferences. Customers were asked their current demographics in order to analyze trends in the survey results, as well as how appearance, taste, packaging, and cost of the product might affect their purchasing decisions. By asking these questions, we were able to determine ways to connect the product with the consumer. The people chosen to be surveyed were selected based on age, social class, and race, which we determined by observing their appearances. We interviewed people from different age groups to obtain a diverse set of data within each target market. As many questionnaires as possible were completed with each of the three targeted customer groups in Bangkok to provide a diverse sample of responses. Figure 7 below shows two members of the project team conducting surveys at MBK mall in Bangkok.



Figure 7: Members of the project team conducting surveys at MBK, a mall in Bangkok, Thailand

However, after talking to Mr. Venkaphathy, the expert from IBM, we determined that the survey was best used to target a place, such as a restaurant or a grocery store, and then used to identify the people who go to these specific places. Based on this information the survey was reformatted to meet the needs of all populations and was used at K-Village and Nihonmachi Market in Bangkok, and Ton Parorn Market in Chiang Mai. The same survey used at K-Village was used at Ton Payorn Market which can be found in Appendix S. The survey used at Nihonmachi Market included the same questions as the survey for farmers markets except for two questions which were changed in order to fit the specific market. This survey was translated into Japanese and can also be found in English in Appendix R. The protocol was developed to be more open-ended than the previous one and was created to determine if assumptions we had

made were correct. Mr. Venkaphathy suggested that surveys are used to check assumptions rather than determining new information. The new survey protocol was also used to identify the amount of Internet access customers have on a daily basis. The project team chose a survey because we aimed to collect a large amount of data quickly and from a specific set of people.

3.3.4 Restaurant Interviews

After gaining insight from the potential rice customer's survey we determined the tourist population's interest in trying the product and decided to interview restaurant owners who might want to serve the Mae Khong Khaa rice in their restaurant. The purpose of the restaurant interviews was to gain insight about the consumer appeal of this type of rice at restaurants and ask the owners to identify strengths and weaknesses of this product. Based on the potential rice customer's survey we determined that restaurants suggested on tourist websites and guidebooks could be places to market the rice. If this rice product were introduced into the restaurant industry, the Raks Thai Foundation could have a loyal customer, and product labels and logos would not be a concern. In addition, restaurants would consume the rice faster than households, thus shelf life would be less of a concern. The interviews provided us with some valuable feedback on marketing techniques for restaurants and other possible places that can be contacted by the Raks Thai Foundation. The interviews were approximately an hour long. The protocol used for all of these semi-structured interviews can be found in Appendices N and O.

3.4 Marketing strategies to increase sales of Mae Khong Khaa rice

The purpose of determining marketing strategies to use for the Mae Khong Khaa rice was to put these strategies in the marketing plan for the Raks Thai Foundation. In order to accomplish this objective, the project team identified the current barriers in marketing the rice, in addition to current marketing strategies that appeal to potential rice consumers. We determined ways to overcome the current marketing barriers, in addition to analyzing common media for food advertisements that would be read by the targeted populations. We also determined what could be altered in the current packaging to increase its consumer appeal. This information was combined to create several marketing strategies to include in the marketing plan for the Raks Thai Foundation. The project team developed several research questions for achieving this objective:

- What are some of the main barriers to selling the rice in the current market?
- What are the main marketing media that have the most effect on consumers?
- What aspects of the Mae Khong Khaa rice's packaging can be improved to increase sales?
- What are successful marketing techniques that could be used to market the attributes of the rice?

These research questions guided the project team in gathering information to include in the marketing plan for the Raks Thai Foundation. To complete this objective, we interviewed the Raks Thai Foundation distributor, Khun Chalerm, to understand the main barriers to selling the rice in the current market, and surveyed potential rice consumers to gather information on successful food marketing techniques.

3.4.1 Interview with the Raks Thai Foundation Distributor

In the same interview described in section 3.2 and 3.3, we were able to identify the barriers involved when Khun Chalerm markets the rice. The purpose for this section of the interview was to identify what the current marketing barriers are, and to identify possible solutions to these barriers. The information gathered from the interview allowed the project team to identify the main problems that occur when Khun Chalerm sells the rice, and a possible solution to this barrier. This solution was included as a marketing strategy in the marketing plan for the Raks Thai Foundation.

3.4.2 Survey of Potential Rice Customers

In the same surveys described in section 3.3, we identified marketing media that are commonly used by consumers. The project team analyzed the most common media that are successful at establishing the name of a product in a market, selling a product brand, and creating a strong and lasting impression. This information was used in the marketing plan for the Raks Thai Foundation to explain what marketing media would be the most effective to market the Mae Khong Khaa rice. The survey also asked the price which the consumers would be willing to pay for a one kilogram bag of the Mae Khong Khaa rice, which gave insight as to whether or not the current price for the vacuum-sealed Mae Khong Khaa bag of rice was appropriate. This information was used in the marketing plan to identify whether the price is appropriate for each of the target markets. The respondents were also asked whether the Mae Khong Khaa rice's packaging was appealing, and what additional information they would like to see on the rice package. This information was also included in the marketing plan, to help increase sales.

3.5 Limitations

There are several sources of error to keep in mind while conducting all of the interviews and surveys described in this section. For our interviews, although our interview protocols had been approved by Worcester Polytechnic Institute and Chulalongkorn University faculty, there is a possibility that the interviewees felt pressured to answer a certain way based on the manner we phrased the questions both in the interviews and on the surveys. During interviews, either the interviewer or a separate person was required to take notes (Statistics New Zealand, 2013). This allows for error in the notes we used for our data, either not recording the full information or recording false information. A specific problem the project team encountered while interviewing was that only two of our seven member research team were able to communicate in Thai. One

member ran the interview while the other member recorded notes. This was more beneficial than having one person both ask questions and take notes, as the attention of the interviewer would have been divided. To prevent against inaccurate notes, the project team interviewers made sure they fully understood the answers provided and allowed time to take accurate notes before moving on to the next question.

The group interview with the villagers presented its own limitations that must be addressed. In a group setting, certain opinions influence the responses from other participants (Frey, 1991). Within the group, they have their own social hierarchy and may experience pressure to conform to the opinions of others. Also, if the question is not worded correctly, the interviewers could be creating a bias that makes the interviewees want to conform to a certain answer. In addition, the translations for communication between the women of the cooperative to us, from Karen to Thai to English, could have led to miscommunications along the way, as translators could have omitted certain information.

3.6 Summary

The information gathered from the interviews, surveys, and group interviews allowed us to develop a comprehensive marketing plan for the Mae Khong Khaa rice. The methods used also helped us develop an educational program for the villagers of Mae Khong Khaa to help them realize the importance of marketing in generating income for themselves.

4.0 Results and Analysis

The findings described in this chapter follow results gathered from each of our four objectives. A review of the objectives is listed below:

- Determine the project direction by assessing the importance of several problems surrounding Mae Khong Khaa's rice production.
- Identify marketing attributes of the Mae Khong Khaa rice.
- Identify a new target market for the Mae Khong Khaa rice.
- Identify marketing media that could be used to increase sales of the Mae Khong Khaa rice.

This chapter begins with an overview of the current status of agricultural production processes in the village of Mae Khong Khaa and the problems that the Raks Thai Foundation is trying to address. Once both the needs of the Raks Thai Foundation and villagers were identified, we explored the information obtained from interviews with the villagers, the Raks Thai Foundation, and potential consumers to identify appropriate solutions. Our findings were able to lead us to the development of our two deliverables: a marketing plan for the Raks Thai Foundation and an educational program for the Mae Khong Khaa villagers. The results below are what led us to these conclusions.

4.1 The most beneficial path to increasing Mae Khong Khaa's profit is marketing

By completing the methods described in section 3.1 for objective 1, the project team determined that marketing was the most fundamental path to increasing the income of Mae Khong Khaa. This was determined by analyzing the information given on other rice processes such as rice growth and storage in the village, in addition to assessing the economics of the village and determining the short and long term goals of both the Raks Thai Foundation and the Mae Khong Khaa women's co-op group.

4.1.1 Village demographics and economics

The village leader of Mae Khong Khaa was able to provide us with village demographics and information about a loan system initiated within the village. The main occupations of villagers are farming and part-time labor in the city, which provides them with limited income to care for their families. He noted that there are sixteen women in the village who work with the Raks Thai Foundation in order to obtain a reasonable income, and are part of the loan system for the village described in section 2.3 of this report. The villagers currently grow corn to sell to the

company CP; however, corn prices fluctuate from year to year which limits the villagers' annual incomes. The village grows two varieties of corn. One variety is produced for CP and is inedible as it is used for animal feed. The other variety they produce in small quantities to be consumed by their village. A main problem with this is that because they are growing so much corn for CP and because they cannot eat this crop, they are consistently forced to outsource for food in the city because they cannot grow enough to sustain the village.

The income in the village mainly comes from the sale of their crops. We analyzed the economics of the village to further understand the feasibility of switching their main crop from corn to rice. The current price for corn is 3 baht/kg compared to the current price for rice, 10-12 baht/kg. When corn was introduced to the village by CP, they were given the seeds, pesticides and fertilizer to be used for the corn and were told that they would make a specific amount per household from this corn. This amount is the price for the corn after the initial costs of the seeds, pesticides, fertilizers, and transportation costs have been taken out. For rice, the cost that the villagers receive per kg is less depended on the market, as the market is relatively stable from year to year. It is more dependent on the current price the Raks Thai Foundation is able to sell it for. This price takes into consideration transportation, labor, and packaging. The current rice package is shown in Figure 8. The rice is packaged in 1 kg vacuum-sealed bags and includes a sticker for the outside of the package. The sticker includes information on the Raks Thai Foundation and cooking instructions for the rice. All of the information on the package is in Thai. The Raks Thai Foundation currently has logos for all of the different varieties of rice that they package and sell, in addition to a sketched picture of a Karen women and the hand-milling machine that they use to process the rice.



Figure 8: Current Mae Khong Khaa rice package

Currently the Raks Thai Foundation supports a loan system to be used for all of the villages that they help. They currently aid several Karen villages around Mae Chaem to help sell their products in the market. This loan can be used by any of these villages to provide them with a sum of money to help either in emergencies or if they would like to purchase new machinery to aid their village production. In the future, the Raks Thai Foundation will split the profit that they make from the Mae Khong Khaa rice into three parts: one to directly give back to the villagers, one to split evenly between all of the villages the Raks Thai Foundation handles, and one to go into the Raks Thai Foundation's communal loan. Thus, if the project team can increase the price of the rice in the market, the Mae Khong Khaa villagers will gain income both directly and indirectly. Until the Raks Thai Foundation splits the profit into three parts, however, we are helping the Mae Khong Khaa villagers by adding to the amount of money available to them to use from the Raks Thai Foundation's loan system.

A detailed table of the current costs for the Mae Khong Khaa rice including packaging and transportation costs can be found in Table 1 below. The total price for the rice at the market is 65 baht/kg in Chiang Mai and 80 baht/kg in Bangkok. If the cost for the packaging could be decreased, or the cost of the rice in the market could be increased, there would be more profit made from the rice which would increase the amount of money available to them in the Raks Thai Foundation's loan.

Table 1: Current costs for the Mae Khong Khaa rice

Category	List	Volume (kg)	Price/Unit (baht)	Price/kg (baht)
Rice	Rice in canvas bag bought from Women's Co-op	1	30	30
Transportation	Transportation from the village to Raks Thai office in Chiang Mai	1	3	3
	Labor	1	1	1
Packaging	Vacuum bag	1	4.5	4.5
	Quality check and management	1	1	1
	Box for 20 rice bags	20	10	0.50
	Stickers	1	9.5	9.5
Price for hand-milled rice sold in Chiang Mai to cover packaging and transportation				49.50
Total price for hand-milled rice sold in Chiang Mai				65
Transportation from Chiang Mai to Bangkok				8.33
Total price for hand-milled rice sold in Bangkok				80

Last year the village made 60,000 baht per household from selling their corn to CP at a price of 9 baht/kg. There are approximately 110 households in the village which means that the village made approximately 6,600,000 baht total last year. This year however the price for corn has decreased drastically, dropping to approximately 2 baht/kg. As this price and assuming they make the same yield as last year, they will make 13,333 baht per household this year which is a large decrease from their 60,000 baht/kg per household from last year. This proves that the market for corn fluctuates too much to provide a stable source of income for the village. Despite this, if the village were to switch completely from corn to rice the village's rice production would have to increase considerably in order to make the same amount of profit. Currently the village only produces 1500 kg of rice collectively per year. Villagers sell their excess unhusked mountain rice to the women's co-op for 10-12 baht/kg. From there the women hand-mill the rice and sell it to the Raks Thai Foundation for 30 baht/kg. This price of 30 baht/kg is a set price determined by the Raks Thai Foundation. When this amount of rice is sold, the women's cooperative makes approximately 45,000 baht per year. It is difficult to compare the price that the average household would make per year if they stopped growing corn because we do not

have adequate information on how much rice each household could potentially produce; however, based on these numbers it is clear that in order to make the same amount of money from rice at the village currently does from corn, there would need to be a significant increase in rice production by the entire village. Although these calculations do not take into account the amount of money the village would save from not having to purchase food from outside their village, the data show that it would be extremely difficult for the village to become entirely self-sufficient and stop growing corn, at least at this point in time and under these circumstances. This is why we have included as part of our educational program for the villagers to stress the importance of increasing rice production, because if they can make more rice per year they will receive more money from the Raks Thai Foundation.

4.1.2 Rice processes

The team assessed the different potential problems in the village and determined that marketing was the only feasible direction. For improvements to growing, the village does not have a consistent water supply as their only source of water comes from a local brook. Because of this they are seeking to introduce an irrigation system to help disperse the water to their crops. Pests and diseases limit their rice yield which forces the women to turn to government experts. These government workers identify the pest or disease and provide them with appropriate pesticides. Despite this government aid, this process is time consuming, and by the time the villagers receive the appropriate aid it is too late to save the affected crop. In addition, the women did not identify any issues with the storage, packaging, or drying of rice in their village, which led us to believe that we could not approach those areas in our project because we would most likely not have their cooperation. When asked about the processing of the rice, the women responded that they liked the hand-milling process because they understood that it is a quality that makes their rice unique. Despite this, the process is labor-intensive and time-consuming, which does not allow them to process a large amount of rice in an efficient amount of time. Although there were definite problems involving the growing and processing of the rice, these needed to be solved with money neither the village nor the Raks Thai Foundation currently has, which led the team to rule out growing and processing from our possible project directions.

4.1.3 The goals of the Raks Thai Foundation and Mae Khong Khaa women's Co-op

After ruling out these areas of the rice process, the project team determined that marketing was a common problem identified by both the villagers and the Raks Thai Foundation. Originally, we aimed to ask the women if they had any ideas about how to market the positive attributes of their rice. Upon conducting the interview, the project team realized that the women had not put thought into the uniqueness of their rice compared to other rice competitors except for understanding that their hand-milling processing is unique. They did not understand how their rice is marketed by the Raks Thai Foundation and had never considered creating a logo, name, or any other marketing tool that could increase their rice's sales. They also could not

identify how marketing could increase their rice sales and future profit. This information led us to determine that an educational conversation with the women's cooperative would be beneficial in showing them how marketing can increase both their rice sales and their total profit. Our belief was that if the women were able to understand this, it could lead to them being able to address the potential of increased rice production coupled with enhanced marketing.

When asked about their overall goal for the group, the women responded that they would like more income so that more money would be circulating in their loan system. The current rice sales do not provide the village women with a sufficient amount of loan money to distribute to individual households. If more money is in this system, the money will be able to be distributed to individual members who provide their rice for sale by the Raks Thai Foundation. Instead of taking a loan out of the credit pool for things like health care and their children's education, they would be able to distribute the money generated by rice sales directly to families so that it would become a consistent source of income to be used for any purpose without interest.

After identifying the villager's goal, we compared it to the goal of the Raks Thai Foundation. The Raks Thai Foundation's future goals for Mae Khong Khaa are to eventually make it so that the village no longer needs their help, as they cannot provide aid to the village indefinitely. The foundation initially became involved with the village to help them reach a self-sustainable lifestyle and to discourage dependency on large corporations to buy their cash crops. They gave us valuable information on the village that can be seen in section 2.3. The current problem for the foundation is that although they have started to bring the Mae Khong Khaa rice into the market, they have not been able to find a consistent buyer. The Raks Thai Foundation would like to use rice as a tool to teach the village that becoming self-sustainable is possible by growing the food they need to eat and selling the surplus, which is what is currently done with the mountain rice.

4.1.4 Limitations

A main limitation when interviewing the Mae Khong Khaa villagers was that they did not understand the current competitors that are present in the hand-milled rice market. If they were able to understand and compare their product to the competition, they may have been able to come up with more in-depth positive attributes of their rice.

4.1.5 Conclusion

In conclusion, the project team chose a problem that was identified by both the Raks Thai Foundation and the Mae Khong Khaa villagers. The interviews showed the team that although the village may see areas of improvement in their growing and processing techniques, these problems require money to solve, which neither the village nor the Raks Thai Foundation has. Several economic characteristics of the village allowed the team to determine that it would be extremely difficult for the village to become economically self-sufficient and to stop growing

corn, at least for the immediate future. In addition, the village women do not have a proper understanding of their hand-milled rice in a market setting and do not understand the current competition and how their rice can be marketed to be sold more consistently and for a higher price, which would allow them to receive higher income. Based on this information the team concluded that an educational marketing program would be beneficial for the villagers to understand more about their rice in a market setting, and also present to them what research we have done that will potentially increase the marketability of their rice.

4.2 The key strengths of the Mae Khong Khaa rice processed by the villagers are the traditional growing and milling techniques.

The problem our group faced was finding a consistent market for the Mae Khong Khaa rice that would produce maximum income for the villagers. This section explains the attributes of the Mae Khong Khaa rice from the perspectives of the women's cooperative and the Raks Thai Foundation's distributor, Khun Chalerm. Using information gathered by both the women and Khun Chalerm, the project team analyzed the strengths, weaknesses, opportunities, and threats of the Mae Khong Khaa rice in the market, displayed in Table 2. The results below explain how the project team came to these conclusions.

4.2.1 Marketing Attributes

The village women identified attributes of their rice that appeal to them, which were then used as marketing attributes for the rice. They told us that they prefer their mountain rice over paddy rice because of the mountain rice's soft and sticky texture along with its sweet taste. In addition to their personal preferences, we asked them about the way the rice is grown and processed. They value the way that they hand-mill the rice in addition to the fact that the rice variety they produce can only be found in this village. These facts would encourage consumers to purchase authentic, hand-milled Mae Khong Khaa rice that cannot be found anywhere else in the world.

The Raks Thai Foundation distributor, Khun Chalerm, provided us with information on attributes of the rice that current customers value. The physical attributes included the soft, slightly sticky texture, which makes it similar to Japanese rice, supporting our information gathered from the villagers. Another common reason that customers purchase Mae Khong Khaa rice is that they want to help the villagers by buying their rice.

4.2.2 SWOT Analysis

The information gathered from Khun Chalerm and the women's cooperative in the Mae Khong Khaa village allowed us to develop a SWOT analysis of the attributes of the Mae Khong Khaa rice. This analysis, shown in Table 2, lists the strengths, weaknesses, opportunities, and

threats of the rice. As part of our SWOT analysis, we analyzed some of the products produced by the Royal Projects to compare with the Mae Khong Khaa rice.

Table 2: SWOT analysis of rice attributes

Strengths	Weaknesses
• Hand-milled. • Softer and stickier than normal brown rice. • Grown by Karen people. • Cannot be found anywhere but the Mae Khong Khaa village. • More nutritious than white rice. • Production, processing, and sales do not employ child labor. • Non – genetically modified plant.	• Unappealing due to broken grains. • The packaging of the rice is plain. • The cost of the product is high in the current market it is sold in. • The product has no certifications. • The cost of production is high, limiting the amount of profit the villagers receive. • The rice has a short shelf-life.
Opportunities	Threats
• Competitors do not present the story of the farmers who grow the rice. • The market of health conscious people is growing. • There is a possibility of new markets in Bangkok and Chiang Mai.	• Rice yield in the village is low and limits the amount of rice that can enter into the market. • New competitors with hand-milled rice products may arise in the future.

Table 2 shows that the villagers’ lack of marketing knowledge and experience contributes to the weaknesses of the rice as a product and constrains the villagers from making more income than they currently do. Villagers do not understand that broken grains in their rice is not something that consumers value. The consumers lack of knowledge of the special traits of the rice will tend to steer them away from the product. In some cases, Khun Chalerm notes that when he is able to explain to some of the customers why the rice grains are broken, they will often purchase the rice. In addition, Khun Chalern said that a main marketing attribute of the rice is the Karen women that grow it because oftentimes, customers purchase the rice in order to help the village.

4.2.3 Limitations

The limitations of these results match the limitations found in the previous section, 4.1, and must be kept in mind when analyzing the data. In addition, when gathering data on the

current customers for the Mae Khong Khaa rice, we were unable to survey the target population at the farmers' market, as time constraints made it impossible for us to visit the market on the two days of the week that it was open. If we had been able to retrieve these data, we would have had a greater insight as to why the current customers continue to purchase the rice. Another main limitation is that we do not have specific nutritional information for the Mae Khong Khaa rice. The nutritional information we do have comes from general brown rice nutritional facts found in section 2.5 of our report.

4.2.4 Conclusion

The strengths for the Mae Khong Khaa rice mainly include its texture and taste in addition to the traditional way it is grown and processed. These attributes led the team to conclude that highlighting the rice's texture in addition to the story of the villagers would be beneficial for marketing the rice because it will both make the product appealing and make the customer want to support the village by purchasing the rice.

4.3 There are several markets that would support the introduction of the Mae Khong Khaa rice based on their consumer profile.

Using the initial information gathered from Khun Chalerm, the project team identified several groups of people that would have interest in the rice including Japanese, tourists, health-conscious people, and university professors. Japanese and university professors make up most of the current customer base, and Japanese and health-conscious people are new potential populations to market the rice to. The project team surveyed professors at Chulalongkorn University and tourists at malls in Bangkok and found that while professors would be a good target population to market the rice to, tourists would have to be approached in a different manner because of their responses to our initial survey. After interviewing with a marketing expert from IBM, we realized that we needed to focus on physical markets and their respective customer bases rather than the target populations, which changed both our questions on the surveys and where we conducted them. We surveyed at several locations, and the project team determined that the farmers' market at K-Village in Bangkok and Ton Payorn Market in Chiang Mai are potential introduction markets for the Mae Khong Khaa rice, based on the limited annual production of the rice. The village is unable to produce enough rice to sustain a large market, so these markets were chosen based on their small size. The results below explain how the project team came to these conclusions.

4.3.1 Current Mae Khong Khaa rice customers.

The Raks Thai Foundation distributor, Khun Chalerm, provided us with the current customer demographics for rice sales at the farmers' market in Chiang Mai. This information gave us insight on how to expand the current market and how to identify other markets in Chiang Mai and Bangkok. Khun Chalerm identified two specific groups of people who are currently

interested in buying the rice, professors at Chiang Mai University and Japanese residents of Chiang Mai. He also believes there is a significant potential to market the rice with the tourist population. He explained that people of Japanese nationality value the rice because it has a similar consistency to Japanese rice, and that the tourism market is usually stable and is a good market for introducing the rice. Finally, he pointed out that the Mae Khong Khaa rice is more nutritious than white rice, which should make it more appealing to some customers, especially if they are health-conscious. Using this information, the project team determined that surveying Japanese, tourists, health-conscious people, and university professors would be a beneficial way to determine if the Mae Khong Khaa rice would be popular among these target populations.

4.3.2 Tourist and professor surveys

Surveys were initially conducted at three separate malls in Bangkok-- MBK, Central World, and Siam Paragon-- to target tourists, and at Chulalongkorn University to target university professors. From these two surveys we discovered that Chulalongkorn University professors represent a potential market. The majority of ten professors surveyed said that they consume rice more than once a day and that they would buy the rice based on its nutritional values, unique attributes, and from wanting to help the village. The project team concluded that tourists would not be a good market for purchasing the packaged rice, as seen in Figure 9, but restaurants would be a beneficial target market because tourists are interested in trying the product, as seen in Figure 10. Restaurants would be a way for tourists to try the rice without directly having to buy it off the shelf.

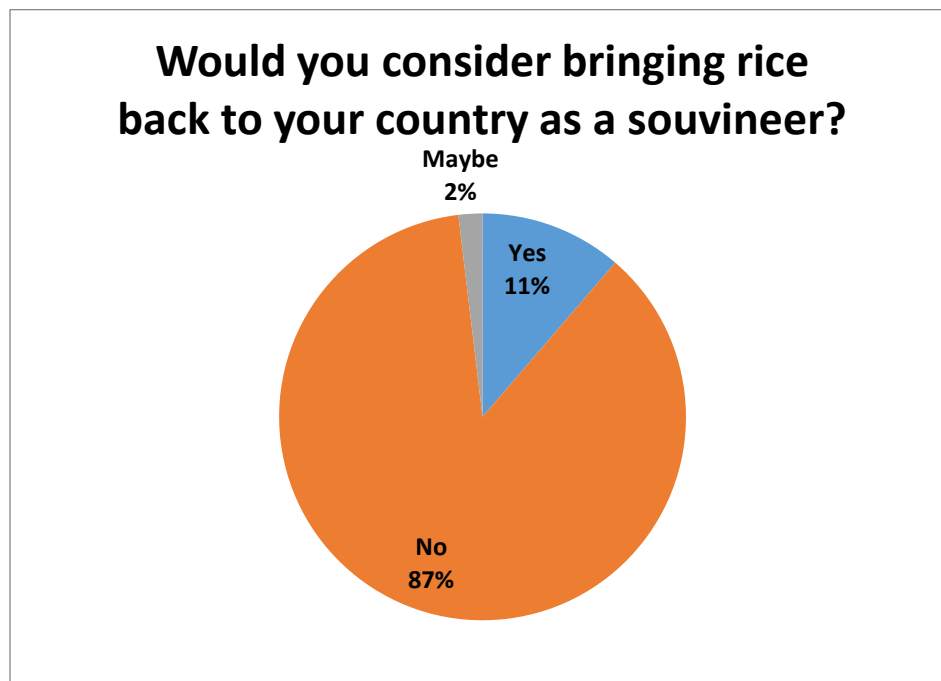


Figure 9: Would you consider bringing rice back to your home country as a souvenir?

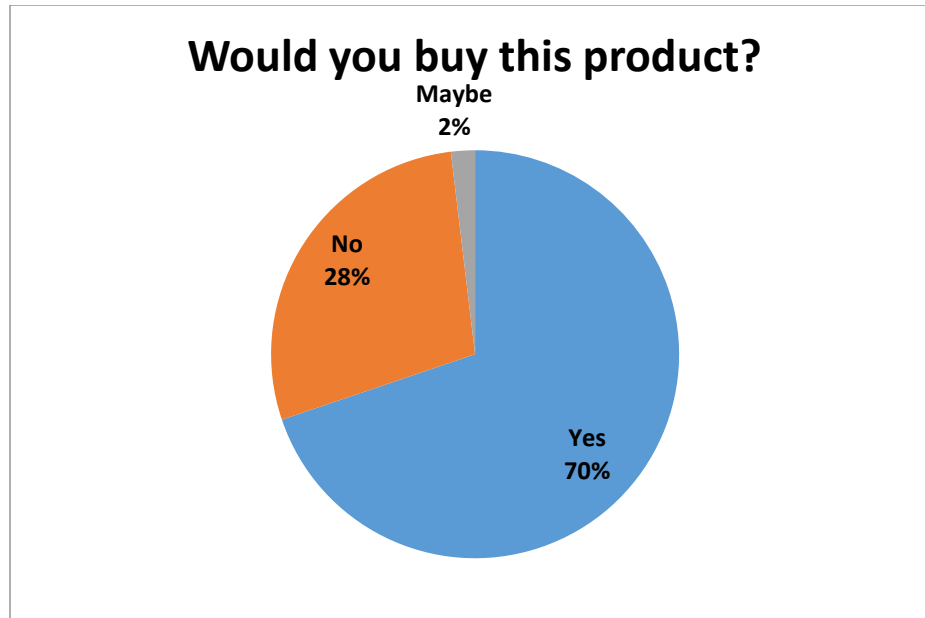


Figure 10: Would you buy this product?

The project team interviewed with two restaurants in Chiang Mai; The Riverside and Khun Churn to determine each restaurant's use of brown rice and whether the owner/manager thought the Mae Khong Khaa rice would be successful in his restaurant setting. The Riverside restaurant's manager shared that he receives his rice from a long-time business partner and that the restaurant is committed to their suppliers. However, he took a sample of the rice and said he would bring it to his next staff meeting and will ask them to try the rice and see if they think it would be good for the restaurant's menu and customers. He also gave us insight on tourists. He strongly believes that the rice should be sold in $\frac{1}{2}$ kg bags to tourists as they would not want to carry a whole kg of rice back home. The reason he would purchase the rice, if any, would be to help the villagers, not because of any economic gain that might occur. The overall attitude of the interview was positive, leading us to think that if the restaurant did not already have a loyal source that they buy their rice from, they would be open to selling the Mae Khong Khaa rice.

The Khun Churn restaurant buys all of its rice from an organic farm in Mae Chaem and mills it every day at the restaurant, thus he would not consider purchasing a different type of rice because of his previous loyalties to his rice distributor, similar to The Riverside. In addition, the restaurant's owner does not think there is any difference in terms of nutrition between machine and manually milled rice; the only thing that differs is the story, which would influence him to purchase the rice.

After interviewing these two restaurants, we concluded that although these two restaurants may not be a good place to market the rice because they currently already have a loyal source that they purchase their rice from, restaurants remain a potential market because there are people who would buy the rice for the background story behind it and to help support the villagers.

4.3.3 Market Surveys

The project team interviewed with Chandra Venkatapathy, a marketing expert at IBM, to understand how best to approach the markets in our marketing plan. He told us that information gathered from surveys should focus on who the people are for each location, what they want to see in a product, and how they receive information about products. Because of this information, the project team revised our surveys to answer these three main questions. We also determined from this interview that we should focus on the places these target populations go to instead of the populations themselves. Because of this, we determined three separate markets to survey the population at: K-Village farmers' market in Bangkok; Nihonmachi Market in Bangkok; and Ton Payorn fresh market in Chiang Mai.

Surveys were conducted at Nihonmachi Market in Bangkok to target Japanese consumers, at Ton Payorn Market, a fresh market in Chiang Mai, and K-Village Farmers' Market in Bangkok to target health-conscious people. The survey asked whether respondents were conscious of the amount of vitamins and minerals in their diet to determine whether the populations at the markets were health-conscious. The project team determined that if a respondent answered yes to this question, they might be interested in purchasing hand-milled rice for its nutritional benefits, as mentioned in section 2.5 of this report. From the surveys at K-Village farmers' market and Nihonmachi Market, 56.3% of the surveyed population responded yes. Although this is only slightly more than half, the surveys were a good sampling of the populations at the markets. In comparison, the survey taken at Ton Payorn market revealed that 65% of the population was conscious of their vitamin and mineral intake, which would make the customers at this market potential buyers of the Mae Khong Khaa rice.

In addition to determining the number of people conscious of their vitamin and mineral intake, the project team determined how often the populations at the markets eat rice. At K-Village and Nihonmachi, 74.6% of the population responded that they eat rice every day, and often times two to three times per day. At Ton Payorn market, 95% responded the same way. This shows that the populations at these markets buy rice in order to consume it several times per day, which would potentially make rice a successful product at these markets.

4.3.4 Visual Assessment of Markets

The project team used the data in this section to determine that the K-Village farmers' market, Nihonmachi Market, and Ton Payorn Market all have customers who could be positive towards the Mae Khong Khaa rice. However, the physical attributes of the markets must be taken into consideration before determining if the market itself is appropriate. Physical attributes include the type of products that are already being sold there, the form these products come in, and the price at which the products are being sold. At the K-Village farmers' market, the project team found that the products sold match the Mae Khong Khaa rice. There were two other types of vacuum-packed nutritious rice being sold by private vendors; Jasberry rice and Happy Health

Club rice. These rice brands were sold in approximately 1 kg packages and were sold for 160 baht and 110 baht, respectively. These prices are prices at which the Mae Khong Khaa rice could be sold if marketed competitively. At both booths for the rice brands, they handed out brochures with information on the rice including marketing attributes such as nutritional facts and certifications. In addition, this farmers' market only occurs once a month, which would be beneficial for the Mae Khong Khaa rice. The production of the rice in the village is limited, which makes a once a month buyer ideal for the rice because the supply would match the demand. In summary, the project team identified the K-Village farmers' market as a potential introduction market for the rice.

The Nihonmachi Market did not match the physical attributes that would be ideal for an introduction market for the Mae Khong Khaa rice. Nihonmachi Market is made up of established private shops that would require each of these shop owners to agree to sell the rice in their stores. From our findings while interviewing restaurant owners, we have realized that it is very difficult to enter a large, established market without personal connections. The Raks Thai Foundation would need previously existing connections with this market to potentially sell their rice there. The project team determined that Nihonmachi Market would not be a potential introduction market for the Mae Khong Khaa rice. However, because Nihonmachi Market is in close proximity to K-Village market, the two markets may share some of the same customers, which would be beneficial for rice sales as the customers at Nihonmachi Market might want to buy the rice.

Ton Payorn Market can be identified by its attribute of being an outdoor fresh market. The project team observed that the rice being sold there was either in open bins or precooked by private sellers. In order for the rice to be introduced to this market, vendors may have to switch the way they sell the rice to match the market by either pre-cooking the rice or selling it without packaging. Overall, the project team determined that Ton Payorn Market is a potential introduction market for the Mae Khong Khaa rice.

4.3.5 Limitations

There are specific research limitations to keep in mind when reviewing the data. Tourists may have thought that we were soliciting a product when we initially approached them based on our professional appearance. This formality would have influenced their response when answering whether they would buy the product. To counter this, we began to approach respondents by explaining that we needed to complete this project for our university in order to graduate. This emphasis on education captured their attention and made sure respondents were aware that we were collecting data, not soliciting. Despite our pre-emptive measures, some respondents apologized to us for saying that they would not purchase the rice, showing that they thought we had an emotional tie to the product. In future surveys, we did not ask this question because it was confusing to the respondent and not necessary for analyzing the population at a

target market location. When surveying tourists at three malls in Bangkok, the survey did not address whether they would purchase the rice in a restaurant setting. However, we still drew the conclusion that restaurants would be a possible market for the rice based on the survey data. It would have been more accurate if we asked whether they would be interested in purchasing this type of rice in a restaurant.

The main limitation in surveying professors at Chulalongkorn University was that we surveyed only ten Chulalongkorn University professors out of more than 2800 professors at the university. This is not a representative sample of this population, although the data were useful in determining whether the university professor population at Chulalongkorn University could be a potential target population. In addition, nine out of ten professors were from the chemistry department, which is not representative of every department at the university. Also, this survey targeted a population rather than a location. Although we determined that this population could possibly lead to success in rice sales, when we asked where they usually shop and buy rice, the options given in the survey were large grocery and department stores, which are not potential markets for the rice due to production limitations and we did not ask them if they ever shopped at a farmers' market such as K-Village.

When conducting the surveys at K-Village, Ton Payorn Market in Chiang Mai, and Nihonmachi Market, one limitation was that we did not survey at different times of the day in order to get responses from customers that might come to the market at different times. We only completed two questionnaires at Nihonmachi, which is within walking distance of the K-Village farmers' market. We surveyed a total of 11 Japanese people between Nihonmachi market and K-Village. It is likely that some of these eleven people were on their way to the farmers' market from the Nihonmachi parking lot, which was why the project team decided to combine the responses from these two markets when analyzing the data. There are also several limitations to keep in mind when analyzing data from specific questions. The results from the question that asked respondents "do you know what manually milled rice is?" may be skewed because of the definitions of the term itself. Respondents may have thought that because they knew that "manually milled" rice was milled with your hands, they fully understood the product which would influence their answer to that question. In addition, one question on the survey asked whether the name "Khaw Mae Khong Khaa" was an effective name, which confused the respondents because it was a question based around the product and was unlike any of the other questions. The project team has recognized this limitation and has excluded this name question from our results.

4.3.6 Conclusion

In conclusion, we have identified three separate markets for the Mae Khong Khaa rice: K-Village farmers' market in Bangkok; Ton Payorn fresh market in Chiang Mai; and restaurants in Bangkok and Chiang Mai. K-Village farmers' market is the most ideal market for the rice.

Ton Payorn fresh market has an ideal population, but the physical appearance of the rice may have to be modified as the only rice that is sold there is in open buckets or cooked. For restaurants, a restaurant would have to be found that does not already have a loyal source for their rice. A start-up restaurant would be a good example of a potential market for the Mae Khong Khaa rice.

4.4 Internet advertisements as well as an effective packaging design are beneficial strategies to reach consumers.

Based on data gathered from Khun Chalerm and potential rice consumers, the project team concluded that out of effective marketing media such as TV, internet, magazine, and newspaper advertisements, internet advertisements would be the most feasible considering the budget limitations of the Raks Thai Foundation. Out of internet advertisements, a Facebook page or YouTube channel would be effective, considering consumer usage of these interfaces. In terms of effective packaging, nutritional information and information on the product in a language other than Thai were the most important points to include on the package. The results below explain how the project team came to these conclusions.

4.4.1 Potential improvements for marketing the Mae Khong Khaa rice.

When asking Khun Chalerm about potential ways to increase rice sales through marketing, he said that often times he has trouble selling the rice because customers do not understand why the rice is unique or why the rice has broken grains. He frequently has to explain the process to the customers in order for them to buy the rice. Once they realize the unique qualities of the rice, they are more interested in helping the villagers and accept the broken grains as products of hand-milled rice. He suggested that our team make a flyer so he could hand it out to customers. This would save him from explaining the rice and would attract more customers. In addition, he said that the information on the flier should include nutritional information, the species of the rice, and directions on how to cook the rice because it does not cook well with some rice cookers. The project team used this information and included it in either the brochure or in the suggestions for packaging content.

4.4.2 Survey for Potential Rice Consumers

To assess whether a brochure would be an effective marketing medium, respondents were asked about manually milled rice. When asked if they knew what manually milled rice was, 67.1% of respondents from K-Village farmers' market and Nihonmachi responded yes, but out of that, 48.9% of people said they did not know how much they would pay for 1 kg of the rice. This means that although they are aware of what the word means, they are most likely not aware of manually milled rice's market value. The project team determined that at K-Village and Nihonmachi market, a brochure explaining the attributes of the rice would be beneficial since these populations do not understand the market value of this type of rice. At Ton Payorn market,

80% of respondents knew what manually milled rice was, and out of this only 18.7% did not know how much they would pay for 1 kg of the rice. Despite this, the project team determined that a brochure would be potentially effective in Ton Payorn market because the brochure explains why there are broken grains, which Khun Chalerm, the Raks Thai Foundation's distributor, identified as a limitation when marketing the rice to customers.

The tourist surveys with respondents from three malls in Bangkok were analyzed for marketing media. They showed that TV, internet, and magazine and newspaper advertisements were the most influential marketing media, as shown in Figure 11.

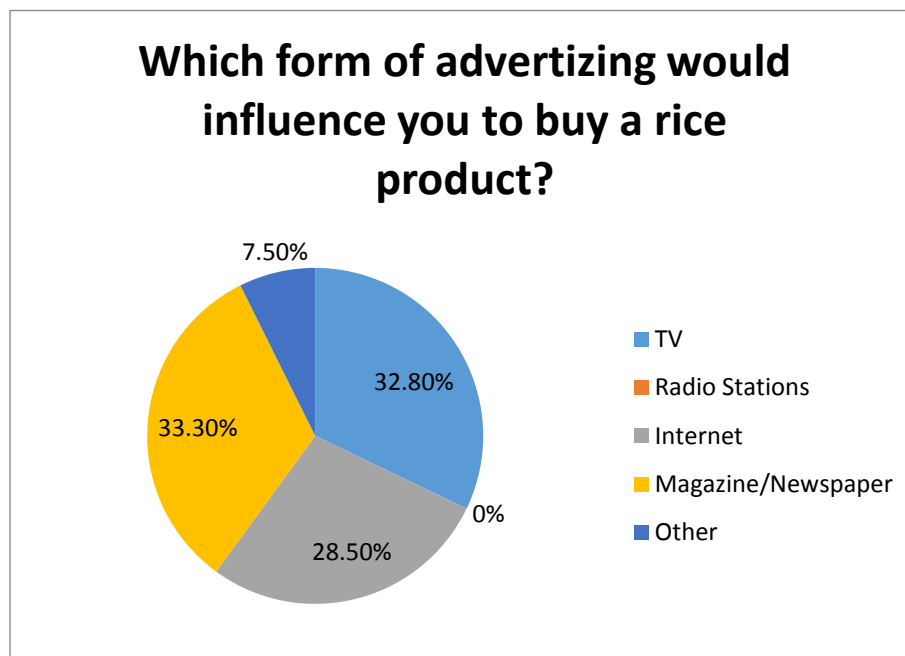


Figure 11: Which form of advertizing would influence you to buy a rice product?

The project team believes that internet advertising would be the most feasible for the Raks Thai Foundation to use considering the budget constraints of the Foundation. In addition, half of the responses from Chulalongkorn University professors showed that internet advertising was the most influential. However, we include suggestions for TV and newspaper advertisements in our marketing plan as well. We also analyzed different types of internet media and their potential effectiveness. The responses obtained at Ton Payorn Market in Chiang Mai, K-Village farmers' market, and Nihonmachi market in Bangkok showed that not only do 100% of respondents have access to the internet every day, but people use Facebook and YouTube often. Therefore, the creation of a Facebook page, a website, and a YouTube channel could impact potential rice customers because of their accessibility to the advertisements. Figure 12 represents the respondents that indicated how often they use Facebook and YouTube. There were several other respondents who said they use these interfaces, but did not specify how often, so they have been taken out of the total when calculating percentages. Due to the difference in nature of the two social networks, Facebook is generally more accessed by the respondents. On the other

hand, YouTube serves a rather specific video function and access frequency is significantly lower.

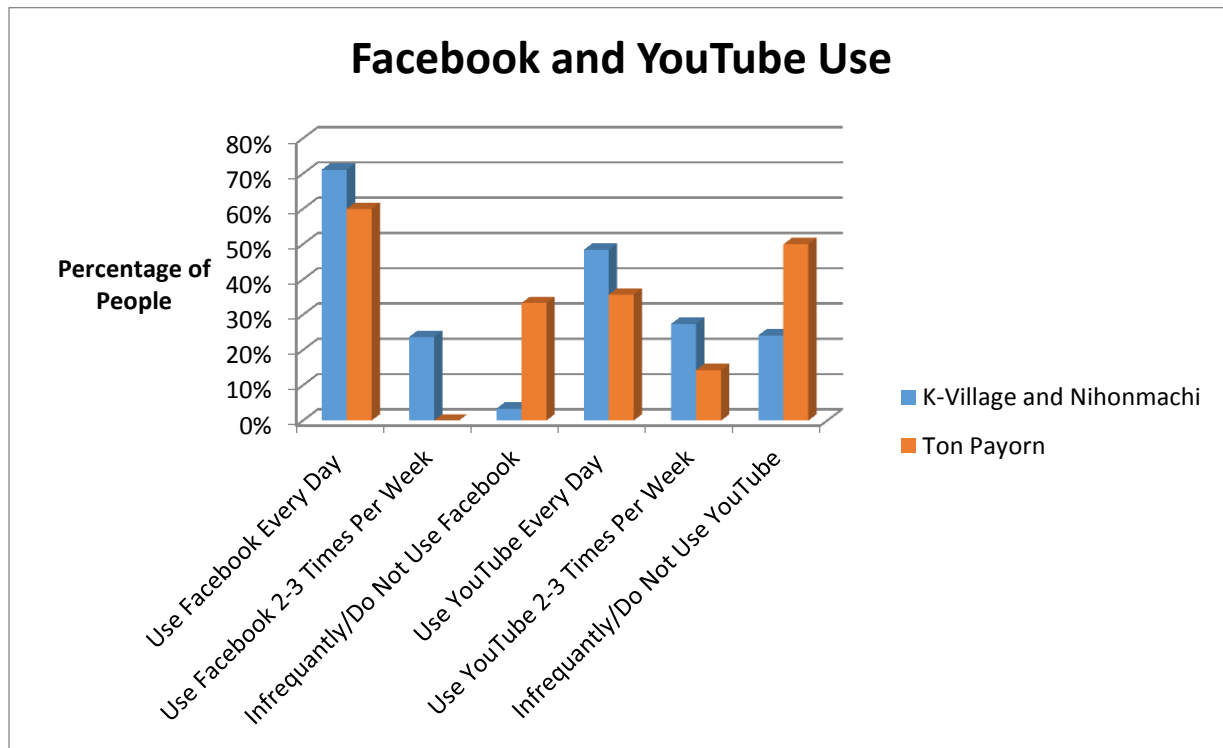


Figure 12: Facebook and YouTube usage

In addition to marketing media, we also asked respondents about packaging design in order to make recommendations on what to include on the rice package. We found that a new package design could increase the sales of the Mae Khong Khaa rice. Using the responses obtained at K-Village farmers' market and Nihonmachi Market, the project team found that nutritional information and information on the product in a language other than Thai were the most important points to include on the package. In addition to these factors, the project team acknowledges the need for pictures, a name, and a logo on the package, supported by information presented in section 2.2 of this report. A new name would be beneficial because most Chulalongkorn University professors stated that they did not find the current name of the rice, which is the species name, appealing.

Figure 13 below illustrates how important nutritional information and information on the package in a language other than Thai is compared to the other options given. The project team found that results for Ton Payorn Market were similar to that of K-Village and Nihonmachi and thus we did not display those results. Although this information is not displayed in this chapter, it can be found in Appendix V.

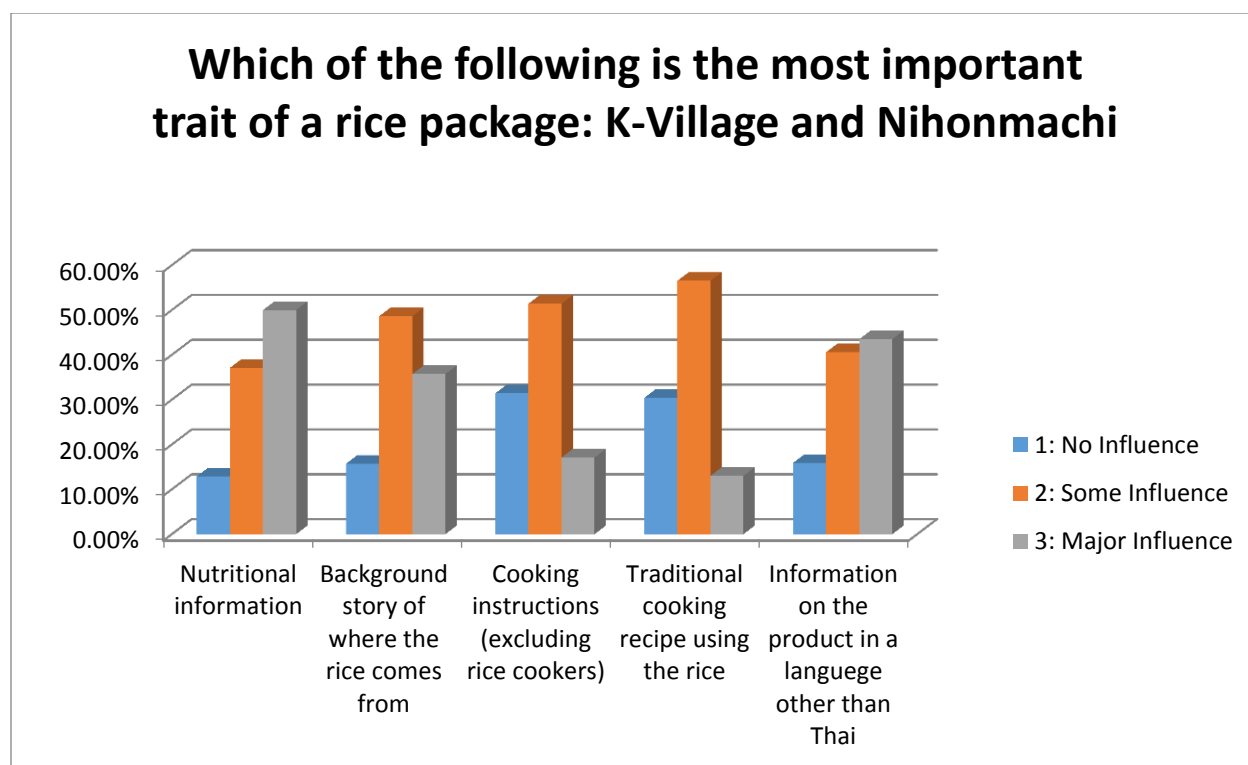


Figure 13: Which of the following is the most important trait of a rice package?: K-Village and Nihonmachi

Another change to be considered regarding package design is the use of a second language. The project team determined that either English or Japanese would be beneficial considering the current customer base. Forty three percent of respondents said information in another language on the rice package besides Thai was most important in a rice package. This is displayed in Figure 13 above. The addition of a second language on the package would attract a larger consumer base and help them to better understand the attributes of the rice. In addition, the information on the package should include the background story of Mae Khong Khaa, and, space permitting, basic cooking instructions and a recipe using the rice.

4.4.3 Limitations

The general limitations described for the surveys conducted at the K-Village farmers' market, Nihonmachi Market, and Ton Payorn Market remain the same. A main limitation of the survey was that despite being asked to write how often they used the interface, many respondents only answered "yes" when asked if they "use Facebook and YouTube and if so, how often?" This limited our data in that we were not able to know how often those respondents used each interface. Another limitation is that we only asked tourists and university professors in our initial surveys on what types of marketing media have the most influence on them. We did not ask the populations at the markets for this information but instead focused on internet media. Despite this, the project team determined that internet media could be influential because of the fact that 100% of respondents have access to the internet every day.

4.4.4 Conclusion

In conclusion, internet media is an effective way to reach the target populations at K-Village farmers' market and Ton Payorn fresh market. A Facebook page and YouTube channel would be successful because of the frequent usage by these populations. Nutritional information and information on the package in another language are the most important factors of a rice package, which we have included in our recommendations for the Raks Thai Foundation.

4.5 Marketing Plan

An organized way to develop a promotional flyer, improved packaging, and other marketing concepts is through the use of a marketing plan. Based on our team's research and fieldwork, we have developed a marketing plan for the Raks Thai Foundation and the people of Mae Khong Khaa. This marketing plan is written in both English and Thai languages and includes a section describing how to evaluate its effectiveness once it is implemented. The key characteristics of the marketing plan include a current product profile, information on how to introduce the product to a specific market, and effective marketing media, including a marketing brochure, new logo, and details on what information is most important to advertise. The marketing plan is a major deliverable of our project and its contents can be found in Appendix C.

4.5.1 Logo

According to the relevant literature on logos, found in section 2.2 of our report, logos create product recognition and consequentially, more loyal customers. Our team has designed a sample logo for the Mae Khong Khaa rice which can be found both in the marketing plan and separately in Appendix G. Due to limited time we were unable to present the logo to the villagers, but we suggest that the Raks Thai Foundation present this logo to them.

4.5.2 Brochure

The team designed a marketing brochure for the Mae Khong Khaa rice based on information consumers preferred to see on packaging. If the brochure were placed with or posted next to the rice packages, we believe that sales of the rice would increase. The design of the brochure can be found both in our marketing plan and separately in Appendix F.

4.6 Educating Mae Khong Khaa Women on Marketing

One of the Raks Thai Foundation's future goals is to give the Mae Khong Khaa villagers full ownership of the packaging, shipping, and selling processes for their rice so they can become self-sustainable. However, many of the villagers are uneducated on marketing concepts and have not considered ways to market their rice, as found in our initial assessment of the village in section 4.1.1. Therefore, an educational program for the women's cooperative was created to

educate them on basic marketing techniques and what the team has accomplished in this project. The outline of this presentation is given in Appendix H. The presentation was sent to the Raks Thai Foundation so that they may use it in other surrounding Karen villages in the future.

The educational program was presented to the majority, 13 out of 16 members, of the women's cooperative. Overall, through the use of visual aids, the presentation attempted to persuade the villagers to shift from growing cash crops to rice, by reinforcing the mindset of self-sustainability and emphasizing unstable market price fluctuations of corn. The women were engaged with the prepared activities and provided helpful responses. As a result of the presentation, 6 out of 13 attendees stated that they would reconsider their production ratio of cash crops to subsistence crops. The team also gained feedback from the villagers suggesting that the team should spend more time in the village to understand their lifestyle in order to help incorporate marketing strategies for them.

4.6.1 Limitations

The main limitation of this presentation was the language barrier. The presentation was translated from Thai to Karen, which increased the amount of time the women had to be attentive and may have caused miscommunications due to translations. These women have never had a formal education; therefore, we should not expect them to listen to a presentation for long periods of time. If the presentations in the future could be given directly in the Karen language, this would decrease the time needed and reduce miscommunication.

4.7 Summary

We have determined that an educational marketing program for the Mae Khong Khaa women is a beneficial way to both present what we have done in our project and allow them to start thinking about how marketing can increase their income. The rice has several marketing attributes that, if marketed effectively, could be used to increase sales. These attributes include the slightly sticky texture, manual milling process, and the nutritional benefits that are found in brown mountain rice. In order to effectively market these attributes, target markets were analyzed and it was determined that farmers' markets, Japanese markets, and tourist-oriented restaurants would be potential places for the Raks Thai Foundation to market the rice based on their current customer profiles. Through surveying customers, it was found that internet advertising and advertisements in magazines and newspapers are common marketing media that reach the target markets. This information is included in both our marketing plan and our marketing presentation for the Mae Khong Khaa women.

5.0 Conclusions and Recommendations

Based on the results of our research, we have identified conclusions and recommendations for the Raks Thai Foundation and the villagers of Mae Khong Khaa. This chapter gives suggestions on implementing our marketing plan and how to use the village education materials. In addition, it includes recommendations on future marketing media and strategies for the Raks Thai Foundation.

We came to the conclusion that the rice should be marketed at small farmers' markets and selected restaurants, not to specific populations. In addition, a brochure should be available to customers so they can learn more about the hand-milling process. Finally, the package should include the nutritional facts and information in other languages. We have supplied our sponsor with a marketing plan that explains in detail, strategies to increase the sales of the product and the tools for measuring its success.

5.1 Key Conclusions

The team determined four key findings to carry out the marketing plan for Mae Khong Khaa rice, which includes why marketing the Mae Khong Khaa rice would benefit the Raks Thai Foundation, marketing attributes of the rice, identification of new target markets, and effective marketing media.

1) The most beneficial path to increasing Mae Khong Khaa's profit is marketing.

There are many problems occurring in the Mae Khong Khaa village such as a lack of an irrigation system, crops plagued by diseases and pests, low processing efficiency, and insufficient sales. None of these issues can be addressed until the villagers realize the importance of these problems and have a higher income so that they can obtain an irrigation system to increase production, or machinery to improve the milling process. Therefore, our team determined that the most beneficial way to increase the income in the village was to address and improve the marketing techniques of their rice and educate the villagers on marketing strategies.

2) The key strengths of the Mae Khong Khaa rice are the milling techniques and the nutritional value of the product.

Based on the results of our surveys, we identified that the uniqueness of the Mae Khong Khaa rice relies on its production, processing, and nutritional information. The Mae Khong Khaa rice is a type of grain that can only be found in the Mae Khong Khaa village. The rice also contains increased nutrition and unique characteristics of northern rice varieties. Promoting the origins and development of the product can create a connection between the farmer, the product, and the consumer. Emphasizing its nutritional value can help the product develop steadily into a loyal health-focused market in Thailand.

3) There are several target consumer groups who have interest in different characteristics of the Mae Khong Khaa rice.

Japanese people like the Mae Khong Khaa rice because of its slightly sticky texture and its flavor; which reminds them of traditional Japanese rice. Furthermore, while tourists would not purchase rice as a souvenir, they would be eager to eat the rice during their visit. Based on these data, we conclude that if restaurants were to offer this rice on their menu, tourists would purchase it. Additionally, Thai people, specifically educated, health-conscious Thai consumers, would purchase the rice because of its nutritional value.

4) Internet advertisements, as well as an effective packaging design, are beneficial to target consumers.

We found that advertisements and a newly designed package would increase the sales of the Mae Khong Khaa rice. An enhanced product identity would contribute to the steady development of the product in the market. Furthermore, advertisements through channels such as newspapers, YouTube, and Facebook would create awareness to the consumers about the Mae Khong Khaa rice and its producers.

5.2 Recommendations

1) We recommend that the Raks Thai Foundation use a marketing plan to increase sales of the Mae Khong Khaa rice.

Due to time limitations, although we were able to develop a marketing plan, seven weeks was not enough time to implement it. The data gathered in our fieldwork was analyzed and used to create a marketing plan that seeks a significant increase in the product sales. We suggest that the Raks Thai Foundation begin to implement our plan immediately. This marketing plan can be found in Appendix C of this report in English and Appendix D in Thai language.

The marketing plan includes four key objectives and approaches to aid the Raks Thai Foundation in expanding the market and increasing sales of the Mae Khong Khaa rice. These objectives and approaches are shown in Table 3 below:

Table 3: Marketing plan objectives

Objectives	Approaches
Create a new image for the Mae Khong Khaa rice.	• Create a name and logo for the product. • Develop enhanced packaging for the rice.
Introduce the Mae Khong Khaa rice in target markets.	• Identify potential markets for the Mae Khong Khaa rice. • Take steps to introduce the Mae Khong Khaa rice to these markets.
Implement marketing strategies to promote the rice in these target markets.	• Use media to enhance the sales of the product. • Design a brochure.
Assess the success of the Mae Khong Khaa rice at these markets.	• Conduct an economic analysis on rice sales both at the start of the marketing plan and three months after the marketing plan has been implemented. • Conduct surveys to analyze the appeal of the new package design.

Our results indicate that increased sales would come from an improved visual identity. Potential rice consumers verified that the current rice packaging lacked specific nutritional information and failed to stand out against competitors. We recommend the packaging design, color, and information be updated to attract a larger customer base. Additionally, interviews with middlemen strongly suggested that the rice would benefit from a brochure detailing how the rice is processed.

The packaging and brochure design should include several variables: a picture, a logo, a name, background information on the village, cooking instructions, nutritional information, and hand-milling facts.

Picture: The package and brochure should have a picture of the Mae Khong Khaa villagers processing the rice. We determined that the current package was not appealing and did not stand out against other rice competitors. Emphasizing the unique hand-milling process practiced by the villagers would provide uniqueness to the product.

Logo: A logo should be developed for the Mae Khong Khaa rice. Research shows that logos help customers identify a brand/company. If customers have a positive reaction to a logo, they are more likely to purchase the product and remember it. We suggest that the logo describes either the Karen people or the hand-milling technique through pictures. This type of logo is proven to

be most beneficial to a low-income, start-up business. In the future, if other products were made with the Karen rice, this logo would help link all of the different products to create a complete product line. We have provided the Raks Thai Foundation with a sample logo design that can be viewed in Appendix G.

Name: Interviews with Chulalongkorn University professors concluded that they did not find the name of the rice appealing. The name should be changed from the specie's name to one that sounds appealing in both Thai and English. Our suggestion is that the rice should be called "Mae Khong Khaa Rice" to incorporate the village as much as possible.

Cooking Instructions: Specific cooking instructions using a rice cooker or regular pots should be placed on the package. These details enhance the package attractiveness and provide the customer with rice preparation facts.

Nutritional Value: The nutritional values of rice were the most requested information from potential rice consumers. Educated individuals, such as professors, and those who are health conscious tend to be more curious about nutrition. While we have been provided basic information on highland rice nutrition, we do not have details on the specific rice varieties that Mae Khong Khaa farmers grow.

Background information on the village: We found that customers would appreciate a background story on Karen villagers producing agricultural products. This information would be appropriate on a flyer to educate customers on the village's background story and persuade them to make a purchase so that they can help the village.

Additional Language: After interviewing various ethnic groups, our team has determined that the rice package should include Thai and English translations. The Japanese population and the foreigner populations who were interested in the rice both stated that it would be beneficial if the package had information provided in a different language. The language that both of these groups would be able to read is English. Our team suggests that the Raks Thai Foundation modify the package so that both languages can be included on the package. Furthermore, the English section of the package should include Japanese translations of crucial information in a smaller font. This would allow Japanese consumers who cannot read English or Thai to understand what they are purchasing. We recommend the Raks Thai Foundation hire a person to translate the rice package information, flyer, and brochure into Japanese. The translated language could be printed on a sticker and placed over the Thai information on some packages.

Hand-milling facts: Customers were more likely to purchase the rice when they were informed about the hand-milling process. Due to limited space on the rice package, this information should be placed in a brochure to accompany the rice package.

We have provided the Raks Thai Foundation with a sample brochure that could be used to promote the Mae Khong Khaa rice. This document can be viewed in Appendix F. This brochure should be placed next to the rice at farmers' markets or stores so that buyers can learn more about hand-milled rice and the Karen people.

Some initial obstacles of changing the design of the package could be a decrease in product recognition. To combat this result, middlemen that sell the rice for the Raks Thai Foundation should use word of mouth to maintain the rice's current customers. Another obstacle that may arise is an increase in the cost of packaging. However, the success of the marketing plan should assure the return on the investment.

The marketing plan presents information on potential target populations who would purchase the Mae Khong Khaa rice. It also points out the most beneficial strategies to approach these populations and several potential places where the Mae Khong Khaa rice could be sold. This marketing plan also provides information on the advertising media that should be used in these markets.

We suggest targeting health-conscious people and tourists by using mass media, such as Facebook and YouTube. These two alternatives are cost-effective, easy to use, and can target large masses in a short period of time. We recommend that a Facebook page be set up, where the public can receive general information about the Mae Khong Khaa village and its hand-milled rice. YouTube videos should be created to provide information on the village's history, rice production, hand-milling process, packaging, cooking instructions, and recipes.

If these media are not effective, an enhancement of the product's visual identity should be re-evaluated using the information provided for objective four so that the product will appeal to more consumers.

2) We recommend that the Raks Thai Foundation conduct nutritional testing on the rice.

We recommend the Raks Thai Foundation finance the nutritional testing of the rice at an accredited facility because the nutritional information is very important for our potential customers. The Central Lab Thai and Chiang Mai University food science lab are options that can be considered for rice testing. We suggest that the Raks Thai Foundation test the rice for basic nutritional values such as calories, fiber, protein, fat, sugar, etc., as well as specific vitamins and minerals such as magnesium, thiamin, phosphorus, and Vitamin B6 because brown rice tends to contain more of these nutrients than white rice. Additional information on this recommendation can be found in the marketing plan appendix.

3) We recommend that the Mae Khong Khaa villagers eliminate the use of chemical fertilizers and pesticides.

One way to dramatically increase the profit of a food item is to label and sell it as organic. The villagers should stop using pesticides and chemical fertilizers in fields where mountain rice is grown so that those chemicals already in the soil can disappear over time. We recommend the Raks Thai Foundation help the villagers obtain certifications for their rice such as GAP (Good Agricultural Practices Standard), Organic Standard, Leaf Marque, FDA (Food and Drug Administration), and Fairtrade. These certifications, although different from each other, aim to promote higher quality.

4) We recommend the Raks Thai Foundation perform a production analysis of rice and an economic review of the current crop production in Mae Khong Khaa.

We recommend the Raks Thai Foundation perform a monthly evaluation of the rice production per household. This analysis will help the foundation keep records about the village's agricultural development in the future. Furthermore, an economic analysis regarding production, sales, and marketing should be conducted in order to calculate and compare yearly revenues. An approach to perform this analysis is shown in the marketing plan appendix including an Excel sheet for documentation found in Appendix E.

5) We recommend the Raks Thai Foundation promote an educational plan to teach the villagers of Mae Khong on marketing concepts and stress increased rice production.

We recommend continuing the educational process of Mae Khong Khaa by teaching the villagers about marketing fundamentals and the importance of these concepts in the sales of their rice. A main limitation of the sales of the Mae Khong Khaa rice is that even if the rice was introduced to large grocery stores, the villager's annual production would not be high enough to keep up with the demand. In order to properly expand the market, there must be an adequate amount of rice available to keep up with the growing demand. A main point to our educational program with the villagers was to help them realize that if they can produce more rice, they can make a higher profit. In addition, with all profits made from the rice going into the Raks Thai Foundation's loan, the only way that the villagers can increase their income is to produce more rice. This is why we have suggested to the Raks Thai Foundation to change the way that the profit is distributed, as seen in the next recommendation. We also suggest using this pilot program in other rural villages to increase awareness of marketing and the limitations of cash crops around northern Thailand.

6) We recommend that once there is a significant increase in rice sales, the Raks Thai Foundation implement the intended profit distribution system.

After successful marketing strategies are applied, the Mae Khong Khaa rice sales are expected to increase and can be used to support the Raks Thai Foundation's goal to implement the three profit distribution system described in section 4.1.1 of this report. However, the increase in sale numbers alone does not provide enough incentive for the villagers to increase rice production. Therefore, the Raks Thai Foundation's future plan to divide the profit should be enhanced to distribute more profit back to the villagers. Once the villagers receive higher income via successful marketing, the confidence of the women's cooperative in the current system will boost, as well as attract new members to participate in the program.

5.3 Summary

Northern Karen tribes of Thailand are using outside sources to help them earn money to send their children to school, pay for healthcare, and purchase other necessities. The village of Mae Khong Khaa relies on large companies to purchase many of their crops and the Raks Thai Foundation, our sponsor, to sell their mountain rice. The Raks Thai Foundation was unable to find a consistent market for the Mae Khong Khaa rice, so it was our goal to establish a market for the rice and provide a marketing plan that would increase the rice sales.

Our team conducted extensive research that is the basis for our results and recommendations to the Raks Thai Foundation and the villagers of Mae Khong Khaa. If our deliverables and recommendations are implemented, they can be re-evaluated after three months and one year, and be improved upon by the Raks Thai Foundation to provide the Mae Khong Khaa villagers with the highest income possible. If successful, this plan can also be applied to other rural villages of northern Thailand with the purpose of building a stronger, more independent Karen ethnic community in Thailand.

References

Buadaeng, K. (2007). Identity Matters: Ethnic and Sectarian Conflict. In James. L. Peacock, (Ed.), *Ethnic Identities of Karen People in Burma and Thailand*. Oxford, NY: Berghahn Books.

CARE International. (2013). *Where We Work: Thailand*. Retrieved on November 10, 2013, from <http://www.care-international.org/where-we-work/thailand.aspx>.

Crooker, R. A. (1988). Forces of change in the Thailand opium zone. *Geographical Review*, 78(3), 241-256.

Department of Rice, (2007). *Rice Nutritional Health*. Thailand: Agricultural Organization of Thailand.

Department of Tourism of Thailand. (2011). Tourism 2009. Retrieved February 17, 2014, from: <http://www.tourism.go.th/index.php?mod=WebTourism&file=details&dID=7&cID=276&dcID=617>

Eat By Date. (2012). *How Long Does Rice Last?* Shelf Life Expiration Date. Retrieved on January 24, 2014, from <http://www.eatbydate.com/grains/rice-shelf-life-expiration-date/>.

EcoLabel Index. (2014). Fair Trade. Retrieved on February 7, 2014, from <http://www.ecolabelindex.com/ecolabel/fairtrade>.

Encyclopedia of Life. (2013). *Oryza Sativa. Rice*. Retrieved on November 16, 2013, from <http://eol.org/pages/1115098/overview>

Entrepreneur Media Incorporation. (2014). *How to Create a Logo*. Retrieved on January 24, 2014, from <http://www.entrepreneur.com/article/71902>

Facebook. (2014). Packaging. [Photos]. Retrieved on March 7, 2014, from https://www.facebook.com/anr.raksthai/media_set?set=a.230091940492486.1073741849.100004750443620&type=3

Fairtrade International. (2011). What is Fairtrade? Retrieved February 7, 2013, from <http://www.fairtrade.net/what-is-fairtrade.html>

Frey, J. H., & Fontana, A. (1991). The Group Interview in Social Research. *Social Science Journal*, 28, 175.

Gomez, K. (2001). Rice. The Grain of the Culture. *The Siam Society Lecture Series*. Lecture conducted from The Siam Society, Bangkok, Thailand. Retrieved December 8, 2013, from http://www.thairice.org/html/article/pdf_files/Rice_thegrain_of_Culture.pdf

Google Maps. (2014a). Map of Chiang Mai Area Near Ton Payom Market. [Photo]. Retrieved from <https://maps.google.com/maps/place?ie=UTF-8&q=ton+payom+market&fb=1&hq=ton+payom+market&cid=0>.

Gwinner, J., Harnisch, R., & Mück, O. (1990). *Manual on the prevention of post-harvest grain losses*. Eschborn, Germany: Post-Harvest Project.

Happy Cow. (2014). Map of Chiang Mai Area Near Brown Rice Organic Bistro. [Photo]. Retrieved from <http://www.happycow.net/gmaps/get-map-direct.php?vid=33735>.

Index Mundi. (2014). Rice, 5 percent broken milled white rice, Thailand nominal price quote, US Dollars per Metric Ton. *Rice Monthly Price - US Dollars per Metric Ton*. Retrieved March 6, 2014 from <http://www.indexmundi.com/commodities/?commodity=rice&months=60>.

IRRI. (2013a). Drying. Retrieved January 23, 2014, from http://www.knowledgebank.irri.org/postproductioncourse/module04/Lesson_03.htm

IRRI. (2013b). Rice in Thailand. Retrieved on November 9, 2013, from http://irri.org/index.php?option=com_k2&view=item&id=10944&Itemid=100214&lang=en.

IRRI. (2013c). World Rice Statistics Online Query Facility. Retrieved November 30, 2013, from <http://ricestat.irri.org:8080/wrs2/entrypoint.htm>

Japan International Cooperation Agency. (1999). Support for Thailand under the New Miyazawa Initiative - Supporting economic stabilization of Thailand and increased productivity & export competitiveness in the agriculture sector-. *Press Release*. Retrieved on March 3, 2014 from http://www.jica.go.jp/english/news/jbic_archive/english/base/release/oecf/1999/0929-e.html.

Jitsanguan, T. (2001). *Sustainable agricultural systems for small-scale farmers in Thailand: implications for the environment*. Food and Fertilizer Technology Center.

John Hopkins Bloomberg School of Public Health. (2010). Food Marketing and Labeling. *Teaching the Food System*. Retrieved February 7, 2014, from http://www.jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/marketing_and_labeling.html.

K-Village. (2014). CONTACT K VILLAGE & VISIT US ON SUKHUMVIT 26 BANGKOK. *HOME*. Retrieved March 4, 2014, from http://www.kvillagebangkok.com/contact_us.aspx.

Leaf Marque. (2013). Linking Environment and Farming. Retrieved February 6, 2014, from <http://www.leafmarque.com/leaf/home.eb>.

- Lee, R. W., & Clawson, P. (1993). *Crop Substitution in the Andes*. Office of National Drug Control Policy, Executive Office of the President.
- Lintner, B. (2000). The Golden Triangle Opium Trade: An Overview. *Chiang Mai: Asia Pacific Media Services, March*.
- MacRae, G. (2006). *Growing Rice After the Bomb, Critical Asian Studies*. London, England: Routledge.
- MacRae, G. (2011). *Rice Farming In Bali, Critical Asian Studies*. London, England: Routledge Taylor and Francis Group.
- Magagna, V. V. (1991). *Communities of grain: rural rebellion in comparative perspective*. Ithaca, NY: Cornell University Press.
- Manalili, N. M., & Dorado, M. A. (2011). *Appropriate Food Developing Solutions for Developing Countries*. Rome: Food and Agricultural Organization of the United Nations.
- Google Maps. (2014b). Map of Thailand. [Photo]. Retrieved from website <https://www.google.co.uk/maps/place/Mae+Chaem+District/@13.5139592,98.5778028,6z/data=!4m2!3m1!1s0x30dafccdd68bebe7:0x30346c5fa8a6e10?hl=en>.
- Mind Tools. (2014). *The Marketing Mix and 4Ps: Understanding How to Position Your Market Offering*. Retrieved February 3, 2014, from http://www.mindtools.com/pages/article/newSTR_94.htm
- Mishra, A., Prabuthas, P., & Mishra, H. N. (2012). Grain storage: methods and measurements. *Quality Assurance and Safety of Crops & Foods*, 4(3), 144-144.
- Nagnur, S., Channal, G., & Channamma, N. (2006). Indigenous grain structures and methods of storage. *Indian J Traditional Knowledge*, 5(1), 114-117.
- Neuman, William. (2012). Coca Licensing Is a Weapon in Bolivia's Drug War. *The New York Times*. Retrieved March 3, 2014 from, http://www.nytimes.com/2012/12/27/world/americas/bolivia-reduces-coca-plantings-by-licensing-plots.html?_r=0.
- Oguoma, O. N., Nkwocha, V. I., & Ibeawuchi, I. I. (2010). Implications of middlemen in the supply chain of agricultural products. *Journal of Agriculture and Social Research (JASR)*, 10(2).
- Oryza. (2013). *Rising Rice Imports Threaten Small-Scale Farmers in China*. Retrieved December 10, 2013, from <http://oryza.com/content/rising-rice-imports-threaten-small-scale-farmers-china>

Pace, G. (2010). *How to Bring a Food Product to Market*. Retrieved November 17, 2013, from <http://www.inc.com/guides/2010/10/how-to-bring-a-food-product-to-market.html>

Paley, N. (2008). *The Marketing Strategy Desktop Guide*. London: Thorogood Publishing.

Panitchpakdi, P. (2010). Raks Thai Foundation and Merck Thailand: Evolving CSR – Partnerships. Retrieved December 9, 2013, from <http://www.thecareguys.com/2010/01/22/raks-thai-foundation-and-merck-thailand-evolving-csr-partnerships/>

Patil, R.T. (2011) *Post-harvest Technology of Rice*. Central Institute of Post-Harvest Engineering and Technology, Punjab Agriculture University, Ludhiana (India). Rice Knowledge Management Portal: Directorate of Rice Research.

PBS. (1998). Opium Through History. *Frontline*. Retrieved March 1, 2014 from <http://www.pbs.org/wgbh/pages/frontline/shows/heroin/etc/history.html>.

Phoonphongphiphat, Apornrath. (2013, January). Thailand to rent additional rice storage as warehouses fill up. *Chicago Tribune*. Retrieved December 8, 2013, from http://articles.chicagotribune.com/2013-01-16/news/sns-rt-thailand-ricewarehouses14n0al4z4-20130116_1_rice-millers-thai-rice-prices-tonnes-of-paddy-rice.

Plant Cultures. (2014). Opium Poppy - Traditional Medicine. *Plant Culture Exploring Plants & People*. Retrieved March 1, 2014 from http://www.kew.org/plant-cultures/plants/opium_poppy_traditional_medicine.html.

Polvanich, V. (1972). *Marketing in Thailand*. Master's thesis. Northridge, California: San Fernando Valley State College.

Raks Thai Foundation. (2008). Annual Report 2008. Retrieved on November 10, 2013, from http://www.raksthai.org/files/media/Annual_Eng_2008_for_web.pdf

Raks Thai Foundation. (2011a). *About Raks Thai: Background*. Retrieved on November 7th 2013, from http://www.raksthai.org/new/about-history.php?tr_id=11

Raks Thai Foundation. (2011b). *About Raks Thai: CARE International*. Retrieved November 7, 2013, from http://www.raksthai.org/new/about-history.php?tr_id=12

Raks Thai Foundation. (2011c). *About Raks Thai: Vision and Mission*. Retrieved November 7, 2013, from http://www.raksthai.org/new/about-history.php?tr_id=1

Raks Thai Foundation. (2011d). *Board of Directors*. Retrieved November 10, 2013, from http://www.raksthai.org/new/about-history.php?tr_id=13

- Raks Thai Foundation. (2011e). *Our Work*. Retrieved November 10, 2013, from <http://www.raksthai.org/new/what-we-do.php>
- Rerkasem, Benjavan. (2007). Having Your Rice and Eating It Too: A View of Thailand's Green Revolution. *Science Asia*, 33(1). 75-80.
- Rice Knowledge Bank. (2009a). *Rice Milling*. Retrieved January 23, 2014, from <http://rkb.irri.org/rkb/index.php/rice-milling>.
- Rice Knowledge Bank. (2009b). *Village Milling*. Retrieved January 23, 2014, from <http://rkb.irri.org/rkb/rice-milling/rice-milling.html>
- The Riverside Bar and Restaurant. (2014). The Riverside Bar and Restaurant. [Photo]. Retrieved on March 6, 2014, from <http://www.theriversidechiangmai.com/7-1-printversion.php>.
- Sangkumchaliang. (2012). Consumers' Perceptions and Attitudes of Organic Food Products in Northern Thailand. Retrieved February 24, 2014, from http://ageconsearch.umn.edu/bitstream/120860/2/20110057_Formatted.pdf.
- SELF Nutrition Data. (2013). *Rice, Brown, Long-Grain, Cooked*. Retrieved December 3, 2013 from <http://nutritiondata.self.com/facts/cereal-grains-and-pasta/5707/2>
- Silk, A. J. (2006). *What is marketing?* Cambridge, MA: Harvard Business Press.
- Startup Overseas. (2013). *Marketing a Business in Thailand*. Retrieved December 8, 2013, from <http://www.startupoverseas.co.uk/starting-a-business-in-thailand/marketing-a-business.html>
- Statistics New Zealand. (2013). Non-sampling Error- Interviewing (Int) and Respondent Error (RE). *Non-Sampling Error in Economic Surveys at Statistics New Zealand*. Retrieved February 26, 2014 from <http://www.stats.govt.nz/methods/survey-design-data-collection/non-sampling-error/interviewing-and-respondent-error.aspx>
- Tucci, Sandro. (1998). Eradication of Illicit Drug Crops and Alternative Development. Retrieved March 3, 2014 from <https://www.un.org/ga/20special/presskit/themes/altdev-6.htm>.
- Turley, J., & Thompson, J. (2012). *Nutrition Your Life Science*. Belmont, CA: CengageBrain.com
- United Nations Environment Programme. (2013). Smallholders, Food Security and the Environment. Retrieved March 1, 2013 from http://www.ifad.org/climate/resources/smallholders_report.pdf.

United Nations Office on Drugs and Crime. (2008, Dec). Part 5: Thailand. In *Sustaining Opium Reduction in Southeast Asia: Sharing Experiences on Alternative Development and Beyond*. Retrieved November 7, 2013, from <http://www.unodc.org/documents/alternative->

United States Department of Agriculture. (2013a). *Basic Report: 20037, Rice, brown, long-grain, cooked*. Retrieved November 17, 2013, from <http://ndb.nal.usda.gov/ndb/foods/show/6385?fg=&man=&lfacet=&format=&count=&max=25&offset=25&sort=&qlookup=rice>

United States Department of Agriculture. (2013b). *Natural Resources Conservation Services*. Retrieved November 17, 2013, from <http://www.plants.usda.gov/core/profile?symbol=PASO2>

Villers, P., Bruin, T. D., Navarro, S., Lorini, I., Bacaltchuk, B., Beckel, H. & Scussel, V. M. (2006). Development and applications of the hermetic storage technology. In *Proceedings of the 9th International Working Conference on Stored-Product Protection, ABRAPOS, Passo Fundo, RS, Brazil, 15-18 October 2006*. (pp. 719-729). Brazilian Post-Harvest Association (ABRAPOS).

Wang, J. J., Deng, Y. X., Dou, W., Yang, Z. L., & Jiang, T. K. (2010). The major achievements of grain storage in PR China. *Julius-Kühn-Archiv*, (425), S-50.

Appendix A: Sponsor Description

Our project sponsor, the Raks Thai Foundation (2011c), is a humanitarian, non-profit organization devoted to increasing the quality of life in Thailand's poor and impoverished areas. Their focus is to resolve problems without using violence in all geographical parts of Thailand. The mission of the organization is to "strengthen the capacity of poor and disadvantaged communities to analyze root causes of problems, determine suitable solutions and participate in development activities." (para. 2). A main goal of the Raks Thai Foundation is to respond to the needs of Thailand.

The Raks Thai Foundation (2011d) has ten Board of Directors members including the president and vice president of the foundation. From observing the foundation throughout our project, we have found that the foundation's office in Chiang Mai includes about ten employees. The foundation relies on international and public funding, depending on the economy (Panitchpakdi, 2010). In 2010 the Raks Thai Foundation merged with Merck Thailand, a Young Leadership Development organization that is "aimed at building occupational and life skills for students and out-of-school youth in Udonthani and Nongkai in the Northeastern region of Thailand," (para. 3). A portion of the money Merck Thailand provided to the Raks Thai Foundation was specifically dedicated to agricultural projects north of Chiang Mai. Other portions of this money went to The Raks Thai Foundation for other causes. In 2004 the Raks Thai Foundation received 22 million Baht in funding to provide help to Tsunami victims that year.

The foundation is based in Bangkok and is involved in several different areas of focus including: Environment and Global Warming; Occupation Development; Learning Development; Health and HIV; Mitigation (Raks Thai Foundation, 2011e). The two major focuses of the organization are HIV/AIDS and environmental concerns (Raks Thai Foundation, 2008). Our project falls under the occupational development category because it involves helping the farmers in Mae Khong Khaa become self-sustainable (Raks Thai Foundation, 2011e).

The Raks Thai Foundation (2011c) was founded as a branch of CARE International, an organization that operates in more than eighty countries around the world. CARE International was originally created to care for the victims of World War II; however, post-war, it turned into a humanitarian organization devoted to helping victims of both war and poverty. CARE International's Thailand division was established in 1979 in response to Cambodian refugees seeking protection from the Cambodian-Vietnamese war (Raks Thai Foundation, 2011a). The Raks Thai Foundation became a member of CARE in January, 2003, making it the first developing country to have a CARE branch (CARE International, 2013). Since then, Raks Thai (2011a) has expanded to cover agricultural issues in the north and the northeast regions of Thailand.

Another group that addresses the same problem that our project is addressing in Thailand is the Thai Royal family (United Nations Office on Drugs and Crime, 2008). The family has supported several “Royal Projects” that educate villages on farming practices and give them alternative crops to grow. These projects are not affiliated with the Raks Thai Foundation. The Raks Thai Foundation aims to make communities self-sustainable, while the Royal Projects buy produce from the farmers and sell it under their own “Royal Project” label.

Appendix B: Story of the Mae Khong Khaa Village

The origin of Mae Khong Khaa is described by a story of a wasp. This wasp flew to Baan Tuan¹ to feed (Khun Wisit, personal communication, Jan. 28, 2014). There, the wasp found a newborn baby of the Wa hill tribe², still red from birthing fluids. The wasp took the child and flew away, mistaking it for a piece of meat. The villagers, desperate to return the baby to its home, attempted to retrieve the baby by leaving red meat in the forest and waiting for the wasp to come eat the meat. Once the wasp came, the villagers tied a string to the wasp's body and followed the string until they reached the hive. The villagers decided to smoke out the hive to force the wasp to leave. By doing this, they killed the caterpillars that lived in the hive and brought it back to the village for food. Once the wasp left the hive, the villagers followed the wasp to a hive at a high mountain in the east of Mae Chaem. The villagers approached the new hive and made a fire with raw grass kindling to again smoke out the wasp hive and burned the wasp. The villagers took back the baby and returned it to Baan Tuan. The name "Mae Khong Khaa" comes from the brook in the area and the name of the grass kindling used to smoke out the hive. "Kaa" is the name of the grass kindling, and so they named the village "Mae Hom Kaa". Through time, the name was pronounced as "Mae Khong Kaa".

¹ A village near Mae Chaem

² A group of tribal people

Appendix C: Marketing Plan

Introduction

The Raks Thai Foundation is a humanitarian (2011c), non-profit organization devoted to increasing the quality of life in Thailand's impoverished areas. The organization is based in Bangkok but has offices in Chiang Mai and Mae Chaem as well. It is involved in many projects that benefit small villages in northern Thailand. Additional information about the foundation can be found in Appendix A.

Today, the foundation has made attempts to enter the Mae Khong Khaa rice in the local market at a Farmer's Market across from Chiang Mai University and in the Bangkok area through business connections. A middleman sells the rice in Chiang Mai and additional sales are made online over the New Year holiday. However, marketing approaches have not been solidified to boost the sales of the product and identify consistent consumers.

Furthermore, packaging for the Mae Khong Khaa rice is costly and in some cases outweighs the benefits of selling the product at its current price. The current cost to package the rice is based off of favors through business connections and cannot be held at this price if the market is expanded. The outcome of the Raks Thai Foundation's limitations is that the organization should have a marketing plan that identifies future potential markets and strategies that could increase sales of the Mae Khong Khaa rice.

Other outlining problems and projects that Raks Thai is involved in enable the foundation from devoting money and all of their time to this project. They wish to identify potential markets that the rice could be established in without investing large amounts of money. Thus, they have contacted us to present research and findings that suggest potential markets and marketing strategies.

Mission Statement

- (a) *Definition of Organization:* The Raks Thai Foundation's purpose is to help the villagers understand the value of their product and promote a self-sustainable mindset by showing them that effectively marketing their product can help increase their income.
- (b) *Distinctive Competitiveness:* The distinctive attribute of this rice is the fact that it is hand-processed. The Raks Thai Foundation is trying to study the production line cost and the village profit from selling the rice at different processing stages; either from the rough rice, or the processed rice.

This document provides a detailed explanation of a marketing plan that aims to increase the sales of the Mae Khong Khaa rice. This program is provided to the Raks Thai Foundation in four stages: Planning; Implementation; Analysis; Restructure. Figure 1 below shows the cycle.



Figure 1: PIAR Plan

In order to implement this plan, the current product situation must be assessed. We have created four objectives to be implemented in order to increase sales of the rice. These objectives can be found in Table 1 below. We then discuss further recommendations for the Raks Thai Foundation to further help the villagers of Mae Khong Khaa and increase their annual income.

Table 1: Marketing plan objectives

Objectives	Approaches
Create a new image for the Mae Khong Khaa rice.	• Create a name and logo for the product. • Develop enhanced packaging design for the rice.
Introduce the Mae Khong Khaa rice in target markets.	• Identify potential markets for the Mae Khong Khaa rice. • Take steps to introduce the Mae Khong Khaa rice to these markets.
Implement marketing strategies to promote the rice in these target markets.	• Use media to enhance the sales of the product. • Design a brochure.
Assess the success of the Mae Khong Khaa rice at these markets.	• Conduct an economic analysis on rice sales both at the start of the marketing plan and three months after the marketing plan has been implemented. • Conduct surveys to analyze the appeal of the new package design.

Current Situation Review

The Mae Khong Khaa rice must be assessed in order to design a successful marketing plan for the Raks Thai Foundation. A review of the current production costs in addition to the current visual identity of the rice is presented.

Current Production Costs for the Mae Khong Khaa Rice.

Table 2 displays the current costs of production for the Mae Khong Khaa vacuum-sealed rice package.

Table 2: Total cost of 1 kg of vacuum-sealed Mae Khong Khaa rice

Process	Price (Baht)
Hand milled Rice in Canvas Bag	30
Transportation (Mae Khong Khaa to Chiang Mai packaging facilities)	3
Packaging Labor	1
Vacuum-sealed Bag	4.5
Quality Check and Management	1
Box (20 bags)	0.5
Sticker	9.5
Transportation (Chiang Mai to Bangkok)	8.33
Total Cost to cover packaging and transportation (Chiang Mai Market)	49.50
Total Cost to cover packaging and transportation (Bangkok Market)	57.83
Total Cost (Chiang Mai)	60
Total Cost (Bangkok)	80

The middleman for the Raks Thai Foundation purchases the non-vacuum packed rice from the foundation at 35 baht/kg and sells it for 40 baht/kg making a profit of 5 baht. This shows that people are willing to sell the Mae Khong Khaa rice to help the village, not necessarily for his or her own profit. The Raks Thai Foundation created a communal loan system to support the villages that they help. They aid several Karen villages around Mae Chaem to help sell their products in the market. The loan system can be used by any of these villages to provide them with a sum of money to help either in emergencies or if they would like to purchase new machinery to aid their village production. In the future, the Raks Thai Foundation will split the profit that they make from the Mae Khong Khaa rice into three parts: one to directly give back to the villagers, one to split evenly between all of the villages the Raks Thai Foundation supports, and one to go into the Raks Thai Foundation's communal loan. Thus, if the project team can increase the price of the rice in the market, the Mae Khong Khaa villagers will gain income both directly and indirectly. Until the Raks Thai Foundation splits the profit into three parts the project team aims to help the Mae Khong Khaa villagers by adding to the amount of money available to use from the Raks Thai Foundation's loan system.

Visual Identity and Price

- (a) *Product*: The Raks Thai Foundation has supported the villagers with packaging designs to market the product. Following is the current standings of typical food packaging

qualities of the Mae Khong Khaa rice package in comparison to other rice products in the market.

- i. *Name:* The Mae Khong Khaa rice does not have a name. Instead, the rice package displays the name of the rice species. There are two species of rice, Bueki and Buewaa, which are grown in the village and sold by the Raks Thai Foundation in the market.
- ii. *Logo:* The Raks Thai Foundation does not supply logos for their products. However, there is a picture for the rice species that can see in Figure 2. The picture's color changes depending on the species. The image has a basic design that does not necessarily appeal to consumers.



Figure 2: Bueki Species Logo (Facebook, 2014)

- iii. *Trademark:* The product does not hold any trademarks. To obtain a trademark, the Raks Thai Foundation would first need to identify a name and logo.
- iv. *Accreditation:* This product has not received any accreditations from the Food and Drug Association of Thailand or any other organizations.

- v. *Packaging*: The package is vacuum-sealed, which provides a shelf life of one year. The design of the product is inconsistent depending on the time of the year the product is sold. As seen in Figures 3 and 4 respectively, the front of the package and the back of the package show the packaging of the Mae Khong Khaa rice designed for New Year's gifts. On the other hand, during the rest of the year, the front and back of the package change. Figure 5 displays the current front design. The back of the package just shows a sticker of the rice specie.



Figure 3: Front of the Mae Khong Khaa rice package designed for New Year's gifts (Facebook, 2014).



Figure 4: Back of the Mae Khong Khaa rice package designed for New Year's gifts (Facebook, 2014).



Figure 5: Current front of the Mae Khong Khaa rice package designed

- i. **Labels:** The front view of the Mae Khong Khaa rice package in Figure 3 displays the logo and identifies the rice as hand milled. The back of the package, seen in Figure 4, displays information about the Karen community and the eco-friendliness of the product. The cooking instructions are also listed on the back. Figure 5 presents information about the local species of rice grown in the highland area. The hand-milled process is also addressed to inform the customer about the high nutrition of the rice. The package also indicates that it is eco-friendly and can help increase the income for the Karen villagers. Both packages are only written in Thai language, which limits the population that can read and identify the product. There is neither nutritional information nor an expiration date displayed.
- ii. **Price:** The current price of the product in the Chiang Mai farmers' market is 35 baht. The price for the airtight product sold in Chiang Mai is 65 baht and the price sold in Bangkok is 80 baht. These prices include the cost of transportation, packaging, and the price given to the women's co-op for their unhusked rice.

Limitations of Sales

- (a) **Production:** The women's cooperative of Mae Khong Khaa is currently producing 1,500 kg of hand-milled rice per year. The husked rice is processed based on the requests from the Raks Thai Foundation and the needs of the middleman. This past year, the middleman has requested a large order and the village has not been able to produce the amount of rice needed to fill the order. This shows that an increase in production is needed in order to increase the villager's income.

SWOT Analysis

We have analyzed the strengths, weaknesses, opportunities, and threats of the Mae Khong Khaa rice in the market. This information is displayed below:

a. Strengths

- i. Hand-milled product.
- ii. Softer and stickier than normal brown rice.
- iii. Grown by Karen people.
- iv. Rice species is unique to Mae Khong Khaa.
- v. More nutritious than white rice, as it is a form of brown rice.
- vi. Production, processing, and sale of the rice do not involve child labor.
- vii. Non – genetically modified plant.

b. Weaknesses

- i. Unappealing appearance because some grains are broken.
- ii. The packaging of the rice is plain.
- iii. The price of the product is high in the current market it is sold in.
- iv. The product has no certifications.
- v. The cost of production is high, limiting the amount of money available for the Raks Thai Foundation's loan system.
- vi. The rice has a short shelf life if it is not vacuum sealed.
- vii. There is currently only one main distributor.

c. Opportunities

- i. Competitors do not present the story of the farmers who grow the rice.
- ii. The tourism market is growing (Department of Tourism of Thailand, 2011).
- iii. There is the possibility of new markets in Bangkok and Chiang Mai.

d. Threats

- i. Rice yield in the village is low and limits the amount of rice that can enter into the market.
- ii. New competitors with hand-milling rice products may arise in the future.

Objective 1: Create a new image for the Mae Khong Khaa rice.

In order to create a new package design and visual identity for the Mae Khong Khaa rice, it is necessary to assess packaging traits that appeal to consumers. We suggest creating a new package design for the Mae Khong Khaa rice based on the data collected that identifies the current product does not have a recognized brand in the market. The logo is inconsistent and the packaging information is not appealing to some consumers. Below is detailed information on possible packaging approaches and recommendations.

- *Create a name for the product:* Creating a name for a product can also be referred to as branding. Branding is used to increase appeal by making the product more noticeable to consumers when placed next to competitors' products. The name should be relatable to the consumer and identify a unique characteristic of the product. Two names could be chosen one for Thai and one for English so that they appeal to their respective audiences. For the Mae Khong Khaa rice, a suggested name would be "Mae Khong Khaa Rice", or "ข้าวแม่คงคา" in Thai.
- *Include information about the villagers, nutritional information, and information in a language other than Thai on the package:* According to surveys, information about the villagers on the package would be appealing to the majority of the Japanese population. Information about the villagers will provide consumers with insight into where their food comes from. Our research within our target populations show that people are willing to buy a product if it means they can help the villagers, thus adding the story of the Mae Khong Khaa village on the package will benefit sales. In addition, respondents ranked that nutritional information and information on the package in a language other than Thai as important factors that influence their opinion of a product. We suggest that the Raks Thai Foundation conduct nutritional tests on the rice, described in detail later on in this marketing plan, and to add information in either English as it is a popular language, or Japanese to appeal to a Japanese population.
- *Enhancing the package design by creating a logo for the rice:* A product logo for a company is essential for recognition by customers (Entrepreneur Media

Incorporation, 2014). If customers have positive reactions to a logo, they are more likely to buy the product because it is a sign that a company is well established in the market. There are three types of logos: logos that are font-based, logos that are abstract symbols, and logos that describe a company through pictures. The best logo option for a start-up company is a logo that describes the company through pictures.

When creating a logo, there are several factors to consider (Entrepreneur Media Incorporation, 2014). A logo should be able to be shrunk and expanded, and also distinguishable in black and white ink. Logos that can capture the uniqueness of a company through original artwork are generally more successful. Logos should have the potential to remain “current” for approximately twenty years so that the logo does not need alterations, and should be cost-effective and feasible to produce. It is advisable for a start-up company to consult a professional logo designer instead of creating one by themselves.

Below is a suggested logo for this product in Thai and English in Figures 6 and 7 respectively.



Figure 6: Product Logo in Thai



Figure 7: Product Logo in English

Objective 2: Introduce the Mae Khong Khaa rice in target markets.

In order to increase sales of the Mae Khong Khaa rice, the rice must be introduced to new markets in order to increase the amount of customers the rice is exposed to. In order to do this, potential markets must be identified, as well as a plan to introduce the rice to these markets. In this section, we will evaluate the target populations for the rice. We have identified three potential markets for the Mae Khong Khaa rice and have provided more information on how best to enter these markets. In addition, we have provided a suggested timeline for the Raks Thai Foundation to follow while implementing this marketing plan.

Target Population Analysis

The middleman offered information on the current consumer market in Chiang Mai and provided feedback that helped identify different target populations. Below are the target populations that would best fit the Mae Khong Khaa rice market and several markets where these populations can be found.

(a) *Identification of the customers:* Three potential target groups are health conscious people, Japanese people and tourists. These targets were determined by assessing the current sales for the Mae Khong Khaa rice and by surveying people in Bangkok and Chiang Mai. Below, the desired description of potential customers is provided.

(b) *Desired Description of Potential Customers:*

- i. *Health Conscious People:* The health conscious market would include people who strive to live healthy lifestyles. Males and

females between the ages of 25 to 65 who are constantly concerned about their health and the daily intake of carbohydrates are desired for this population. This population would usually have a higher education degree and is part of a middle-upper class, in order to afford the price of the rice. This customer would rely on a healthy diet to perform efficiently, which would make them more prone to buying healthy rice. Therefore, these people would have the inclination to read the nutritional information on product. The health conscious people were initially targeted due to nutritional value that the Mae Khong Khaa rice has that many white rice types do not. The majority of the customers at Nihonmachi market, K-village farmers' market, and the Ton Payorn fresh market stated that they are aware of their vitamin and mineral intake in their diet. Based on survey results gathered from these three markets, factors that would influence them to purchase this rice include:

- The importance of rice in Thai meals.
- The rice's nutritional information.
- Information on the package in a language other than Thai.

ii. *Japanese expats:* This market would ideally be composed of Japanese households that display economic stability in order to afford the price of the rice. These consumers are unique because they would tend to relate the texture of the Mae Khong Khaa rice to the Urinachi species of rice found in Japan (Ninja Japanese Restaurant, 2014). Based on survey results gathered from K-Village farmer' market and Nihonmachi market, factors that would influence them to purchase this rice include:

- Story of the Villagers of Mae Khong Khaa.
- Texture and appearance of the rice similar to the one found in Japan.
- Information on the package in a language other than Thai.

iii. *Tourists:* This market would be willing to try different products that are authentic to Thailand. This group would usually be composed of Asian, European and western people, men and females between 20 and 50 years of age. Customers in this group would be willing to explore Thai cuisine. Data obtained from the Department of Tourism of Thailand shows that tourism has become a large market in Thailand over the past five years

(Department of Tourism of Thailand, 2011). Since 2009, tourism has risen by 90%, as displayed in Figure 8 below, which indicates that the tourist potential market could be rising. Based on survey results from tourists in Bangkok, factors that would influence them to purchase this rice include:

- Price of the product.
- Taste of the rice.
- Eco-friendly material.

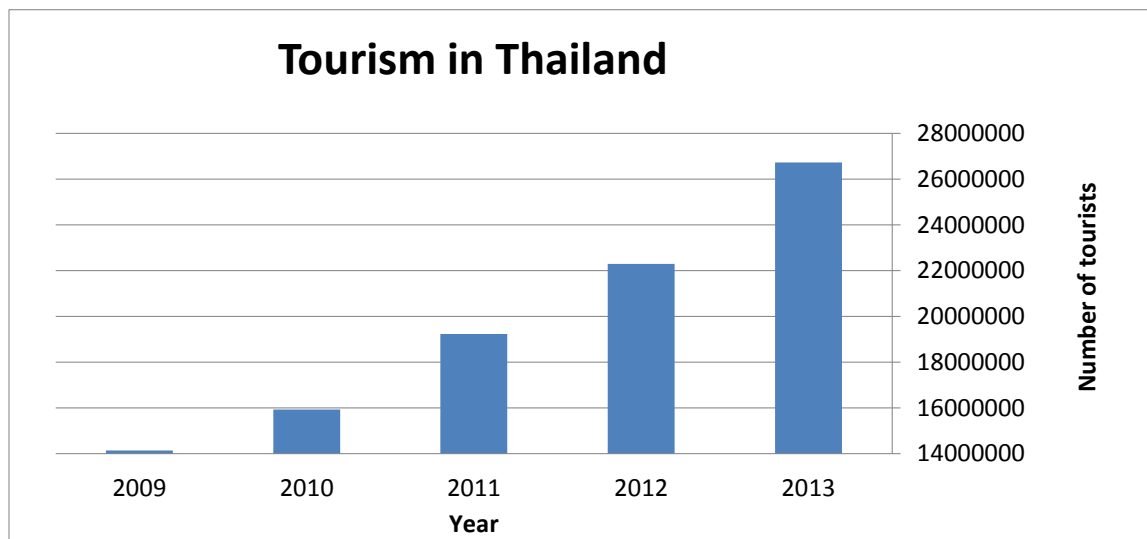


Figure 8. Tourism Increase in Thailand since 2009 (Department of Tourism of Thailand, 2011).

Target Market Analysis

We have identified four potential markets where our target populations can be found: K-Village farmers' market in Bangkok; Nihonmachi market in Bangkok; Ton Payorn fresh market in Chiang Mai; restaurants in Chiang Mai and Bangkok. We will now assess each market and determine which markets are target markets for the Mae Khong Khaa rice.

K-Village Farmers' Market in Bangkok: At K-Village farmers' market, the project team found the products sold match the proper market for Mae Khong Khaa rice. There were two other types of vacuum-sealed nutritious rice being sold by private vendors; Jasberry rice and Happy Health Club rice. These rice brands were sold in approximately 1 kg packages and were sold for 160 baht and 110 baht, respectively. These prices are potential values that the Mae Khong Khaa rice could be sold if marketed competitively. At both booths for the rice brands, they handed out brochures with information on the rice including marketing attributes such as nutritional facts and certifications. This farmers' market only occurs once a month, which would be beneficial for the Mae Khong Khaa rice. The production of the rice in the village is limited, which makes a

once a month buyer ideal because the supply would match the demand. In summary, the project team identified the K-Village farmers' market as a potential introduction market for the rice.

Nihonmachi Market in Bangkok: Despite Nihonmachi market meeting the criteria of a large Japanese population, the market did not match the physical market attributes that would be ideal for an introduction market for the Mae Khong Khaa rice. Nihonmachi Market is made up of established private shops that would require each of these shop owners to agree to sell the rice in their stores. From interview with restaurant owners, we have recognized that it is very difficult to enter a large, established market without personal connections. The Raks Thai Foundation would need existing connections within this market to have potential to sell their rice there. With these limitations, the project team determined that Nihonmachi Market would not be a potential introduction market for the Mae Khong Khaa rice. However, because Nihonmachi Market is in close proximity to K-Village market, the two markets may share some of the same customers, which would be beneficial for rice sales as the customers at Nihonmachi Market might purchase the rice.

Ton Payorn Fresh Market in Chiang Mai: Ton Payorn Market can be identified by its attribute of being an outdoor fresh market. The project team observed that the rice being sold there was either in open bins or precooked by private sellers. In order for the Mae Khong Khaa rice to be introduced to this market, vendors may have to switch the way they sell the rice to match the market by either pre-cooking the rice or selling it without packaging. Overall, the project team determined that Ton Payorn Market is a potential introduction market for the Mae Khong Khaa rice because this market would allow the foundation to decrease packaging costs, increasing profit.

Restaurants in Chiang Mai: The Riverside restaurant in Chiang Mai relies on about half of their profit from tourists during one third of the year. The increasing tourism trends seem to provide a prosperous stable market for restaurants to take risks and try new products (Department of Tourism of Thailand, 2011). Thus the increase in tourism has indirectly led to possibilities for introducing the Mae Khong Khaa rice to tourists. Selling the rice at restaurant would provide steady income for the village and a supplier inclination to buy the rice that is not dependent on packaging. Khun Churn restaurant in Chiang Mai states that although they have a consistent rice supplier and do not show interested in purchasing the rice, the owner suggested that other restaurants would be interested because of their desire to help the villagers. Therefore, Raks Thai Foundation should target hotels and restaurants that offer authentic northern food as well as restaurants that promote healthy lifestyles and are famous among tourists seen to advertisements through travel blogs, books, and reviews. Startup restaurants are a good option because they do not have strong ties with suppliers. Any connections the foundation has with restaurants around Chiang Mai and Bangkok should also be considered. There is a restaurant called Brown Rice that has just opened in Chiang Mai that offers only brown rice options and is looking to expand its business. Therefore, this company should be considered. Restaurants offer the Raks Thai

Foundation the opportunity to have a loyal customer and yet lower the cost of production due to not requiring fancy packaging.

Market Contact Information

We will now provide contact information and additional profile information on each potential target markets to introduce the Mae Khong Khaa rice to.

K – Village Farmer’s Market, Bangkok

K – Village is an open-air lifestyle mall that comprises dining, fashion, beauty and other stores. Every month, this mall hosts a 2-day farmers’ market that offers a variety of home-made, organic and natural products. A disadvantage for this market is that it relies on the need of a middleman to sells the product. However, this option should be highly considered, since it targets all three potential customers.

Address:

93, 95 Sukhumvit 26,
Klongtan, Klongtoey กรุงเทพมหานคร 10110
Bangkok, Thailand



Figure 9. Location of K-village (K-Village, 2014)

Website:

www.kvillagebangkok.com

Contact information:

Tel: (+66) 2 258 99 19 21

Email: info@kvillagebangkok.com

Ton Payorn Market, Chiang Mai

This is fresh market in Chiang Mai that has the potential to sell the Mae Khong Khaa rice. This market is visited daily by a lot of locals that are looking for rice, vegetables, fruits, etc. The manager of the market suggested that the Mae Khong Khaa rice can be profitable in this market place since brown rice sales have increased this year. However, the disadvantage of this market is the fact that a middleman is required to sell the rice every day. Data shows that internet media is not as popular in this market as it is within the population at K-Village farmers' market. A brochure may be more important to implement here rather than internet media because more of the population said they either do not use Facebook and YouTube or use it infrequently.

Address:

Mueang Chiang Mai District,
Chiang Mai, Thailand

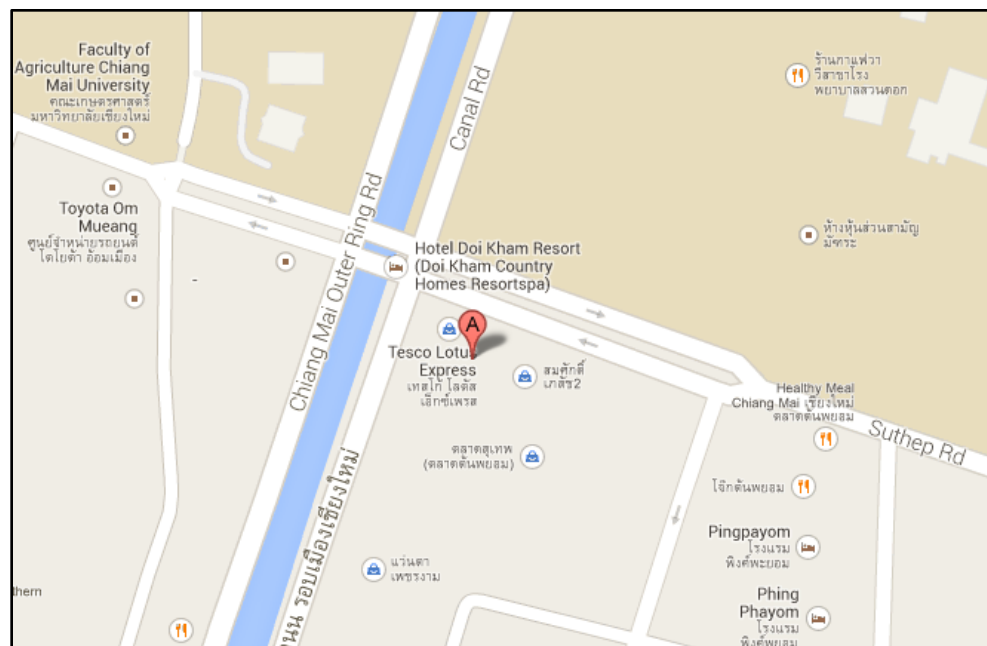


Figure 10. Map location of Ton Payom Market (Google Maps, 2014a)

No further contact information was found of this market. If the Raks Thai Foundation displays interest, they should personally approach the managers of the market.

The Riverside Bar & Restaurant

The team identified The Riverside Bar & Restaurant as a potential venue to promote the rice, due to its high recognition among tourists. The menu serves all varieties of food, including Thai, traditional northern Thai and western food. As its name indicates, the restaurant is located nearby Ping River and its night view is yet another attraction for customers to visit. As the manager of the restaurant suggested, this restaurant would be a good alternative since they would be able to offer its customers with a unique product that helps the development of the Mae Khong Khaa people. The restaurant did not indicate initial interest in the product; however, they were give a bag of the Mae Khong Khaa rice to try and based on the taste of the product their opinion of the rice in their restaurant may change.

Address:

9-11 Charoen Rat Road

Chiang Mai, Thailand

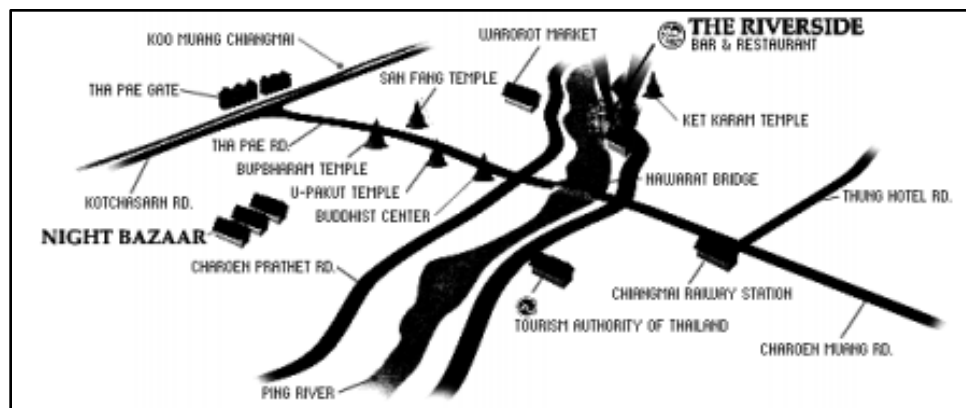


Figure 11. Map location of The Riverside Bar and Restaurant (The Riverside Bar and Restaurant, 2014)

Website:

www.theriversidechiangmai.com

Contact information:

Tel: (+66) 53 243 239

E-mail: service@theriversidechiangmai.com

Brown Rice - Organic Bistro

Brown Rice/Organic Bistro, in Chiang Mai, is famous for its vegetarian cuisine, specializing in Thai and western dishes. The team recognized this start-up restaurant as a potential target for the Mae Khong Khaa rice to establish a consistent distribution. Due to the nature of food they serve, the Mae Khong Khaa rice could be a unique addition.

Address:

48 Changmoi Road, Muang,
Chiang Mai, Thailand

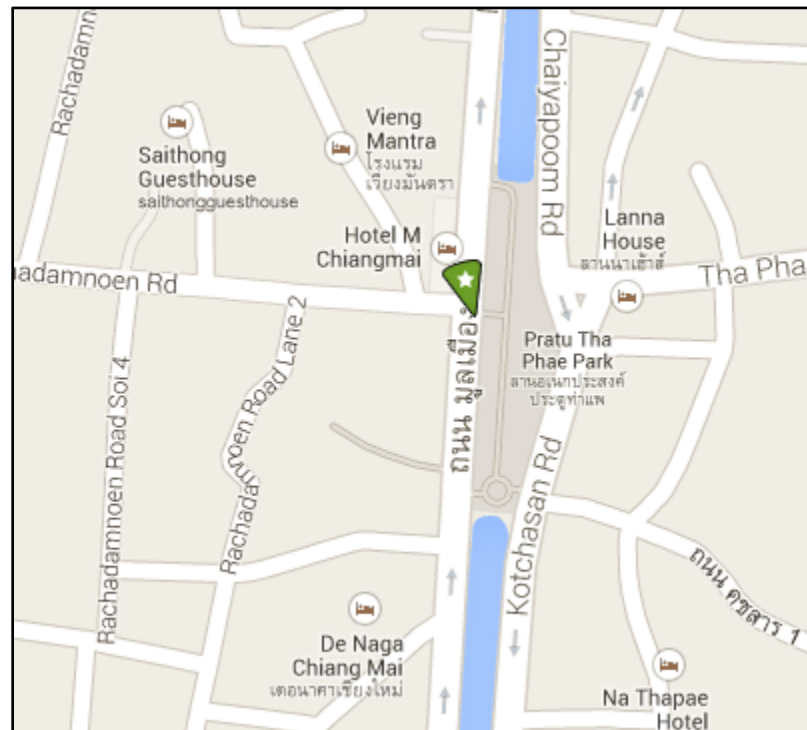


Figure 12. Map location of the Brown Rice Organic Bistro (Happy Cow, 2014)

Contact information:

Tel 1: (+66) 86 918 8428

Tel 2: (+66) 93 292 4688

E-mail 1: duangvg@gmail.com

E-mail 2: nanwarin@gmail.com

Objective 3: Implement marketing strategies to promote the rice in these target markets.

Our program is based on research conducted in the Bangkok and Chiang Mai areas. This plan is centered the theory of “consumer experience.” It is important to market the rice as an experience the consumers can receive through purchasing the rice and eating it. The foundation could create a consumer experience by marketing the farmer’s story on the package. For example, tell the customers about how each bag of rice purchased impacts the life of a woman in Mae Khong Khaa and about the health benefits of the type of brown rice. In order to properly do this, it is essential to analyze the best marketing media for the target populations and develop a plan to use these media. Our research shows that populations at K-Village farmers’ market and Ton Payorn market not only have access to the internet every day, but the majority of

respondents use Facebook and YouTube every day. This makes these social networking channels effective to reach out to our target populations.

YouTube Channel: The creation of a YouTube channel will allow the Raks Thai Foundation to generate awareness of the product. YouTube provides access for people from all around the world to learn more about the Mae Khong Khaa village and their traditional hand-milling rice practices. We recommend creating videos in both Thai and English language. The content of the YouTube channel should include the following videos:

Mae Khong Khaa rice

This video should contain the information of the product. Topics that should be addressed include the nutritional information and the benefits the rice provides to the customer. Through this video, we aim to promote the brand and the product.

Mae Khong Khaa Farmers

This video is very important since one of the main goals of the foundation is increasing the development of the Mae Khong Khaa villagers. We recommend this video to be filmed in Mae Khong Khaa and focus on the lives of the villagers. Topics that should be addressed include the life of the villagers, and their traditions and beliefs. The purpose of this video is to increase the interest of the consumer encouraging them to learn more about the villagers and the Karen people

Mae Khong Khaa hand-milling technique

The focus of this video is on the technique that the villagers use to mill their rice. Detailed information about the mortar and pestle approach should be given in this video. It is also important to include the reason why the villagers use this method so that the viewer can recognize the relationship of the villagers to their product.

Mountain rice farming.

A video that explains the difference between paddy-field and mountain farming should be included. The fact that the Mae Khong Khaa rice is grown in a mountain is a unique property that should be highlighted. Contributions from experts on rice growth, the villagers and the Raks Thai Foundation should be incorporated in the video.

Traditional Mae Khong Khaa recipe

A recipe from the villagers will attract the customers to purchase the rice and try something different. The video should be focused on the villagers so that the customers can learn directly from them. This video will also raise awareness and create interest towards the brand.

Design a Brochure: A brochure is a marketing tool that can be implemented to enhance the attention of the consumer to the product and create awareness of the quality and uniqueness of the Mae Khong Khaa rice. The majority of customers, identified in Objective 2, are influenced by nutritional information; therefore, the brochure should include the most important nutritional facts about the mountain rice. In addition, the majority of people surveyed concluded that they were unaware of what hand-milled rice is, so this would be additional information that should be included to appeal to consumers. Figure 13 and Figure 14 below show the recommended example brochure for the Mae Khong Khaa rice.

Additional space in the brochure can be used to include information on:

- Mountain rice facts.
- Directions on how to cook rice.
- Story of the village.
- Story of one villager and her responsibility within the community.
- Mae Khong Khaa village recipe.



Figure 13: Front of the Mae Khong Khaa rice brochure



Figure 14: Back of the Mae Khong Khaa rice brochure

Facebook Page:

The creation of a Mae Khong Khaa rice followers' page will allow Facebook users to access the recent updates of the Mae Khong Khaa rice and send the link of the rice to friends and family members as a recommendation to try the rice and follow the story.

Facebook page recommendations:

- Update the Mae Khong Khaa rice webpage every day. Updates about the development of the village and the promotions of the product will attract potential consumers to look for the product more often. Examples of posts could be:
 - "Check out this new delicious variety of our rice."
 - "Explore our exciting new video to learn more about the women's cooperative of Mae Khong Khaa."
- At least once a week, create a post that connects with the customer, explaining how they are helping the village by purchasing the rice. Examples of this include:
 - "Your rice purchase helped this family afford schooling for their son. Thank you!"

- Try to include pictures or videos in the posts as much as possible. The visual media convey ideas better and remind the consumers that they are helping people.
- Keep the name of the page consistent. For example include the brand name of the rice.
- Use a cover picture of the Mae Khong Khaa people.
- Use a profile picture advertising the Mae Khong Khaa rice. For example, the logo would be a good choice.

Magazine advertisements:

Magazine advertisements are another way to create awareness of the product by targeting consumers that read magazines every day. Magazines are a great place to feature recipes that use the Mae Khong Khaa rice. We recommend using magazine advertisements once rice sales have increased. An example of a recipe that could be use is the “Kao Ber Porridge”. The recipe is authentic to the Karen people and is shown below:

Kao Ber Porridge Recipe

Ingredients:

- Khaw Khong Khaa rice
- Pork and ribs
- Bamboo sprouts
- Chili
- Salt and pepper

Directions:

1. Set up the rice cooker. Pour water and put rice into it.
2. When the water is boiled, put pork or pork ribs and bamboo sprouts into the pot.
3. When rice start to break apart, you need to stir it again.
4. Add chili, salt, and pepper.

Media Analysis for Individual Markets

Internet media is important in both K-Village farmers’ market and Ton Payorn fresh market because not only do 100% of the respondents have access to the internet every day, but there is a high usage of the social network sites Facebook and YouTube. Despite this, there is a discrepancy between the data gathered from K-Village and the data gathered from Ton Payorn. Facebook and YouTube usage is higher at K-Village farmers’ market than it is at Ton Payorn. This means that the brochure may be more effective at Ton Payorn than internet advertisements.

Timeline

Economic

Analysis

Day 1 into Marketing Plan

The economic analysis Excel sheet, found in Appendix E and described in the next section of this document, will provide the foundation with a clear vision of all expenditures at the initial start of the marketing plan. This analysis will also be redone three months into the plan to re-assess the success of the plan and determine areas for improvement.

Social media product launch

Day 10 - 30 into Marketing Plan

The social media launch is the biggest marketing tool to promote the product. Therefore, it has to be carefully reviewed and enhanced. The Mae Khong Khaa rice YouTube channel and Facebook page after launch can be promoted by family, friends and word of mouth.

Press Conference

Day 40 into Marketing Plan

A press conference is not essential, but it creates awareness in the market because the event can attract attention from media such as TV, magazines, and newspapers. If a press conference is organized, the product should be promoted by describing the traditions of the Mae Khong Khaa villagers and their traditionally hand-milled rice. A member of the Mae Khong Khaa women's cooperative should be present to explain the product and the process from her perspective. The woman should discuss the appealing attributes of the rice based on our eight principles. In addition, the support of the Department of Tourism of Thailand and the Department of Culture of Thailand at this event would help to promote this product in nearby restaurants throughout Thailand. Finally, potential guests should include newspaper and magazine reporters, representatives from restaurants where the rice is being sold, and representatives from companies that could be potential consistent purchasers.

Newspaper Interview

Day 50 into Marketing Plan

Obtain an interview with a well-known Bangkok and Chiang Mai newspaper, such as the Bangkok Post, to raise additional awareness of the product in the market. The newspaper interview should be focused on who the Mae Khong Khaa people are and what their products offer to the purchasers such as nutritional value and unique taste.

Magazine advertisements

9 Months into Marketing Plan

Placing advertisements in health or cooking related magazines could reach out to potential consumers who do not travel often, but are easily influenced to try new things. The advertisement plan should be implemented toward the end of the first year of business, if the foundation believes it would be beneficial to further expand the market. This marketing media is more of a risk due to high initial costs to place the advertisement in the magazine; however, it can provide an increased income for the village if successful.

Objective 4: Assess the success of the Mae Khong Khaa rice at these markets.

Strategies have been created to evaluate the marketing plan after three months. It is necessary to measure and evaluate the success of the goals established in this plan to help the Mae Khong Khaa villagers move towards self-sustainability. In this section, an evaluation plan for the first three objectives is presented.

Analysis for Objective 1: In three months, in order to analyze the new perception of customers regarding the Mae Khong Khaa rice, the Raks Thai Foundation should conduct a survey that assesses the new packaging design. This survey should include questions regarding the logo, colors, nutritional information, and story of Mae Khong Khaa provided. We recommend that the Raks Thai Foundation survey people at farmers' markets and fresh markets in Chiang Mai and Bangkok. These places were selected because of the teams previous marketing analyses were conducted in these locations. Once the surveys have been given, an in-depth analysis they should be completed and evaluated by marketing professionals.

Analysis for Objectives 2 and 3: The effectiveness of the plan should be assessed through an economic analysis. This analysis should consist of a comparison of the present and previous expenditures and profits. Attached to this plan in Appendix E is an Excel file with an example template. This template allows a user to view the costs of rice production, processing, packaging, delivering, and marketing. It also calculates the net revenue per month. This analysis will help the Raks Thai Foundation organize their monetary transactions from the start of the implementation of the marketing plan to the end. A customer behavior analysis should be performed and customer reviews should be evaluated to determine the success of the Mae Khong Khaa rice product. We recommend contacting the distributors of the rice and its consumers in order to obtain these comments about the product. Facebook and YouTube are also powerful tools that can be used to obtain consumer perspectives and analyze the strength of the brand in the market.

Restructure

We recommend the Raks Thai Foundation hire a professional marketing agency that can enhance the marketing techniques after the previous evaluation has been done. A marketing agency will evaluate the current attempts and implement new techniques. If there is no need to enhance the marketing techniques, the plan should continue for six months and then the analysis should be performed again. This marketing plan can be used as a start-up plan for other products

the Raks Thai Foundation handles. The same general process of planning, implementation, analysis, and restructure can be utilized to both introduce a product to the market and increase sales.

Additional Recommendations

There are four main recommendations we suggest to the Raks Thai Foundation to further their goals for the Mae Khong Khaa village.

Educational Programs

The project team suggests the Raks Thai Foundation use our educational program for the Mae Khong Khaa villagers to stress the importance of increasing production. To gain more income, villagers need to start by producing more rice. After marketing strategies are applied, the Mae Khong Khaa rice sale is expected to increase and can be used to support the Raks Thai Foundation's goal to implement the profit distribution system, additional information on the profit distribution system can be found in Section 4.1.1 of this report. This program can be used in other villages as well to increase production for the foundation and their distributors.

Implement Three-Part Distribution System

The project team suggests that the foundation implement their three-part distribution system once they have reached the established goal of profit in the fund. The increase in sale numbers alone does not provide enough incentive for the villagers to increase rice production. Therefore, Raks Thai Foundation's future plan to divide the profit should be implemented to distribute more profit back to the villagers. Once the villagers receive higher income via successful marketing, it will increase the confidence of the women's cooperative in the current system, as well as attract new members to participate in the program.

Accreditations

The project team suggest the Raks Thai Foundation work in conjunction with the villagers to obtain product accreditations that increase the profit of the product. By obtaining certifications, the villagers are not only offering a better quality product but also a more expensive and selective rice. Examples of accreditations that can be obtained include:

- Leaf Marque: It is an internationally recognized label and is available to use in Thailand. (Leaf Marque, 2013). By using the label, members promise that they grow their produce in a way that is environmentally-friendly.
- Fairtrade: This label certifies that small-scale businesses and farmers receive fair deals from purchasers and middlemen, and that they also meet social and environmental

international policies (Fair Trade International, 2011b). To a consumer, it means that they are purchasing a product that was produced and traded fairly among all parties involved and that their money is directly helping to decrease poverty in developing countries (EcoLabel Index, 2014). The Fairtrade mark is available in Thailand.

- Good Agricultural Practices Standard (GAP) is a standard for which the farmers in Thailand can be certified (United Nations Office on Drugs and Crime, 2008). The standard mandates that only a certain amount of pesticides can be used, and they have to be predetermined as “safe.”
- Organic Standard differs from the Good Agricultural Practices Standard in that no pesticides are allowed on crops (United Nations Office on Drugs and Crime, 2008). “Pesticide-free” can be a significant marketing tool for farmers because they can receive prices of 20-80 % higher than non-organic produce in the market.

Nutritional Testing

The project team suggests the Raks Thai Foundation get nutritional testing done for the Mae Khong Khaa rice. From research conducted, we found that customers appreciate nutrition as one of the most important characteristics to be included in the package. The brochure, located in Objective 4, provides general nutritional information on mountain brown rice. However, specific information should be obtained to verify our nutritional claims. The nutritional testing includes protein, fat, carbohydrate, mineral and vitamin content analysis.

The nutritional testing can be performed at different places in Bangkok and Chiang Mai. The “Central Lab Thai” is an alternative found in both cities mentioned before. Its price is approximately 12,500 Baht and it requires a kilogram of sample and 10-12 working days to obtain results. We recommend this analysis, since this marketing plan aims to reach health conscious people. The information of “Central Lab Thai” is shown below:

Central Laboratory (Thailand) Company Limited.
50 Phaholyothin Rd., Ladyao, Jatujak, Bangkok 10900
Tel 1: (66) 2940 6881 -3 Ext. 271
Tel 2: (66) 2940 5993

Website: <http://www.foodsafety-lcfa.com/web/en/main/index.php>

E-mail: chollada@centrallabthai.com

Further Studies

We recommend conducting studies that analyze the village's standing and additional improvement that can be performed. A study regarding the economic development of cash crops and subsistence crops in the village should be done to help them realize that rice can be a possible crop that will lead them towards self-sustainability.

Additionally, we recommend continuously studying the marketing knowledge of the villagers so that when they have the necessary resources they can market their product on their own.

Works Cited

Department of Tourism of Thailand. (2011). Tourism 2009. Retrieved February 17, 2014, from: <http://www.tourism.go.th/index.php?mod=WebTourism&file=details&dID=7&cID=276&dcID=617>

EcoLabel Index. (2014). FairTrade. Retrieved on February 7, 2014, from <http://www.ecolabelindex.com/ecolabel/fairtrade>

Facebook. 2014. Packaging. [Photos]. Retrieved from https://www.facebook.com/anr.raksthai/media_set?set=a.230091940492486.1073741849.100004750443620&type=3.

Fairtrade International. (2011a). What is Fairtrade?. Retrieved February 7, 2013, from <http://www.fairtrade.net/what-is-fairtrade.html>

Google Maps. 2014a. Map of Chiang Mai Area Near Ton Payom Market. [Photo]. Retrieved from <https://maps.google.com/maps/place?ie=UTF-8&q=ton+payom+market&fb=1&hq=ton+payom+market&cid=0>.

Happy Cow. 2014. Map of Chiang Mai Area Near Brown Rice Organic Bistro. [Photo]. Retrieved from <http://www.happycow.net/gmaps/get-map-direct.php?vid=33735>.

K-Village. (2014). CONTACT K VILLAGE & VISIT US ON SUKHUMVIT 26

BANGKOK. *HOME*.

Retrieved March 4, 2014 from http://www.kvillagebangkok.com/contact_us.aspx.

Leaf Marque. (2013). Linking Environment and Farming. Retrieved February 6, 2014, from <http://www.leafmarque.com/leaf/home.eb>.

Ninja Japanese Restaurant (2014). *Uruchimai Japonica White Rice*, Retrieved March 6, 2014, from: <http://ninjajapaneserestaurant.com.au/uruchi-mai-japonica-white-rice/>

Raks Thai Foundation. (2011c). *About Raks Thai: Vision and Mission*. Retrieved November 7, 2013, from http://www.raksthai.org/new/about-history.php?tr_id=1

Sangkumchaliang. (2012). Consumers' Perceptions and Attitudes of Organic Food Products in Northern Thailand. Retrieved February 24, 2014, from http://ageconsearch.umn.edu/bitstream/120860/2/20110057_Formatted.pdf.

The Riverside Bar and Restaurant. 2014. The Riverside Bar and Restaurant. [Photo]. Retrieved from <http://www.theriversidechiangmai.com/7-1-printversion.php>.

United Nations Office on Drugs and Crime. (2008, Dec). Part 5: Thailand. In *Sustaining Opium Reduction in Southeast Asia: Sharing Experiences on Alternative Development and Beyond*. Retrieved November 7, 2013, from <http://www.unodc.org/documents/alternative->

Appendix D: Marketing Plan (Thai)

แผนทางการตลาด

มูลนิธิรักษ์ไทย

บทนำ

มูลนิธิรักษ์ไทยเป็นองค์กรมนุษยนิยมซึ่งไม่หวังผลกำไรที่อุทิศเพื่อพัฒนาคุณภาพชีวิตคนไทยที่อาศัยอยู่ในดินแดนที่ยากไร้ องค์กรมีสำนักงานหลักอยู่ที่กรุงเทพฯ แต่มีสาขาอยู่ในเชียงใหม่และแม่แจ่มเช่นกัน องค์กรนั้นมีส่วนเกี่ยวข้องกับโครงการหลายโครงการที่เป็นประโยชน์ต่อหมู่บ้านเล็กๆ ในภาคเหนือของประเทศไทย

วันนี้

มูลนิธิได้พยายามนำข้าวหมู่บ้านแม่คงคาเข้าสู่ตลาดท้องถิ่นในตลาดเกษตรตรงข้ามมหาวิทยาลัยเชียงใหม่และในกรุงเทพฯ ผ่านคนรู้จักทางการค้าเราได้พบพ่อค้าคนกลางผู้ซึ่งเป็นคนขายสินค้าในตลาดและสินค้าบางส่วนนั้นขายเพียงช่วงปีใหม่เพื่อเป็นของขวัญ อย่างไรก็ตามแล้วแต่ ความพยายามนั้นไม่ได้ผลเท่าที่ควร

นอกจากนี้ บรรจุภัณฑ์ของข้าวหมู่บ้านแม่คงคานั้นมีราคาสูงและทำให้สูญเสียผลประโยชน์ในการขายสินค้าในราคาปัจจุบัน นอกจากนั้นแล้ว ราคาที่ทำบรรจุภัณฑ์นี้ได้รับการช่วยเหลือจากคนรู้จักและไม่สามารถทำตลาดไปได้ ผลจากข้อจำกัดนั้นทำให้องค์กรควรมีแผนการตลาดที่ชี้ให้เห็นตลาดที่มีศักยภาพในอนาคตและกลยุทธ์ที่ช่วยเพิ่มยอดขายของข้าว ในหมู่บ้านแม่คงคา

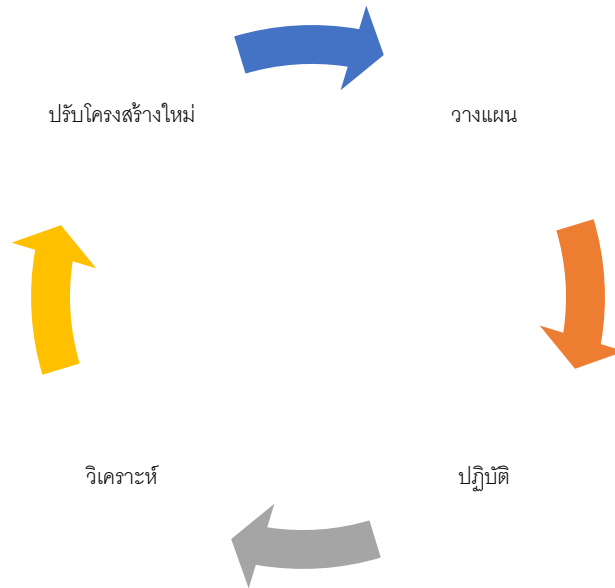
ด้วยปัญหาต่างๆ และโครงการอื่นๆ ที่มูลนิธิรักษ์ไทยมีส่วนเกี่ยวข้องอยู่นั้นทำให้ทางมูลนิธิไม่สามารถแบ่งเงินและเวลาทำโครงการนี้ได้

ทางมูลนิธิต้องการที่จะหาตลาดที่มีศักยภาพที่ข้าวจะสามารถเข้าไปได้โดยไม่จำเป็นต้องใช้เงินลงทุนจำนวนมาก มูลนิธิจึงได้ติดต่อเราเพื่อนำผลการค้นคว้าที่ได้ไปเพื่อนำตลาดที่มีศักยภาพและกลยุทธ์ทางการตลาด

พันธกิจองค์กร

a. คำนิยามองค์กร :

จุดมุ่งหมายของมูลนิธิรักษ์ไทยคือเพื่อช่วยให้ชาวบ้านเข้าใจในคุณค่าของสินค้าของพวกเขา เพื่อที่จะสามารถอยู่ได้ภายใต้การเปลี่ยนแปลงของระบบเศรษฐกิจ ชาวบ้านและตัวข้าวต้องการการพัฒนาในอนาคต เงินกำไรที่คาดว่าจะได้จะสามารถนำมาพัฒนาชุมชนในหมู่บ้านได้ มูลนิธิตั้งเป้าไว้ว่าจะให้พวกเขาเข้าใจว่าวัตถุดิบของพวกเขาสามารถนำไปขายในตลาดอื่นๆ ได้



- b. สมรรถนะที่โดดเด่น: คุณลักษณะเด่นของข้าวนี้คือการที่เป็นข้าวที่ทำด้วยมือ
มูลนิธิริรักษ์ไทยได้พยายามที่จะเรียนรู้ค่าใช้จ่ายที่มาจากสายการผลิตและเงินส่วนต่างที่ชาวบ้านจะได้ถ้าขายข้าวในระหว่างขั้นตอนการผลิตต่างๆ ไม่ว่าจะเป็นข้าวเปลือกหรือที่กระเพาะเปลือกแล้ว

เอกสารเล่มนี้ให้คำอธิบายเกี่ยวกับแผนการตลาดที่มุ่งส่งเสริมการเพิ่มยอดขายของข้าวแม่กงคา
ทีมของเราได้สร้างโปรแกรมที่จะเพิ่มยอดขายของข้าวแม่กงคา โปรแกรมตัวนี้ประกอบไปด้วยสี่ขั้นตอน: วางแผน; ปฏิบัติ;
วิเคราะห์; ปรับโครงสร้างใหม่ รูปด้านล่างคือสี่ขั้นตอนหลัก

ในการที่จะดำเนินการแผนนี้ ผลลัพธ์ปัจจุบันจำเป็นที่จะต้องประเมิน เราได้สร้าง 4 เป้าหมายหลัก
ที่จะใช้ดำเนินการในการเพิ่มยอดขายของข้าว เป้าหมายเหล่านี้สามารถดูได้จากตารางด้านล่าง
หลังจากนั้นเราได้พูดถึงคำแนะนำ เพิ่มเติมให้กับมูลนิธิริรักษ์ไทย เพื่อที่จะใช้ในการช่วยชาวบ้านแม่กงคาและเพิ่มรายได้ประจำปี

ในการที่จะดำเนินการแผนนี้ ผลสัมฤทธิ์ปัจจุบันจำเป็นที่จะต้องประเมิน เราได้สร้าง 4 เป้าหมายหลัก
ที่จะใช้ดำเนินการในการเพิ่มยอดขายของข้าว เป้าหมายเหล่านี้สามารถดูได้จากตารางด้านล่าง หลังจากนั้นเราได้พูดถึงคำแนะนำ เพิ่มเติมให้กับมูลนิธิริษัทไทย
เพื่อที่จะใช้ในการช่วยชาวบ้านแม่คงคาและเพิ่มรายได้ประจำปี

เป้าหมาย	วิธีปฏิบัติ
สร้างภาพลักษณ์ใหม่ให้แก่ข้าวหมู่บ้านแม่คงคา	สร้างชื่อใหม่ให้แก่ตัวสินค้า ทำภาพลักษณ์บรรจุภัณฑ์ใหม่สำหรับตัวข้าว
แนะนำข้าวแม่คงคาให้กับกลุ่มเป้าหมาย	หาตลาดที่มีศักยภาพในการซื้อข้าวหมู่บ้านแม่คงคา ดำเนินการตามขั้นตอนที่จะนำข้าวแม่คงคาให้กับตลาดต่างๆ
ดำเนินการตามแผนการตลาดที่จะโปรโมทข้าว ในกลุ่มเป้าหมาย	ใช้สื่อในการแนะนำสินค้า ออกแบบแผ่นพับ
ประเมินผลของข้าวแม่คงคาในตลาดต่างๆ	ทำการวิเคราะห์เชิงเศรษฐกิจของยอดขายข้าวแรกเริ่มและสามเดือนหลังจากนั้น ทำแบบสอบถามเพื่อที่จะวิเคราะห์แรงดึงดูด

การวิเคราะห์สถานการณ์ปัจจุบัน

สินค้าควรที่จะถูกประเมินเพื่อที่จะออกแบบแผนการตลาดที่ดีสำหรับหมู่บ้านแม่คงคา

การวิเคราะห์ต้นทุนการผลิตจึงได้ถูกทำขึ้น

ผลสรุปรายรับรายจ่าย

ต้นทุนทั้งหมดของข้าวแม่คงคา 1 กิโลกรัม

ขั้นตอน	ราคา, (บาท)
ข้าวซ้อมมือในถุงกระสอบ	30
ขนส่ง (หมู่บ้านแม่คงคาไปยังสถานที่ทำบรรจุภัณฑ์ในเชียงใหม่)	3
ค่าแรงงานในการทำบรรจุภัณฑ์	1
ถุงสุญญากาศ	4.5
ตรวจสอบคุณภาพ	1
กล่อง (20 ถุง)	0.5
สติ๊กเกอร์	9.5
ขนส่ง (เชียงใหม่ถึงกรุงเทพ)	8.33
ต้นทุนทั้งหมดรวมไปถึงบรรจุภัณฑ์และค่าขนส่ง (ตลาดเชียงใหม่)	49.50
ต้นทุนทั้งหมดรวมไปถึงบรรจุภัณฑ์และค่าขนส่ง (ตลาดกรุงเทพ)	57.83
ต้นทุนทั้งหมด (ตลาดเชียงใหม่)	60
ต้นทุนทั้งหมด (ตลาดกรุงเทพ)	80

ปัจจุบันพ่อค้าคนกลางของมูลนิธิรักไทยได้ซื้อข้าวแบบไม่บรรจุสุญญากาศที่ราคา 35 บาทต่อกิโล และขายที่ 40 บาทต่อกิโล ซึ่งทำให้ได้กำไร 5 บาท นี่แสดงให้เห็นว่าคนยอมที่จะซื้อข้าวหมู่บ้านแม่คงคาเพื่อที่จะช่วยเหลือชาวบ้าน โดยไม่คำนึงถึงกำไรที่เขาจะหาได้ มูลนิธิรักไทยได้สนับสนุนกองทุนรวมสำหรับทุกหมู่บ้านที่เขาดูแลอยู่ กองทุนนี้สามารถใช้ช่วยเหลือทุกหมู่บ้านที่รักไทยดูแลอยู่ ขณะนี้ได้ช่วยหมู่บ้านชาวกะเหรี่ยงในแม่แจ่มที่จะขายสินค้าของพวกเขา กองทุนนี้สามารถใช้ได้โดยทุกหมู่บ้านเพื่อที่จะให้ชาวบ้านมีเงินก่อนเวลาฉุกเฉินหรือถ้าต้องการจะซื้อเครื่องมือใหม่ในการช่วยการผลิตสินค้า ในอนาคต ทางมูลนิธิได้วางแผนที่จะแบ่งกำไรเป็นสามส่วนคือ ให้กับชาวบ้านโดยตรง ให้กับแต่ละหมู่บ้านเป็นส่วนๆ และให้กับกองทุนรวมของรักไทย ถ้าทีมเราสามารถเพิ่มราคาของข้าวนี้ได้ ชาวบ้านแม่คงคาก็จะได้อายุได้โดยตรงและทางอ้อม จนกว่าที่ทางมูลนิธิจะแบ่งกำไรเป็นสามส่วน ตอนนี้เราก็ช่วยหมู่บ้านโดยการเพิ่มเงินในกองทุนหมู่บ้านไปก่อน

การวิจารณ์สถานการณ์ของสินค้า

หัวข้อนี้จะแสดงข้อมูลปัจจุบันของสินค้าจากที่เราได้สัมภาษณ์มูลนิธิริรักษ์ไทย, ชาวบ้านหมู่บ้านแม่คงคา, และพ่อค้าคนกลาง ข้อมูลภาพรวมแสดงข้อมูลเกี่ยวกับภาพลักษณ์และบรรทัดฐานของตัวสินค้า

ข้อมูลเกี่ยวกับตลาดเป้าหมายจะถูกประเมินภายหลังในแผนและอยู่บนพื้นฐานจากผลการสำรวจ

- a) การผลิต กลุ่มสตรีของหมู่บ้านแม่คงคาสามารถผลิตข้าวซ้อมมือ 100 กิโลกรัมต่อวัน ข้าวที่นำมาดำนั้นขึ้นอยู่กับคำร้องขอของมูลนิธิริรักษ์ไทยและความต้องการของพ่อค้าคนกลาง

- b) สินค้า มูลนิธิริรักษ์ไทยช่วยเหลือชาวบ้านโดยทำบรรทัดฐานเพื่อช่วยเรื่องการตลาด

ด้านล่างคือบรรทัดฐานอาหารทั่วไปเปรียบเทียบกับบรรทัดฐานของข้าวแม่คงคา

- i. ชื่อ ข้าวหมู่บ้านแม่คงคานั้นไม่มีชื่อ แต่ได้ทำการใส่ชื่อพันธุ์ของข้าวเข้าไปแทน

มีข้าวอยู่ 2 สายพันธุ์คือป๊อกกิและป๊อกวาที่ปลูกในหมู่บ้านและส่งให้มูลนิธิริรักษ์ไทยขายในตลาด

- ii. โลโก้ มูลนิธิริรักษ์ไทยไม่ได้ออกแบบโลโก้ให้ตัวสินค้า อย่างไรก็ตาม

ข้าวแต่ละชนิดนั้นมีโลโก้เป็นของตัวเองตามรูปด้านล่าง สีของโลโก้จะเปลี่ยนตามพันธุ์ข้าว

โลโก้นั้นเรียบและธรรมดาแต่ไม่ดึงดูดต่อผู้บริโภค



- iii. เครื่องหมายการค้า สินค้าตัวนี้ยังไม่มีเครื่องหมายการค้าสำหรับในตลาด

ในการที่จะมีเครื่องหมายการค้านี้เองก็จะต้องมีชื่อและโลโก้ก่อน

- iv. การรับรองคุณภาพ สินค้าตัวนี้ไม่ได้ถูกรับรองจากอย. หรือองค์กรใดๆทั้งสิ้น

- v. บรรทัดฐาน บรรทัดฐานเป็นแบบสูงสุญญากาศ ซึ่งทำให้มีอายุสินค้าถึง 1 ปี อย่างไรก็ตาม

ดีไซน์นั้นไม่แน่นอนขึ้นอยู่กับช่วงของปีที่ขาย

รูปด้านล่างแสดงถึงด้านหน้าและด้านหลังบรรทัดฐานข้าวแม่คงคาที่ขายเป็นของขวัญปีใหม่

ส่วนช่วงเวลาที่เหลือของปี

ตัวบรรทัดฐานจะเปลี่ยนไปซึ่งด้านหน้าจะเป็นแบบที่มีข้อมูลมากขึ้นซึ่งแสดงอยู่ด้านล่างส่วนด้านหลังจะเป็น

สตีกเกอร์แสดงพันธุ์ข้าวอย่างเดียว



- vi. ฉลาก ด้านหน้าฉลากของข้าวแม่คงคาสำหรับขายช่วงปีใหม่แสดงโลโก้และชี้ให้เห็นว่าเป็นข้าวหอมมะลิ ด้านหลังแสดงข้อมูลเกี่ยวกับชุมชนชาวกระเหรี่ยงและความเป็นมิตรต่อสิ่งแวดล้อมของตัวสินค้า วิธีการหุงและข้อควรระวังนั้นมืออยู่ที่ด้านหลัง
- บรรจุภัณฑ์แบบปกตินั้นจะมีข้อมูลเกี่ยวกับพันธุ์ข้าวท้องถิ่นของข้าวที่ปลูกบนพื้นที่ราบสูง มีการบอกถึงการทำข้าวหอมมะลิซึ่งจะบอกลูกค้าเกี่ยวกับคุณค่าทางโภชนาการที่สูง
- ตัวบรรจุภัณฑ์ยังบอกว่าเป็นสินค้าที่เป็นมิตรต่อสิ่งแวดล้อมและสามารถช่วยเพิ่มรายได้ให้กับชาวกระเหรี่ยง
- บรรจุภัณฑ์ทั้งสองแบบนั้นเป็นภาษาไทยเท่านั้น ซึ่งจำกัดจำนวนผู้คนที่สามารถอ่านข้อมูลเกี่ยวกับสินค้าได้ รวมไปถึงไม่มีการเขียนข้อมูลทางโภชนาการหรือวันหมดอายุบนตัวบรรจุภัณฑ์อีกด้วย
- vii. ราคา ปัจจุบันราคาของข้าวที่ขายที่ตลาดเกษตรกรในเชียงใหม่อยู่ที่ 35 บาท
- ราคาสำหรับบรรจุภัณฑ์สุญญากาศที่ขายส่วนใหญ่อยู่ที่กรุงเทพฯ อยู่ที่ 80 บาท
- ราคานี้รวมถึงต้นทุนการผลิต, ค่าเนิ่นการ, และบรรจุภัณฑ์

จุดด้อยในยอดขาย

- a) การผลิต: กลุ่มสตรีของแม่กงคาปัจจุบันผลิตได้ 1500 กิโล ต่อปี
ข้าวนั้นถูกเตรียมตามการสั่งซื้อจากมูลนิธิรักไทยและ ความจำเป็นของพ่อค้าคนกลาง ในปีที่ผ่านมา
พ่อค้าคนกลางได้สั่งเป็นปริมาณมากแต่ชาวบ้านไม่สามารถผลิตให้ได้ ตามต้องการ
นี่เลยแสดงให้เห็นว่าการเพิ่มประสิทธิภาพในการผลิตเป็นเรื่องจำเป็นในการที่จะเพิ่มรายได้ให้กับชาวบ้าน

การวิเคราะห์ **SWOT**

เราได้ทำการวิเคราะห์จุดเด่น, จุดอ่อน, โอกาส, และอุปสรรคของข้าวหมู่บ้านแม่กงคาในตลาด ข้อมูลต่างๆถูกแสดงด้านล่าง:

a) จุดเด่น

- i. ข้าวหอมมือ
- ii. นุ่มกว่าและเหนียวกว่าข้าวกล้องธรรมดา
- iii. ปลูกโดยชาวกะเหรี่ยง
- iv. เป็นพันธุ์ข้าวเฉพาะของแม่แจ่ม
- v. มีคุณค่าทางอาหารมากกว่าข้าวสวย และเป็นประเภทเดียวกับข้าวกล้อง
- vi. กระบวนการผลิตและการขายไม่ใช่แรงงานเด็ก
- vii. ไม่มีการแต่งเติมพันธุกรรม

b) จุดอ่อน

- i. รูปลักษณ์ที่ไม่ดึงดูดเนื่องจากข้าวบางเม็ดแตก
- ii. บรรจุภัณฑ์ซึ่งธรรมดา
- iii. ราคาสินค้าที่แพงถ้าเทียบกับราคาตลาด
- iv. สินค้าไม่มีการรับรอง
- v. ราคาต้นทุนที่สูงซึ่งจำกัดกำไรที่ชาวบ้านจะได้รับ
- vi. ข้าวมีอายุที่สั้นถ้าไม่ปิดถุงสุญญากาศ
- vii. มีผู้ค้าส่งเพียงคนเดียว

c) โอกาส

- i. คู่แข่งไม่ได้มีการแสดงเรื่องราวเกี่ยวกับชาวนาผู้ปลูกข้าว
- ii. ตลาดของคนรักสุขภาพกำลังโตขึ้น
- iii. มีความเป็นไปได้ที่จะมีตลาดใหม่ในกรุงเทพฯและเชียงใหม่

d) อุปสรรค

- i. ผลผลิตข้าวที่ได้นั้นต่ำและจำนวนที่สามารถนำเข้าตลาดได้นั้นจำกัด
- ii. คู่แข่งรายใหม่ของข้าวหอมมะลิในอนาคตอาจมีเพิ่มขึ้น
- iii. โครงการหลวงผลิตสินค้าประเภทเดียวกันด้วยราคาที่ถูกลงกว่า

เป้าหมายที่ 1: สร้างภาพลักษณ์ใหม่ให้แก่ข้าวหอมมะลิบ้านแม่คงคา

เราแนะนำให้ทำบรรจุภัณฑ์ให้กับข้าวแม่คงคาใหม่เพราะจากข้อมูลที่ได้มา ตัวสินค้ามันไม่ได้มีภาพลักษณ์ที่แข็งแกร่งในตลาด โลโก้นั้นไม่ได้ไปในทิศทางเดียวกับตัวสินค้าและข้อมูลบนบรรจุภัณฑ์ไม่ได้ดึงดูดลูกค้า

กลยุทธ์ ในการที่จะสร้างภาพลักษณ์ใหม่ให้แก่ข้าวหอมมะลิบ้านแม่คงคา การทำให้บรรจุภัณฑ์ดึงดูดลูกค้ามันเป็นเรื่องสำคัญ ข้อมูลด้านล่างนี้เป็นรายละเอียดการปฏิบัติและคำแนะนำต่างๆ

- **สร้างชื่อสำหรับสินค้า:** การสร้างชื่อให้ตัวสินค้านั้นรวมไปถึงการสร้างแบรนด์
แบรนด์นั้นใช้เพื่อเพิ่มความน่าสนใจโดยทำให้สินค้าเป็นที่สังเกตมากขึ้นต่อผู้บริโภคเมื่อวางสินค้าไว้ข้างๆ
สินค้าคู่แข่ง ชื่อควรมีความเกี่ยวข้องกับลูกค้าและบ่งชี้ถึงลักษณะพิเศษของตัวสินค้า
สำหรับข้าวหอมมะลิบ้านแม่คงคาสามารถเสนอให้ชื่อเป็น “ข้าวแม่คงคา”
ชื่อที่เขียนเป็นทั้งอังกฤษและไทยจะสามารถดึงดูดลูกค้าที่สามารถอ่านภาษานั้นๆได้
- **ทำภาพลักษณ์บรรจุภัณฑ์ใหม่สำหรับตัวข้าวโดยสร้างโลโก้ใหม่สำหรับข้าว:**
โลโก้สินค้าสำหรับบริษัทนั้นสำคัญต่อการจดจำของลูกค้า (Entrepreneur Media Incorporation, 2014) ถ้าลูกค้ามีปฏิริยาด้านบวกต่อโลโก้
พวกเขามีโอกาสที่จะเลือกสินค้านั้นเพราะเป็นสัญญาณว่าบริษัทนั้นเป็นที่ยอมรับในตลาด โลโก้นั้นมี 3
ประเภท ได้แก่ โลโก้ที่เป็นตัวหนังสือ, โลโก้ที่เป็นสัญลักษณ์นามธรรม,
และโลโก้ที่อธิบายตัวบริษัทโดยผ่านรูป
- **เมื่อจะสร้างโลโก้** ปัจจัยหลายอย่างต้องถูกนำมาคิด (Entrepreneur Media Incorporation, 2014) โลโก้ควรจะสามารถย่อหรือขยายได้ และสามารถแยกแยะออกด้วยสีขาวและดำ
โลโก้ที่สามารถจับความพิเศษของบริษัทผ่านอาร์ตเวิร์กนั้นโดยปกติแล้วจะมีโอกาสสำเร็จมากกว่า
โลโก้ควรจะมีความสามารถในการคงความทันสมัยไปได้เป็นเวลาประมาณ 20 ปีเพื่อที่ไม่จำเป็นต้องการแก้ไข
และควรจะคุ้มทุนและเป็นไปได้ที่จะผลิต

เราขอแนะนำสำหรับบริษัทที่เพิ่งเริ่มก่อตั้งในการปรึกษาผู้ออกแบบโลโก้มืออาชีพแทนที่จะออกแบบด้วยตัวเอง

ด้านล่างคือโลโก้ที่ทางเราเสนอ



เป้าหมายที่ 2: แนะนำข้าวแม่คงคาให้กับกลุ่มเป้าหมาย

ในการที่จะเพิ่มยอดขายของข้าวแม่คงคา ข้าวควรที่จะถูกเปิดในตลาดใหม่ๆ ซึ่งจะทำให้จำนวนลูกค้าที่เห็นสินค้าเพิ่มขึ้น ในการที่จะทำแบบนี้ได้ กลุ่มเป้าหมายที่เป็นไปได้ควรที่จะต้องถูกหา รวมไปถึงแผนที่จะแนะนำให้กลุ่มเหล่านี้

เราได้พบกลุ่มเป้าหมายสามกลุ่มด้วยกัน ซึ่งเราได้หาข้อมูลเพิ่มเติมว่าจะเจาะแต่ละกลุ่มด้วยวิธีใด
เรายังได้ให้เวลาที่เหมาะสมกับทางรักษ์ไทยที่จะดำเนินแผนการตลาดนี้ด้วย

ตลาดผู้บริโภคที่มีความเป็นไปได้

พ่อค้าคนกลางได้ให้ข้อมูลเกี่ยวกับตลาดผู้บริโภคในเชิงใหม่และให้ผลตอบรับที่ช่วยในการบ่งชี้เป้าหมายกลุ่มอื่น
ข้อมูลด้านล่างคือกลุ่มเป้าหมายที่คาดว่าจะเหมาะสมที่สุดของข้าวแม่กงคา

- c. การระบุกลุ่มเป้าหมาย: กลุ่มเป้าหมาย 3 กลุ่มประกอบด้วย กลุ่มคนรักสุขภาพ, กลุ่มคนญี่ปุ่น,
และนักท่องเที่ยว

กลุ่มเป้าหมายเหล่านี้ถูกระบุโดยการประเมินจากการขายข้าวหมูป่านแม่กงคาในปัจจุบันและการทำแบบสำรวจ
ของกรุงเทพและเชียงใหม่ ด้านล่างเป็นความต้องการของกลุ่มลูกค้าแต่ละกลุ่ม

- d. ลักษณะความต้องการของกลุ่มลูกค้า

1. กลุ่มคนรักสุขภาพ: ตลาดคนรักสุขภาพนั้นรวมกลุ่มคนที่ต้องการใช้ชีวิตอย่างสุขภาพดี
กลุ่มชายและหญิงอายุระหว่าง 25 ถึง 65

ปีนั้นคำนึงถึงสุขภาพและการบริโภคคาร์โบไฮเดรตต่อวันของพวกเขาเน้นที่รวมอยู่ด้วย

คนประเภทนี้มักจะมีการศึกษาสูงและเป็นกลุ่มคนระหว่างชนชั้นกลางถึงชั้นสูง

คนกลุ่มนี้นั้นรับประทานอาหารสุขภาพเป็นประจำ

พวกเขาจึงอ่านฉลากสินค้าเกี่ยวกับคุณค่าทางโภชนาการ จากผลสำรวจ

การตัดสินใจที่มีผลต่อการเลือกซื้อของพวกเขาเน้นมี:

- ความสำคัญของข้าวในแต่ละมื้ออาหารของคนไทย
- คุณค่าทางโภชนาการ
- วิธีการทำที่แสดงบนบรรจุภัณฑ์

2. คนญี่ปุ่นที่อาศัยในประเทศไทย:

กลุ่มตลาดนี้ประกอบอยู่หลักๆคือกลุ่มครอบครัวคนญี่ปุ่นจำนวนมากซึ่งแสดงถึงความมั่นคงทาง

เศรษฐกิจ

ผู้บริโภคกลุ่มนี้พิเศษตรงที่พวกเขาบอกว่าเนื้อผิวของข้าวหอมบ้านแม่คงคานั้นคล้ายคลึงกับพันธุ์อุริมาจิที่พบที่ญี่ปุ่น จากผลสำรวจ องค์ประกอบที่มีผลต่อการเลือกซื้อของพวกเขานั้นมี:

- เรื่องราวของชาวบ้านในหมู่บ้านแม่คงคา
- เนื้อผิวและลักษณะของข้าวที่คล้ายคลึงกับข้าวของญี่ปุ่น
- บรรพบุรุษของข้าว

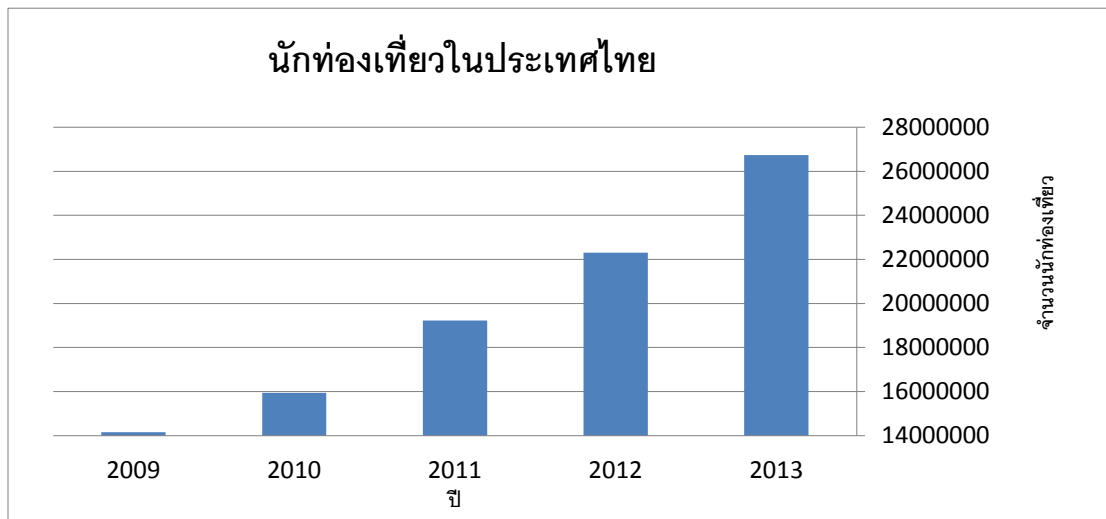
3. นักท่องเที่ยว: ตลาดกลุ่มนี้ต้องการลงสินค้าต่างๆที่ผลิตในประเทศไทย

ตลาดกลุ่มนี้มักจะประกอบด้วยคนเอเชีย, ยุโรป, และตะวันตกอายุประมาณ 20 ถึง 50 ปี

กลุ่มลูกค้ากลุ่มนี้ต้องการที่จะลงมืออาหารแบบไทย จากผลสำรวจ

องค์ประกอบที่มีผลต่อการเลือกซื้อของพวกเขานั้นมี:

- ราคาของสินค้า
- รสชาติของสินค้า
- วัสดุที่อนุรักษ์ธรรมชาติ



การวิเคราะห์ตลาดเป้าหมาย

เราได้พบสี่ตลาดที่มีความเป็นไปได้ว่ากลุ่มเป้าหมายเราจะไปคือ: ตลาดเกษตรกรที่ K-Village ในกรุงเทพ; ตลาดนิฮอนมาชิในกรุงเทพ: ตลาดสดต้นพยอมในเชียงใหม่; ร้านอาหารในเชียงใหม่และกรุงเทพ เราจะประเมินสถานที่เหล่านี้และระบุว่าตลาดไหนคือตลาดเป้าหมายของข้าวแม่กงคา

ตลาดเกษตรกรที่ K-Village ในกรุงเทพ: ที่ตลาดเกษตรกรที่ K-Village

ทีมเราได้พบว่าสินค้าที่นี้เหมือนกับข้าวจากแม่กงคา ที่นี้มีข้าวบรรจุแบบสูญญากาศขายตามร้านค้าต่างๆ; ข้าว Jasberry และ Happy Health Club สองแบรนด์นี้ ขายข้าวแบบหนึ่งกิโลอยู่ที่ 160 และ 110 บาทตามลำดับ ราคาข้าวเหล่านี้เป็นราคาที่ข้าวแม่กงคาสามารถขายได้ถ้าทำการตลาด ได้สู้สี่ ทั้งสองร้านนี้ ได้ให้แผ่นพับที่มีข้อมูลเกี่ยวกับจุดเด่นทางการตลาดเช่น ข้อมูลทางโภชนาการ และใบรับรอง ยิ่งไปกว่านั้น ตลาดนี้นั้นถูกจัดขึ้นเพียงเดือนละครั้ง จึงทำให้เป็นการได้เปรียบต่อสินค้า นี่ก็เป็นเพราะว่า เนื่องจากกำลังการผลิตของหมู่บ้านน้อย มาก จึงทำให้ลูกค้าที่มีเดือนละครั้งเป็นประโยชน์ โดยรวมตลาดเกษตรกรที่ K-Village จึงเป็นตลาดเป้าหมายของข้าวเรา

ตลาดนิฮอนมาชิในกรุงเทพ: ตลาดนิฮอนมาชิไม่ตรงกับคุณสมบัติที่เหมาะสมสำหรับการเปิดตลาดสำหรับข้าวแม่กงคา

ตลาดนิฮอนมาชิเต็มไปด้วยร้านค้าเอกชน

จึงเป็นสิ่งจำเป็นที่จะต้องให้เจ้าของร้านค้าตกลงยินยอมให้ขายข้าวในร้านค้าของพวกเขา จากผลการวิจัยของเรา

ในขณะที่สัมภาษณ์เจ้าของร้านอาหาร เราได้รู้ว่ามันเป็นเรื่องที่ยากมาก ที่จะเข้าตลาดที่มีขนาดใหญ่

โดยไม่มีกรรู้จักเจ้าของเป็นการส่วนตัว มูลนิธิริักษไทยจึงต้องมีคนรู้จักอยู่แล้วที่จะขายข้าวที่นั่น ทีมงานจึงระบุว่า

ตลาดนิฮอนมาชิไม่มีศักยภาพพอสำหรับข้าวแม่กงคา แต่เนื่องจากตลาดนิฮอนมาชิอยู่ในบริเวณใกล้เคียงกับ K-Village

ตลาดสองที่นี้อาจจะแบ่งส่วนของลูกค้าเดียวกัน ซึ่งจะเป็นประโยชน์สำหรับการขายข้าว เพราะลูกค้าที่ตลาดนิฮอนมาชิ อาจจะซื้อข้าว

ตลาดสดต้นพยอมในเชียงใหม่: ตลาดต้นพยอมสามารถระบุคุณลักษณะเด่นในการที่ตลาดนี้เป็นตลาดสดกลางแจ้ง

ทีมเราได้สังเกตเห็นว่า ข้าวที่ขายที่นี้ มีทั้งในถังเปิด และ หุงสุกโดยผู้ขาย ในการที่จะขายข้าวที่นี้นั้น

ผู้ขายอาจจะต้องเปลี่ยนวิธีขายข้าวให้ตรงกับตลาด โดยการขายข้าวแบบหุงสุก หรือขายโดยไม่ต้องมีบรรจุภัณฑ์

โดยรวมทีมเราระบุว่าตลาดต้นพยอม เป็นที่สามารถเปิดตลาดสำหรับข้าวแม่กงคาได้

ร้านอาหารในเชียงใหม่:

ถ้าไรประมาณครึ่งหนึ่งของร้านอาหารริเวอร์ไซด์ในเชียงใหม่มาจากนักท่องเที่ยว ในช่วงสามส่วนของปี

แนวโน้มการท่องเที่ยวที่เพิ่มขึ้นนั้น ดูเหมือนจะทำให้ ร้านอาหารขอมที่จะเสี่ยงและลองผลิตภัณฑ์ใหม่ ดังนั้น การเพิ่มขึ้นของ

การท่องเที่ยวและทำให้การเปิดตลาดของข้าวแม่กงคาให้กับนักท่องเที่ยวเป็นไปได้ การที่สามารถขายในร้านอาหารได้

จะทำให้รายได้ของชาวบ้านเพิ่มขึ้นและ มีลูกค้าที่ไม่ต้องการบรรจุภัณฑ์ ร้านอาหารคุณเชิญในเชียงใหม่ได้กล่าวว่า

ถึงแม้ว่าพวกเขา จะมีที่ซื้อข้าวเป็นประจำอยู่แล้ว และคงไม่สนใจซื้อข้าวของเรา
แต่ร้านอื่นๆคงจะสนใจเพราะว่าเขอยากช่วยชาวบ้าน มูลนิธิริักษ์ไทยควรที่จะเล็งเป้าหมายไปที่โรงแรมและร้านอาหาร
ที่ให้บริการอาหารเหนือแท้ๆ รวมทั้งร้านอาหารที่ส่งเสริมเรื่อง วิถีชีวิตที่มีสุขภาพดีและมีชื่อเสียงในหมู่นักท่องเที่ยว
ร้านอาหารเปิดใหม่เป็นตัวเลือกที่ดีเพราะพวกเขายังไม่มีแหล่งซื้อข้าวประจำ มีร้านอาหารที่หนึ่ง ที่เรียกว่า **Brown Rice**
ซึ่งเปิดได้ไม่นานในเชียงใหม่และมีข้าวกล้องบริการที่ร้านเท่านั้น ร้านอาหารนี้ได้มอบโอกาสให้กับมูลนิธิริักษ์ไทยที่จะเป็น
ลูกค้าประจำ ซึ่งจะช่วยให้ต้นทุนลดลงเพราะ ไม่ต้องใช้บรรจุภัณฑ์หุรร่า

ข้อมูลการติดต่อตลาด

เราจะแสดงข้อมูลการติดต่อและข้อมูลโดยรวมของแต่ละตลาดที่มีศักยภาพเพื่อนำข้าวแม่คงคาเข้าสู่ตลาดพวกนี้

ตลาดเกษตรกรที่ K-Village

K-Village เป็นศูนย์กลางการค้าชุมชนที่ประกอบด้วยร้านอาหาร, ขายเสื้อผ้า, ความงาม, และอื่นๆ
ทุกเดือนจะมีงานตลาดเกษตรกรจำนวน 2 วันที่มีสินค้าโฮมเมด, สินค้าอินทรีย์, และสินค้าตามธรรมชาติมาขาย
ข้อดีของตลาดนี้คือความต้องการพ่อค้าคนกลางในการขายสินค้า อย่างไรก็ตามแต่
ทางเลือกนี้ควรจะนำมาพิจารณาเป็นอย่างยิ่งเพราะตลาดนี้ดึงดูดกลุ่มลูกค้าทั้ง 3 กลุ่มที่ต้องการ

ที่อยู่:

93, 95 สุขุมวิท 26,

คลองตัน, คลองเตย, 10110

กรุงเทพ, ประเทศไทย



Website:

www.kvillagebangkok.com

ข้อมูลติดต่อ:

โทร 02-258-9919-21

E-mail: info@kvillagebangkok.com

ตลาดต้นพยอม

ตลาดนี้เป็นตลาดสดในเชิงใหม่ที่มีศักยภาพในการขายข้าวแม่กงคา

ตลาดนี้เป็นตลาดที่คนท้องถิ่นเข้ามาจับตลาดทุกวันเป็นจำนวนมากเพื่อซื้อข้าว, ผัก, ผลไม้, ฯลฯ

ผู้จัดการของตลาดนี้ได้ให้สัมภาษณ์และแนะนำว่าข้าวแม่กงคาสามารถนำมาขายและประสบผลสำเร็จได้เพราะข้าวกล้องนั้นเพิ่มขึ้นในปีนี้อย่างไรก็ตาม ข้อดีของตลาดนี้คือยังต้องการพ่อค้าคนกลางในการขายข้าวอยู่ทุกวัน

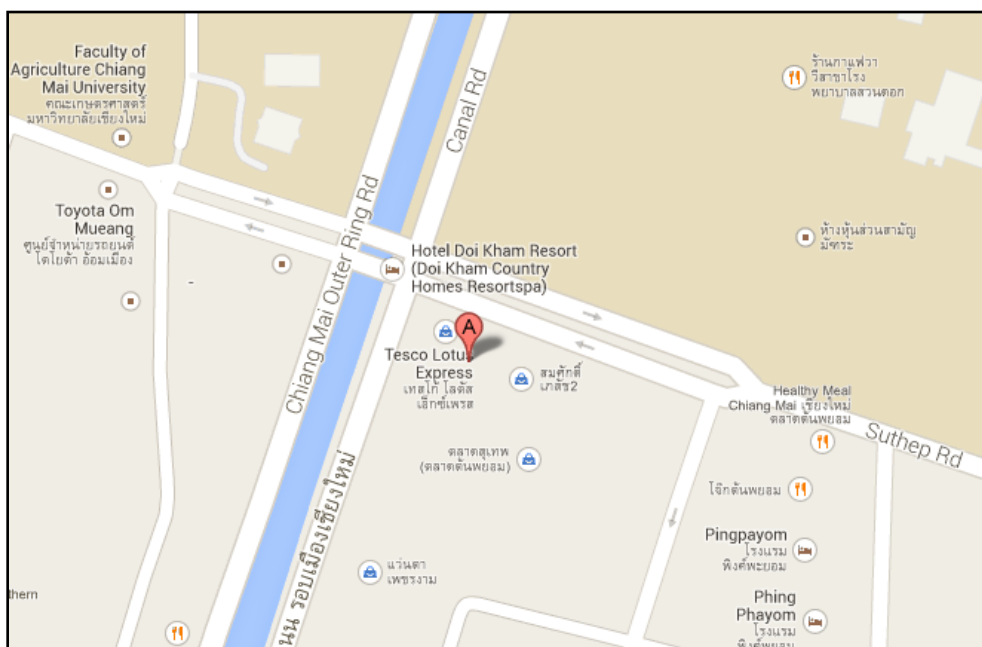
ข้อมูลแสดงให้เห็นสื่ออินเทอร์เน็ตไม่ได้ใช้อย่างแพร่หลายในตลาดนี้เท่ากับตลาดเกษตรกรใน K-Village

แผนพืชนั้นอาจดูสำคัญกว่าสื่อทางอินเทอร์เน็ตในการทำตลาดที่นี่เพราะผู้บริโภคที่นี่ไม่ใช่ Facebook หรือ Youtube หรือแม้แต่ไม่บ่อย

ที่อยู่:

อำเภอเมืองเชียงใหม่,

เชียงใหม่, ประเทศไทย



ไม่สามารถหาข้อมูลเพิ่มเติมสำหรับตลาดนี้ได้ ถ้ามูลนิธิรักไทยมีความสนใจ ทางมูลนิธิสามารถติดต่อผู้จัดการของตลาดได้

ร้านอาหาร The Riverside Bar & Restaurant

ทางทีมมองว่าร้าน The Riverside Bar & Restaurant

เป็นร้านที่มีศักยภาพในการโปรโมตข้าวด้วยเวลาที่ร้านมีชื่อเสียงในหมู่นักท่องเที่ยว เมนูอาหารนั้นมีอาหารทุกประเภท ทั้งไทย, อาหารเหนือ, และอาหารตะวันตก ตามชื่อร้าน

ร้านอาหารนั้นตั้งอยู่ใกล้แม่น้ำปิงและวิวในช่วงกลางคืนเป็นอีกหนึ่งจุดสนใจสำหรับลูกค้าในการมาชม

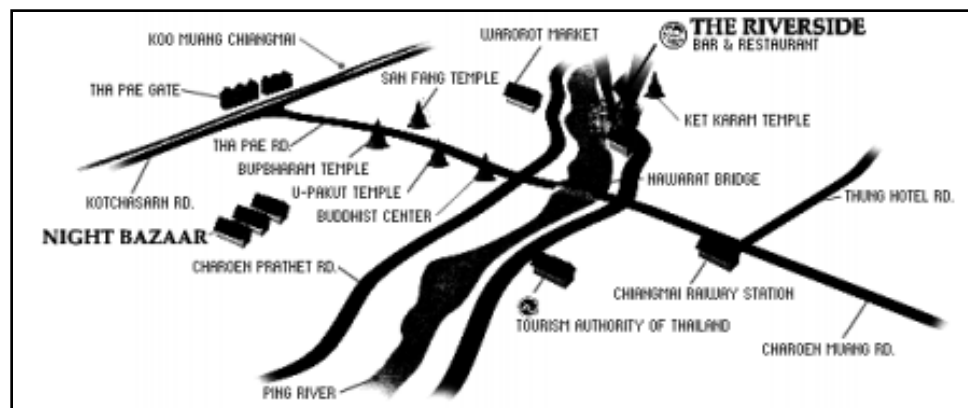
ตามที่ผู้จัดการของร้านได้แนะนำไว้

ร้านอาหารนี้เป็นอีกตัวเลือกที่ดีเพราะจะสามารถให้ผู้บริโภคได้ลองสินค้าใหม่ๆที่ช่วยพัฒนาชุมชนแม่ฮ่อง

ที่อยู่:

9-11 ถนนเจริญราษฎร์

เชียงใหม่, ประเทศไทย



Website:

www.theriversidechiangmai.com

ข้อมูลติดต่อ:

โทร: 053-243-239

E-mail: service@theriversidechiangmai.com

ร้านอาหาร Brown Rice – Organic Bistro

ร้าน Brown Rice นั้นมีชื่อเสียงมาจากอาหารมังสวิรัตที่เป็นอาหารไทยและตะวันตก
ทางทีมคิดว่าร้านอาหารที่เพิ่งเปิดนี้เป็นเป้าหมายสำหรับข้าวแม่คงคาในการจัดจำหน่ายที่มั่นคง จากอาหารที่พวกเขาขาย
ข้าวแม่คงคาสามารถนำไปเป็นส่วนหนึ่งของเมนูได้

ที่อยู่:

48 ถนนชัยภูมิ, เมืองเชียงใหม่,

เชียงใหม่, ประเทศไทย



ข้อมูลติดต่อ:

โทร 1: 086-918-8428

โทร 2: 093-292-4688

E-mail 1: duangvg@gmail.com

E-mail 2: nanwarin@gmail.com

เป้าหมายที่ 3: ปฏิบัติตามกลยุทธ์ทางการตลาดเพื่อโปรโมตข้าวในตลาดเป้าหมาย

โปรแกรมของเราทำวิจัยอยู่ที่พื้นที่กรุงเทพฯและเชียงใหม่ แผนของเราอยู่บนคอนเซป

“ประสบการณ์ของผู้บริโภค”

มันสำคัญที่จะทำการตลาดข้าวโดยเป็นประสบการณ์ที่ผู้บริโภคจะได้รับ โดยซื้อและรับประทานข้าว

มันสำคัญที่จะใช้เรื่องราวของชาวนามาทำการตลาดด้วยความจริงที่ว่าข้าวทุกถุงที่ซื้อนั้นมีผลต่อความเป็นอยู่ของสตรีในหมู่บ้าน

แม้คงอาจสามารถนำมาเป็นจุดขายหลักและผลประโยชน์ที่มีต่อสุขภาพผู้บริโภค ในการที่จะทำให้อีกดองนั้น

มันจำเป็นที่จะต้องวิเคราะห์สื่อทางการตลาดที่ดีที่สุดสำหรับกลุ่มเป้าหมายและสร้างแผนในการใช้สื่อเหล่านั้นให้มีประสิทธิภาพงานวิจัยของเราแสดงให้เห็นกลุ่มคนที่ตลาดเกษตรกรที่ K-Village และตลาดต้นพยอมว่านอกจากจะมีการเข้าถึง nternet ทุกวันแล้ว แต่ส่วนใหญ่ใช้ Facebook และ Youtube ทุกวันอีกด้วย ซึ่งทำให้การใช้สื่อ Social Network นั้นมีประสิทธิภาพต่อกลุ่มเป้าหมายของเรา

ช่อง **Youtube:** การสร้างช่อง Youtube จะทำให้มูลนิธิริรักษ์ไทยสามารถทำให้คนอื่นรับรู้เกี่ยวกับสินค้า Youtube สามารถทำให้คนทั่วโลกเรียนรู้เกี่ยวกับหมู่บ้านแม่คงคาและข้าวซ้อมมือ เราแนะนำให้ทำวิดีโอทั้งภาษาไทยและอังกฤษ หัวข้อวิดีโอในช่องนั้นควรมี:

ข้าวแม่คงคา

วิดีโอควรมีข้อมูลเกี่ยวกับตัวสินค้า หัวข้อที่ควรมีคือคุณค่าทางโภชนาการและประโยชน์ที่ข้าวมีแก่ผู้บริโภค เราตั้งเป้าไว้ว่าจะโปรโมตตัวแบรนด์และสินค้าจากวิดีโอนี้

ชาวนาของหมู่บ้านแม่คงคา

วิดีโอนี้สำคัญมากเพราะหนึ่งในหลักการของเราคือการช่วยพัฒนาชาวนาบ้านหมู่บ้านแม่คงคา เราแนะนำให้ถ่ายวิดีโอที่หมู่บ้านแม่คงและเน้นไปที่วิถีชีวิตของชาวนาบ้าน หัวข้อที่ควรมีคือชีวิตของชาวนา, ประเพณีและความเชื่อ เป้าหมายของวิดีโอคือการเพิ่มความสนใจให้แก่ผู้บริโภคในการที่จะเรียนรู้เกี่ยวกับชาวนาและชาวกะเหรี่ยง

การดำข้าวของหมู่บ้านแม่คงคา

จุดเน้นของวิดีโอนี้คือเทคนิคที่ชาวนาบ้านดำข้าว ข้อมูลรายละเอียดเกี่ยวกับครกกระเดื่องควรมีในวิดีโอ และสำคัญที่ว่าจะต้องให้เหตุผลว่าทำไมชาวนาถึงใช้วิธีนี้เพื่อที่จะให้ผู้ชมเข้าใจหมู่บ้านและสินค้า

การปลูกข้าวไร่

วิดีโอควรอธิบายเกี่ยวกับความแตกต่างระหว่างข้าวนาและข้าวไร่

ความพิเศษที่หมู่บ้านแม่คงคาปลูกข้าวบนภูเขานั้นควรจะเน้นอยู่ในวิดีโอ ความช่วยเหลือจากผู้ชำนาญเรื่องการปลูกข้าว, ชาวบ้าน, และมูลนิธิริักษ์ไทยควรจะรวมอยู่ในนั้นด้วย

สูตรอาหารพื้นบ้านของหมู่บ้านแม่คงคา

สูตรอาหารจากหมู่บ้านแม่คงคาจะทำให้ลูกค้าอยากซื้อสินค้าเพื่อลองสิ่งใหม่ๆ

วิดีโอควรจะเน้นไปที่ชาวบ้านเพื่อที่ลูกค้าจะได้เรียนรู้โดยตรงจากพวกเขา

วิดีโอนี้จะช่วยให้คนรู้จักมากขึ้นและช่วยให้แบรนด์คู่ดีขึ้น

ออกแบบแผ่นพับ: แผ่นพับเป็นเครื่องมือทางการตลาดที่เพิ่มความสนใจของผู้บริโภคต่อสินค้าได้

เครื่องมือนี้จะใช้เข้ามาให้คนรู้จักคุณภาพและความแปลกใหม่ของข้าวแม่คงคา ลูกค้าส่วนใหญ่ในหัวข้อที่ 5

นั้นคำนึงถึงคุณค่าทางโภชนาการ เพราะฉะนั้น แผ่นพับควรมีข้อมูลทางโภชนาการที่สำคัญที่สุดเกี่ยวกับข้าวไร่ นอกจากนี้

คนส่วนใหญ่ที่ทำการสำรวจสรุปว่าเราไม่รู้จักริักษ์หอมมือ จึงเป็นข้อมูลเพิ่มเติมที่ใส่ไปให้ผู้บริโภค

ด้านล่างแสดงถึงตัวอย่างที่แนะนำสำหรับแผ่นพับข้าวแม่คงคา:

คุณค่าทางโภชนาการ Nutritional Benefits

ข้าวไร่ของเรา มีโปรตีนและใยอาหารสูงซึ่งสามารถสร้างกล้ามเนื้อและลดระดับคอเลสเตอรอล จึงทำให้ข้าวซ้อมมือเป็นตัวเลือกอันดับหนึ่งในการบริโภคเป็นประจำ ข้าวมีวิตามินสูง เช่น B1, B2, และ B6 รวมไปถึงแคลเซียม, ธาตุเหล็ก, และฟอสฟอรัส ซึ่งจำเป็นต่อระบบย่อย เปลี่ยนมารับประทานข้าวไร่จะช่วยให้ทุกคนมีสุขภาพที่ดี

Our highland rice is high in protein and fiber, building muscles and lowering cholesterol levels, making it a clear choice for daily consumption. It is rich in vitamin groups such as B1, B2, and B6, and contains minerals including calcium, iron, and phosphorus that are vital for supporting proper digestion.



ข้าวซ้อมมือ Hand-milled Rice



ข้าวซ้อมมือมีประโยชน์ต่อร่างกาย, วิตามินสูง จึงเป็นตัวเลือกที่ดีกว่าข้าวหอมมะลิซึ่งมีคุณค่าทางโภชนาการต่ำ ข้าวซ้อมมือใช้วิธีตำในครกไม้เพื่อแยกเนื้อข้าวออกจากรำข้าว วิธีเก่าแก่ที่ถูกใช้มาเป็นพันๆ ปีและไม่มีการใช้เครื่องจักรหรือสารเคมีใดๆ ซึ่งทำให้มันต่างจากข้าวที่ผลิตเป็นจำนวนมาก กระบวนการผลิตนี้ยังรับรองได้ว่าวิตามินและสารอาหารในเนื้อข้าวจะไม่หายไป

Hand-milled rice is a healthier, vitamin-packed alternative to Jasmine white rice, which has low nutritional value. Hand-milled rice is milled by pounding the rice in a wooden mortar to separate it from the husk. This ancient technique has been used for thousands of years, and does not involve any machinery and is chemical free, separating it from mass-produced rice. The process also assures that the

ข้าวแม่คงคา Khao Mae Khong Khaa



สนับสนุนโดยมูลนิธิรักไทย
ติดต่อสอบถาม สั่งซื้อ โทร. 053-308-169



ภาพด้านบนคือรูปครกกระต๋องที่ใช้ตำข้าว
ออกจากรำข้าว

Above is a picture of the hand-milling technique that the villagers use to separate the rice from the husk.

MAE KHONG KHA A VILLAGE หมู่บ้านแม่คงคา

หมู่บ้านแม่คงคา คือหมู่บ้านชาว Karen ที่ตั้งอยู่ทางตะวันตกเฉียงเหนือของจังหวัดเชียงใหม่ ชาวบ้านมีวิถีชีวิตที่เป็นธรรมชาติและเรียบง่าย การเกษตรคือรายได้หลักของชาวบ้าน ชาวบ้านหมู่บ้านแม่คงคา มีประเพณีและวัฒนธรรมที่แตกต่างจากหมู่บ้านอื่นและเป็นหนึ่งในไม่กี่หมู่บ้านชาว Karen ในประเทศไทยที่ยังคงอนุรักษ์เครื่องแต่งกาย, ภาษา, และวิถีชีวิตที่เป็นเอกลักษณ์

Mae Khong Khaa is a Karen village located in the northwest of the Chiang Mai province. Villagers live a natural and simple lifestyle, where agriculture is their major source of income. Mae Khong Khaa villagers share unique traditions and customs and are one of the few



พื้นที่ว่างในแผ่นพับสามารถใส่ข้อมูลเหล่านี้ได้:

- ข้อมูลเกี่ยวกับข้าวไร่
- วิธีหุงข้าว
- เรื่องราวของหมู่บ้าน
- เรื่องราวของชาวบ้าน 1 คนและความรับผิดชอบของเธอที่มีต่อหมู่บ้าน
- สูตรทำอาหารเหนือที่โด่งดัง

หน้าFacebook:

การสร้างหน้า followers' page “ข้าวแม่คงคา” จะช่วยให้ผู้ใช้งาน Facebook

เข้าถึงข้อมูลล่าสุดของข้าวแม่คงคาและสามารถส่งลิงก์ไปถึงเพื่อนและสมาชิกในครอบครัว

คำแนะนำ

- อัปเดตหน้าของ การเพิ่มเกี่ยวกับการพัฒนาของหมู่บ้านและ โปรโมชันของสินค้าจะทำให้กลุ่มลูกค้ามองหาตัวสินค้ามากขึ้นเท่านั้น ตัวอย่างการโพสต์เช่น:
 - มาดูซื้อแบรนด์หรือสินค้าใหม่ของเรา
 - เรียนรู้รับชมวิดีโอเกี่ยวกับสมาคมสตรีของหมู่บ้านแม่คงคา
- โพสต์สิ่งที่ทำให้เชื่อมต่อกับลูกค้าอย่างน้อยสัปดาห์ละ 1 ครั้ง
อธิบายว่าพวกเขา กำลังช่วยหมู่บ้านอย่างไร โดยการซื้อข้าว ตัวอย่างเช่น:
 - การซื้อข้าวของคุณช่วยให้ครอบครัวนี้มีเงินส่งลูกไปเรียนหนังสือ ขอบคุณ
- ลองใส่รูปหรือวิดีโอในโพสต์ให้มากที่สุด
มันจะช่วยถ่ายทอดความคิดได้ดีกว่าและช่วยให้ผู้บริโภคทราบว่าเขากำลังช่วยคนอื่นอยู่
- พยายามให้ชื่อของหน้านั้นเกี่ยวข้องกับเรื่องราว ตัวอย่างเช่นการใส่ชื่อแบรนด์ของข้าว
- ใช้รูปปกเป็นรูปของชาวบ้านหมู่บ้านแม่คงคา
- ใช้รูปโปรไฟล์โฆษณาข้าวแม่คงคา ตัวอย่างเช่นโลโก้

โฆษณาในนิตยสาร:

โฆษณาในนิตยสารเป็นอีกวิธีที่จะให้ความรู้เกี่ยวกับตัวสินค้าแก่ผู้บริโภคที่อ่านนิตยสารในทุกวัน

นิตยสารเป็นสื่อที่ดีสำหรับคนที่ต้องการสูตรอาหารที่ใช้ข้าวแม่คงคา

เราแนะนำให้ใช้โฆษณาในนิตยสารเมื่อยอดขายของข้าวได้เพิ่มขึ้นแล้ว ตัวอย่างสูตรอาหารที่สามารถใช้ได้คือ “แกงข้าวเบ๊อะ” ซึ่งเป็นสูตรเฉพาะของชาวกะเหรี่ยงซึ่งแสดงอยู่ด้านล่าง:

สูตรแกงข้าวเบ๊อะ

ส่วนผสม:

- ข้าวแม่คงคา
- เนื้อหมูและซี่โครง
- หน่อไม้
- พริก
- เกลือและพริกไทย

วิธีทำ:

1. เตรียมหม้อหุงข้าว เติมน้ำแล้วใส่ข้าวลงไป
2. เมื่อน้ำเดือด ใส่เนื้อหมูหรือซี่โครงหมูและหน่อไม้ลงไปในหม้อ
3. เมื่อข้าวเริ่มแตก ให้คนอีกรอบ
4. ใส่พริก, เกลือ, และพริกไทย

การวิเคราะห์สื่อและตลาดเฉพาะราย

สื่ออินเทอร์เน็ตสำคัญสำหรับทั้งตลาดเกษตรกรใน K-Village และตลาดต้นพยอมเพราะนอกจาก 100% ของผู้ทำแบบสำรวจสามารถเข้าถึงอินเทอร์เน็ตทุกวันแล้ว ยังมีการใช้ Facebook และ Youtube มากอีกด้วย นอกจากนี้ ข้อมูลที่ได้จาก K-Village และตลาดต้นพยอมมีความแตกต่างตรงที่คนที่ใช้ Facebook และ Youtube ในตลาด K-Village นั้นมีมากกว่าตลาดต้นพยอม

นั่นหมายความว่าแผ่นพับอาจจะมีประสิทธิภาพมากกว่าการโฆษณาบนอินเทอร์เน็ต

ไทม์ไลน์

วิเคราะห์เศรษฐกิจ

วันที่ 1 ของแผนการตลาด

สถานที่: สำนักงานมูลนิธิรักไทย

คำอธิบาย:

การวิเคราะห์เศรษฐกิจของแผนการตลาดจะให้มูลนิธิเห็นว่าค่าใช้จ่ายทั้งหมดมาจากไหนตั้งแต่จุดเริ่มต้นของแผนการตลาด

การวิเคราะห์นี้จะสามารถสำเร็จในเวลา 3

เดือนและดำเนินการตามแผนเพื่อประเมินความสำเร็จของแผนและกำหนดจุดที่ต้องทำให้ดีขึ้น

การปล่อยสินค้าในสื่อออนไลน์

วันที่ 10-30 ของแผนการตลาด

สถานที่: ทั่วโลก

คำอธิบาย: การปล่อยข้อมูลทางสื่อออนไลน์เป็นเครื่องมือการตลาดที่ใหญ่ที่สุดในการโปรโมตสินค้า เพราะฉะนั้น

มันจำเป็นจะต้องมีการตรวจสอบอย่างถี่ถ้วนและปรับปรุงอย่างสม่ำเสมอ ช่อง Youtube ของข้าวแม่คงคาและหน้า

Facebook นั้นสามารถโปรโมตในครอบครัวและเพื่อนและส่งต่อกันปากต่อปาก

การแถลงข่าว

วันที่ 40 ของแผนการตลาด

สถานที่: กำหนดในภายหลัง

คำอธิบาย: การแถลงข่าวนั้นไม่จำเป็นแต่มันสามารถให้ข้อมูลในตลาดได้เพราะการแถลงนั้นสามารถดึงความสนใจจากสื่อเช่น

โทรทัศน์, นิตยสาร, และหนังสือพิมพ์ ถ้าการแถลงข่าวนั้นมีการจัดขึ้น

ตัวสินค้าควรจะถูกนำเสนอโดยอธิบายเกี่ยวกับประเพณีของชาวบ้านหมู่บ้านแม่คงคาและเรื่องข้าวหอมมะลิ

สมาชิกของกลุ่มสตรีหมู่บ้านแม่คงคาก็ควรจะไปอธิบายสินค้าและกระบวนการจากมุมมองของเธอ

ชาวบ้านควรมีการพูดคุยเรื่องลักษณะเฉพาะที่น่าสนใจโดยยึดหลัก 8 ข้อเป็นหลัก

การช่วยเหลือจากกรมการท่องเที่ยวและกระทรวงวัฒนธรรมจะสามารถช่วยโปรโมตสินค้าในร้านอาหารใกล้เคียงทั่วประเทศได้

อีกด้วย ที่ยที่สุด แจกผู้รับเชิญควรจะมียกข้าว, บรรณาธิการ,

ตัวแทนจากร้านอาหารที่ขายข้าวอยู่รวมไปถึงตัวแทนบริษัทที่สามารถมาเป็นคู่ค้าที่มั่นคงมาด้วย

การสัมภาษณ์จากหนังสือพิมพ์

วันที่ 50 ของแผนการตลาด

คำอธิบาย: ได้รับการสัมภาษณ์จากหนังสือพิมพ์ที่มีชื่อเสียงของกรุงเทพฯและเชียงใหม่ เช่น **Bangkok Post**

เพื่อให้คนรู้จักมากขึ้นในตลาด

การสัมภาษณ์จากหนังสือพิมพ์ควรมุ่งเน้นไปที่ว่ากลุ่มคนในหมู่บ้านแม่คงคาคือใครและสินค้าเขาได้อย่างไรบ้างเช่นคุณค่าทางโภชนาการหรือรสชาติที่แปลกใหม่

โฆษณาในนิตยสาร

เดือนที่ 9 ของแผนการตลาด

คำอธิบาย:

การใส่โฆษณาในนิตยสารที่เกี่ยวกับสุขภาพหรือการทำอาหารจะทำให้สินค้าได้ไปถึงหูของกลุ่มลูกค้าที่ไม่เดินทางบ่อยแต่ต้องการที่จะสิ่งใหม่ๆ แผนการโฆษณาควรจะทำประมาณที่กิจการผ่านไป 1 ปี

ถ้าทางมูลนิธิยังเชื่อว่าเป็นประโยชน์ที่จะขยายตลาด

สื่อทางการตลาดนี้ถือเป็นความเสี่ยงที่สูงด้วยต้นทุนที่จะลงโฆษณาในนิตยสาร

อย่างไรก็ดีแล้วแต่จะสามารถให้รายได้จำนวนมากถ้าสำเร็จ

เป้าหมายที่ 4: ประเมินความสำเร็จของข้าวแม่คงคาในตลาดต่างๆ

กลยุทธ์เหล่านี้จะถูกสร้างขึ้นเพื่อประเมินแผนการตลาดหลังจากผ่านไป 3 เดือน

มันจำเป็นที่จะต้องควบคุมและวัดความสำเร็จของเป้าหมายในแผนนี้เพื่อช่วยชาวบ้านหมู่บ้านแม่คงคาเพื่อให้พวกเขาสามารถยืดหยัดได้ด้วยตนเอง ในหัวข้อนี้ แผนการประเมินเป้าหมาย 3 เป้าหมายแรกแสดงอยู่ด้านล่าง

เป้าหมายที่ 1: ใน 3 เดือน การที่จะวิเคราะห์เกี่ยวกับภาพลักษณ์และมุมมองใหม่ของลูกค้าต่อข้าวแม่คงคา

มูลนิธิรักไทยจำเป็นต้องทำแบบสอบถามที่ประเมินเกี่ยวกับบรรจุกัญช์แบบใหม่

แบบสอบถามนี้จะมีคำถามเกี่ยวกับโลโก้, สี, ขนาด, และข้อมูลบนบรรจุภัณฑ์ เราแนะนำให้ทางมูลนิธิทำแบบสอบถาม 3

สถานที่ได้แก่ ห้างสรรพสินค้าในกรุงเทพฯ, ตลาดเกษตรกรในเชียงใหม่และกรุงเทพ

เหตุผลที่เลือกสถานที่นี้เพราะการวิเคราะห์ตลาดของเราได้ทำที่นี่ หลังจากที่เราสำรวจแล้ว

ควรทำการวิเคราะห์เชิงลึกและประเมินโดยนักการตลาดมืออาชีพ

เป้าหมายที่ 2 และ 3: ประสิทธิภาพของแผนนี้ควรประเมินผ่านการวิเคราะห์ทางเศรษฐกิจ

การประเมินควรประกอบด้วยการเปรียบเทียบระหว่างรายรับและกำไรในปัจจุบันและอดีต ไฟล์ Excel

ที่แนบมาเป็นตัวแม่แบบซึ่งผู้ใช้งานจะสามารถดูราคาต้นทุนสำหรับการปลูกข้าว, ค่าข้าว, ทำบรรจุภัณฑ์, ขนส่ง, และค่าการตลาด
ตัวแม่แบบยังสามารถคำนวณรายได้อีกด้วย

แบบวิเคราะห์นี้จะช่วยให้มูลนิธิริรักษ์ไทยสามารถจัดการเรื่องการดำเนินการด้านการเงินตั้งแต่เริ่มขึ้นปฏิบัติแผนการตลาด

การวิเคราะห์พฤติกรรมผู้บริโภคควรทำโดยดูจากข้อคิดเห็นที่ได้จากผู้บริโภคเพื่อที่จะนำไปประเมินความสำเร็จของข้าวแม่กงคา

เราแนะนำให้ติดต่อผู้จัดจำหน่ายข้าวและผู้บริโภคเพื่อที่จะได้คำแนะนำเกี่ยวกับตัวสินค้า Facebook และ Youtube

ก็เป็นเครื่องมือที่สามารถทำให้เห็นมุมมองของผู้บริโภคได้อย่างดีเพื่อที่จะนำมาวิเคราะห์จุดเด่นของแบรนด์ในตลาด

ปรับโครงสร้างใหม่

เราแนะนำให้มูลนิธิริรักษ์ไทยจ้างบริษัททำการตลาดมืออาชีพที่จะสามารถปรับปรุงเทคนิคทางการตลาดหลังจากการประเมิน
ครั้งก่อนหน้า บริษัททำการตลาดจะประเมินสถานการณ์ปัจจุบันและพัฒนาวิธีใหม่

ถ้าไม่มีความจำเป็นที่จะต้องปรับปรุงเทคนิคทางการตลาด แผนควรจะดำเนินต่อไปเป็นเวลา 6

เดือนและการวิเคราะห์ควรจะทำต่อไปในอนาคต

แผนการตลาดสามารถนำไปใช้เป็นหลักพื้นฐานสำหรับสินค้าตัวอื่นที่มูลนิธิริรักษ์ไทยดูแลอยู่ได้ หลักการวางแผน, ปฏิบัติ,
วิเคราะห์, และปรับโครงสร้างใหม่นั้นสามารถนำมาใช้ทั้งการแนะนำสินค้าสู่ตลาดและการเพิ่มยอดขาย

คำแนะนำเพิ่มเติม

ในหัวข้อนี้เราได้เสนอข้อเสนอแนะอื่นๆให้มูลนิธิริรักษ์ไทยเพื่อที่จะนำไปพิจารณาเพื่อปรับปรุงยอดขายของสินค้า

โปรแกรมการให้ความรู้

เราแนะนำเป็นอย่างสูงว่าให้มูลนิธิริรักษ์ไทยเข้าไปให้ความรู้แก่ชาวบ้านหมู่บ้านแม่กงคาเพื่อให้ตระหนักถึงความสำคัญ
ของการเพิ่มผลผลิต วิธีหลักที่ชาวบ้านจะได้รายได้เพิ่มจากข้าวคือการผลิตที่เพิ่มมากขึ้น หลังจากทำการตลาดสำเร็จแล้ว
ยอดขายข้าวแม่กงคาคาดว่าจะเพิ่มขึ้นและสามารถบรรลุเป้าหมายของมูลนิธิริรักษ์ไทยคือการแจกจ่ายกำไรได้ อย่างไรก็ตาม
การเพิ่มยอดขายอย่างเดียวไม่สามารถกระตุ้นให้ชาวบ้านเพิ่มผลผลิตข้าวได้

เพราะฉะนั้นแผนในอนาคตของมูลนิธิริรักษ์ไทยเรื่องการแบ่งกำไรควรจะแบ่งกำไรที่มากขึ้นกลับไปให้หมู่บ้าน

หลังจากที่ชาวบ้านมีรายรับมากขึ้นจากการทำการตลาดที่ประสบผลสำเร็จแล้ว

มันจะสามารถช่วยเพิ่มความมั่นใจให้แก่กลุ่มสตรีในปัจจุบัน รวมไปถึงดึงดูดให้คนมาสมัครเป็นสมาชิกเพิ่มอีกด้วย

ใบรับรองคุณภาพ

เราแนะนำให้มูลนิธิรักภัยไทยทำงานร่วมกับชาวบ้านเพื่อหาใบรับรองคุณภาพที่สามารถช่วยเพิ่มกำไรให้สินค้า การที่จะได้ใบรับรองนั้น ไม่เพียงแต่ชาวบ้านจะทำคุณภาพสินค้าให้ดีขึ้น แต่จะสามารถเพิ่มราคาและต้องคัดคุณภาพเพิ่มอีกด้วย ตัวอย่างของการรับรองคุณภาพที่สามารถได้รับคือ:

- **Leaf Marque:** เป็นฉลากที่พบเห็นทั่วโลกและสามารถใช้ได้ในประเทศไทย (Leaf Marque, 2013) โดยการใช้ฉลากนี้ สมาชิกจะยึดค่านับสัญญาว่าจะผลิตสินค้าอย่างเป็นมิตรต่อสิ่งแวดล้อม
- **Fairtrade:** เป็นฉลากที่รับรองว่าธุรกิจขนาดเล็กและชาวนานั้นมีการทำการค้าอย่างยุติธรรมจากผู้ขายและพ่อค้าคนกลาง และยังผ่านนโยบายนานาชาติเกี่ยวกับสังคมและสิ่งแวดล้อมอีกด้วย (Fair Trade International, 2011b) สำหรับผู้บริโภค มันหมายถึงว่าพวกเขากำลังซื้อสินค้าที่ผลิตและแลกเปลี่ยนอย่างเป็นธรรมสำหรับทุกหน่วยงานที่เกี่ยวข้องและเงินของเขานั้นได้ช่วยผู้ขายไว้ในประเทศที่กำลังพัฒนาโดยตรง (EcoLabel Index, 2014) ฉลาก Fairtrade นั้นมีในประเทศไทย
- **Good Agricultural Practices Standard (GAP):** เป็นมาตรฐานสำหรับชาวนาในประเทศไทยที่สามารถได้รับการรับรอง (United Nations Office on Drugs and Crime, 2008) มาตรฐานนั้นชี้เฉพาะเรื่องการใช้จำนวนยาฆ่าแมลงที่จำกัดและสามารถบอกได้ว่า “ปลอดภัย”
- **Organic Standard:** แตกต่างจาก GAP ตรงที่ว่าห้ามใช้ยาฆ่าแมลงบนพืชเลย (United Nations Office on Drugs and Crime, 2008) “ปลอดภัยฆ่าแมลง” สามารถเป็นเครื่องมือทางการตลาดที่ดีสำหรับชาวนาเพราะเขาสามารถขึ้นราคา 20-80% มากกว่าสินค้าปกติในตลาด

การวัดคุณค่าทางโภชนาการ

เราแนะนำให้มูลนิธิรักภัยไทยทำการวัดคุณค่าทางโภชนาการสำหรับข้าวแม่คงคา จากผลวิจัยของเรา เราพบว่าลูกค้ามองว่าคุณค่าทางโภชนาการคือหนึ่งในสิ่งสำคัญที่ควรใส่ใจในบรรจุภัณฑ์ ปัจจุบันแผ่นพับเราให้ข้อมูลเกี่ยวกับคุณค่าทางโภชนาการทั่วไปของข้าวกล้องที่ผลิตจากข้าวไร่ อย่างไรก็ตามแต่ ข้อมูลเฉพาะพันธุ์นั้นควรจะมีเพื่อตรวจสอบข้อมูลของเรา การวัดคุณค่าทางโภชนาการนั้นประกอบด้วยโปรตีน, ไขมัน, คาร์โบไฮเดรต, แร่ธาตุ, และวิตามิน

การวัดคุณค่าทางโภชนาการสามารถทำได้ในหลายๆที่ทั้งในกรุงเทพฯและเชียงใหม่ ที่ “Central Lab Thai” ก็เป็นทางเลือกที่พบได้ในทั้ง 2 จังหวัด ราคาตกอยู่ที่ประมาณ 12,500 บาทซึ่งต้องการตัวอย่าง 1 กิโลกรัมและใช้เวลา

10-12 วันทำการเพื่อให้ผล เราแนะนำเป็นอย่างสูงสำหรับการตรวจสอบนี้ เพราะแผนการตลาดพุ่งเป้าไปที่กลุ่มคนรักสุขภาพ
ข้อมูล “Central Lab Thai” แสดงอยู่ด้านล่าง:

Central Laboratory (Thailand) Company Limited.

50 ถนนพหลโยธิน ลาดยาว จตุจักร กรุงเทพฯ 10900

โทร 1: 02-940-6881-3 ติดต่อ 271

โทร 2: 02-940-5993

Website: <http://www.foodsafety-lcfa.com/web/en/main/index.php>

E-mail: chollada@centrallabthai.com

การศึกษาเพิ่มเติม

เราแนะนำให้ศึกษาเรื่องการวิเคราะห์จุดยืนของหมู่บ้านและการพัฒนาในอนาคตสามารถทำได้อย่างไรบ้าง
การศึกษาเกี่ยวกับการพัฒนาเศรษฐกิจของพืชเศรษฐกิจและพืชเพื่อยังชีพในหมู่บ้านนั้นควรมีเพื่อให้พวกเขาเห็นว่าข้าวสามารถ
เป็นพืชที่ทำให้พวกเขายืนหยัดด้วยตัวเองได้

นอกจากนี้แล้ว เรายังแนะนำให้ศึกษาเกี่ยวกับความรู้เรื่องการตลาดของชาวบ้านไปเรื่อยๆเพื่อที่เมื่อพวกเขามีทรัพยากร
พวกเขาจะสามารถนำมาทำการตลาดเองได้

[illegible][illegible]

Appendix F: Marketing Brochure for the Mae Khong Khaa Rice

คุณค่าทางโภชนาการ
Nutritional Benefits

ข้าวไร่ของเรามีโปรตีนและใยอาหารสูงซึ่งสามารถสร้างกล้ามเนื้อและลดระดับคอเลสเตอรอล จึงทำให้ข้าวซ้อมมือเป็นตัวเลือกอันดับหนึ่งในการบริโภคเป็นประจำ ข้าวมีวิตามินสูง เช่น B1, B2, และ B6 รวมไปถึงแคลเซียม, ธาตุเหล็ก, และฟอสฟอรัส ซึ่งจำเป็นต่อระบบย่อย

เปลี่ยนมารับประทานข้าวไร่จะช่วยให้ทุกคนมีสุขภาพที่ดี

Our highland rice is high in protein and fiber, building muscles and lowering cholesterol levels, making it a clear choice for daily consumption.

It is rich in vitamin groups such as B1, B2, and B6, and contains minerals including calcium, iron, and phosphorus that are vital for supporting proper digestion.

Switching to highland rice will ensure a healthy lifestyle for everyone.




ข้าวซ้อมมือ
Hand-milled Rice



ข้าวซ้อมมือมีประโยชน์ต่อร่างกาย, วิตามินสูง จึงเป็นตัวเลือกที่ดีกว่าข้าวหอมมะลิซึ่งมีคุณค่าทางโภชนาการต่ำ

ข้าวซ้อมมือใช้วิธีตำในครกไม้เพื่อแยกเนื้อข้าวออกจากข้าวเปลือก

วิธีเก่าแก่นี้ถูกใช้มาเป็นพันๆ ปีและไม่มีการใช้เครื่องจักรหรือสารเคมีใดๆ ซึ่งทำให้มันต่างจากข้าวที่ผลิตเป็นจำนวนมาก กระบวนการผลิตนี้ยังรับรองได้ว่าวิตามินและสารอาหารในเนื้อข้าวจะไม่หายไป

Hand-milled rice is a healthier, vitamin-packed alternative to Jasmine white rice, which has low nutritional value. Hand-milled rice is milled by pounding the rice in a wooden mortar to separate it from the husk. This ancient technique has been used for thousands of years, and does not involve any machinery and is chemical free, separating it from mass-produced rice. The process also assures that the vitamins and nutrients in rice grains are preserved within the rice.

ข้าวแม่คงคา
Mae Khong Khaa Rice



สนับสนุนโดยมูลนิธิรักไทย
ติดต่อสอบถาม สั่งซื้อ โทร. 053-308-169





ข้าวซ้อมมือ
HAND-MILLED RICE
ภาพด้านบนคือรูปครกกระเดื่องที่ใช้ตำข้าว

ออกจากรำข้าว

Above is a picture of the mortar and pestle manual machine used to separate the rice from the husk.

MAE KHONG KHAH VILLAGE

หมู่บ้านแมคคงคา

หมู่บ้านแมคคงคาคือหมู่บ้านชาวกะเหรี่ยงตั้งอยู่ทางตะวันตกเฉียงเหนือของจังหวัดเชียงใหม่ ชาวบ้านมีวิถีชีวิตที่เป็นธรรมชาติและเรียบง่าย การเกษตรคือรายได้หลักของชาวบ้าน ชาวบ้านหมู่บ้านแมคคงคามีประเพณีและวัฒนธรรมที่แตกต่างจากหมู่บ้านอื่นและเป็นหนึ่งในไม่กี่หมู่บ้านชาวเขาในประเทศไทยที่ยังคงอนุรักษ์เครื่องแต่งกาย, ภาษา, และวิถีชีวิตที่เป็นเอกลักษณ์

Mae Khong Khah is a Karen village located in the northwest of the Chiang Mai province. Villagers live a natural and simple lifestyle, where agriculture is their major source of income. Mae Khong Khah villagers share unique traditions and customs and are one of the few hill tribes in Thailand that maintain their authentic clothing, language and life style.



Appendix G: Logo for the Mae Khong Khaa Rice

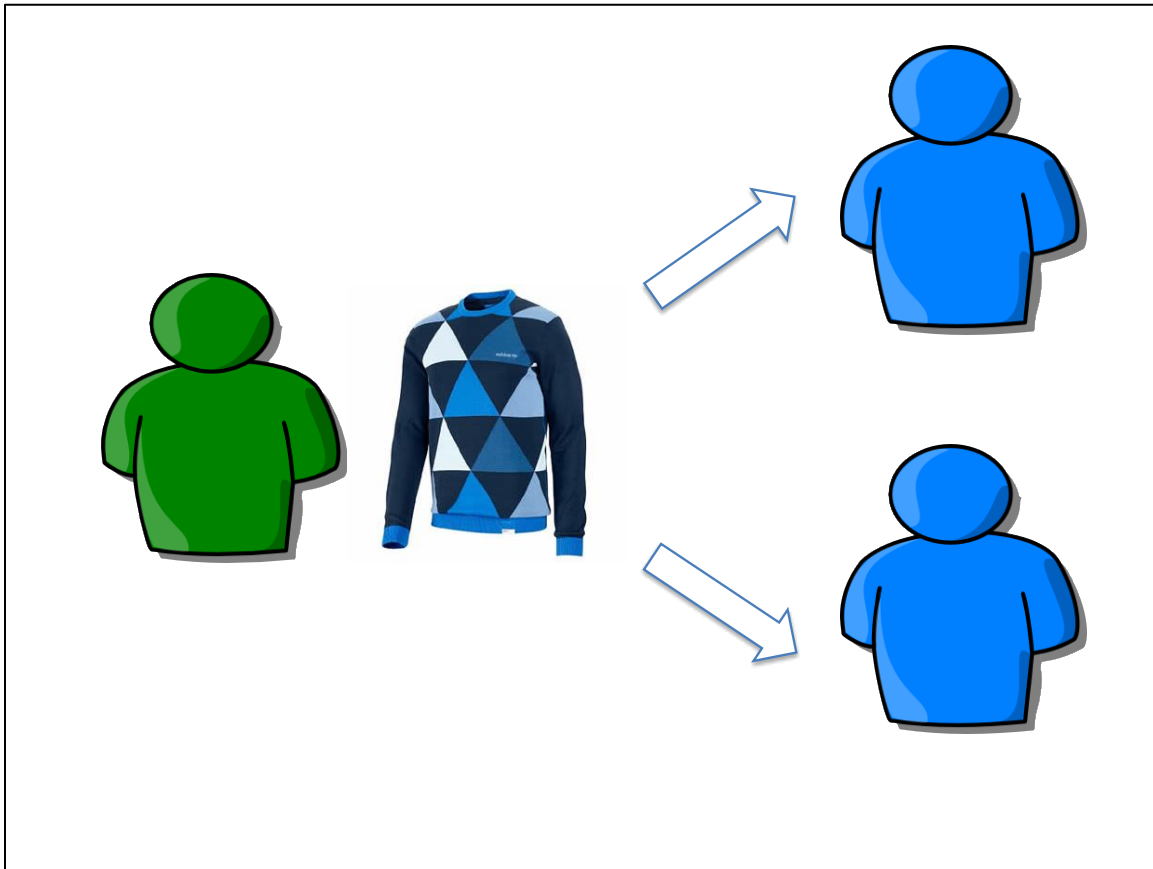
Thai Version:



English Version:



Appendix H: Presentation Slides for the Village of Mae Khong Khaa



Selling Activities

- Try to sell the sweater
- Guide them through the 4Ps (Product, Price, Place, Promotion)
- Explained to them how this activity is related to marketing

What is Marketing?



What is Marketing?

- By having more coconuts on the boat, it attracts more customer
- How would you get people to buy your product?
- How would you make the customer notice your product in the market?
- Marketing involves four main things: Product, Customers, Distributors, and Exchange Rate

Why Marketing?



Why Marketing?

- What happen if you only produce and sell the product without any marketing practices?
- Your product will not sell
- No one will know about your product
- Two things you will get from marketing are increased awareness of the product and higher sales.

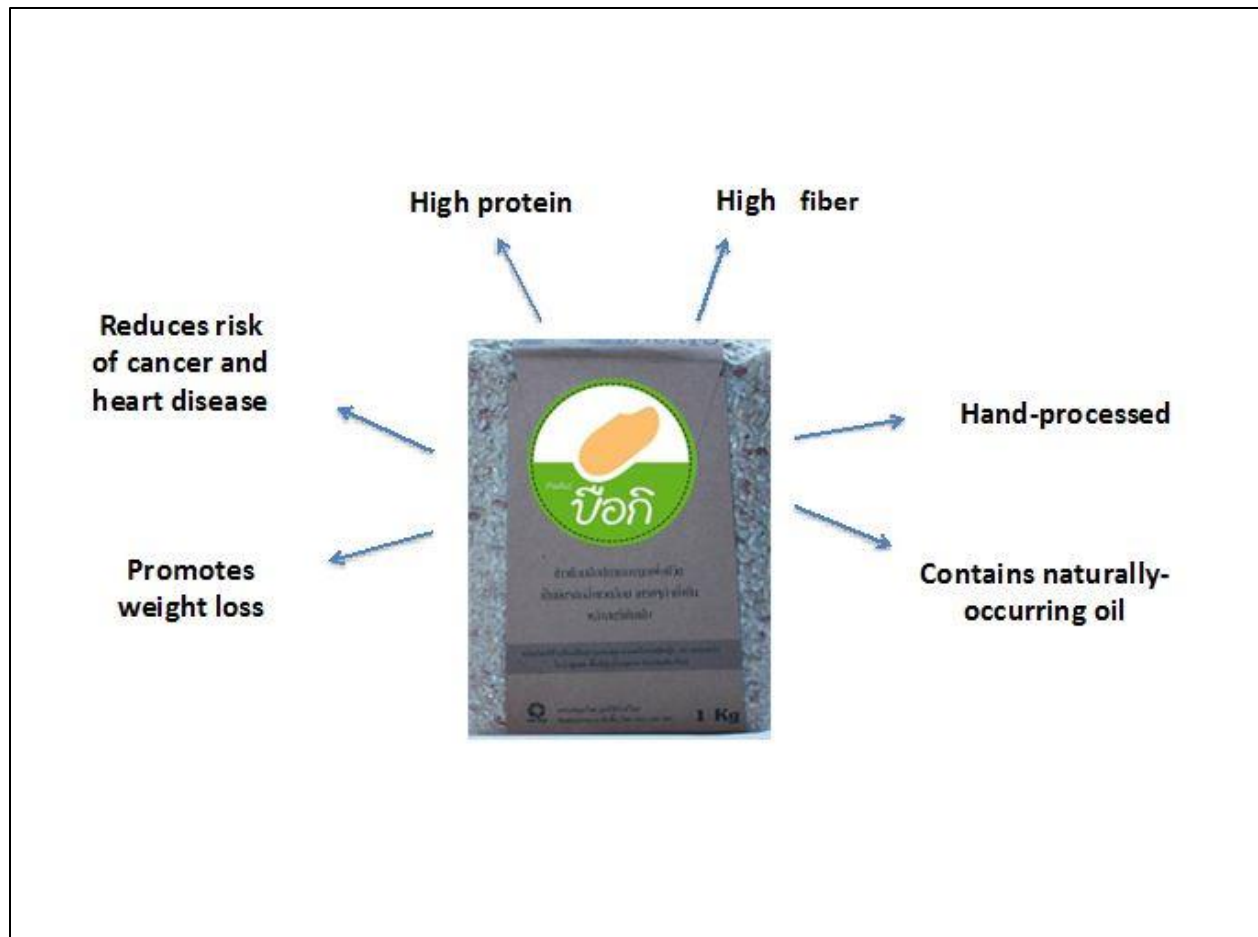
Mae Khong Khaa Rice



Let's look back at your product. This is Mae Khong Khaa rice. What do you think about your product? Do you think it is marketable?



These are rice products available in the market. As you can see, there are many species and brands of rice. Each of them has its strengths and weaknesses. Can you image your product beside one of these products? Do you think people will choose to buy your product over the other products? If so why?

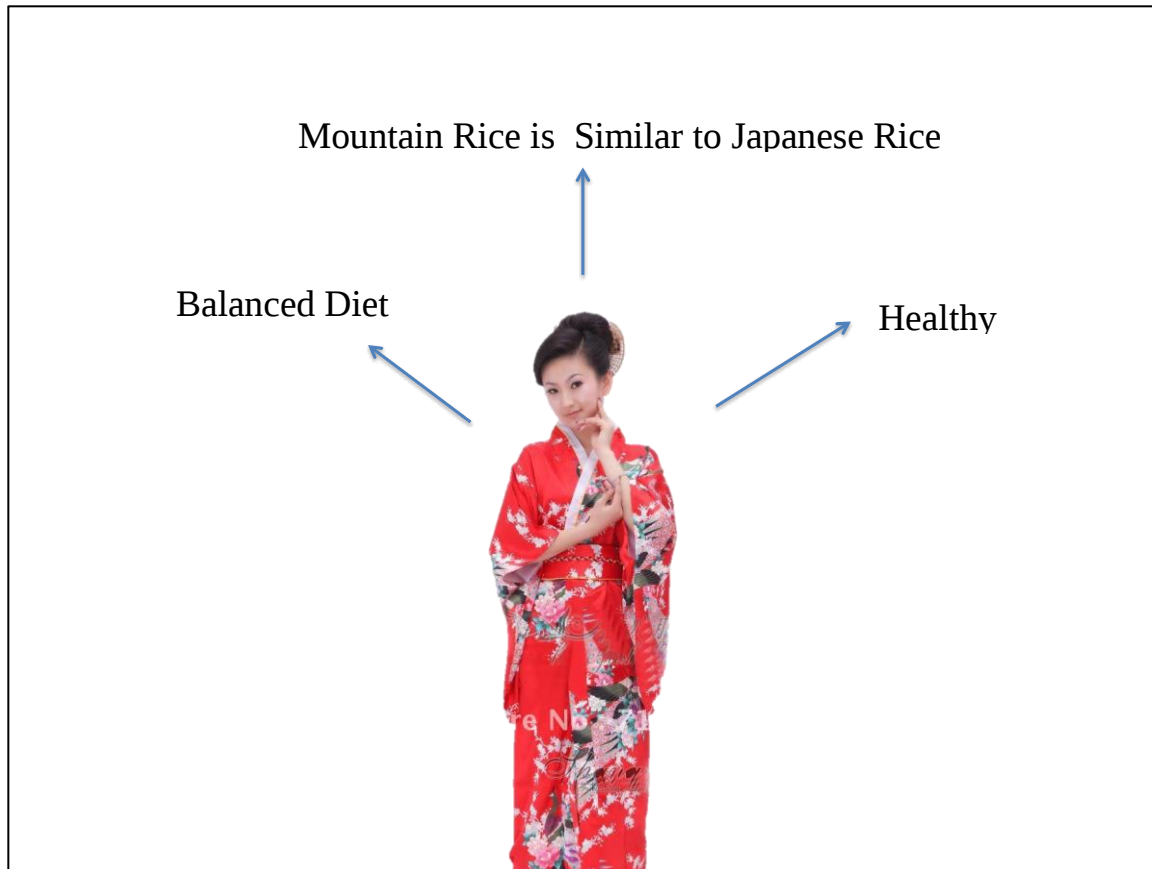


Let's see how much you know about your own product. Do you know the strengths of your rice? These are the strengths that your rice present compared to white rice:

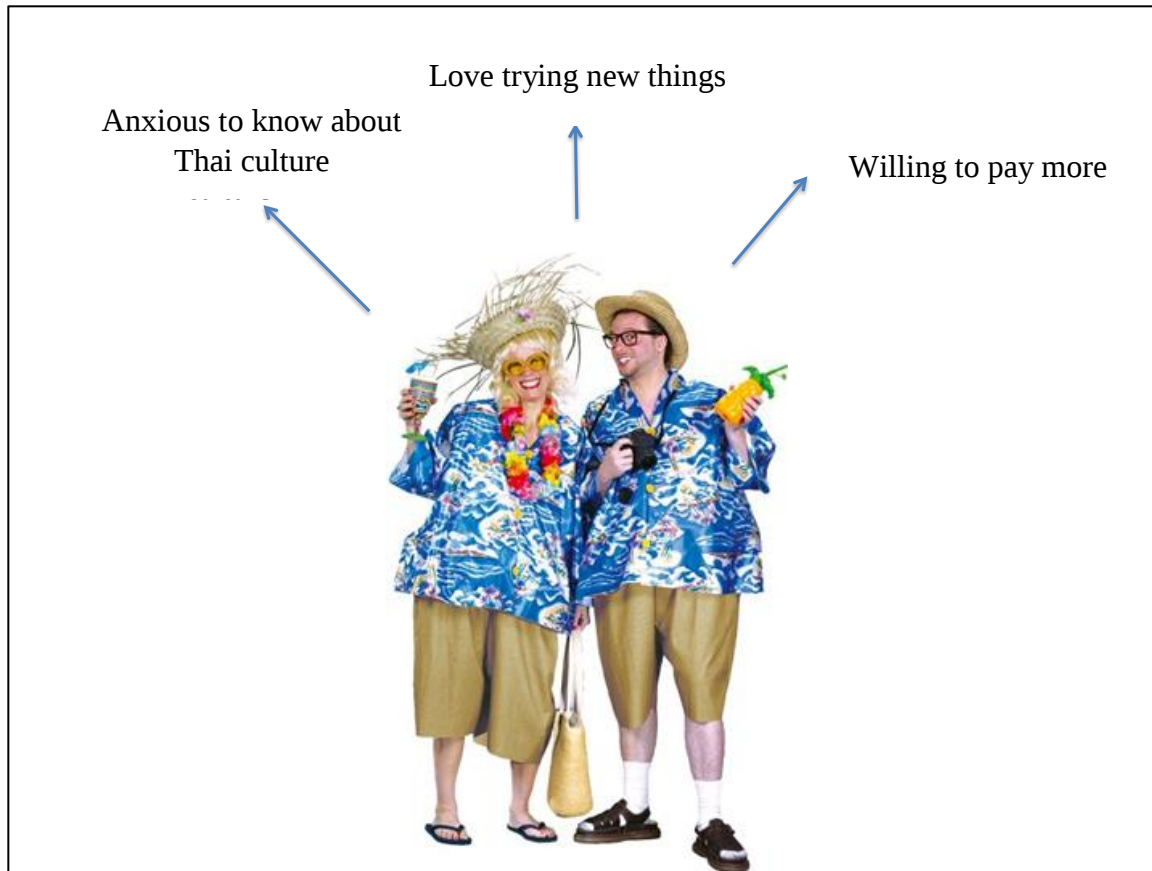
- High protein
- High fiber
- Hand-processed
- Contains natural oil
- The brown rice attributes suggest that the rice may promote weight loss and reduce risk of cancer and heart disease



According to these strengths, we did some research and analysis to find out who are the target groups for your rice. The result shows that there are 3 main customers: health conscious people, Japanese people, and tourists. Let's study more about each target group and how they think. Health conscious people love to exercise, eat healthy food, read nutrition labels, and get lots of sleep.



Japanese people are considered to be a current target population of your rice because your mountain rice has a very similar texture and taste to Japanese rice. In addition, Japanese people also live a healthy lifestyle and consume a balance diet.



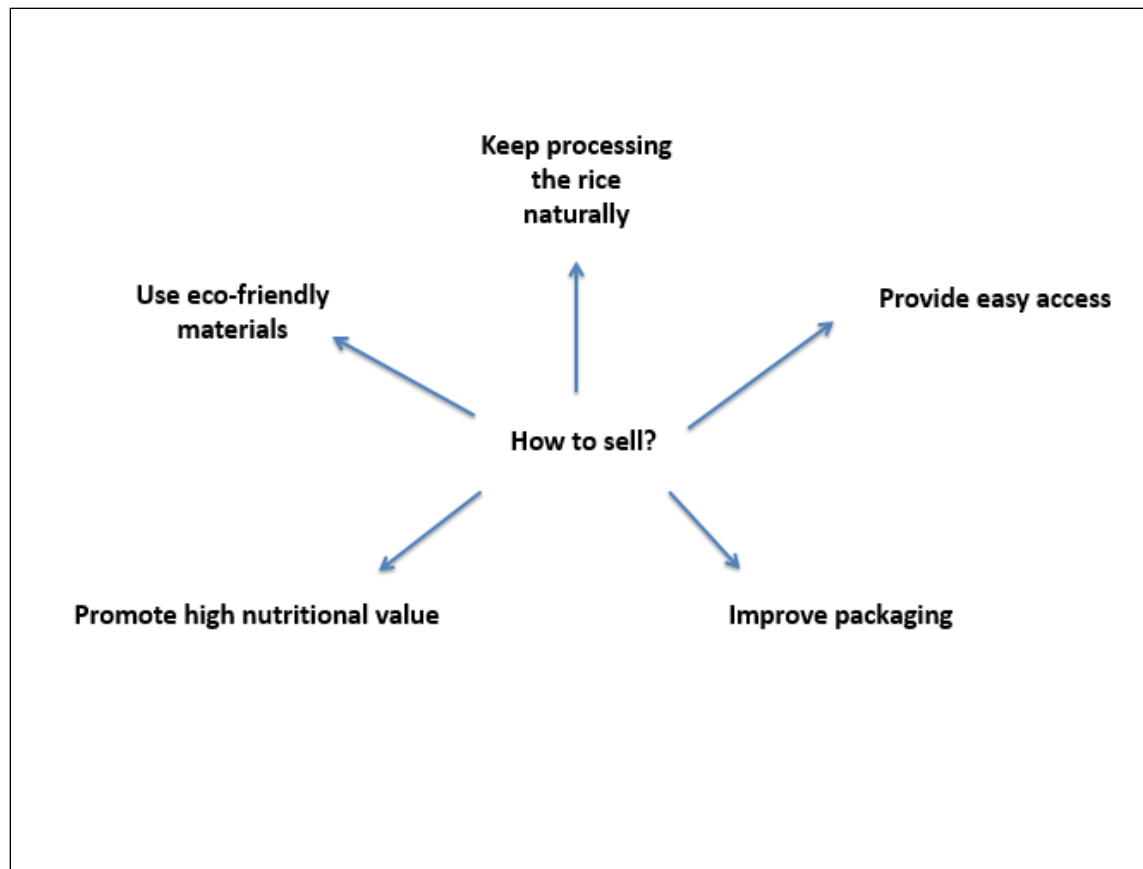
The last group is tourists. Tourists love to try new things, and they are willing to try brown rice over white rice. They are also more willing to buy rice at a higher price in the comparison to other groups in the market. It is also in their behavior to be interested in knowing more about Thai culture, which in this case is about the Karen villagers.



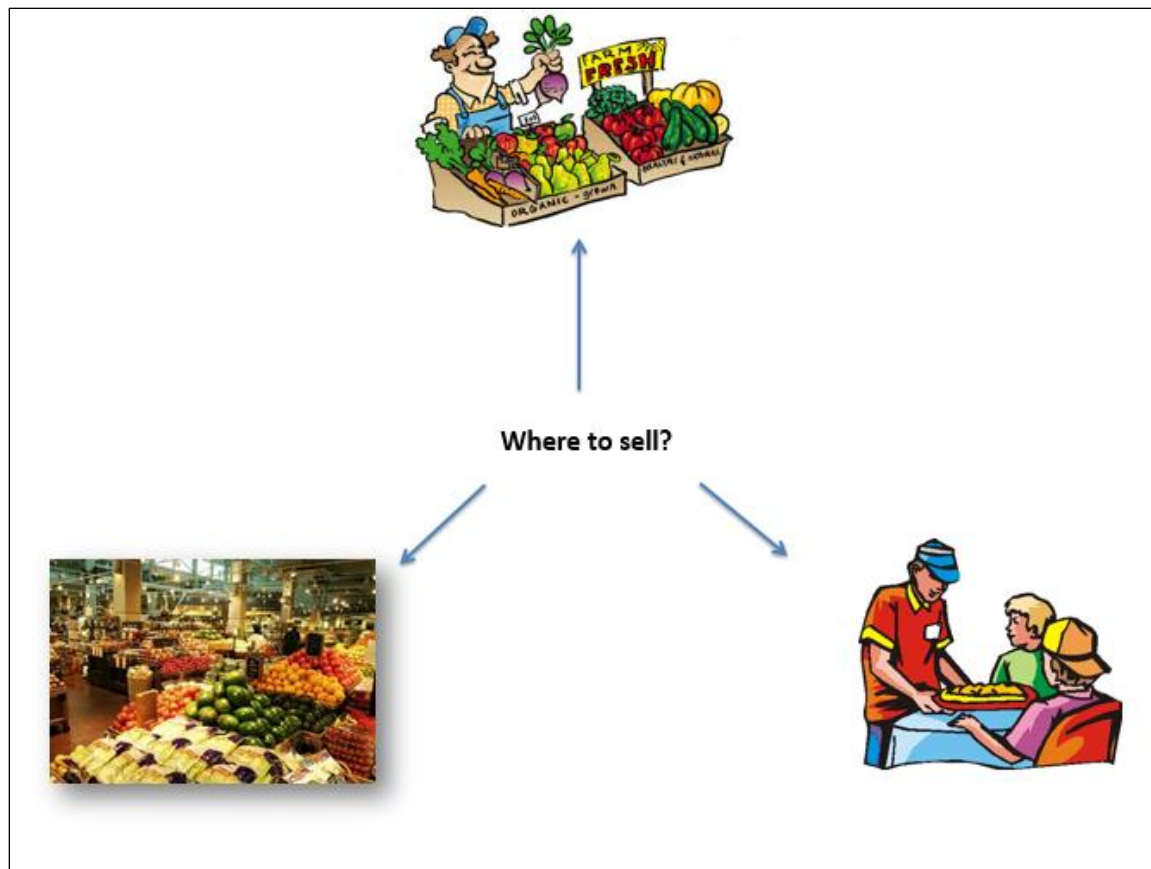
So now that you know about each target group. What do you think these people think when they are thinking about buying rice product? According to research and surveys, we found that they expect a higher nutritional value product, natural processes, more appealing logo and informative packaging.



QUESTION: How would you sell the rice to these markets?



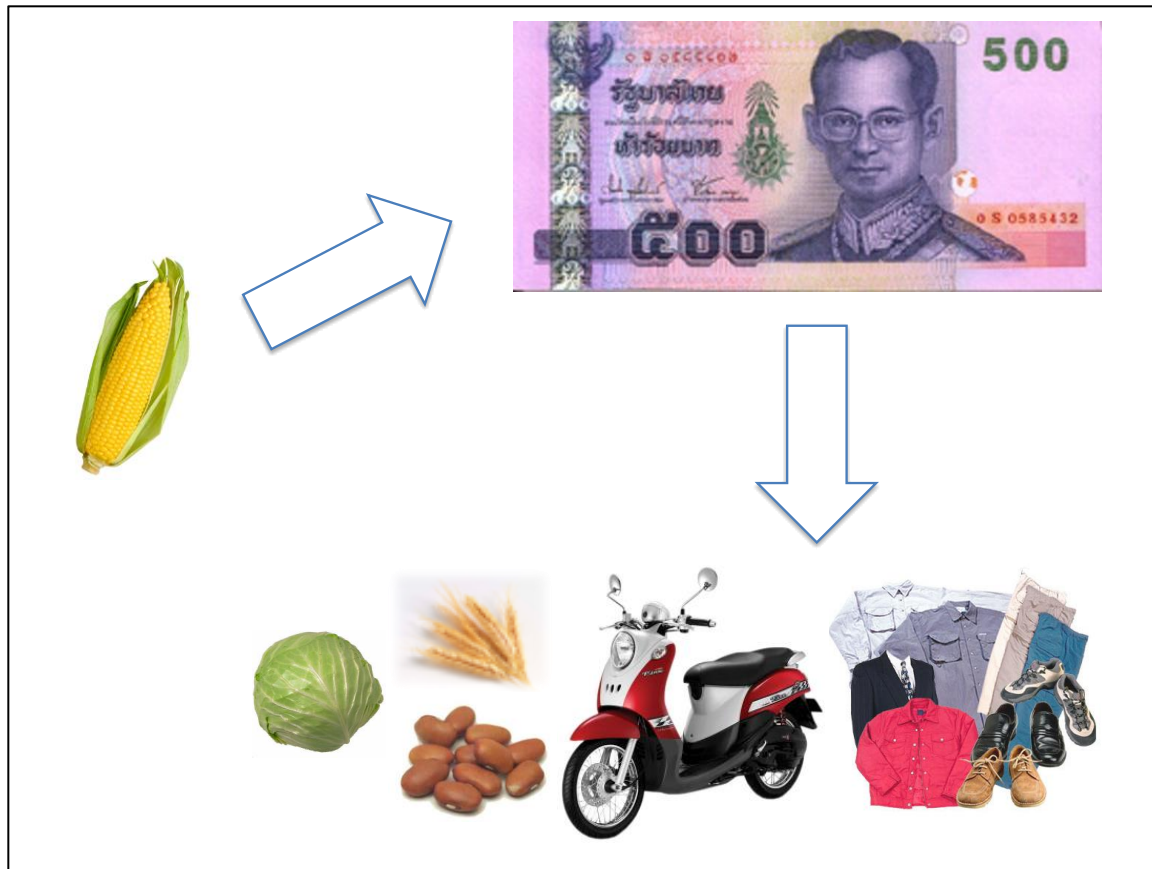
In order to sell this product, we need to keep the natural processes to produce the rice, use eco-friendly materials, promote the high nutritional value, improve packaging, and promote this rice in markets that are accessible for these populations.



We also found three potential places to distribute the rice. They include the farmer markets, local fresh markets, and restaurants. The farmers' markets are considered good places to sell the rice because people who go there are the people who are looking for organic, fresh, and reasonable price product. We also picked local fresh markets because that is where most of the Thai people go for grocery shopping. The Raks Thai Foundation suggested restaurants to us. They mentioned that they want customers who will order the rice occasionally. Therefore, if we can get restaurants to order the product every month, it would be a very good customer base for the village.



This is the process of how your rice gets marketed. After the rice is milled, the Raks Thai Foundation collects it. The Raks Thai Foundation packages your rice and puts a label onto the package. The rice is then sold at a local farmers' market near Chiang Mai University. Customers of your rice are mostly professors, businessmen, and Japanese expats. Your village receives profits from the rice that is sold.

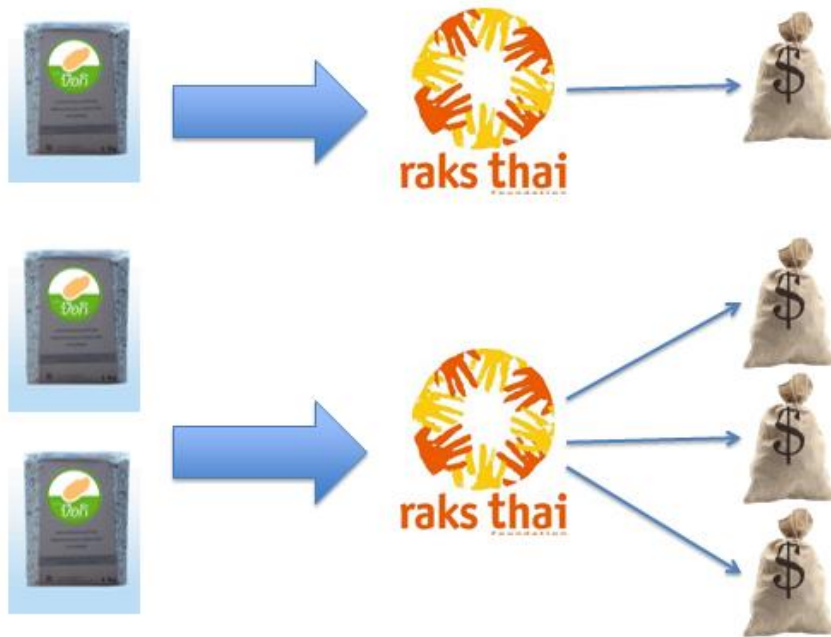


Another thing that we also noticed in the village is that you are growing mainly cash crops. Cash crops can provide you with a large amount of money at the end of the year. You can use this money to purchase things like clothing, motorcycles, and food for consumption within the household.



However, we think there is a better way. If you can grow less corn and grow more rice along with other crops that you eat, then you don't have to rely on anyone but yourself. Growing fewer cash crops will make you more economically self-sufficient and then you will not have to worry about the fluctuating price of corn every year. At first, you might make less money, but you will have enough to satisfy your needs since part of the money that you need is to buy food and that can be saved if you grow your own food.

Marketing for MKK



Here is the big picture. In the first scenario, you grow both corn and rice at the same time. The Raks Thai Foundation will help you distribute the rice and increase the money in the loan system of the cooperative. While you grow corn, you will also receive money, but the price changes every year, so it's up to the government and big corporations to determine the price you get. However, in the second scenario, you grow more rice, which gives Raks Thai more supply to sell. What you get is higher income to put in the loan system. Also some of the money that was used to buy food can be saved because now you are growing your own food. Also the price of rice has a tendency to increase every year. The profit from selling rice might be low at the beginning, but as time goes on if you are able to increase the amount of rice sold you will make more money than corn. . This is because if the marketing is going well, more and more people will be aware of the rice and would want to purchase it. But if there is not enough supply of the rice, customers might turn somewhere else. So we would want you to be working together with Raks Thai Foundation to increase sales of this product.

IQP-SSP



Appendix I: Interview with Elected Officials

Interviewee: Leader of the Mae Khong Khaa Village, VP of the Mae Khong Khaa Women's Co-op, and Khun Tee and Khun Wisit from the Raks Thai Foundation.

Interviewer: Warongvat Wanachaikia

Date of interview: January 27, 2014

Place of interview: Mae Khong Khaa Village, Mae Chaem

A. Introductory Protocol

By taking this interview, you will become an essential component in this investigation. We are seeking enhancements in the shelf life, storage and processing of rice. Before we start, we would like to state the following:

1. Your confidentiality is important to us. If your responses are used in our report, your identity will be kept anonymous.
2. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview.
3. The purpose of our research is to help rural communities become self-sustainable. Your responses will help us create a plan for the Raks Thai Foundation.
4. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about the rice processes and storage facilities you use in the village. Most questions will be open ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you believe that a question should not be answered, tell us and we will explain the reasons behind our questions.

B. Questions for the Interviewee

**Questions are in normal font and answers are italicized.*

1. What do the villagers do as their main occupation?

Village Leader: The main occupation of the villagers are farmers, and part-time as laborers in the city. During the dry season, women grow and process the highland rice, which is mountain rice, and pack it in a box to send to Raks Thai foundation.

2. What is the population of the Mae Khong Khaa village?

Village Leader: The population is approximately 320 people. There are 86 households.

3. How many members part of the Women's Co-op that sells the rice to the Raks Thai Foundation?

Village Leader: 16 members.

4. How long have they been done on highland rice?

Village Leader: The mountain rice has been grown for 4-5 years.

5. Do you have any problems with the rice?

Village Leader: If they do not have enough seed they will have to buy the seed from Mae Chaem. The shortage of seeds is caused by pests and diseases in the rice.

6. Do you use pesticides and fertilizers?

Village Leader: On the mountain, pesticides are not used initially. They plant the rice and then check later on whether there are any pests. If there are, the villagers go to the local government for free pesticides. The problem with this is that it takes time for the villagers to go to the government with the specific type of pest or disease. The villagers do not use fertilizers on the mountain rice but they do use it on the paddy rice.

7. Is it hard to grow mountain rice compared to paddy rice?

VP of Women's Co-op: The amount of mountain rice grown is less than paddy rice. 1 rai of mountain rice yields 30 buckets due to an insufficient amount of water. There is only 1 main source of water, which is a brook, but there are also minor brooks that are utilized when growing paddy rice. For mountain rice, they depend on rain for the source of water.

8. Can you explain how the farming system in the village works?

Village Leader: A version of the rotational farming technique is used. This year we grow rice, and next year we will grow corn.

9. What do you do with the corn you grow?

Village Leader: The main income of the village comes from selling the corn. The problem here is that if the corn's price decreases the village changes to other crops for the next year. Pesticides are used for corn.

10. Is the hand-milling considered hard labor?

VP of Women's Co-op: It is considered hard labor, but they are used to it because they do it regularly. The rice is processed by order. The only buyer of the rice is the Raks Thai Foundation. If it was not for the Raks Thai Foundation the villagers would not be able to communicate with consumers.

11. How much of the rice do the members sell?

VP of Women's Co-op: Farmers in the village sell their excess unhusked mountain rice to the women's co-op for 11-12 baht/kg, and then sold to the Raks Thai Foundation for 30 baht/kg.

12. How do you set the selling price in the market?

Khun Tee: The product price is determined by assessing the other costs involved such as transportation and packaging.

13. How do you think rice sales will behave this year?

Khun Tee: The sales would increase.

14. Did Raks Thai Foundation give you anything at the start of this project?

Village Leader: Initially the Raks Thai Foundation gave 6000 baht to the village. They created a grocery store with this money, then changed it shortly after to growing mountain rice because the grocery store was not making any profit. The Raks Thai Foundation buys the rice and the profit is given to the village's cooperative fund, which is used for borrowing money at a low interest rate. In the future, the goal is to have enough money in the fund to distribute it back to individual farmers. At first they used the system that whoever sells their excess rice gets money, but the fund did not increase. This is why they changed to putting the profit into the village fund

to be used by all members. After an order is completed, the money is received in the fund within 2-3 months.

15. How much money is currently in the fund?

VP of Women's Co-op: The overall fund is now approximately 40000 baht.

16. Do you have any problems with rice storage in the village?

Village Leader: There is no problem with storage.

17. After the rice is milled, how long can the rice be stored before it goes bad?

Khun Tee: If the package is not vacuum sealed, the product would last around 1-2 months. If the product is vacuum sealed, it could last for 1 year. The vacuum sealed package costs 70-80 baht.

18. How much rice is lost during the milling process?

VP of Women's Co-op: Up to half the amount of rice is lost.

19. Are there any cultural ideas we have to be aware of in this village?

Khun Tee: Not in particular currently but in the previous years, Karen tribes would not sell the rice they grew. They only used their rice for consumption.

Appendix J: Group Interview with the Mae Khong Khaa Villagers

Rice Processes used by Mae Khong Khaa Villagers

Interviewee: Nine members of the Women's Co-op group in the village

Interviewer: Warongvat Wanachaikiat

Date of interview: January 28, 2014

Place of interview: Mae Khong Khaa Village, Mae Chaem

A. Introductory Protocol

By taking this interview, you will become an essential component in this investigation. We are seeking enhancements in the shelf life, storage and processing of rice. Before we start, we would like to state the following:

1. Your confidentiality is important to us. If your responses are used in our report, your identity will be kept anonymous.
2. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview.
3. The purpose of our research is to help rural communities become self-sustainable. Your responses will help us create a plan for the Raks Thai Foundation.
4. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about the rice processes and storage facilities you use in the village. Most questions will be open ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you believe that a question should not be answered, tell us and we will explain the reasons behind our questions.

B. Introduction

You have been selected to be part of our study because you have been acknowledged for your potential to provide us with useful information about the shelf life, storage and processing of rice in your village. Our goal for our project is to help both you and the Raks Thai Foundation complete your objectives.

C. Questions for the Interviewee

**Questions are in normal font and answers are italicized.*

STORAGE AND DRYING

1. Can you describe the storage practices the village uses?

The storage facilities are prepared and cleaned up. The floor is covered with sack material and if there is no sack, we use mattresses that are made from bamboo tree. The rice husk is then put on top of the matt.

2. Do you mix anything with the grains?

Currently, we don't add anything to it. But in the past, the villagers add a vegetable (can't remember the name) into the rice storage to preserve the rice. We don't do it anymore because the vegetable is hard to find.

3. Can you describe the drying practices the village uses for the rice?

In order to dry the rice, a bamboo mattress or canvas is put on the ground. The rice is then spread over the mattress and dried in the sun prior to hand processing. Before the rice is harvested, it is left in the field to be dried. After that, the rice is smashed to the ground to take out the grain.

4. Could your seed drying techniques be improved upon? If yes, how?

There is another way the rice is dried which is done mostly during the rainy season. The villagers build fire and dry the rice on top of the fire.

5. Approximately how long do you think the rice can be stored before it goes bad? Why?

The rice can be stored unprocessed for 2 years but usually it is stored for 1 year.

6. What would you identify as strengths of your rice storage method?

The storage place is not inside the house or close to the house. The place is isolated outside. Since the place is high above the ground, rats and birds cannot get in. Also, the wall of the storage is made from wood. The wall is not completely sealed so that wind and air can flow into the storage place.

7. Have there been problems with storage in the past?

In the past, the roof was cover with grass (Imperata cylindrica). When it rained, there would be fungus growing the storage place. Now this does not happen because the villagers use a roof that is made from zinc.

POST-HARVEST PROCESSES:

8. Can you explain the post-harvest processes used by the village?

Before harvesting the rice, it is left in the sun to dry for a while. After that, the rice plant is smashed against the ground to take out the grain. If the rice is still not dry, it is dried in the sun again. The rice grain is then separated from the husk through a manual milling process, where a pestle smashes the rice in a mortar. The husk is then removed from the pile of rice through winnowing, when the farmers sift the rice. In the past, the villagers used mud and cow waste to cover the floor and dry the rice. Some villagers are superstitious about when they collect the rice, so they have to find a proper date for this process. Also, the old rice has to be separated before new rice can be stored. If the rice is milled using a machine, the rice doesn't have to be dried, but if the rice is going to be hand milled, the rice has to be dried so that it is easy to smash. This is because the husk falls off from the grain easily so that the grain won't be damaged.

A problem that they encountered was the climate change during December. During the harvest season, it doesn't stop raining and this causes new rice to grow which doesn't taste good. This has been happening over the past 4-5 years.

RICE CHARACTERISTICS

1. Describe mountain and paddy rice and your preferences. Why do you prefer one over the other?

Mountain rice is more delicious, softer, stickier, and sweeter compared to paddy rice. Paddy rice tastes plain. Some paddy rice farmers prefer paddy rice because is not as sticky as mountain rice.

2. How much mountain rice do you sell?

The village sells 80% of their mountain rice.

3. What are some unique characteristics of your rice? Are there any good selling points?

Mountain rice smells better, and is stickier and softer. The marketable characteristics of mountain rice are that it is softer and sweeter when cooked. The rice also does not use fertilizers. The rice sold is hand-processed, compared to other village's rice that is milled using machines. We are unable to identify unique characteristics of paddy rice, as it is similar to rice in the market.

4. What are your favorite types of rice grown and how much of it do you grow?

Here are the types of rice we grow in order of preference: Bue Taboh, Bue Ki, and Bue Wa. Bue Taboh and Bue Ki are types of mountain rice. Bue Wa is paddy rice. We grow 70% Bue Taboh, 10% Bue Ki, and 20% Bue Taboh.

5. Where do you get the seed from?

The seed is a local species that has been passed down through many generations in the village.

6. If Bue Taboh is the favored rice, why aren't all households producing this type of rice?

Some villagers can't grow Bue Taboh, mountain rice, because their plots of land for production do not support that species of rice.

7. Have you ever tried rice produced elsewhere? If so, how do you think it compared to the rice grown in your village? Please explain.

Yes, but it is not preferred because it is harder than the rice produced in village. The rice produced in the village doesn't have as nice of a fragrance.

8. What improvements would you like to see in your rice processes?

There could be improvements in the packaging to increase shelf life or appeal more to the external market. There could also be improvements in the location of the hand-processing machine and additional equipment could be added.

HAND PROCESSING TECHNIQUE

9. Can you please explain the hand-processing technique?

The hand processing technique takes occurs by the following process:

1. *Dry the rice in the husk*
2. *Clean the mortar.*
3. *Pound the rice in the mortar until the husks are separated from the rice grain.*
4. *Separate the rice and husk by winnowing.*
5. *Pound the rice again until all the husks are peeled off.*
6. *Separate the fractured rice, broken rice, and small grains by using threshing basket.*

10. What equipment do you use in the rice milling process?

The equipment includes a mortar, stick, threshing basket, and rice-winnowing basket.

11. Do you like the current milling techniques? If so, why?

Yes, we like it because it is hand-processed. If we run out of time to process the rice we consume in the village, we'll process it using the milling machine.

12. What do you dislike about this technique? Why?

The process requires a lot of energy to complete, which makes it hard for us to complete large orders over a short period of time.

13. Would you be willing to consider changes in this technique? Why or why not?

No, this technique is a tradition of ours and it is a technique that separates us from others.

14. Do you have any ideas to improve the current process?

The only way we can think of improving it is by using milling machine, it helps saving time. However, we like the current technique for selling rice to Raks Thai.

15. How much rice is processed in an hour by the hand-milling technique?

For one bucket of rice it takes one person two hours to complete the whole processes including hand-milling.

16. How much rice can be hand-milled in a day?

On average, three buckets of rice in the husk can be milled per person. These three buckets of rice produce twenty-one liters of unhusked rice because one bucket of rice is seven liters. If in a rush, the whole group can work together to produce 100 kilograms in one day.

17. Would you want more help with hand-milling?

We have enough people for the current equipment but more machines could be helpful.

18. How often is this process performed?

For our families we process the rice every day because if it is keep too long it will go bad. For the Raks Thai Foundation this process occurs whenever orders come in from Raks Thai, and is dependent on the size of the order. Usually the process occurs two to three times month; however, sometimes only once.

19. After it is hand-processed, how long is its shelf-life?

The self-life is one month.

20. After the rice is hand-milled, how is it stored?

After hand milling the rice is stored in sacks.

21. How do you package the rice when the Raks Thai foundation picks it up?

The rice that is in sacks are tied with a rope and sent off.

22. How much does the Raks Thai Foundation order per month?

The amount of rice the Raks Thai Foundation orders is dependent on how many customers they have. On average the foundation orders 100 kg per month.

GROWING

23. What month do you start preparing the rice fields? Plant the seeds? Harvest the rice?

Men start preparing the rice fields the last week of April. During this week men burn the field with dry grass and if there're leftover tree stools they are cut down. Next the men wait until it has rained three or four times, after this has occurred the men use shovels to dig a hole and plant the seeds for 10-20 seeds per hole. In the past, rain would start during May, but today, they have to wait for it to rain one to two times to start planting to assure that it is the rainy season. After the seeds are planted we take care of the fields, removing weeds once every two months. Removing the weeds increase the quality of the rice. Women will do this process. Then, the farmers wait for seven to eight months to collect the rice. Farmers with few areas of farm take one week to collect while men with more area take up to three weeks. After collect the rice, we dry the rice for a week and then we start to mill the rice.

24. What other crops do you grow?

We grow melon, chili, cabbage, onion, parsley, gourd, and corn. These crops are grown at the same time as rice.

25. How does growing crops today differ from the past?

In the past families would use one plot of land to grow all crops and leave all other land vacant to replenish the soil. However, today every plot will be used to grow crops. Crops are still combined together on the same plot with the exception of corn. Corn will be grown individually.

26. Do you always use fertilizers?

For mountain rice it's depends on the land condition, if there are pests then fertilizer is used. Some people use herbicides as a preventative measure.

27. Do you have problems on insects or diseases?

In the past insects and diseases were rare. They would only occur once every fifteen years. However, lately there have been many insect and disease problems.

28. Can you be sure that rain will come every year?

It is not certain that rain will come every year, but we prevent against this by waiting until it rains one or two times before we plant the seeds. We have more of a problem with birds and rats eating all the seeds.

29. If rain doesn't fall what do you do?

We have to go into town to find jobs if it doesn't rain.

30. What would happen if the rain doesn't fall for a long time?

The government would bring artificial rain for the village.

31. How many plots of land do you own?

We own 20 rai of land.

32. Do you select the seeds you use to grow the rice? If so how do you select them?

We select seeds. Seeds are selected based on if they have many ears and the size of the rice. For the most part we use the first batch of rice that is collected from the field for the seeds for the following year.

ADDITIONAL INFORMATION

33. Have you used the loan service?

Yes, almost every member has used it. There are only four members haven't used it.

34. What do most people use the loan system for?

The loans are used for our children's education.

35. How long do you have to pay back the loan?

The loan must be paid back within one year.

36. What is the interest rate of the loan?

The interest rate is 12%.

37. Why aren't more people involved in the loan system?

The loan service is only for members of the women's cooperative. We haven't asked other people outside of the cooperative to join. We predict that in the future there will be more people joining if we ask them.

38. Apart from women cooperative, are other people growing rice?

Yes, many people grow rice for their families.

39. What would you do if there is not enough rice within the cooperative?

We would use the money from the loan service to buy rice from other people in the village.

40. Do you have a traditional favorite recipe for mountain rice?

Yes, it's called "Kao Ber Porridge." Here are the cooking directions:

- 1. Set up the rice cooker. Pour water and put rice into it.*
- 2. When the water is boiled, put pork or pork ribs and bamboo sprouts into the pot.*
- 3. When rice start to break apart, you need to stir it again.*
- 4. Add chili, salt, and pepper.*

Appendix K: Interview with the Raks Thai Foundation

Rice marketing and packaging used by the Raks Thai Foundation

Interviewee: Khun Tee and Khun Wisit, Raks Thai Foundation Senior Officers

Interviewer: Warongvat Wanachaikiat

Date of interview: January 29, 2014

Place of interview: Day 1: Raks Thai Foundation Office in Mae Chaem; Day 2: Raks Thai Foundation Office in Chiang Mai

A. Introductory Protocol

By participating in this interview, you will become an essential component in this investigation. We are seeking enhancements in the packaging and marketing techniques of rice sale in Chiang Mai. Before we start, we would like to state the following:

1. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview without any penalty or loss of benefits to you.
2. The purpose of our research is to help rural communities become self-sustainable. Your responses will help us create a plan for the Raks Thai Foundation.
3. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identifies you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about processes that the Raks Thai Foundation performs. Most questions will be open ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you believe that a question should not be answered, tell us and we will explain the reasons behind our questions.

B. Introduction

You have been selected to be part of our study because K. Direk, our liaison between the foundation and our project, acknowledges your potential to provide us with useful information about the marketing and packaging approaches of the Raks Thai Foundation. Once we finish the interview, we will use your answers to develop a marketing plan to increase the sale of the Mae

Khong Khaa rice, and to develop an educational marketing program for the villagers of Mae Khong Khaa.

C. Questions for the Interviewee Day 1 (Mae Chaem Office)

**Questions are in normal font and answers are italicized.*

1. What is the goal of Raks Thai foundation?

The quality of the rice is good, but the standard of living in the village remains poor. The Raks Thai foundation uses rice as a tool to work with the community. In order to help the villagers understand the value of their product and be able to live under the changing of economic system, the people and the rice require development. Simply selling the idea won't work which is why we need a team to help us. In the future, if everything works out, there will be profit coming into the village to develop the community. We aim to help them understand that their raw materials can be sold to other markets.

2. Can you explain qualities of the rice that Mae Khong Khaa is producing?

This village grows 2 types of rice, paddy rice and mountain rice. The paddy rice is planted in two ways, broadcasting rice cultivation and transplanting rice cultivation. Water is used for the entire paddy rice process until the cultivation. Mountain rice is planted along the mountain slope. Rain is the only water source for this type of rice.

3. Can you explain how to prepare the rice field before the planting process?

The preparation for the field is done by using a small shovel to dig a hole and plant seeds inside. This is done prior to the rainy season. During the rainy season, the rice will grow without a water management system. 10-20% of the rice the village grows is paddy rice and the rest is mountain rice.

4. Is it possible for farmers to expand their land?

The area is limited by laws and community's traditions. If a farmer would like to increase the area of their fields, the community's rules must be changed. The government also has restrictions, only allowing for a certain amount of ground to be cultivated.

5. Can you explain the rice growing system in Mae Khong Khaa?

Rotational farming is when the farmers rotate which fields they grow crops in year to year to retain the amount of nutrients in the soil. One person will have at least seven rai, sometimes up to twenty rai. 70 or more types of crops are grown in the village where as previously they grew

hundreds of different species. Some of these current crops can be eaten instantly and some can be stored. Recently, cash crops have become a large part of the village's agriculture system. This has changed the way the villagers do the rotational farming. The village no longer rotates which fields they use; they use all available fields based on the price for which the new cash crops are able to be sold. The lack of rotation in their fields makes the soil deteriorate. Fertilizers are now needed to retain the nutrients in the soil.

6. Are there any other problems with rice growing?

There is a water shortage problem on the mountain. If there is no water that year, the crops will not grow.

7. Do the villagers eat meat?

There is a ceremony for slaughtering hogs that the village partakes in before eating meat.

8. What if the villagers get sick?

In the past, when people get sick, there were doctors in the village that could help them. If the doctors could not cure the patients, they would die. Today, as modern Thai culture has made its way into the village, villagers are sent to clinics in the city, and children's education is required.

9. How do cash crops affect the lives of the villagers?

Crops are used to trade for money. The large corporations determine the price for cash crops. If the quality of the crops grown in the village is good, then it can be sold to these corporations. This leads to the soil deterioration problem because the village grows these crops in all available areas. Because of their current method of burning the vegetation to create space for fields, there is less forest space around the village. If the company sees that this community's crops are not good, they move to a different village.

10. Do you have any suggestions on how to solve the cash crop problems?

This problem can be solved by growing rice in the village. The rice that is grown in Mae Khong Khaa is a local species. The target is to persuade the villagers to stop invading the forest areas and find a way that they could live sustainably, separate from the large corporations that buy their cash crops (corn). Villagers have depended on money for quite a long time, so it would be hard for them to change back to their old life when money did not have an impact on their lives.

11. How do the villagers sell the rice?

The leftover rice they had would sell for a very cheap price. 20 liters per bucket of unhusked mountain rice costs 100 baht. Once the rice is processed, separating it from the husk, the yield is 7 liters of rice. This can be sold at 240 baht, the profit being 140 baht. If the villagers can produce a large amount, they would gain more profit than cash crops.

If they were to understand this, it would lead to a water management system, and growing non-seasonal crops instead of growing cash crops.

12. Are they looking into organic farming?

To be labeled as organic, chemicals in the crops must be stopped for at least 5 years, and the soil condition must be verified by an official. There is no way that the village could pass the test.

13. What is your final goal for selling the Mae Khong Khaa rice?

The goal is to help the villagers understand that if they increase their production of rice they will be able to sell the rice and get as much of a profit as they are currently getting growing cash crops. One main goal is to look for ways to make the crops organic, thus reducing the amount of chemicals used.

14. Do you have any suggestions on how to sell the rice?

The distinctive attribute of this rice is the fact that it is hand-processed. Raks Thai is trying to study the production line cost and how much more money the village would gain from selling the rice at each processing stage; either from the rough rice, or the processed rice.

15. What if there is a large order that Mae Khong Khaa cannot fill?

Last year, a company asked to buy 6 tons of the rice in December. If there is a large order, the village would determine how much they could produce and how many distribution channels do they have to assess how to fill the order.

16. For the Raks Thai Foundation, are there any other products you are helping the highland villages with?

The Raks Thai Foundation also does silk, coffee, and vegetables.

17. Within the time frame, what would you like us to consider as first priority?

We would like you to focus on marketing and nutritional values. We also hope that if you have a chance, you could come help us and visit the village again to show them what you have done.

D. Questions for the Interviewee Day 2 (Chiang Mai Office)

41. Have you ever tried to contact the Royal Project for either informational help or help in distributing the rice?

The Royal Projects are difficult to connect with. They do not want to give out their data. The Royal Projects mainly distribute seeds for the villagers to grow. The main goal of Royal Project and Raks Thai foundation is the same, to help villagers in need, but the specific methods are different. The Raks Thai Foundation's method is to make use of their own resources. The Royal Project method is to let the villagers decide by themselves what they want to do.

42. When is the rice sold and harvested?

The rice is harvested by December. The villagers choose to sell the old rice first. One season's worth of rice is usually sold in one to one and a half years.

43. Are there any other villages that produce similar rice to Mae Khong Khaa village?

The Raks Thai foundation is trying to make a network for the villages. At one point in time the Raks Thai Foundation received a 6 ton order, which presented a challenge for the villagers, as they could not produce that much rice. The Raks Thai Foundation filled the order by collecting similar rice from other villages and selling it in the same package as the Mae Khong Khaa rice.

44. Do you separate the rice from Mae Khong Khaa village from rice from other villages?

The rice is not separated by village when it is packaged, but it is possible to do so.

45. Do you have any place in mind that you would like to sell the rice in Chiang Mai?

We are trying to contact Rimping supermarket in Chiang Mai.

46. Are there any orders that do not come from Chiang Mai?

There are a few big orders in Bangkok during New Year. The rice is packaged in baskets as part of a gift set with coffee, and sold to the customer.

47. How is the rice packaged? Please explain.

The normal 30 baht package (non-vacuum packed) production has been stopped. Currently, we are producing only the vacuum sealed rice package. The vacuum machine's condition is not good because it has been used for 20 years. In the past, they used thinner bags, but the quality of these packaging was not good. The thick bag used currently is more expensive. If we ordered 10000 bags, it would cost 5 baht each. If we ordered less than 10000, it would cost 7-8 baht each. For the sticker, the current quality is better than if we printed it ourselves, but it is more expensive.

48. What has the Raks Thai foundation done for the village?

We have collected data on the species of mountain rice and amount produced in the village each year. The rice stock must be observed every year due to weather conditions. We want the rice to act as a tool for working with the village. We aim to have them see the importance in marketing their rice. The disadvantage of producing rice is not being able to make a large profit all at once, which corn allows. The village's corn is bought consistently by CP.

49. What is the Raks Thai Foundation currently trying to do for the village?

We are trying to increase the villager's awareness of other rice competitors, encourage them to stop using fertilizers and pesticides so that the product can be organic, manage the water system to increase production, and encourage them to grow many crops at the same time. We hope that there will be 10-20 farmers doing organic farming in the future. Records must to be taken on the result of each action including the cost, and the final result of how many crops can be grown in a rai. We are trying to teach the villagers how to use water and see the importance of forests, in order to use more water for a longer amount of time. We are also encouraging the villagers to stop buying rice from outside the village.

50. What are your expectations for us during this project?

Marketing is urgent. The Raks Thai foundation doesn't have much budget for marketing, but we are trying to improve the quality of life for the villagers. The distributor for the rice is hired as Raks Thai foundation staff and is in charge of selling the rice to consumers.

51. Do you have any other organizations you worked with to distribute your rice?

Merck was once interested in doing a Corporate Social Responsibility, but in the end, Merck chose to abandon the project as they believed the rice was not high quality.

Appendix L: Interview with the Raks Thai Foundation Distributor

Interviewee: Khun Chalerm, Raks Thai Foundation Distributor

Interviewer: Warongvat Wanachaikia

Date of interview: January 29, 2014

Place of interview: Chiang Mai University Organic Market, Chiang Mai

A. Introductory Protocol

By taking this interview, you will become an essential component in this investigation. We are seeking enhancements in the shelf life, storage and processing of rice. Before we start, we would like to state the following:

Your confidentiality is important to us. If your responses are used in our report, your identity will be kept anonymous.

1. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview.
2. The purpose of our research is to help rural communities become self-sustainable. Your responses will help us create a plan for the Raks Thai Foundation.
3. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about the rice processes and storage facilities you use in the village. Most questions will be open ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you believe that a question should not be answered, tell us and we will explain the reasons behind our questions.

B. Questions for the Interviewee

**Questions are in normal font and answers are italicized.*

1. Why do you help sell the rice for the Raks Thai Foundation?

I want to help Mae Khong Khaa because they are a hill tribe and get a lower price when they try to sell the rice in the market. I also wanted to help the Raks Thai Foundation because I recognized that they were having problems selling the rice in the market. I also recognize that if we can open the market for Mae Khong Khaa's women's cooperative, customers will become more aware of this product and the women's cooperative will gain a higher profit.

2. Who do you sell it to and why do they choose this rice over other rice being sold?

The customers are housemaids, police officers, and teachers of Chiang Mai University. Many of them are returning customers. They prefer the Raks Thai foundation's rice because it is softer than brown rice. Some other customers buy the rice because they like brown hand-processed rice and want to support the farmers.

3. How long does it take to get the rice from Mae Khong Khaa to you?

Usually it takes about ten days because they do not store the village's rice, the rice is just processed by order. The rice is sent in 1 kg bags.

4. What price the rice is sold at?

Last year I bought the rice from the foundation for 35 baht and sold it for 40 baht. They use only a plain package which limits the sale of the rice. I have heard that this year it will be changed to vacuum package. If they do change the packaging, I plan to continue to buy the rice. I do not sell the rice for the profit, I sell it to help the farmers.

5. Where do you sell the rice?

Rice will be sold here, at this organic market across from Chiang Mai University, on Wednesday and Saturday. On Sunday, rice will be sold at JJ Market.

6. Have you received any complaints on the quality of the rice?

I have not received any complaints about poor quality of rice. I have more concerns from customers about the broken grains; they don't understand why some of the grains are broken. I have to teach them about the hand milling process and how hard it is to avoid breaking all grains.

7. Do you have any suggestion to expand the market?

There are three or four health conscious shops in the area. The names of the shops are Baan Suan Phak in Jang See Phum, Urban Green at Chang Klahan road near the Curve department store, and Bake and Bite in front of Prince School. We may be able to offer them a price and they

will add it to their commission. They may be able to sell the product faster and make the customers more aware of the uniqueness of the product.

8. How much do you sell the rice for?

I sell the rice for 40 baht. I buy the rice from Raks Thai for 35 baht.

9. What types of rice you buy/sell?

I sell all three types of rice that Mae Khong Khaa produces. Customers mostly prefer Bue Taboh. But in the end, all types of rice are sold. I don't order a large amount; instead I purchase small portions frequently. I ordered at least 60 kg each time at least once a month.

10. What do you think are the strengths of the Mae Khong Khaa rice?

In my opinion, it is the fact that it is a local species of rice that is grown by local people with traditional methods. Also, the local species comes from the village without pesticides. I also believe that the species may have additional nutrition benefits than other types of rice in the market.

11. What makes people buy the Mae Khong Khaa rice?

They want to help the farmers.

12. Are there any other competitors in the market similar to the Mae Khong Khaa rice?

There is, but not much. Most of them just come and go. If they more the villages brought rice for me to sell, I would sell it. I have only bought from Raks Thai foundation.

13. What tools do you think would make the customers buy the rice more often?

I believe brochures or advertisements would be helpful to raise awareness of this type of rice. Also flyers with nutritional value, species, and how to cook the rice would be helpful. How to cook the rice is important for people because some rice cookers do not cook this type of rice very well.

14. Do you think the product would be more marketable if we include an English translation on the package?

It's worth a try because it is softer than brown rice and it is much better than white rice. In Chiang Mai, there are many hypermarket, for example Rimping and Big C, that many foreigners go to. If we're focusing on packaging, it would be nice to add more colorful pictures to attract the customer to the product.

15. How would you improve the package?

Some people buy rice dependent on the shelf life of the package, therefore it would help if it was vacuum packed.

16. Are there any foreigners who are customers?

Japanese customers are loyal customers for this product. Other customers come and go as they please.

17. Why do Japanese people like the rice?

I believe the Japanese like the rice because the mountain rice that Mae Khong Khaa gives me is similar to Japanese rice, they are both sticky and make it easy to hold with chopsticks.

18. What is the age range of Japanese people come and buy your rice?

Mostly they are older Japanese people. Most of them live in apartments in Nimman.

19. Compared to your first order, have orders of rice increased?

The first time I only ordered 10 kg. Now I order at least 60 kg. The rate of customers have been slowly increasing. Most people don't understand hand-processing which makes it hard to sell the product in the market.

20. Do you explain why the rice is broken to customers?

Yes, I do because when I do some people are willing to buy the rice because they understand that the villagers hand-mill it. There still are a few who don't buy it based on its appearance though.

21. Do you have any additional suggestions for the package?

It would be good if packages were also written in Japanese for these customers.

Appendix M: Interview with a Marketing Expert from IBM

Interviewee: Chandra Venkatapathy, IBM Marketing representative

Interviewer: Gabriela Romero

Date of interview: February 17, 2014

Place of interview: Chulalongkorn University via Skype

A. Introductory Protocol

By taking this interview, you will become an essential component in this investigation. We are seeking enhancements in the marketing strategies to increase the sales of the Mae Khong Khaa rice. Before we start, we would like to state the following:

Your confidentiality is important to us. If your responses are used in our report, your identity will be kept anonymous.

1. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview.
2. The purpose of our research is to help rural communities become self-sustainable. Your responses will help us create a plan for the Raks Thai Foundation.
3. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about marketing. Most questions will be open ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you believe that a question should not be answered, tell us and we will explain the reasons behind our questions.

B. Questions for the Interviewee

**Questions are in normal font and answers are italicized.*

1. What marketing suggestions do you have for our project?

I encourage you to think what qualities the rice has that appeals to people. We have a good idea of how this rice is special to the country but what is so great about this rice.

2. What's your perception of potential markets for our product?

Going to a big market is not beneficial because you do not have a big production. You should go towards an exclusive market, try to make the target market selective. Even though the product may not be pretty (packaging and broken grains) if you market it in the right place you will still be able to sell it for a high price because the people care about the product and the people, not the packaging. Therefore, you have to find out who these people are. You have to target them and explain why this rice is better.

Also, how do we know that Japanese is a good target? There are a lot of other markets that would be good potential markets. Pick a small target market, instead of population, and start building it up.

Maybe travel agents are a good market; maybe you should start with the Japanese. Anyway, you must link the rice to the people (village) to create a story- can't get it from the regular supermarket

How many people know how rice is planted? No one knows/cares when they buy rice in the supermarket. Therefore, by targeting selective markets you can charge double- the price to match the special qualities

3. What are the essential to put in a marketing plan?

A marketing plan is all about a goal, so what is your goal? What makes your product special? Marketing the product is all about what you can do with it. Because of the time constraints, there should be two goals in your plan: How do I reach the goal? And how do I measure this goal?

4. Do you have any advice on how to start the marketing plan?

Start by planning your strategies. You should include: what you plan to do, how you will do it, when you will do it. The way you will you measure the success and perhaps the cost of it. Keep it simple! Marketing is about intuition. Do what you feel is best and connect to the audience.

5. What should a campaign consist of?

Campaigns are short and not done consistently. I don't recommend campaigns for this project. Just keep in mind that the key is not to assume anything.

6. What are the best low cost mediums?

Word of mouth marketing can be used for domestic markets. Website and YouTube channels are a great idea. Maybe you can talk to the local TV or newspaper and ask about getting free coverage. They will be more interested in talking to you because you are students and you are marketing a local product that is healthy. Don't forget to mention all the good things we have talked about.

7. Should we include economic projections?

You don't worry about that. It is not necessary.

8. Do you know the best way to format a marketing plan? Do you have any examples?

I can think of something to send you guys. Just give me a couple of days.

9. We have created marketing materials such as the logo and brochure. Where do these fit in?

All that information is about the brand. Before we can make a website or brochure you need the brand information to put in it. Include this in early sections.

10. Do you have any recommendations that can be included in the plan?

Do a three month trial once the marketing plan is established. Add the mediums you will use to evaluate the outcomes of your plan. Also, you need to have a permanent market because rice is not a commodity.

11. What details should be included in the marketing plan?

You need to find how many Japanese or tourists go to the markets that you want to target. Then you can get a percentage of how many people are buying the rice. So the question then becomes how do you sell for the percentage that is not buying the rice? Think of ways on how to approach them. Targeting hotels and restaurants that might sell the rice is a good idea. You have to target the markets and see what types of people go to these markets rather than targeting the types of people. Once you find the markets, useful information like the nutritional values are important when targeting health-conscious people.

12. How do you evaluate if these target markets were successful?

To evaluate the success, look at the percentage of people who are buying the rice after the marketing plan has been implemented, and if the percentage of people who are buying the rice increases, it means progress.

13. Do you have any additional advice on how to proceed with our plan?

First of all, you can't assume a certain group of people has access to a specific marketing medium. Find out where these people go, then target that market. For your plan, include the assumptions, goal and start small. For example if your goal is to create awareness with Japanese tourists/expats, find where Japanese tourists/expats go. Find their interactions and think of ways to communicate the message to them.

For the actual content you need to promote the product, don't forget to include what's special about this rice. You need to expand on the unique qualities to make the product sound unique. Include the benefits- health, emotional (local people), geographical for the village, etc.

On a different topic: can you think of any partnerships? Such as working with health clubs? Or health food chains similar to Whole Foods? You should figure out which markets you want to target first, second, and third and then identify the consumers of that market.

Appendix N: Interview at The Riverside Restaurant in Chiang Mai

Interview Protocol – Chiang Mai Restaurant

Interviewee: Riverside Restaurant Manager

Interviewer: Gabriela Romero and Kellie Dickerson

Date of interview: February 22, 2014

Place of interview: Riverside Restaurant

A. Introductory Protocol

By participating in this interview, you will become an essential component in this investigation. We are seeking enhancements in the techniques and feasibility of rice sales in Chiang Mai. Before we start, we would like to state the following:

1. Your confidentiality is important to us. If your responses are used in our report, your identity will be kept anonymous.
2. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview without any penalty or loss of benefits to you.
3. The purpose of our research is to help rural communities become self-sustainable through the increased sales of rice that they grow. Your responses will help us create a plan for the Raks Thai Foundation, which currently helps these communities sell their rice.
4. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identifies you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about opinions from selected restaurants toward the rice product we are investigating. Most questions will be open-ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you don't understand the purpose of any questions, tell us, and we will explain the reasons behind our questions.

B. Introduction

You have been selected to be part of our study because we would like to observe the attitude and opinions of the Chiang Mai's local restaurants toward the Mae Khong Khaa rice. Once we finish

the interview, we will use your answers to assess the characteristics of the Mae Khong Khaa rice in order to develop a proper supply channel for selected restaurant(s) in Chiang Mai.

C. Questions for Interviewee

1. Can you describe the customer demographic of this restaurant? Eg. age, nationality, profession, gender

We have a wide variety of food and people. Families, Thai people and tourists come to the restaurant. The tourists are in two groups; foreign tourists and local tourists because Thai people like to travel during festivities. We also have expats and local Thai people, the tourists account for 50-60% of our customers in the high season and 40% in the low season. All three legs are important to the restaurant. We serve families and also younger people. There are two main groups that come to our restaurant. The first group comes from 6-9PM for dinner and the second group comes for live music from 9:30-2 AM. Usually locals and students come for drinks and snacks. There has been a nationality shift from Western tourists to Chinese because Americans and Europeans are in an economic crisis. Individuals come more often now whereas it used to be tour groups of 40-50 people. They now take direct flights to Chiang Mai or Phuket directly instead of Bangkok from Korea and China. The people here have many professions-- students, professors, doctors. We are not too cheap, we have 30 musicians that we need to pay. We are in a good location but backpackers think it is pricey.

2. What are the main attractions for customers to visit your restaurant? Eg. type of cuisine, environment, price

The river is one of the main selling points. We lost 70% of our restaurant three years ago because we didn't renew the lease. So we opened our second restaurant on the other side of the street. People write reviews for our restaurant which have been consistently good over the years. We have many cuisines—western, international, northern Thai food, vegetarian, so we can cater to all segments. It is good for families because they all want different things. We have big portions compared to other restaurants and our cooking is home-style. We have a mid-range price and offer live music for entertainment.

Extra question: What types of rice is the restaurant current using? Eg. Brown, white rice, brown rice and sticky rice

We use white rice which consists of 95% of white jasmine rice. We also offer brown rice which is a mix of 1/3 red rice and 2/3 brown rice for which the brown rice is 93% jasmine brown rice. We

purchase directly from the mill and it is a wholesale arrangement. We have good quality rice and sell a lot because 400-500 people come to eat here each night.

Many places don't sell brown rice so people aren't aware of it. Many times people don't go through whole menu so it is up to the server to ask if they don't notice it on the menu. When asked about 10% will go for brown rice because it is healthier. However, most of the staff will not ask if the customer wants white or brown rice because of the language barrier.

Extra question: What about sticky rice?

We don't ask if people want sticky rice because people know if they want sticky rice. We don't sell much brown rice because people don't know about it. The staff don't know English, it is a busy place. It is not a good seller.

3. What are the criteria that the restaurant uses for its selection of rice brands? Price, Familiarity, History, cooking characteristics

From familiarity, history, and price. We've used the same people for years and years; they deliver right to our restaurant. We get the export price because we buy it straight from the mill. We use some of the same suppliers as when we first opened the restaurant. We stick with the same people because of the relationship. We are a family, our staff is a family. We look at price but it's not all about that.

4. How much do you currently pay for brown rice per kg?

Per kilo of red rice we pay 65 baht. We pay 142 baht for 3 kilos of jasmine rice, so 45 baht per kilo.

Extra question: Why do you mix the rice?

Because it looks nicer because of the color variety, the bite is a bit different and it has different qualities and is more special. We never offer it to Thai people because they don't go for brown rice. Foreigners are more interested in brown rice. Thai people grow up with rice and its white rice they eat every day so it's what they are used to.

5. Who do you buy brown rice from?

A rice mill in Chiang Mai about 20 km away.

6. How much do you sell an average bowl of brown rice for?

15 baht for a plate and 70 baht for a bowl.

7. How popular is brown rice? What percentage would you say buys brown rice over the white rice?

10% choose brown rice.

8. How many kgs of brown rice do you have to buy per month to fill the supply? Per year?

I don't know.

9. Could the dishes served in the restaurant be served with hand-milled brown rice instead of what you currently serve? Why/why not?

It would be good in northern Thai dishes. We usually use sticky rice for northern dishes. We have ten northern Thai dishes. We mainly use white rice because it is neutral in taste, you don't want it taking it away from the food. I would really have to taste it to see how sweet it is or if it is better.

Extra question: What do you think the selling point of our rice is?

I think the selling price is the hand milling process. Supporting the mountain people would be more for the tourists than the Thai.

So its rainwater?

Yes

It's one crop a year?

Yes

Oh so environmentally in terms of water it is better.

Is it organic?

No they can't claim it to be organic because they use pesticides on the corn fields.

So if they have one harvest what do they do?

They rotate it with other crops.

Oh so they can't declare it as organic. Sad as it is, rice is important, that's how the world works. My house is right next to a field. I see how they do the labor... maybe three people do the whole field, then they come spray it, and they do pesticides and then machines.

Within two days the whole thing is done; it is not labor intensive. But obviously this is different and is labor intensive. How much is it?

The price would be determined by the Raks Thai Foundation. It is currently sold for 80 baht with the nice packaging. Obviously you would not need the nice package. We can put you in touch with the Raks Thai Foundation if you would like further information on price. (Give him the rice)

We are a family style business. Every Thursday we have a meeting where we all come together as managers. I will take it to the meeting and see what they think.

10. Do you think that using hand-milled rice in your restaurant would be successful?

If we sell it, it wouldn't be for commercial reasons it would be for the selling point of the fact that other places do not have it. We want to support rural communities, we want to be different from other places, we want to be special, we want to be different. If you say it is sticky and sweet obviously there are only a few foods that it would go with.

Have you bothered to check on the internet mountain rice? For a Google search, most things that come up are rice problems on mountains in Thailand.

So people might be more interested in it as a souvenir, you shouldn't exclude that. People are traveling around in groups and they might want it as a souvenir to bring home, but its people who have traveled around to these communities. If it is nicely packaged it might be a nice souvenir. Thai people do not take other people home to eat, they take them out to a restaurant. In my country, you take them home and you sit down together and usually you bring something. You bring wine or other stuff. But now people bring spices and stuff used to cook; so this is something that you might bring along. "Oh I just got back from Thailand and I got this for you." You shouldn't forget this as a souvenir option. I'm from Switzerland myself and I understand that there are niche shops. People there want to know where it's coming from, if there are pesticides. They are willing to pay more and there are countries that are more aware and are willing to spend more money like in northern Europe.

Extra question: How much rice is eaten in Switzerland?

I think a lot, but we are also potato people; gratin and pasta etc. If I compared it to Thailand as 100%, then Switzerland is 30, 30, 30 potato, pasta, rice. If I think back, a typical week of eating has bread and cheese as a cold meal. But then a main dish we try to bring variety, so maybe rice twice a week, potato twice a week, and pasta twice a week.

11. What price range do you estimate the 1 kg package of Mae Khong Khaa rice to be? What would you be willing to pay for this rice per kg?

I think ½ kg is better. 1 kg is heavy, ½ kg is more attractive than one kilo. Obviously you need some description in English.

As a souvenir, for a half package I would pay 120-150 baht for half kilo if it is nicely packaged. It has to have an appeal. I would ask myself; if someone gave this to me as a present, would I be pleased? If I'm a tourist I would spend one week north and two weeks at a beach. The likelihood that this brochure would get lost is big. If it's in a pouch, or slid in, or attached I wouldn't lose it. As an addition, I think it would get lost somewhere but initially, I think it's good. The idea of keeping it is good but then you put in suitcase and lose it if it's not really attached. You could refer to a website, but you know how it is, people are busy.

I've been living in Thailand for 15 years. I was not part of the initial founders, I've been with the restaurant for 10 years, but the restaurant has been open for 30 years. I haven't been back to Switzerland in 15 years. There is not as much pressure here in Thailand; it is a bit more casual.

For the interviewer only:

Comments:

Interviewee looks comfortable during the interview. He is really open to listen to us and provide useful feedback on the product.

Appendix O: Interview at Khun Churn Restaurant in Chiang Mai

Interview Protocol – Chiang Mai Restaurant

Interviewee: Max

Interviewer: Restaurant Owner

Date of interview: February 22, 2014

Place of interview: Khun Churn, Chiang Mai

A. Introductory Protocol

By participating in this interview, you will become an essential component in this investigation. We are seeking enhancements in the techniques and feasibility of rice sales in Chiang Mai. Before we start, we would like to state the following:

1. Your confidentiality is important to us. If your responses are used in our report, your identity will be kept anonymous.
2. If at any time you feel uncomfortable, please let us know. We will immediately stop the interview without any penalty or loss of benefits to you.
3. The purpose of our research is to help rural communities become self-sustainable through the increased sales of rice that they grow. Your responses will help us create a plan for the Raks Thai Foundation, which currently helps these communities sell their rice.
4. The data being collected will be stored on a password protected computer that only the project team will have access to. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identifies you by name. Any publication or presentation of the data will not identify you.

Thank you for participating. We have planned this interview to cover questions about opinions from selected restaurants toward the rice product we are investigating. Most questions will be open-ended. Please feel free to ask for clarification if you do not understand what is being asked. If at some point you don't understand the purpose of any questions, tell us, and we will explain the reasons behind our questions.

B. Introduction

You have been selected to be part of our study because we would like to observe the attitude and opinions of the Chiang Mai's local restaurants toward the Mae Khong Khaa rice. Once we finish

the interview, we will use your answers to assess the characteristics of the Mae Khong Khaa rice in order to develop a proper supply channel for selected restaurant(s) in Chiang Mai.

C. Questions for Interviewee

1. Can you describe the customer demographic of this restaurant? Eg. age, nationality, profession, gender

In the past, Chiang Mai locals were the main customers. Foreigners have become the main customers, which consists of Americans, Europeans, and Japanese. In addition, Chinese tourists that visit Khun Churn have been increasing recently. Other than that, certain groups of Chiang Mai locals are still regulars of the restaurants, and their ages are between 30-40 years old.

2. What are the main attractions for customers to visit your restaurant? Eg. type of cuisine, environment, price

The vegetarian cuisine is the main attraction for customers; in addition, the restaurant serves food in a buffet style, which can be appealing for customer populations that prefer large serving portions. The dining environment is relaxing and friendly. The restaurant scale is rather big compared to others, which can support more than 20 customers. Also, the open time is considered long.

3. What types of rice is the restaurant current using? Eg. Brown, White

Currently, the restaurant only serves brown rice. A friend of mine runs a 10 acre rice field farm on the mountain at Mae Chaem, which has been growing rice for 8-9 years. He said that organic farming has huge potential and the products can be sold at higher price. If he succeeds, his farm can be the example for the nearby villagers to follow for organic farming. The long term benefit of organic farming is elimination of pesticides and fertilizers, which compromises the soil's quality. After he graduated from Kasetsart University, he came back to develop the land and has been supplying the restaurant with brown rice ever since. Currently, the annual production is up to 5 tons, which all have been supplied to the restaurant. I also bought a milling machine to mill the rice myself, which I send to all of my restaurants. The overall amount is 3 and a half tons per year. The leftover 1.5 tons is for selling to the customers. The rice used in the restaurants and for selling is the same. I mix red jasmine rice and black rice along with brown rice.

4. If they only sell one type of rice, why do they only sell that type of rice?

The fact that brown rice has high nutrients is the reason my restaurant serves this type of rice. The restaurant has been serving brown rice for 19 years; back then, the concept of organic farming and being health conscious did not even exist. However, the vegetarian cuisine was already well-known back then, in which my restaurant provided either white rice or brown rice.

The “Chevachit” idea introduced by Dr. Satis Intarakamhaeng 10 years ago, claiming brown rice as being anti-cancerous, changed people’s perception about consuming brown rice. My restaurant changed to serve only brown rice since then, and there has been no complaints from any customers.

5. What are the criteria that the restaurant uses for its selection of rice brands? Price, Familiarity, History, cooking characteristics?

In the past, there was no organic rice, so I used only regular brown rice. I judge the quality of rice by its appearance after cooking. There was a regular brown rice source that I purchased from, until I found out that my friend was developing organic farm products.

6. How much do you currently pay for brown rice per kg?

Before, I did the milling process myself, I purchased it at the price between 34-37 baht per kg. Currently, the restaurant purchases unprocessed brown rice at the price of 20 baht per kg.

7. Who do you buy brown rice from?

My mention that was mentioned before.

8. How much do you sell an average bowl of brown rice for?

18 baht.

9. How popular is brown rice? What percentage would you say buys brown rice over the white rice?

The customers prefer brown rice and they are interested in the fact that I mix black rice into it. Foreigners are even more interested in the rice after they know the restaurant mills its own rice. The restaurant mills its own rice on a daily basis, I usually tell my customers to not stock brown rice in large amounts, no more than 5kg, and purchase fresh rice from restaurant.

10. How many kgs of brown rice do you have to buy per month to fill the supply? Per year?

150-200 kilograms per month for the Chiang Mai restaurant.

11. How often is rice used in the cuisine in the restaurant?

For dinner, most of them use rice as an ingredient due to the nature of Thai food. For example, fried rice and rice with basil leaves. However, noodles are ordered quite often during lunch time.

12. Could the dishes in the restaurant be served with hand-milled brown rice instead of what you currently serve? Why/why not?

The problem of switching to hand-milled brown rice can be related to its appearance and fracture; the customers may wonder if the restaurant serves them bad quality brown rice. It would be necessary to display the actual hand-milling process to the customers; they would then realize that rice fracture is not due to bad quality.

13. Do you know the differences between mountain rice and paddy rice?

No

14. Are you aware that there are local villages in Northern Thailand that are producing mountain rice by the hand-milling technique?

Yes, because I've personally been to some local villages before.

15. Do you think that using hand-milled rice in your restaurant would be successful?

In my opinion, it is hard. The best explanation is to sit and talk with the customers; however, time does not allow me to explain this to every customer. Even if there is information in the restaurant, the possibility of customers reading it can be low.

16. Please take a look at the current Mae Khong Khaa rice package. What are your opinions about this product?

The vacuum sealed package ensures its safety.

17. What price range do you estimate the 1 kg package of Mae Khong Khaa rice to be? What would you be willing to pay for this rice per kg?

I don't have a solid reason to purchase hand-milled rice, unless certain customers were curious to know about the lives of tribal villages and their agricultural products. Personally, I think that brown rice, milled by either machinery or manual method, provides the same amount of nutrients. For machinery milling, the rice appearance is more attractive. However, hand-milled brown rice displays no significant advantages to machinery milled brown rice, unless you mention that it is the product of tribal villages.

Appendix P: Survey for Potential Rice Consumers: Tourist Population

Surveys were taken at Central World, Siam Paragon, and MBK in Bangkok

1. Age
 - a. 25 to 34
 - b. 35 to 44
 - c. 45 to 54
 - d. 55 +
2. Gender
 - a. Male
 - b. Female
3. What factors influence your food choices while traveling?

Price	
Taste	
Smell	
Nutritional value	
Appearance	
Curiosity	
Others (please specify)	
4. Would you consider taking rice back to your home country as a souvenir?
 - a. Yes
 - b. No
5. Would you buy rice at the airport?
 - a. Yes
 - b. No
6. Have you heard of “hand milled rice?”
 - a. Yes
 - b. No
7. Do you know how to cook rice?
 - a. Yes
 - b. No
8. Which of the following is the most important trait of a rice package?
 - a. Eco-friendly materials
 - b. Color
 - c. Logo
 - d. Story of the farmers
 - e. Cooking instructions
 - f. Nutritional information
9. Would you buy this product?
 - a. Yes
 - b. No
10. What additional information would you like to see on this package?
 - a. Recipe using the rice
 - b. Basic cooking instructions
 - c. Information about the product in another language
11. What price would you be willing to pay for this bag of rice?
 - a. 80 baht or less
 - b. 81 - 100 baht
 - c. 101 - 120 baht
 - d. 121 baht or more

12. Which form of advertising would influence you to purchase this rice product?

- a. TV
- b. Radio stations
- c. Internet
- d. Magazine/Newspaper
- e. Others (please specify)

13. Where do you shop regularly?

MBK		Terminal 21	
Siam Paragon		Big C	
Central		Tesco	
Emporium		Others (please specify)	

Appendix Q: Survey for Potential Rice Consumers: Professor Population

Surveys were taken at Chulalongkorn University

1. Age

- a. 25 to 34
- b. 35 to 44
- c. 45 to 54
- d. 55 +

2. Gender

- a. Male
- b. Female

3. How many people are in your household, including yourself?

- a. 1 - 2
- b. 3 - 4
- c. 5 - 6
- d. 7 or more

4. What factors influence your rice choices?

Price	
Taste	
Smell	
Nutritional Value	
Appearance	
Others (please specify)	

5. How often do you consume rice per week (times)

- a. 1 - 2
- b. 3 - 4
- c. 5 - 6
- d. 7 +

6. Have you heard of manually milled rice?

- a. Yes
- b. No

7. Rank the following from 1-3 on what influences you the most when purchasing rice

1 = It is a major influence

2 = It has some influence on me

3 = It does not influence me

Price	
Brand (if any)	
Type of rice (Eg. White vs. Brown rice)	
Nutritional values	
Packaging	

8. Where do you purchase rice regularly?

Villa Market		Tesco Lotus	
CP Freshmart		Big C	
Max Value		Tops	
Gourmet Market		Others (please specify)	

9. Which of the following is the most important feature or characteristic that you want to see on a package of rice?
- a. Eco-friendly packaging materials
 - b. Color of the package
 - c. Logo of the company
 - d. Background story of the village where the rice is grown
 - e. Cooking instructions
 - f. Nutritional information
 - g. It doesn't matter

Assessment of the current Mae Khong Khaa rice packaging

10. Would you consider buying this product?
- a. Yes
 - b. No

11. What additional information would you like to see on this package?
- a. Recipe for particular dish
 - b. Directions on how to cook rice
 - c. Information about the product in other language
12. What price would you be willing to pay for this bag of rice?
- a. 80 baht or less
 - b. 81 - 100 baht
 - c. 101 - 120 baht
 - d. 121 baht or more

13. How would you like to receive information about this product?
- a. TV
 - b. Radio stations
 - c. Internet
 - d. Magazine/Newspaper
 - e. Others (please specify)

Appendix R: Survey for Potential Rice Consumers: Nihonmachi Market

1. What is your age group?
 - a. 24 and younger
 - b. 25-54
 - c. 55+
2. What is your nationality?

3. What is your profession?

4. Do you currently live in Thailand?
 - a. Yes
 - b. No
5. Are you conscious of your vitamin and mineral intake in your diet?
 - a. Yes
 - b. No
6. How often do you eat rice? If every day, how many times per day? _____
7. Do you know what manually milled rice is?
 - a. Yes
 - b. No
8. If you answered yes to Question 7, how much would you pay for 1 kg of manually milled rice?

9. How often do you come to Nihonmachi?

10. How often do you currently have access to the internet?
 - a. Every day
 - b. Every other day
 - c. Less than two times per week
 - d. I never have access to the internet

*If you do not have access to the internet, please skip questions 11-13

- 1 = Major influence
2 = Some influence
3 = No influence

Cooking instructions	1	2	3
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11. Do you use QR codes?
 - a. Yes
 - b. No
 - c. I don't know what that is
12. Do you use Facebook? If so how often?

13. Do you use YouTube? If so how often?

14. What is most important to you when purchasing rice? Please circle one in each row.

1 = Major influence
2 = Some influence
3 = No influence

Taste	1	2	3
Price	1	2	3
Information on the people that grows the rice	1	2	3
Type of rice (Eg: White vs Brown)	1	2	3
Nutritional values	1	2	3
Packaging	1	2	3
Brand (if any)	1	2	3

15. Which of the following is the most important trait of a rice package? Please circle one in each row.

(excluding rice cookers)			
Traditional recipe using the rice	1	2	3
Information about the product in a language other than Thai	1	2	3
Nutritional information	1	2	3
Background story of where the rice comes from	1	2	3

Appendix S: Survey for Potential Rice Consumers: Farmers Markets

1. What is your age group?
 - a. 24 and younger
 - b. 25-54
 - c. 55+
2. What is your nationality?

3. What is your profession?

4. Do you currently live in Thailand?
 - a. Yes
 - b. No
5. Are you conscious of your vitamin and mineral intake in your diet?
 - a. Yes
 - b. No
6. How often do you eat rice? If every day, how many times per day? _____
7. Do you know what manually milled rice is?
 - a. Yes
 - b. No
8. If you answered yes to Question 7, how much would you pay for 1 kg of manually milled rice?

9. How often do you come to this market?

10. How often do you currently have access to the internet?
 - a. Every day
 - b. Every other day
 - c. Less than two times per week
 - d. I never have access to the internet

*If you do not have access to the internet, please skip questions 11-13

	No influence	Some influence	Major influence
Nutritional information	1	2	3
Background			

11. Do you use QR codes?
 - a. Yes
 - b. No
 - c. I don't know what that is
12. Do you use Facebook? If so how often?

13. Do you use YouTube? If so how often?

14. Is the name "Khaw Mae Khong Khao" appealing? _____
15. What is most important to you when purchasing rice? Please circle one in each row.

	No influence	Some influence	Major influence
Taste	1	2	3
Price	1	2	3
Information on the people that grow the rice	1	2	3
Type of rice (Eg: White vs Brown)	1	2	3
Nutritional values	1	2	3
Packaging	1	2	3
Brand (if any)	1	2	3

16. Which of the following is the most important trait of a rice package? Please circle one in each row.

story of where the rice comes from	1	2	3
\Cooking instructions (excluding	1	2	3

rice cookers)			
Traditional recipe using the rice	1	2	3
Information about the product in a language other than Thai	1	2	3

Appendix T: Data Analysis: Tourist Surveys

Analysis of the surveys in Appendix P: Tourist surveys

***Numbered questions represent questions on the survey, followed by an analysis of each question.**

This section presents an analysis of each question asked in the tourist survey performed at MBK, Siam Paragon and Central World malls. Figures 15, 17, and 20 in this appendix can be found in Chapter 4.0 of this report where the information is expanded.

1. What is your age group?

The majority of the respondents belong to the 25-34 age group. Therefore, most of the respondents who go to MBK, Siam Paragon, and Central World tend to be part of a young public

2. What is your gender?

The ratio between males and females was almost a 1:1 ratio. There were 27 males and 26 females. This shows that both men and women shop at these locations.

3. What factors influence your food choices while traveling?

According to the pie chart in Figure 14, tourists choose their meals based on two factors, taste and price. Therefore, in order to influence tourists to purchase our product, we have to provide them with a unique rice taste at a reasonable price range. Furthermore, curiosity is another factor that should not be ruled out since this is what attracts several tourists to become more aware of Thai cuisine.

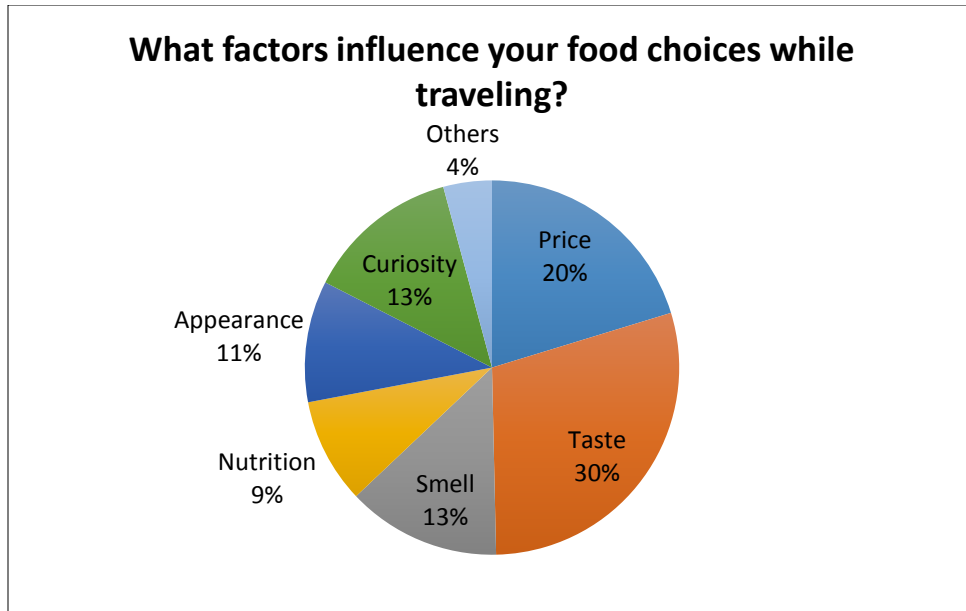


Figure 14: Factors influencing tourist food choices while traveling

4. Would you consider taking rice back to your home country as a souvenir?

The project team concluded that tourists would not be a good market for purchasing the packaged rice as a souvenir, as seen in Figure 15. However, restaurants would be a beneficial target market because tourists are interested in trying the product, as seen in Figure 17 below in question 9.

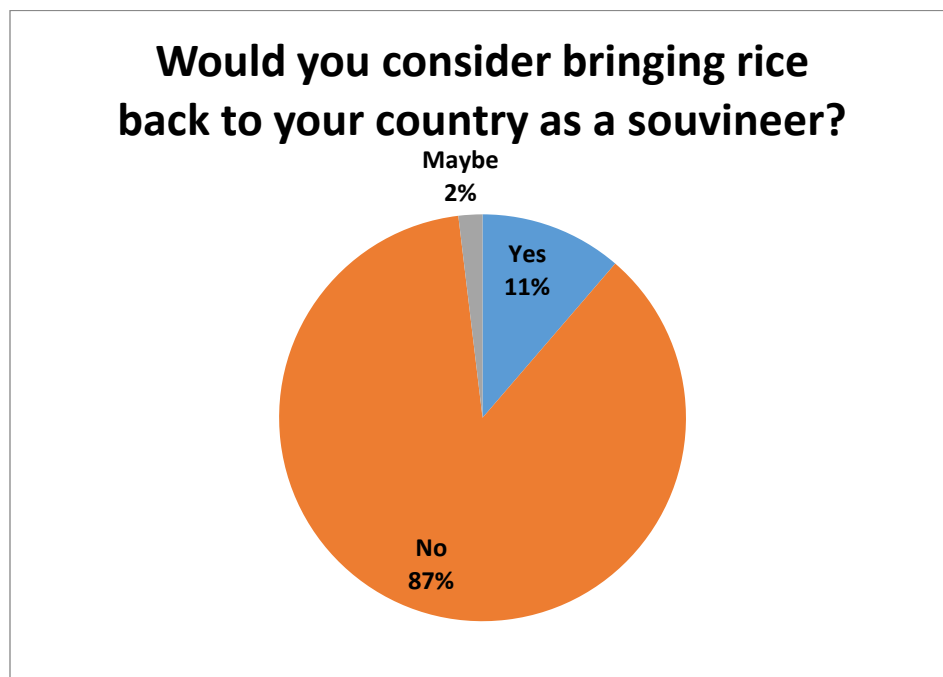


Figure 15: Would you consider bringing rice back to your country as a souvenir?

5. Would you buy rice at the airport?

Data shows that 94% of tourists will not buy rice at the airport. This confirms that in order to sell to tourists, we have to find a new channel of distribution.

6. Have you heard of “hand-milled rice”?

The survey shows that most tourists have never heard of hand-milled rice because 73% of tourists answer “No” to this question. As a result, it is part of our marketing strategy to raise awareness about hand-milled rice to the tourists.

7. Do you know how to cook rice?

Every respondent claimed that they know how to cook rice. Therefore, it might not be necessary to put rice-cooking directions on the product package to target tourists.

8. Which of the following is the most important trait of a rice package?

Figure 16 displays the most important traits of a rice package according to the tourist population surveyed. Thirty percent of the respondents consider the nutritional information as the most important trait found in a package. Additionally, 29% of tourists care about packaging materials and note that they prefer eco-friendly supplies. All this information indicates that the Raks Thai Foundation should include the nutritional information of the rice and build a package from eco-friendly materials in order to target the tourist population.

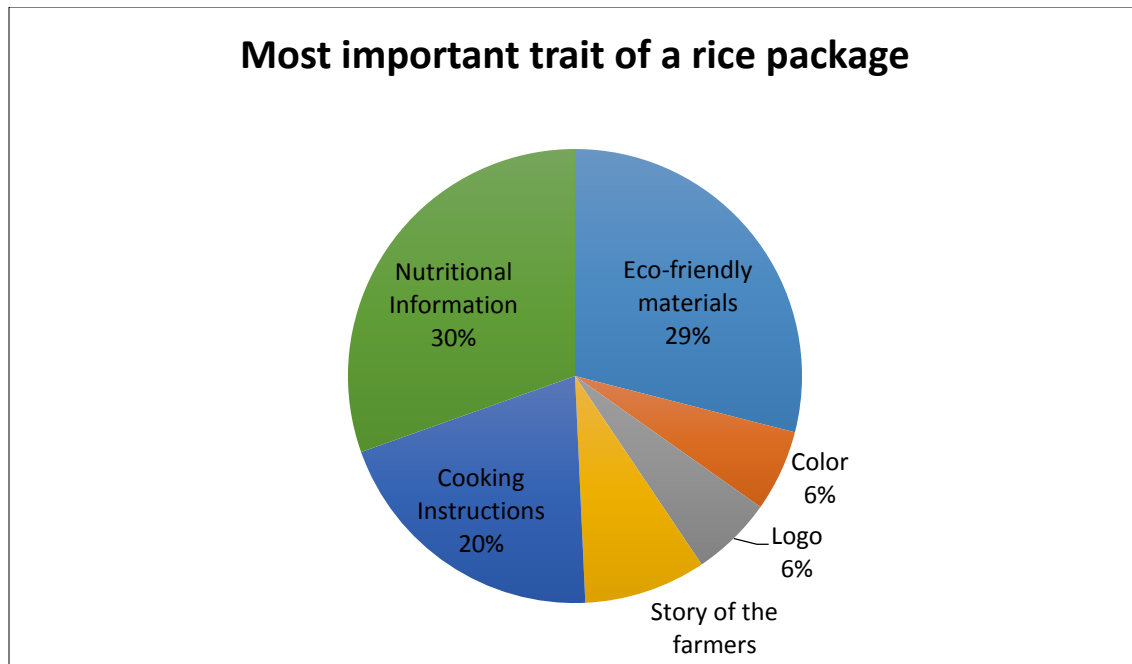


Figure 16: Most important trait of rice package

9. Would you buy this product?

Figure 17 shows that most tourists would buy the rice, despite the fact that they would not purchase the product at the airport or as a souvenir. These results suggest that we could target restaurants that tourists visit.

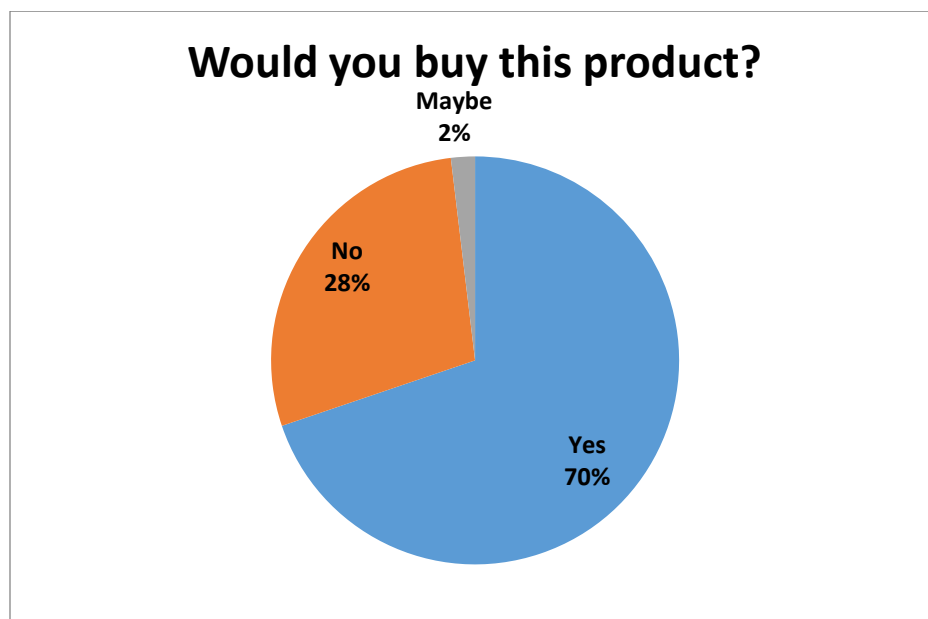


Figure 17: Would you buy this product?

10. What additional information would you like to see on this package?

Figure 18 identifies that most respondents want to see an original recipe on the rice package. Therefore, an authentic Karen recipe that uses rice should be included on the package of the product to attract potential customers and raise awareness of the Karen traditions.

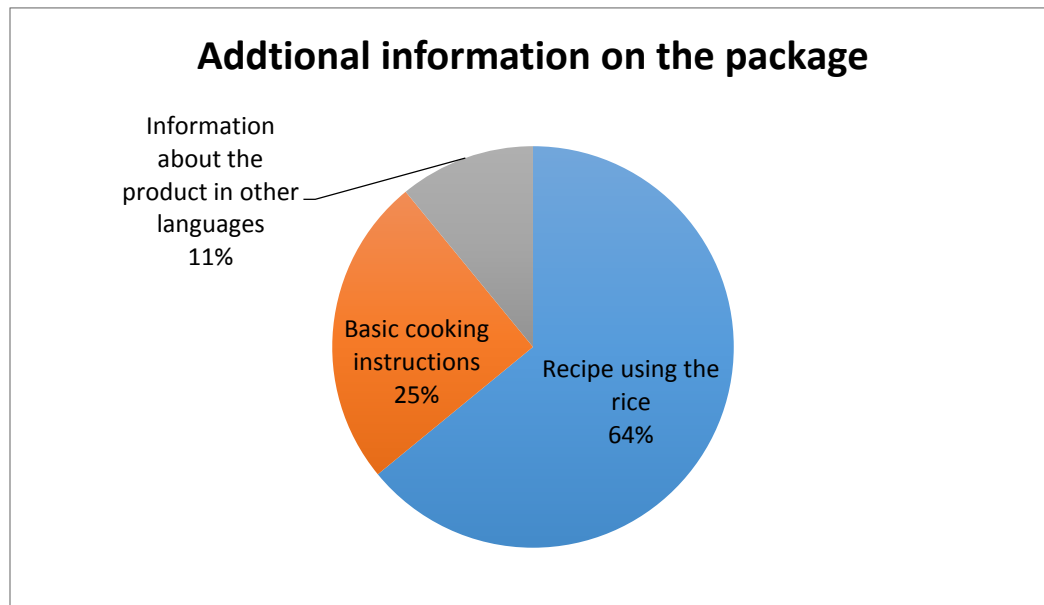


Figure 18: Additional information on the package

11. What price would you be willing to pay for this bag of rice?

The bar graph in Figure 19 indicates that most tourists will be willing to pay between 81 and 100 baht for 1 kilogram of rice. As a result, the product should be priced around this range for the tourist population.

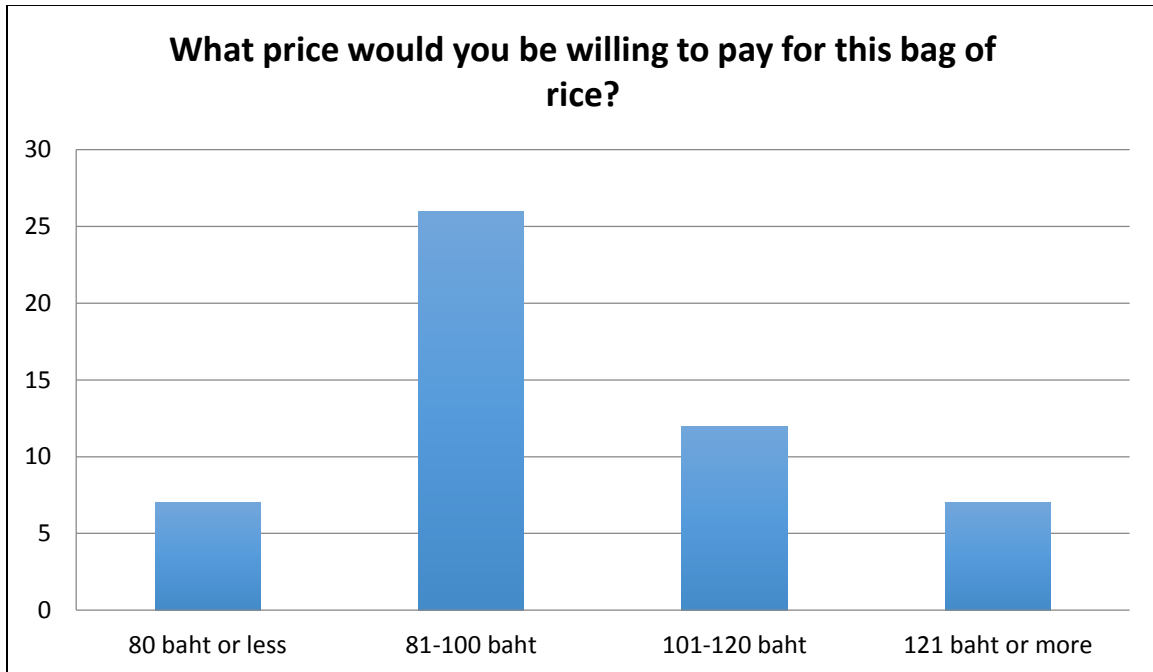


Figure 19: What price would you be willing to pay for this bag of rice?

12. Which form of advertising would influence you to purchase this rice product?

Data in Figure 20 shows three appropriate forms of advertising that would influence tourists to purchase the rice the most. These forms of advertising include TV, Magazine/Newspaper, and Internet. Further research should be conducted to identify the elements that should be included in TV, magazine and newspapers advertisements.

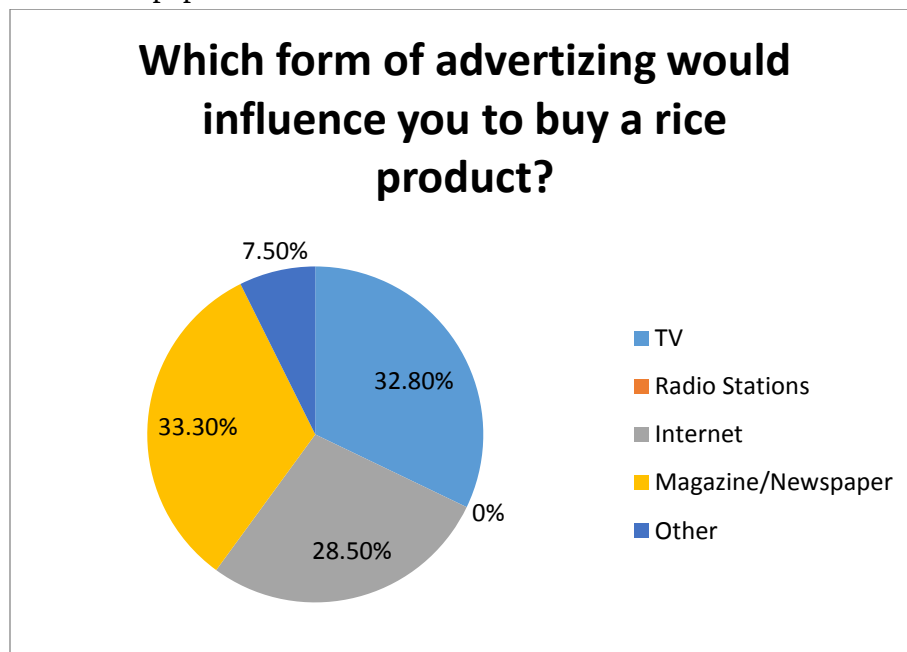


Figure 20: Which form of advertising would influence you to purchase a rice product?

13. Where do you shop regularly?

Figure 21 shows that the shopping mall named “Siam Paragon” is the most frequented place that tourists choose to go shopping. This information is not as relevant to our project as the other questions on the survey because the production of the Mae Khong Khaa rice is limited, meaning that it would be very difficult to keep up with the demand from a large market like this. A limitation for this question is that we may have surveyed several tourists visiting for the first time this location.

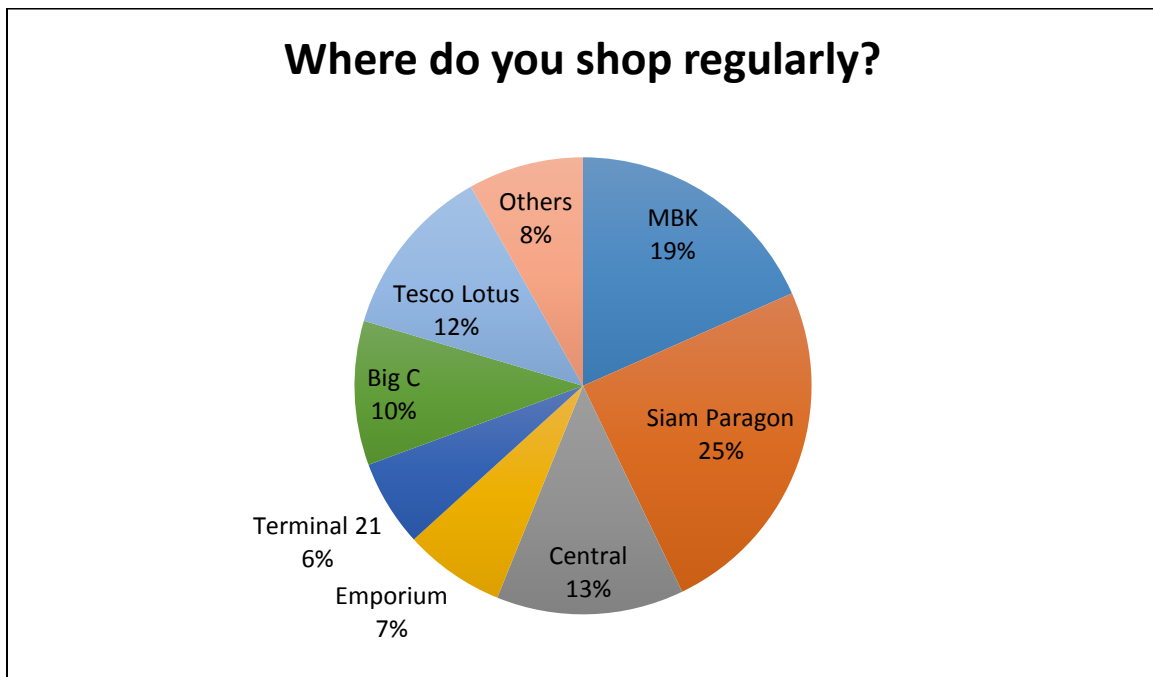


Figure 21: Where do you shop regularly?

Appendix U: Data Analysis: Professor Surveys

Analysis of the survey in Appendix Q: Professors Survey

*Numbered questions represent questions on the survey, followed by an analysis of each question.

1. What is your age group?

The majority of respondents were in 45-54 age group. This information identifies that these results best represent the views of the middle-aged professors' population.

2. What is your gender?

There were 14 interviewees and out of 9 males and 5 females. This shows that the majority of the population interviewed was male.

3. How many members live in your household?

It was identified that 11 out of 14 interviewees have 4 or more members that live in their household. This provides the project team information about how large rice packages should be to meet consumer needs.

4. What factors influence your rice purchase?

Data from this question show that the factors that most influence rice purchases for this population are nutritional information and the type of rice. In order to reach out to the professor's population and attract them to this rice product, nutritional information and taste preferences should be considered. Further assessments should be done on this population to identify the best way to reach this population if it is found to be the best target population for this rice.

5. How often do you consume rice?

The majority of survey respondents consume rice every day of the week, which suggests that at least one meal each day contains rice. The fact that rice is eating nearly every day suggests that there is a large demand for rice and it can be assumed that if the costumer bought and liked the product they may buy the product often.

6. Have you heard of manually milled rice?

All of survey respondents were aware of what manually milled rice is. This is important because it suggests that professors would not be as interested in reading a brochure that focuses on what manually milled rice is. The brochure instead could focus on the nutritional value or other characteristics of the rice to attract the population.

7. Please rank for influence of the rice properties listed.

Data suggests that 9 out of 14 of survey respondents consider the type of rice the most important property to influence the purchase; the second most popular property is the nutrition within the rice. The fact that the rice type influences their purchase of rice could be a limiting factor for the professors' population because if they prefer white rice over brown rice this rice product might not meet their wants. However, since nutrition is important to professors, the product could be marketed with its specific nutrition information.

8. Where do you usually purchase rice from?

Tesco and Tops are the top two popular places that respondents purchased their rice from. Although it was determined that the grocery store markets were not ideal for this rice, it could be marketed as local outdoor markets near Tesco and Tops grocery stores and advertisements can be used to attract professors to the market.

9. What are the most important packaging characteristics?

Figure 22 indicates that the professors value nutritional information the most out of the listed characteristics in the figure. This information helped the project team create the recommendation for the Raks Thai Foundation to get nutritional testing done and put the information on the package. The results in Figure 22 also suggest that color of the package and cooking instructions are attributes that consumers do not consciously consider while purchasing rice. Thus, color and cooking instructions should not be the primary focus of the packaging.

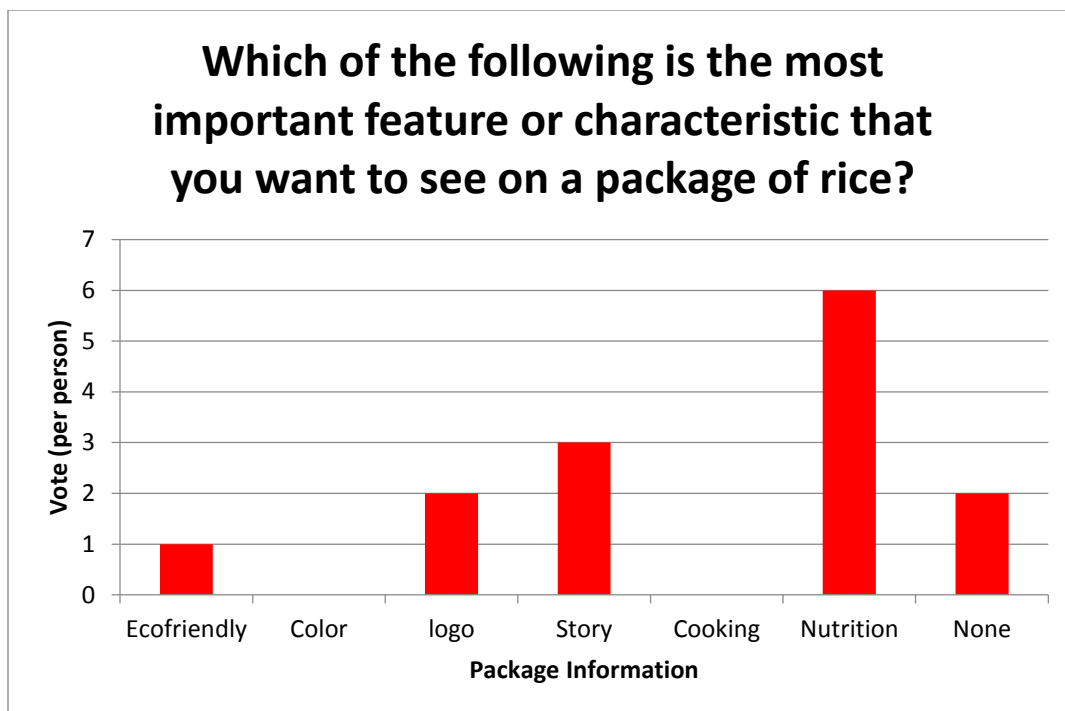


Figure 22: Which of the following is the most important feature or characteristic that you want to see on a package of rice?

10. Would you be willing to buy Mae Khong Khaa rice?

71% of respondents surveyed stated that they were interested in buying the Mae Khong Khaa rice. This response solidifies our hypothesis that professors are one potential market for the rice.

11. What additional information would you like to see on this package?

The majority of respondents identified that they would like to see cooking instructions on the package. These results conflict with data gathered in question 9. Thus, we are relying on the results from the tourist population for any additional information that should be added to the package.

12. How much would you pay for this rice?

Figure 23 shows that the majority of survey respondents would pay less than 80 baht for the rice. This indicates that with current packaging the Raks Thai Foundation is selling the rice at a good price to reach professors as consumers.

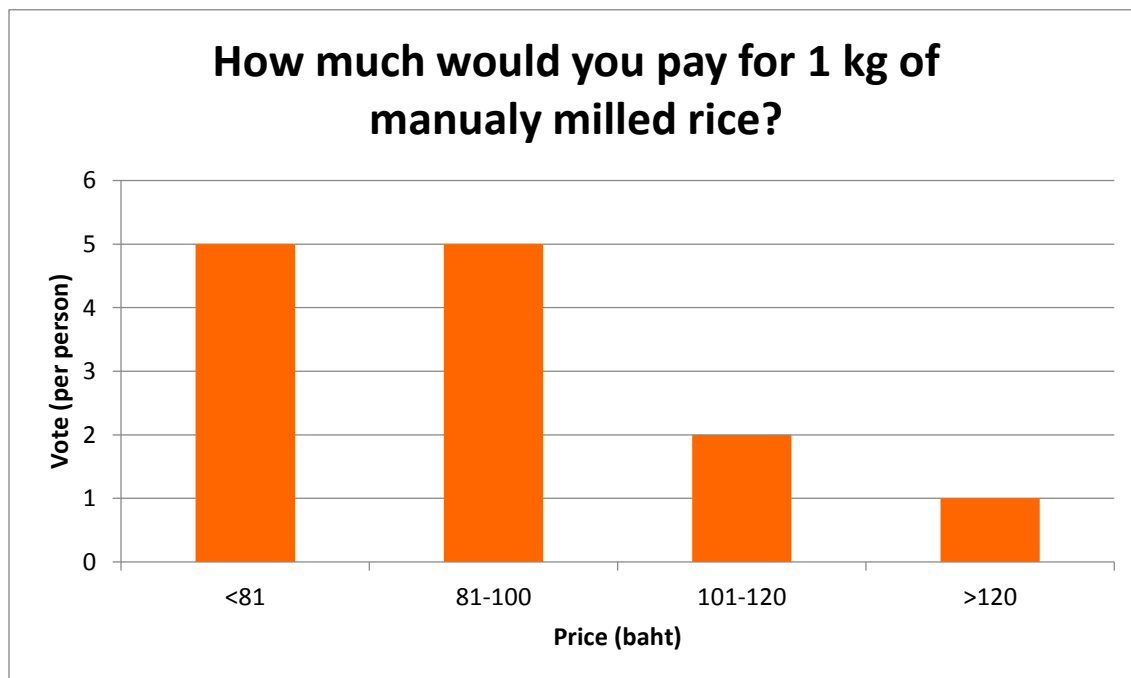


Figure 23: How much would you pay for 1 kg of manually milled rice?

13. How would you like to receive the information about the product?

Respondent results, shown in Figure 24 show that 50% of the population best receive information through the internet. The next best mediums to reach this population would be TV, magazines and news. The results also suggest that the radio and other mediums are not necessary to target to reach the professors.

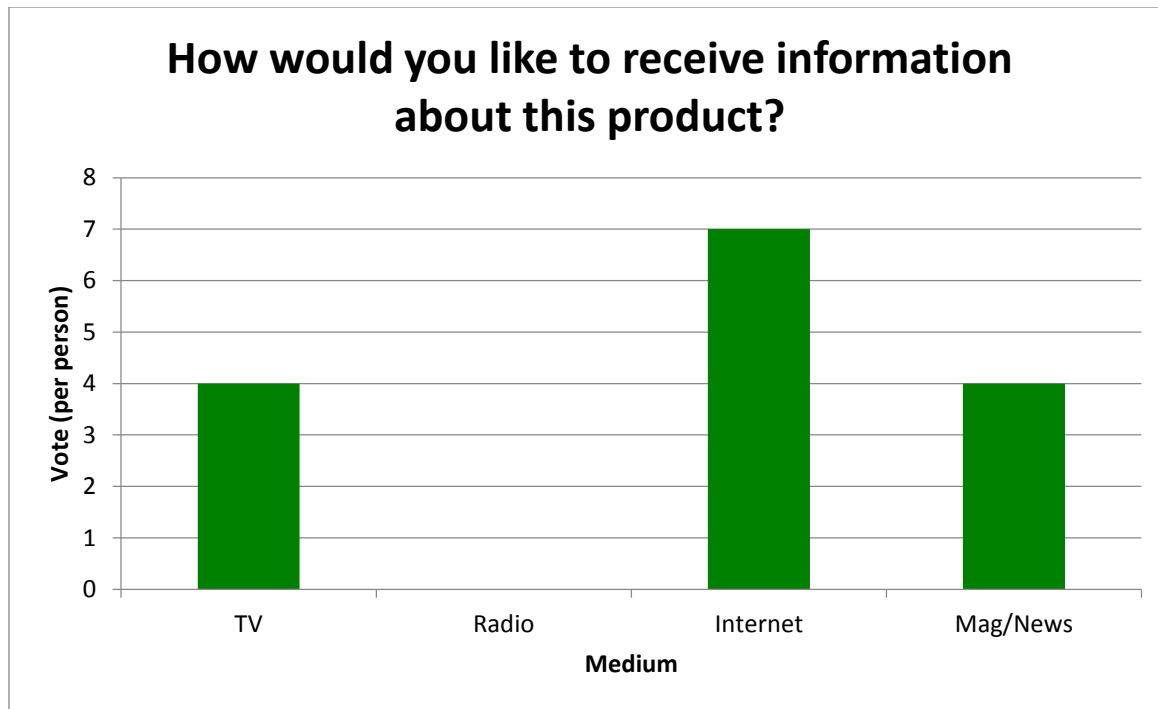


Figure 24: How would you like to receive information about this product?

14. Where do you go grocery shopping?

The results, shown in Figure 25, identify that Tesco and Tops are the top two places for grocery shopping. These results as well as the results from question 8 identify that this population goes grocery shopping at the same location that they purchase their rice from. Regularly

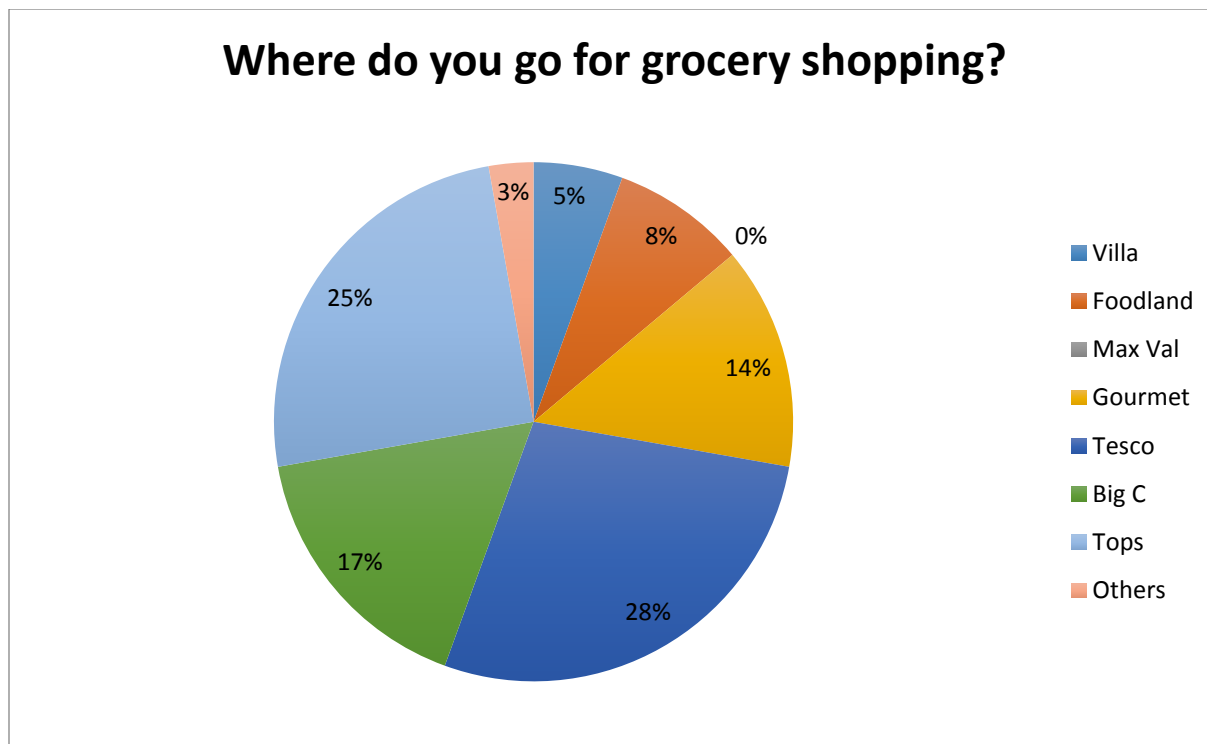


Figure 25: Where do you go for grocery shopping?

15. Where do you shop regularly?

The results, shown in Figure 26, identify Central Department Store, Big C, and Tesco are top three places for shopping. This may suggest that only a daily bases Tesco is a location that this population goes for all forms of shopping. A limitation of this question is that the respondents could have interpreted this question as where do you go grocery shopping on a daily bases, similar to the previous question. In addition, this does not aid in our research because the limited rice production from the village cannot meet the demands of these large stores.



Figure 26: Where do you shop regularly?

Appendix V: Data Analysis: Market Surveys

Analysis of the surveys in Appendix R and S: Farmers Market Survey and Nihonmachi Survey

*Numbered questions represent questions on the survey, followed by an analysis of each question. Figures 28 and 31 in this appendix can be found in Chapter 4.0, Results and Analysis.

1. What is your age group?

The majority of the respondents were in the 25-54 age group. Age groups were more important when analyzing the data from other questions. We chose the groupings 24 and younger, 25-54, and 55 and up because according to the Central Intelligence Agency, these groups of people are represented almost equally in Thailand.

2. What is your nationality?

There were different nationalities found through our interviews. Twenty five percent of the population interviewed comes from a Western country such as Great Britain and the USA. Five percent were Asian people from Hong Kong, Taiwan and Vietnam. Thirteen percent were Japanese and 57 % were Thai people. This data is shown in Figure 27. More of the half of the population analyzed is from an Asian country. Therefore, our marketing plan should be geared towards the Asian culture present in Thailand. One limitation of this question is that we did not conduct a random sample at the markets. We purposefully asked Caucasians, Thais, and Japanese to take our survey so that we could analyze the populations.

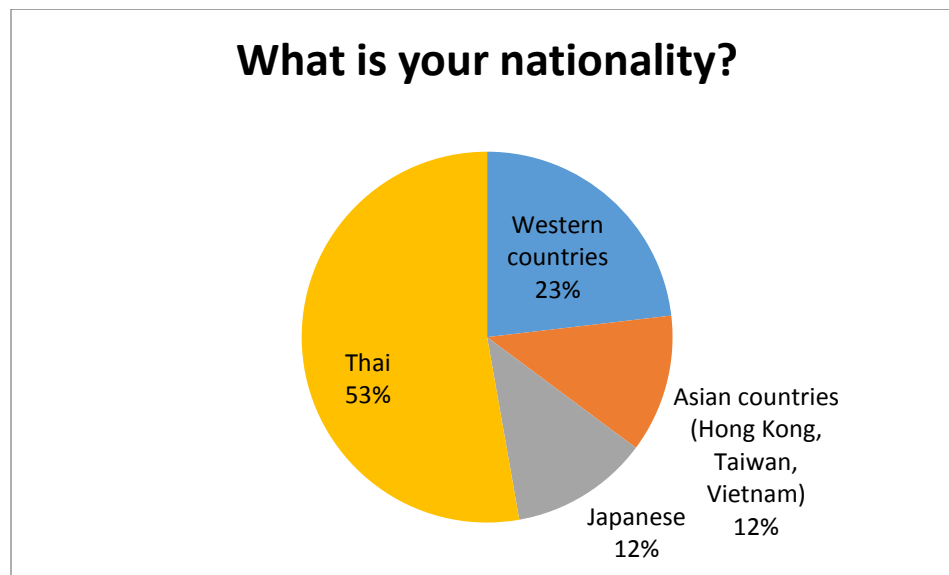


Figure 27: What is your nationality?

3. What is your profession?

The people surveyed present a variety of professions. These professions vary from housewives, students, business owners, professors, engineers to analysts. The people surveyed in Bangkok at K-Village and Nihonmachi market display an affluent profession whereas the people from Chiang Mai show traits of a working class. Through this data we can see that the target groups are part of a middle class to middle-upper class. This information is relevant because we are trying to market the rice as a more expensive, unique, hand-milled rice and must target a population that has the money to purchase it and would be willing to spend the extra money. A limitation in this question is that since we gave respondents the option to fill in the blank for their profession, we were not always sure what the average salary of that profession would be.

4. Do you currently live in Thailand?

Thai citizens and expats compose the 96 % of the people surveyed who live in Thailand. Therefore, our marketing strategies should be focused towards a consistent market where locals shop. We designed this question to assess whether the Japanese population at Nihonmachi market was Japanese expats, currently living in Thailand. 100% of the Japanese surveyed lived in Thailand, which shows that Japanese expats make up a portion of the population at Nihonmachi market.

5. Are you conscious of your vitamin and mineral intake in your diet?

The team determined that from the surveys at K-Village Market and Nihomachi Market, 56.3% of the surveyed population responded yes. Although this is only slightly more than half, the surveys were a good sampling of the populations at the market. In comparison, the surveys taken at Ton Payorn market revealed that 65% of the population was conscious of the vitamin and mineral intake in their diet, which would make the populations at these markets potential consumers for the Mae Khong Khaa rice. A main limitation of this question was that we assumed that if a respondent answered yes, they may be interested in purchasing hand-milled rice for its nutrition benefits. Despite this, we feel that this question is a good representation of whether the respondent would be interested in purchasing healthy rice.

6. How often do you eat rice? If every day, how many times per day?

At K-Village and Nihonmachi, 74.6% of the population responded that they eat rice every day, and often times two to three times per day. At Ton Payorn market, 95% responded the same way. This shows that the populations at these markets buy rice in order to consume it several times per day, which would make a rice product potentially successful at these markets.

7. Do you know what manually milled rice is?

Data suggests that 67.1% of respondents from K-Village farmers market and Nihonmachi know what manually milled rice is. At Ton Payorn market in Chiang Mai, 80% of respondents knew

what manually milled rice was. There is a relatively high understanding of the words “manually-milled” rice. However, this might be because of the word relation. A strong awareness campaign showing the uniqueness of the rice should be created.

8. If you answered yes to Question 7, how much would you pay for 1 kg of manually milled rice?

48.9% of the respondents from K-Village farmers market and Nihonmachi said they did not know how much they would pay for 1 kg of the rice. This means that although they are aware of the rice, they are most likely not aware of manually milled rice in a market setting. A different trend was seen in Chiang Mai, since 18.7% is a small population that did not know what they would pay for 1 kg of the rice.

9. How often you come to this market?

Approximately 46 % of people surveyed in Bangkok visit K-Village and Nihonmachi market at least once a month. At Ton Payorn market in Chiang Mai, 79 % of the population visits the market every day. This means that fresh markets which are constantly open are more visited by locals. The K-village farmers’ market is hosted only once a month. Not many people are aware of it; therefore, the lower presence of people. If we were to target farmers’ market more propaganda should be performed in order to make first and second time customers aware that the rice is being sold at the market.

10. How often do you currently have access to the internet?

The surveys taken at Ton Payorn Market in Chiang Mai, K-Village famers market, and Nihonmachi market in Bangkok showed that 100 % of respondents have access to the internet every day. This information suggests the potential success of social media and YouTube use to promote the product.

11. Do you use QR codes?

Surprisingly, approximately 69 % of the population does not use QR codes or does not know what they are or how they are used. Through this data we can see that QR codes are not a powerful strategy to promote a product in Thailand.

12. Do you use Facebook? If so how often? Do you use YouTube? If so how often?

People displayed a trend to often use YouTube and Facebook. Figure 28 seen below shows the percentage of people surveyed at Nihonmachi Market, K- Village and Ton Payorn market who use these two mediums and how often they use them.

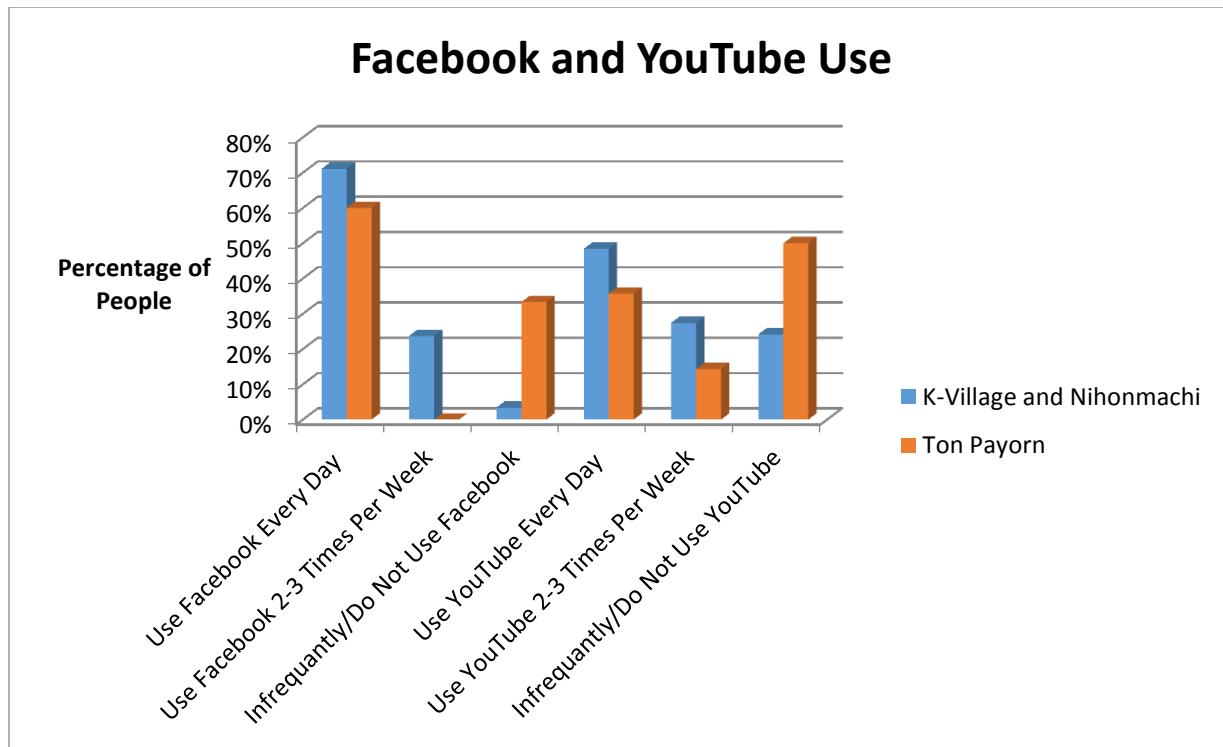


Figure 28: Facebook and YouTube use

13. Is the name Khaw Khong Khaa appealing?

The potential name “Khaw Khong Khaa” was accepted by 30 % of the population surveyed. This could be because the population had not enough information to understand the context of the question. Further names should be explored in order to choose the best alternative.

14. What is most important to you when purchasing rice?

Data shows that potential customers have three major influential factors when they purchase rice. These factors include the taste of the product, the type of rice and its nutritional value. The data collected from Nihonmachi Market, K-Village and Ton Payorn Market is displayed below in Figure 29 below.

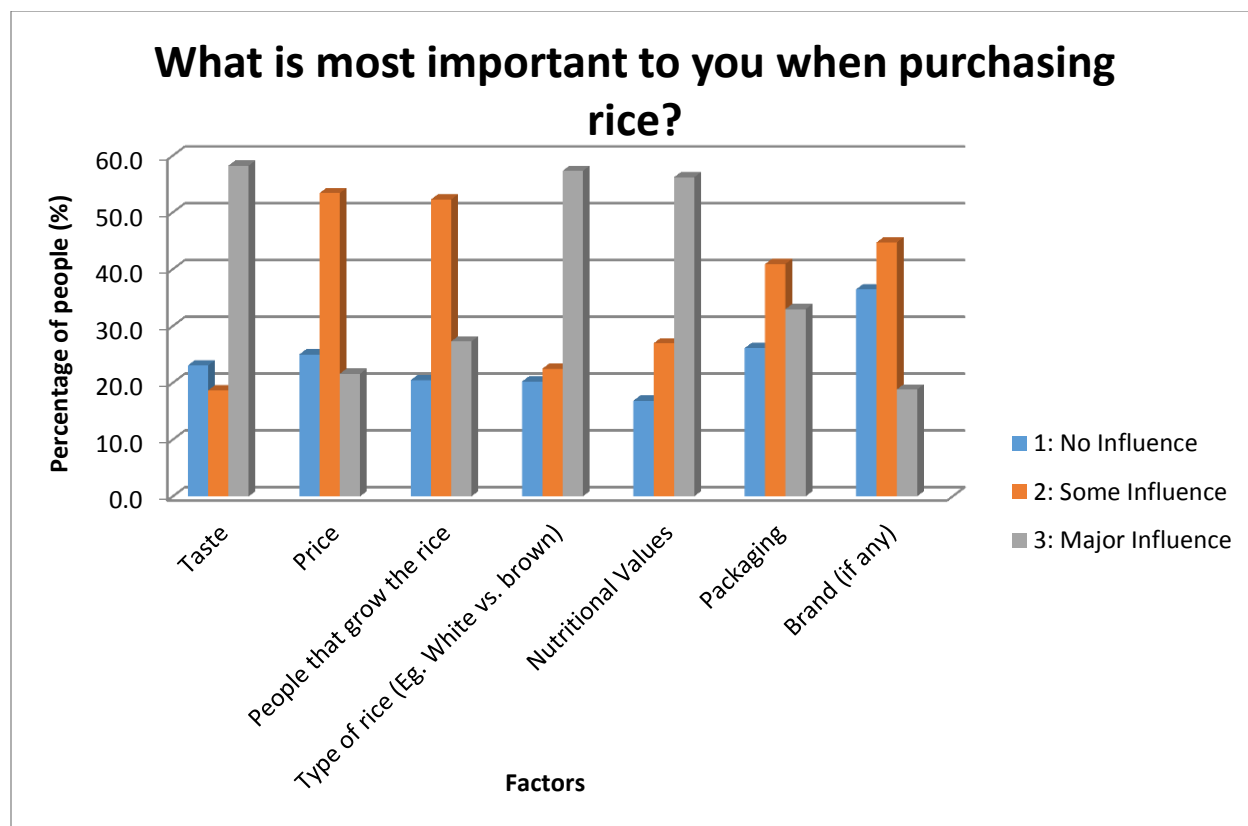


Figure 29: What is most important to you when purchasing rice?

15. Which of the following is the most important trait of a rice package?

Data shows that the nutritional information and the information of the product in a language other than Thai are the two most important factors that should be included in the packaging of the Mae Khong Khaa rice. The information collected at Ton Payorn Market in Chiang Mai, K-Village and Nihonmachi are shown below in Figure 30.

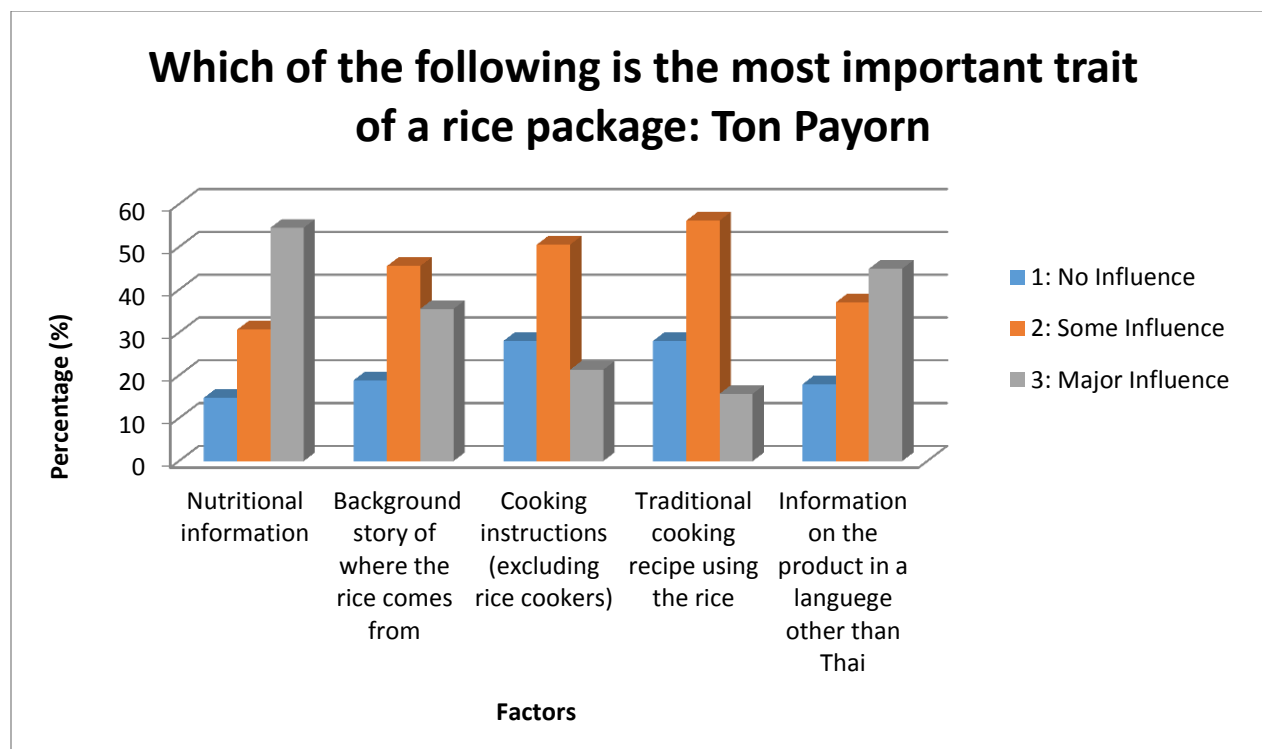


Figure 30: Which of the following is the most important trait of a rice package?

In the following table the same information is displayed. However, as seen below, in Figure 31. The information displayed is the same as Figure 30. The data collected at Ton Payorn was not significant to change the main results. When analyzing the data collected from Japanese expats at K-Village and Nihonmachi, there was a significant amount that ranked the story behind the village as most important.

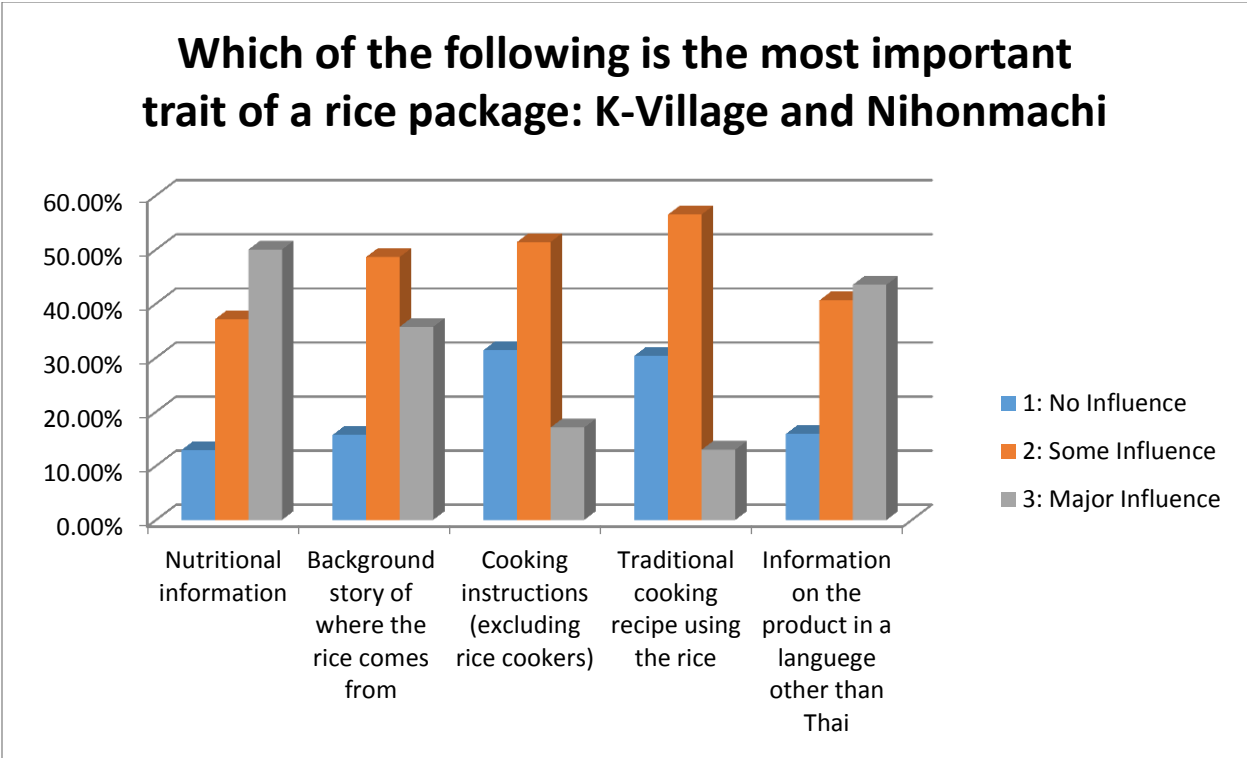


Figure 31: Which of the following is the most important trait of a rice package?: K-Village and Nihonmachi

Appendix W: Diagram of Rice Processes



Farmers use a shovel to dig a hole for the rice



The rice plant grows during the rainy season



The rice is harvested by December by cutting down the plant



The plant is left to sun-dry in the field



The plant is threshed, releasing the husk



The rice in the husk is sun-dried



The rice is husked using a manual machine



The rice is packaged and sold to the Raks Thai Foundation

Appendix X: Drying

Drying grain prior to storing is essential for the prevention of fungi and toxins (Patil, 2011). Aflatoxins are toxins that come from the fungus that is present in moist grain. Aflatoxins can cause many health problems in humans including liver damage, and can cause liver and intestinal cancer. Although milled rice has generally low levels of aflatoxins, paddy and par-boiled rice contain high levels because of the conditions they are grown and processed in. Fungi grow best in moist conditions, so if the grain is not fully dried or is stored in a moist place, fungi can grow leading to the appearance of aflatoxins.

There are several methods used to ensure both the high quality of the rice and the prevention of fungi (IRRI, 2013b). Most rural small-scale farmers dry their grain using a sun-drying method. For the highest quality rice, the rice should be dried both after harvesting and immediately after hulling. Post-harvest grain is dried either by field drying or panicle drying. Field drying is the least useful, as the rough rice is allowed to dry in the fields overnight. The moisture content in the air rises during the night and is then absorbed by the rough rice, increasing its moisture content. Panicle drying is when the rough rice is bundled into groups and allowed to dry on mats or pavement. Although this method presents the problem of uneven drying, as the grains in the middle of the bunch do not dry as fast as the outside, it is a more effective drying method than field drying. For post-processed rice, rice is spread on mats or pavement and dried in the sun during the day. The rice must be spread first, and frequently mixed to allow for even drying. The mixing is usually done manually by walking over the rice. Mixing should be done every 30 minutes until the rice has reached 13% moisture content (Patil, 2011). There are small devices that have been developed solely for the purpose of testing the moisture content of rice and grains that can potentially be introduced to small-scale farming villages (IRRI, 2013b). After the rice is dried, it is ready for milling as explained in the next section.

Appendix Y: Processing

In the milling process, rice is transformed from rough rice, whose kernels are still encased in an inedible protective hull, to brown rice and further to white rice (Rice Knowledge Bank, 2009a). On small-scale farms in northern Thailand, hand milling is the most common practice.

Hand milling requires villagers to physically pound rice in a mortar and pestle. The downward force on the grain forces the husk to separate from the rice (Rice Knowledge Bank, 2009b). This method is labor intensive compared to other machine milling processes, damages the grain, and does not completely remove the bran. After grain is processed, it is winnowed where the unprocessed rice is separated from processed rice.

During hand milling processes, only the hull is removed from the rice. The brown rice product contains a bran and germ layer that shortens the life expectancy of the rice. This short shelf life can be compared to the longer shelf life of white rice (Eat By Date, 2012). Rice that is not stored adequately loses significant nutritional and market value over time (Manalili, 2011).

One way to increase earnings for farmers through processing improvements is by parboiling the rice before the rice is hand milled (Rerkasem, 2007). Parboiling prevents the grain from sprouting and spoiling. Parboiling also binds the rice grains together, which decreases the amount of breakage in the grain. By using this method, farmers are able to sell rice with moisture levels of 20% or higher, instead of the 14% required by non-parboiled rice. Despite these positive qualities, parboiling the rice compromises the taste which in turn decreases consumer appeal. Parboiling is just one method; there are several different storage methods that can be used to create a product that has both a longer shelf life and a higher market value.

Appendix Z: Storage

It is essential to have a quality product to be able to succeed in the food industry market. Effective storage practices and facilities contribute to maintaining high quality rice. Current storage processes in Thailand span from small-scale farm storage to large government-subsidized facilities (Phoonphongphiphat, 2013).

Thailand favors large storage facilities, as seen by their addition of over 180 government storage warehouses for grain (Phoonphongphiphat, 2013). However, the rapid growth of these large-scale facilities over the past few years has prevented the government from providing support to small-scale farmers located in rural areas of the country. In the process of expanding rice facilities, the government's focus on improving rice storage practices has been minimal. In 2013, Thailand lost over 410 billion Baht of revenue due to food storage problems (Grain Pro Inc., 2013).

Due to the government's focus on improving and expanding large storage facilities, small-scale rural storage practices and facilities have remained basic (Nagnur, 2006). Rural storage facilities over the years have allowed farmers to provide food for their family; however, they are not able to produce a high-quality rice surplus because pests and traditional milling processes degrade the quality of the rice.

Once harvested and dried, grain is often mixed with natural resources such as coal, for preservation (Nagnur, 2006). In the highland regions of Thailand such as the Dharwad District, rice and other cereal grains are sun-dried, and neem leaves, salt, ashes, and even garlic are mixed with the rice. In rural villages, Nagnur (2006) states that most of the preservatives used are local, natural, and eco-friendly materials. After preservatives have been added to the grain, the grain is stored in facilities such as Kanaja, Sandaka, Kothi, Utrani, and Hagevu. Each of these storage techniques is described below.

Kanaja: Kanaja is a cylindrical storage container made out of bamboo whose walls are plastered with a mixture of cow dung and mud (Nagnur, 2006). The top is covered with cow dung and mud or covered with paddy straw or gunny bags. This method is used in lowland paddy regions as well as highland zones.

Sandaka: Sandaka is a box made of wood used to store smaller quantities of rice for household consumption (Nagnur, 2006). It is placed a few feet above ground level to prevent moisture from coming in and contains outlets to withdraw the rice without removing the lid. In addition, Sandaka can contain partitions inside the box to hold two to three different types of rice.

Kothi: Kothi is a large storage room that contains a large door to pour rice through and an outlet to retrieve the rice (Nagnur, 2006). This type of facility is found in places where substantial quantities of rice are grown and stored.

Utrani: Utrani is a small mud pot made by potters for grain storage (Nagnur, 2006). Families have many of these that they stack on top of each other.

Hagevu: Hagevu is an underground storage area that is insulated with straw ropes to prevent damage from moisture (Nagnur, 2006). The structure is filled to the top with rice and sealed with straw and mud. The benefit of the Hagevu method is that it does not require fumigation to remove pests. This storage method provides long-term mold prevention and takes up less storage space. However, this process is not a good storage method for rice seed that will be planted in the future.

Although these storage facilities are effective, there remain problems with insects in grain storage in many regions (Mishra, 2012). Insects have been a problem around the world for decades and are still a leading cause of food spoilage in Thailand.

Hermetic Storage

According to Villers (2006), milled rice is more difficult to store long term than unmilled rice. However, experiments in the Philippines have shown that when milled rice is stored hermetically, it can be safely kept for over one year. There are several hermetic packaging methods for storage that can prolong shelf life, each used for different purposes. For rice storage, organic hermetic storage is the most feasible and sustainable approach as it does not involve machines or electricity.

Organic hermetic storage depends on eliminating the metabolic activity and respiration of organisms such as insects and mold (Villers, 2006). The objective of this method is to create a low oxygen and high carbon dioxide sealed atmosphere that can preserve the grain. This method has been identified as the most suitable technique to preserve rice bran because it maintains a constant moisture level. The minimum levels of oxygen in this method lead to the mortality of most organisms in a period of two weeks. Additionally, this method allows for a postponed use of pesticides. Organic hermetic storage can also be applied to seed storage and is often used in hot, humid climates. Countries such as Costa Rica, Indonesia, and China have utilized this technique with successful results.

Plastic enclosures called “cocoons,” “cubes,” “volcanic cubes,” and “super grain bags” are used for organic hermetic storage (Villers, 2006). The “super grain bag” is a multi-layer plastic bag with a low permeability for gas and water, which allows farmers to protect their products from rodents. An option for rural villages is to implement this type of storage mechanism using empty gallon drums for the storage and transportation of rice. This method is heavily used in Asia and results in medium to long term storage of rice.

China has researched successful rice storage practices for the prevention of insects since 1990 (Wang, 2010). Over the past decade, China has studied pest prevention methods such as

fumigation and the use of warehouses and silos for the storage and transportation of grains. China has identified the relationship between oxygen concentration and moisture concentration in storage. In the past few years, India has been asking China for advice on grain storage techniques. Both China and India have increased their profits from rice exports due to the changes they have made in storage practices. However, China has not been able to implement profitable small-scale farming practices (Oryza, 2013).

Rice Storage in Nepal

Projects have been completed on small-scale farms in quality assurance to address the problems that government organizations have not acknowledged (Johnson, 2012). In 2005, Nepal's International Fund of Agricultural Development, IFAD, in partnership with the Institute of Agricultural and Animal Science, IAAS, initiated a project to tackle food security and sustainability in the uplands of Nepal by creating better seed storage conditions and increasing community support. On small-scale farms in upland Nepal, IFAD and IAAS worked with villagers to implement successful grain storage strategies. This project worked to introduce ideas that could be implemented not only in the district of Lamjung, but also throughout Nepal, as 91% of the rice produced in Nepal is on small-scale farms.

The IFAD provided rice seed from the IRRI and the National Rice Research Program, NRRP, to farmers in Nepal and conducted field trials using the different varieties of rice, which allowed farmers to identify the best types of rice for their villages (Johnson, 2012). The farmer's goal was to be able to produce rice that would have a "high yield, resist drought, have good cooking and eating quality, tolerate pests and diseases, and command a better price in the market" (para. 6). Over time, the IFAD project identified four upland rice types, Radha-32, Ghaiya-2, IR55435-5, and Pakhejhinuwa, and six lowland rice types, Radha-4, Ram Dhan, Barkhe-3017, Sunaulo sugandha, Barkhe-2024, and NR-1824-21-1-1, that fulfilled the goals of the farmers.

The next step for the farmers was to create a long-term seed storage plan in order to keep rice production processes healthy (Johnson, 2012). Local villages in Nepal started using a "community-based seed production program," which allowed the community to come up with their own seed production program. The community learned how to process and store seeds. The seeds that were put in the community food bank were collected from many different farmers in the district. This program, overseen by the IFAD, was successful in creating leadership roles for both men and women in making decisions on seed keeping, seed health management, and varietal selection. The success of the program increased the amount of free time farmers had to grow other crops, keep bees, and raise goats. These additions allowed farmers to gain alternative incomes instead of relying on rice sales for sustainability.

By the end of IFAD's time in Lamjung District, farmers were able to produce "4 tons of seeds in the first year, 20 tons the following year with about 1,000 farmer-buyers, and 30 tons in

the third year” (Johnson, 2012, para. 12). Men and women in the village were able to make additional income from other crops and buy other necessities such as clothes, food, and pesticides for their crops.

After IFAD left the district in 2009, the Consortium for Unfavorable Rice Environments, CURE, continued the research in that location (Johnson, 2012). CURE’s goal was to provide knowledge to over a hundred thousand farmers. CURE also worked with seven other villages to validate that the rice would grow in varying environments.

The stress tolerant seeds that the IFAD and CURE were able to identify as well as the processes associated with the project in Nepal could be implemented in small-scale villages in Thailand. The community food bank method allows villagers to store the best seeds for the following year’s planting. However, this strategy can only be developed if communities are willing to work together. Once the quality of rice reaches its full potential, the food product can enter the market and other marketing strategies such as visual mediums and packaging can be considered.