

Consumer Perception and Attitude Study for Market Development of Hommali Organic Rice Products from Thung Kula, Thailand

Pensri Jaroenwanit and Pornpirat Kantatasiri

Abstract— This research aims to study consumers' perceptions and attitudes toward Hommali Organic Rice Products for the purposes of market development in Thailand. Hommali Organic Rice Products from Thung Kula, Roi-Et Province were used for the case study in this quantitative research. Field survey research was conducted using questionnaires to collect data from 440 test subjects who were Thai Hommali Organic Rice Product consumers; 240 people were surveyed in Bangkok, 100 people in Khon Kaen, and another 100 people were in Roi-Et. Test subjects were selected using purposive sampling. Descriptive statistics and inferential statistics were used in the data analysis. The research found that all research subjects knew of and had consumed Hommali Organic Rice Products; however, only 56.8% knew of Hommali Organic Rice Products specifically from Thung Kula. They had a low level of awareness in terms of differences between Hommali Organic Rice Products from Thung Kula and from other areas and knew little about the distribution of such products from Thung Kula. This study suggests that marketing communication should be developed in order to build positive perceptions and attitudes towards Hommali Organic Rice Products from Thung Kula. As consumers pay a lot of attention to their health, the selling points of these products should focus more on the benefits of consumption, lack of poisonous substances, and relatively aromatic and soft qualities when compared to Hommali Rice from other areas. Development of product distribution, marketing, and the domestic market are needed in order to expand the product's reach and to be accessible for the target group.

Keywords — Attitude, Market Development, Organic Rice, Perception.

1. INTRODUCTION

Consumer behavior in terms of willingness to pay or purchase organic products depends on consumers' perceptions and attitudes [1], [2], [3], and [4]. Specially, at present consumers are interested in the relationship between diet, food and health [5] and have concerns about the risks of illness and disease from food [6] because today many countries are spreading information about risks from the chemical synthesis on food products [4] and [7]. In addition, many research studies have revealed that consumers are increasingly aware and protect their health by consuming organic products instead the conventional food products [2], [3], [4], [6], [8], [9], [10]. These changes in consumer perceptions and attitudes about organic products are correspondingly important for companies to be aware of and employ in their marketing strategies.

Organic agriculture products are a popular choice for many consumers who are aware of their health [11]. Organic products are not associated with chemical synthesis in contrast to typical, agro-chemical products [12]. The International Federation of Organic Agriculture Movement (IFOAM) [13] and USDA Organic [14] determined the definition of organic agriculture to be:

"Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved [13]."

In Thailand organized organic production began in the early 1980s when a group of farmers and local Non-Governmental Organizations (NGOs) came together to establish the Alternative Agriculture Network (AAN) (Anderson, Lonmo, Schaan, & Schenk) [15], [16], and [17]. The network aimed to foster sustainable agriculture activism in Thailand [17]. In Thailand, the main sources of agriculture are rice, vegetables, and fruits [15], [16].

The expansion of organic rice production in Thailand is supported by The Ministry of Agriculture and cooperatives, especially Hommali Organic Rice, which is famous around the world [15]. Khao Hom Mali Thung Kula Ronghai is a very famous and unique Jasmine rice variety known by Thai consumers since it can grow in limited area only and has high quality with special fragrance and attributes [18]. Hommali Organic Rice is grown in the Thung Kula Rong Hai area that contains five provinces: Roi-Et, Mahasarakham, Surin, Srisaket, and Yasothon. Government policy has increased the volume of Hommali Organic Rice production by two hundred and five tons from the Thung Kula Rong Hai area, distrubuted amongst the five provinces (i.e. a rice yield of 75,000 tons from the Surin area and 15,000 tons

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from the Yasothon area) [19] Hence, the Hommali organic rice's market is expanding the volume in domestic market and making most of Thai people better know about the special of it.

Although Hommali Rice is a famous kind of rice in Thailand and most people known about this, Hommali Organic Rice is quite new in the market and different product attribute from general Hommali Rice because it was produced without chemical substances involving in the production process [19]. This distinction raised the research question of how consumers perceive and feel towards general Hommali Organic Rice and Hommali Organic Rice from Thung Kula Rong Hai. Roi-Et is the major production area of Hommali rice since more than 30% of Thung Kula Rong Hai area with thousands rice growers are in Roi Et province. This led Roi-Et province got much more supports from government and private organizations for many years and resulted in more advance developed in production and marketing process especially on organic system and products than other provinces. Therefore, Hommali Organic Rice products from Roi-Et Province were used for this study. The objective of this paper is to study consumers' perception and attitude toward Hommali Organic Rice and Hommali Organic Rice from Thung Kula Rong Hai, Roi-Et Province. The results from this study will be useful for developing marketing strategies. Following introduction part, this paper contains a literature review, description of methodology, findings, conclusions, and further discussion.

2. LITERATURE REVIEW

2.1 Organic Rice Definitions

Organic rice is a natural growing rice that is minimally processed and free of synthetic preservatives, artificial sweeteners, colors, flavors and other artificial additives, growth hormones, antibiotics, hydrogenated oils, stabilizers, and emulsifiers while grown [14] and [20]. Specially, this rice is grown without the use of synthetic fertilizers or pesticides for at least three years prior to harvest [13], [14], [16], [17], [20] and [21]. Furthermore, cover rice seed, compost and other natural fertilizers are used for maintaining soil fertility, while biological control and natural pesticides are used for pest control [14], [15], and [17]. Organic livestock production requires that animals are fed organic feed, have access to a pasture or the outdoors, and prohibits the use of antibiotics and hormones [14] and [22]. Moreover, most organic rice products have an organic label to ensure consumer confidence in their origin [14], [17], [23], [24] and [25]. Therefore, organic rice definition refers to the process and product of organic rice production.

2.2 Hommali Organic Rice from Thung Kula

Khao Hom Mali Thung Kula Rong Hai is the rice variety produced in the Thung Kula Rong-Hai area, extending across five provinces of northeast region, Thailand. Hommali Organic Rice can be brown or white (milled rice) [15] and [16]. Thung Kula Rong Hai is an area that used to be an expansive, harsh, and dry place in the

middle of the region. It covers 5 provinces, which are Roi Et, Surin, Srisaket, Yasothon, and Maha Sarakham. One-third of the area is in Roi Et province [19] and [26].

There is a legend that says the Kula people were traders in ancient times who were also great fighters with excellent stamina. However, they cried when they got to Thung Kula Rong Hai because it was such a desolate place without water and big trees. Presently the area is fertile due to the efforts of the government to develop it and it is suitable for agriculture especially growing rice [26]

2.3 Consumer Perception

Consumer behavior is a dynamic phenomenon that depends heavily on consumers' perceptions. This is the most important psychological factor in the marketing field because consumers must have a perception or attitudes about a product before they are interested in purchasing it [27], [28], and [29]. Organic products in Asian markets are less recognized than in the EU market [7] and knowledge about such products has a slow rate of diffusion. For example, in Bangkok people who had bought organic products knew only about organic fresh vegetables [30] and were aware of a little market selling these organic products [31]. Thus, consumer's perception affects to marketing strategy [32] that can be induced the consumers' needs, especially, after consumer perceives the risk from food, they are always try to find the better [33] and [34].

Culture's influence consumption

Hofstede's culture definition refers to the dynamic process that can drive human social beliefs, create attitudes, perceptions, thoughts, and responses[13]. Hofstede discussed one dimension of culture that is particularly relevant here: individualism collectivism. These play a key role in consumer perceptions and attitudes [35]. Western cultures (e.g. England, Australia) and Eastern cultures (e.g. Thailand, China) differ in ways that can be classified following Hofstede's cultural dimensions. Western cultures tend more towards individualism than those in the East, so a consumer in Eastern cultures who is part of a collectivistic society has more impetus to follow social trends [36] in the terms of consuming organic food [37]. In this way many researchers reveal that culture is an important factor which affects consumers' perceptions, attitudes, and consumption of a new product in the market [37] and [38].

Cognitive consumption behavior

Many research studies have found that not only gender and age but also consumer perception and attitude have an effect on food consumption behavior [39]. In particular, consumers who purchase organic products are often cognitive of the relationship between food and health [40]. Different opinions about this affect consumer perception [41], and statistically women are more likely than men to use information about how to be healthy for changing their behavior [40] and [42]. In general, women make decision to purchase products

while comparing the benefits from different choices [5] and [43]. Overall people who are aware of their health will pay extra to get food products with higher and safer standards than conventional products [5]. Consumers who regularly purchase healthy products have personal tendencies and cognitive reasoning that lead them to choose healthy food brand products [44] and [45]. On the other hand, this group of people is only one segment of the initial market for new food products [46]. In this way, consumers' perception is related to their cognitive reasoning, which in turn affects their behavior to consume the organic products [47] and [48].

2.4 Consumer Attitude

An attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor [2]. In addition, it involves an overall evaluation that expresses how much we like or dislike an object, issue, person, or action. Attitudes are learned, and they tend to persist over time [49]. In other words, attitudes reflect the consumers' overall evaluation of something based on associations linked to it [50] and [49]. However, attitude is important because it guides our thoughts (the cognitive function), it influences our feelings (the affective function, or emotion), and it affects our behavior (the conation function) [51] and [52].

Furthermore, attitude can be described in terms of five main characteristics: favorability, attitude accessibility, attitude confidence, persistence, and resistance [53] and [54]. This research emphasizes the consumers' attitude as it results in behavior. Attitude is understood as a rational, choice-based evaluation of the consequences of a behavior or a behavior's subjective utility, as well as an estimate of the likelihood of expected outcomes [55], [56] and [57]. Hence, an attitude includes affective (e.g. enjoyable or unenjoyable) and instrumental (e.g. benefit or harmful) evaluation toward a behavior that have contributed to the level a person possesses a desirable or non-desirable estimation or behaviour-based appraisal in question [57], [58], [59], [60] and [61].

2.5 Market Development and Hommali organic rice market in Thailand.

The body of consumers willing to purchase or actively seeking organic products is a new market, which is developing to suit consumers' needs [62], and [60]. Moreover, it has been found that more information about the organic food market, which increases consumers' organic food knowledge, is important because it positively influences consumers'attitudes towards organic food products [2], [63], and [64]. The success of market development absolutely bases on strategy of consumers' perception and attitude creation. Hommali organic rice is high price premium product in domestic market. It can add value to Hommali rice and expand market potentials as well as increase competitive advantage for doing rice market.

Growth of Hommali organic rice market in Thailand has been gradually increase for some years with Roi-Et province as the production leader. Although Roi-Et

province has several attempts to expand Hommali organic rice market but it has not been much accepted by Thai consumers because of low perception and attitude.

3. METHODOLOGY

Field conducted survey research was using questionnaires to collect data from 440 test subjects who were Thai Hommali Organic Rice Product consumers; 240 people were surveyed in Bangkok(the capital city), 100 people in Khon Kaen (the biggest city in the Northeastern region of Thailand), and another 100 people were in Roi-Et (the land of Thung Kula). The Hommali Organic Rice is a premium product that has more value of quality and price than normal Hommali Rice products, so the samples should live in the big provinces and have high education. Hence, Bangkok and Khon Kaen was selected because there are many people with high education and high income living there, and Roi-Et was selected because it is the growing land of Hommali Organic Rice. The test subjects were the consumers who regularly buy packed rice and aware about organic rice. Purposive sampling was used for test subjects selection with screening questions pass before interview. Only Hommali Organic Rice Products from Roi-Et Province were used for this study.

The data obtained from the survey is analyzed using fundamental descriptive and inferential statistical methods. The meaning of the mean value in talbe 2,3,4 is definded as follow:

1.00-1.80 refers to lowest

1.81-2.60 refers to low

2.61-3.40 refers to moderate

3.41-4.20 refers to high

4.21-5.00 refers to highest

4. FINDING

A. Personal Data of Test Subjects

74.5% of test subjects were female and 86.6% of these were married. Each household consisted of 3-4 members on average, with 55.7% of households meeting the average. 39.3% had an income around 10,000-20,000 Baht per month. 21.8% had been educated up to a high school or vocational level. Also, 28.6% were running their own business and 45.7% had loyal and sincere personality.

B. Consumers' Perception of Hommali Organic Rice Products from Thung Kula

All test subjects knew of and had consumed Hommali Organic Rice Products; however, only 56.8% knew of Hommali Organic Rice Products from Thung Kula. Most test subjects who didn't know of Hommali Organic Rice Products from Thung Kula were young and single with low income and their education was at a high school or vocational level or lower.

The cultivated areas of Hommali Organic Rice where most test subjects familiar with were Roi-Et Province, followed by Surin and Yasothorn Province respectively. Most test subjects had received information about Hommali Organic Rice Products from Thung Kula at exhibitions, followed by seeing the products themselves, media advertisements, such as brochures, internet and television respectively.

Most test subjects could not recognize the Hommali Organic Rice brand. For those who did, Sue Sat was the most recognized brand of Hommali Organic Rice Product from Thung Kula, followed by Moral Rice and Rakbankerd brand. The brands they had ever bought are shown in Table 1.

TABLE 1: Number and Percentage of test subjects that purchased various Hommali Organic Product Brands from Roi-et Province

Province	s Ban	Bangkok		Khon Kaen		Roi-et		Total	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	
Product brand									
Sue Sat brand	21	14.1	1	0.7	0	0.0	22	14.8	
Rakbankerd brand	15	10.1	2	1.3	0	0.0	17	11.4	
Khoa Phen Ya brand	21	14.1	11	7.4	6	4.0	38	25.5	
Unrecognized	32	21.5	24	16.1	16	10.7	72	483	
Total	89	59.7	38	25.5	22	14.8	149	100.0	

Note: Subjects could choose more than 1 answer

When buying Hommali Organic Rice products, most test subjects normally look at the label to ensure that the rice they buy is Hommali Organic Rice. Sometimes they receive information from retailers and advertisements. The majority of test subjects buy Hommali Organic Rice from the supermarket, followed by grocery stores and then by Hommali Organic Rice Product Shops.

The test subjects had a high level of awareness about Hommali Organic Rice and also had confidence in the quality and price of Hommali Organic Rice Products from Thung Kula but they paid little attention to the origin of the product. However, they had a low level of awareness in terms of differences between Hommali Organic Rice Products from Thung Kula and Hommali Organic Rice from other areas and knew little about the distribution of Hommali Organic Rice Products from Thung Kula. The results are shown in Table 2.

C. Consumers' Attitude of Hommali Organic Rice Products from Thung Kula

The test subjects had a positive attitude toward Hommali Organic Rice because it was produced without chemical fertilizers, plant growth regulators, herbicides, insecticides, or additional hormones, and was not genetically modified (GMOs).

The production process of Hommali Organic Rice was considered environmentally friendly and helpful in reducing pollution. Hommali Organic Rice Products do not contain poisonous substances and are good for consumers' and producers' health. Most test subjects tended to buy Hommali Organic Rice Products from Thung Kula and would recommend it to other people.

The test subjects were highly satisfied with the widespread and wide range of products (as shown in Table 3).

TABLE 2: Mean and Standard Deviation of Consumers' Perceptions of Hommali Organic Rice from Roi-et Province

No.	Consumers' perceptions	Mean	SD	Level of Consumers' perceptions
1.	I know Hommali Organic Rice, but I didn't pay	3.44	1.171	High
	attention to its origin.			
2.	I know Hommali Organic Rice from Roi-et	3.37	1.085	Moderate
	Province.			
3.	IknowHommaliOrganicRicefromThungKula.	3.35	1.040	Moderate
4.	I often receive information about Hommali	3.04	0.920	Moderate
	Organic Rice from Roi-et Province.			
5.	Information about Hommali Organic Rice from	3.24	0.897	Moderate
	Roi-et Province is interesting and attracts			
	consumers' attention.			
6.	I saw Hommali Organic Rice Products from Roi-	3.07	1.076	Moderate
	et Province in shops and supermarkets.			
7.	I'm confident about the quality and price of	3.48	0.846	High
	Hommali Organic Rice from Roi-et Province.			
8.	I can differentiate Hommali Organic Rice from	2.87	1.216	Moderate
	Roi-et Province and Hommali Organic Rice from			
	other provinces.			
9.	I can easily find Hommali Organic Rice from	3.11	1.174	Moderate
	Roi-et Province.			
10.	ItendtobuyHommaliOrganicRicefromRoi-et	3.18	1.087	Moderate
	Province.			

Table 3 Mean and Standard Deviation of Consumers' Attitudes towards Hommali Organic Rice from Roi-Et Province

No.	Consumers' Attitudes	Mean	SD	Level of Consumers'
_				Attitudes
1.	I satisfied with the widespread availability of Hommali Organic Rice from Roi-et Province.	3.85	0.808	High
2.	I satisfied with the Channel of Distribution of Hommali Organic Rice from Roi-et Province and these products are easy to find.	3.79	0.848	High
3.	I satisfied with the variety of brands of Hommali Organic Rice from Roi-et Province.	3.31	0.746	Moderate
4.	I satisfied with the price of Hommali Organic Rice from Roi-et Province. (about 60-80 Baht per kilogram)	3.17	0.909	Moderate
5.	I satisfied with the taste and smell of Hommali Organic Rice from Roi-et Province. (only for those who had it before)	3.90	0.670	High
6.	I satisfied with the packaging of Hommali Organic Rice from Roi-et Province.	3.77	0.761	High
7.	I satisfied with the information and details on the label of Hommali Organic Rice from Roi-et Province.	3.62	0.901	High

Moreover, they expressed that the products were tasty and smelled good with nice packaging and labels that provided information and details about the product.

The features of Hommali Organic Rice that the test subjects prefer include its healthy benefits, environmentally friendly and safe to eat (as shown in Table 4)

TABLE 4 Mean and Standard Deviation of Customers' Decision-making Factors

No.	Customers' Decision-making Factor	Mean	SD	Level of Significance
1.	I pay attention to my health.	3.75	0.720	High
2.	I decide to buy products that are good for my health.	3.65	0.913	High
3.	$\label{eq:conditional} I \ decide \ to \ buy \ good \ quality \ products \ regardless \ of \ price.$	3.26	1.227	Moderate
4.	I decide to buy familiar brandproducts regardless of safety.	2.87	1.224	Moderate
5.	Good products are products that a ware of environmental effects.	3.72	0.850	High
6.	I decide to buy products which are considered environmental friendly.	3.32	1.023	Moderate
7.	I decide to buy products which are considered to use animal friendly processes.	3.29	1.181	Moderate
8.	I will buy products whose quality I have confidence in regardless of environmental effect.	2.72	1.238	Moderate

5. CONCLUSIONS

It can be concluded from the results of the field survey research as follows:

- 1) Most test subjects had loyal and sincere Personality. This will be very good opportunity for Hommali Organic Rice Products from Thung Kula to satisfy them and build up good relationship with them and then make them to be loyal consumers in the near future.
- 2) About half of consumers knew of Hommali Organic Rice Products from Thung Kula. This shows that there is low accessibility and coverage. Thus, it need more efforts to develop wider markets.
- 3) Most test subjects who didn't know of Hommali Organic Rice Products from Thung Kula were young and single with low income. This is because young generation cuttently do not pay attention so much about their health and find safe products to consume. However, they will increase their care about health and food when they grow up. The marketers should not ignore these group and should try to find their demand and deep information.
- 4) Consumers had a positive attitude toward Hommali Organic Rice. They tended to buy Hommali Organic Rice Products from Thung Kula and would recommend it to other people. This result can lead marketer to do the good word of mouth marketing.
- 5) From Table 3, Consumers had moderate satisfaction with brands and price of Hommali Organic Rice Products. This shows that success of brand might influence good pricing policy. Thus, building good brand image can make the products to get high price.

6. RECOMMENDATIONS

Recommendations are drawn from this research study to sustainably increase competitiveness of Hommali Organic Rice Products from Thung Kula as follows:

1) Appropriate marketing communication should be developed in order to build more positive perceptions and attitudes toward Hommali Organic Rice Products from Thung Kula since most consumers currently cannot recognize the brands of Hommali Organic Rice and the differences between Hommali Organic Rice Products from Thung Kula and from other areas. It will be the good opportunity for Hommali Organic Rice from Thung Kula if it can build up high consmuers' perception at present.

- 2) Development of product distribution, marketing, and the domestic market are needed in order to expand the product's reach and to be accessible for the target group. Hommali Organic Rice from Thung Kula should be distributed to cover all modern food channels such as healthy products shop, convenience store, hypermarket and supermarket. This could be available in the modenn shop aroun the contry and sustainably increase the competitiveness of Hommali Organic Rice Products from Thung Kula.
- 3) As consumers pay a lot of attention to their health, they need safe products. The selling points of Hommali Organic Rice Products from Thung Kula that should be good benefits for consuming, no poisonous substances, and its relatively aromatic and soft qualities when compared to Hommali Rice from other areas.
- 4) A variety of products for examples a rice germ, drink powder, germinated rice milk, and rice facial scrub powder, etc. should be available in order to meet consumers' demands. Packaging and attractive labeling should also be taken into account to make the good image and give valuable information for the consumers.

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