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The Development of Cashew Products from the Small and Micro Company Enterprise (SMCE) Groups of Ranong Province, Thailand

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Abstract

The objective of this research was to study the status and features of cashew nut products of Ranong province's SMCE group in order to find further ways to improve the product quality. The population for this study consisted of two groups. The first group was members and entrepreneurs of Ranong's SMCE, from which the sample randomly selected on for 16 persons by using the group of cashew nut products criteria. The second group was the customers who had bought the cashew nut products. The research paper utilized both quantitative and qualitative data. The quantitative data was collected from questionnaire regarding the needs of development in cashew nut products. In addition, the descriptive statistic analytical technique which were frequency, mean, and percentage also played an important role in this part. Each question would be measured by the five point scales criteria. While the qualitative data would be collected by the in-depth interview with members and entrepreneurs of Ranong's SMCE in order to study the general data of cashew nut products. From the findings regarding the opinion of the status and features of Ranong SMCE's cashew nut products, the highest mean was 4.06 with .722 SD for sensible pricing. From the findings regarding ways to improve Ranong SMCE's cashew nut products, the highest mean was 3.91 with .865 SD for sensible pricing.

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Keywords: Cashew Nuts; Ranong SMCE; Product;

1. Introduction

Community Cashew (*Anacardium Occidentale*) is a perennial-flowering plant and is a local plant from the northeast of the Federative Republic of Brazil. Currently cashew plants are cultivated in various tropical areas to

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make use from their fruits and seeds. Cashew is an evergreen plant 10-12 meters of height with short and disorganized branches. Leaves are considerably glazed with a curve to oval shape and arranged in spiral pattern. Their leaves are 4-22 cm long and 2-15 cm in width. However, leaves at the bloom can be very long at 26 cm. The bloom consists of five petals 7-15 cm long with sharp tip; they have a pale-green color at first and later turn bright red. Cashew is a fruit with a single seed in a kidney or boxing glove pattern. The seed is located on the tip of the fruit. The true fruit will grow on the tree first, and then branch of the bloom would expand and later became the pseudo carp.

Ranong province has agricultural families in total of 28,756 families within an agricultural area at 562,033 Rai. The agricultural area could be categorised by farmlands at 7,136 Rai, fruits corps at 114,910 rai, perennial plants farms at 347,839 rai, dry corps at 8,033 rai, vegetable farms at 3,959 rai, and flower farms at 58. Most of Ranong's farmlands are local rice plants which are usually cultivated for consuming. The cultivating areas for rice pads have decreased considerably, therefore farmers have turned to cultivate other plants which give them more profit such as palm, as well as other fruit corps i.e. mangosteen, durian, longan, etc. These fruits give more profit compare to the rice pad fields which cultivated by season. Fruit corps has a risk from a shortage of cultivating area by trends due to complications of caring and managing the farming products as well as high cost of investment and inconsistent weather and agricultural pests. The selling price of the farming products is unpredictable which makes farmers use their own land to cultivate other plants, as well as provide products more quickly such as oil palm and rubber. Important perennial plants which make a lot of profit for Ranong province are coffee, rubber tree, oil palm, and cashew. The cultivating areas of these plants have been continuously increasing especially for the oil palm and rubber tree. However, the coffee cultivating area seems to be decreasing as farmers change the area for oil palm and rubber trees. Farmers in Ranong province as well as other areas throughout Thailand have transformed the cashew in many ways especially for the seed, which is the main ingredients for various recipes, and can also be ground and make into cashew nut butter as well. As the cashew products are very well known throughout country, the choice of products are not very different, with few distinctions, and can be copied easily. Cashew is actually the distinctive product of Ranong province and currently many people transform the cashew to be a local-made product in various possible ways and have a promising quality to be a competitive in domestic market, as well as international market in the new future. However, to improve the products, several factors are required to be re-considered apart from the product style such as packaging, the trademark, etc. All of these factors would help cashew products gain more value and distinctive.

2. Methodology

The objectives of this research were to study the status and features of cashew products of Ranong province's SMCE group in order to find further ways to improve the product quality.

There were two Objectives: 1) To study the status and features of cashew products of Ranong province's SMCE group. 2) To find further ways to improve the product quality of Ranong province's SMCE group.

Quantitative instrument is a questionnaire regarding the needs of development in cashew nut products. The questionnaire would be divided in four parts which are 1) Information of the respondents, which consist of a checklist of questions for general information such as occupation, income, education, marital status, and residing area. 2) Status and features of cashew nut products. These questions would be conducted in a five points rating scale. 3) Ways to develop the cashew nut products, these questions would also use the five points rating scale. Descriptive statistic analytical technique which were frequency, mean, and percentage would also play the important role in this part. Each question would be measured by the five point scales criteria.

Qualitative instrument was an in-depth interview with members and entrepreneurs of Ranong's SMCE in order to study the general data of cashew nut products.

3. Findings

Table 1. The result of the study of opinions regarding the status and features of cashew products of Ranong province's SMCE group.

The status and features of cashew products of Ranong province's SMCE group	Opinion Level						□	S.D.
	Very High	High	Percentage Med	Low	Very Low			
1. Cashew Products								
1.1 Buying products from the brand	19.25	55.00	21.50	4.25	0.00	3.89	0.753	
1.2 Buying products from the packaging	24.75	56.75	16.50	2.00	0.00	4.04	0.701	
1.3 Buying products from the provided amounts	27.00	59.00	14.00	0.00	0.00	4.13	0.628	
1.4 Buying products from the quality	39.25	47.50	12.25	1.00	0.00	4.25	0.703	
1.5 Buying products from the tastes	41.25	45.50	13.25	0.00	0.00	4.28	0.684	
1.6 Buying products by the referral of other consumers	22.25	41.00	31.75	4.00	1.00	3.80	0.866	
2. Prices of Cashew								
2.1 The product has sensible price	27.50	50.25	21.25	1.00	0.00	4.04	0.726	
2.2 The product has sensible price in terms of characteristic, such as the size or the amount of products	26.75	47.00	26.25	0.00	0.00	4.01	0.729	
2.3 The product has sensible price in terms of quality	28.75	48.00	22.25	1.00	0.00	4.05	0.741	
2.4 The selling price is match the regulations from the government	12.25	55.25	29.50	3.00	0.00	3.77	0.696	
2.5 The product has sensible price compare to the profit and the capital	14.25	53.75	28.00	3.00	1.00	3.77	0.763	
3. Quality of Cashew								
3.1 The product from Ranong SMCE has the official seal from Thailand Industrial Standards	29.25	51.50	18.25	1.00	0.00	4.09	0.713	
3.2 The product has the quality assurance	22.25	46.00	26.75	3.00	2.00	3.84	0.874	
3.3 The produce and expire date are indicated clearly on the product	22.50	42.00	28.50	3.00	4.00	3.76	0.967	
3.4 The quality is followed by the advertisement	23.50	41.00	30.50	2.00	3.00	3.80	0.923	
4. Product Advertisement								
4.1 The product from Ranong SMCE has the advertisement spot aired on TV channels or local TV programs	18.00	38.75	21.75	12.50	9.00	3.44	1.183	
4.2 The product has advertisement on radio channels	6.00	49.00	25.75	10.25	9.00	3.33	1.043	
4.3 The product has advertisement in newspapers and magazines	9.00	38.00	28.00	15.00	10.00	3.21	1.118	
4.4 The product has advertisement on billboards or advertisement area on public bus	13.25	34.75	30.75	15.25	6.00	3.34	1.076	
5. Product Distribution								
5.1 The product from Ranong SMCE are available in common convenient stores	19.25	37.75	23.75	12.25	7.00	3.50	1.142	
5.2 The product is available in the supermarkets	13.25	31.00	34.50	10.25	11.00	3.25	1.150	
5.3 The seller/the employee provided good advices regarding the product	16.00	39.25	30.75	5.00	9.00	3.48	1.101	
5.4 The product is available in direct sales channel	15.25	33.50	33.75	12.50	5.00	3.42	1.049	

Cashew products: 1) The study regarding buying products from the brand found that most of respondents replied with a high level at 55/100, The overall mean was high at 3.89 with S.D .753. 2) The study regarding buying products from the packaging found that respondents also showed mostly high level of responses with 56.75/100 and medium overall mean at 4.04 with S.D .701. 3) Study of buying products from the provided amounts found high level opinions are still majored in this category with 59/100 with high overall mean at 4.13 and S.D .628. 4) Buying products from the quality – The result showed high level of responses at 47.5/100 followed by the very high level at 39.25/100. The overall mean was in the high level at 4.25 and S.D at .703. 5) Buying products from the tastes – Like previous studies, respondents provided high level at 45.5/100 followed by very high level at 41.25 and overall mean was in high level at 4.28 and S.D .684. 6) Buying products by the referral of other consumers. This study showed

high level of responses at 41/100 followed by medium level at 31.75/100. The overall mean was in high level similar to previous studies at 3.80 and S.D 866.

Price of cashew: 1) The product has sensible price – The study found mostly a high level of opinion at 50.25/100 with an overall mean at 4.04 and S.D .726. 2) The product has a sensible price in terms of its characteristic, such as the size or the amount of product – a high level of opinion was the major amount of this category with 47/100 and followed by a very high level at 26.75. The overall mean is at 4.01 and S.D .729. 3) The product has sensible price in terms of quality – Respondents majorly showed a high level at 48/200 followed by very high at 28/75. The overall mean was also in the high range at 4.05 and S.D .741. 4) The selling price is match the regulations from the government – This study mostly showed a high level of respondents at 55.25/100 with high level of overall mean at 3.77 and S.D .696. 5) The product has sensible price compare to the profit and the capital – Respondents also responded with a high level of responses at 53.75/100 and high level of overall mean at 3.77, S.D .763.

Quality of Cashew: 1) The product from Ranong SMCE has the official seal from Thailand Industrial Standards – This category mostly showed high level of responses at 51.5/100 with a high overall mean at 4.09, S.D .713. 2) The product has the quality assurance – High level of respondents had the major opinion in this category with 46/100 followed by the medium level at 26.75. The overall mean was in the high level at 3.84 and S.D .874. 3) The produce and expire date are indicated clearly on the product – High level of respondents also had major level with 42/100 followed by the medium level at 28.5/100. The overall mean was at high level with 3.76 and S.D .967. 4) The quality is followed by the advertisement – Similar to the previous category, most of respondents provided a high level of opinions at 41/100 and followed by medium level at 30.5/100. The overall mean was in the high level at 3.80, S.D .923.

Product Advertisement: 1) The product from Ranong SMCE has the advertisement spot aired on TV channels or local TV programmes – Most of respondents showed a high level with 38.75/100 followed by a medium level at 21.75/100 with medium overall mean at 3.44 and S.D 1.183. 2) The product has advertisement on radio channels – Respondents still mostly provided a high level with 49/100 and followed with a medium level at 25.75. The overall mean indicated a medium level at 3.33 and S.D 1.043. 3) The product has advertisement in newspapers and magazines – High level of responses were the major amount of this category with 28/100 and followed with a medium level at 28/100. The overall mean is still in the medium level at 3.21, S.D 1.118. 4) The product has advertisement on billboards or advertisement area on public bus – Similar to previous category, most respondents showed a high level at 34.75/100 followed by medium level at 30.75/100 and medium overall mean at 3.34, S.D 1.076.

Product Distribution: 1) The product from Ranong SMCE are available in common convenient stores – Respondents mostly showed a high level at 37.75/100 and followed by a medium level at 23.75/100. The overall mean was in medium level at 3.50, S.D 1.142. 2) The product is available in the supermarkets – Unlike others, respondents mostly showed a medium level with 34.5/100 followed by a high level at 31/100. The overall mean was in the medium range at 3.25 with S.D 1.150. 3) The seller/the employee provided good advices regarding the product – The response showed majorly with a high level of opinions at 39.25/100 followed by medium level at 30.75/100 with medium level of overall mean at 3.48, S.D 1.101. 4) The product is available in direct sales channel – a medium level of opinion scores highest responses in this category with 33.75/100 followed by a high level at 33.5/100. The overall mean was in medium level at 3.42 and S.D at 1.049.

Table 2. The study results of further ways to improve the Cashew product quality of Ranong province's SMCE group.

Further ways to improve the Cashew product quality of Ranong province's SMCE group	Opinion Level						S.D.
	Very High	High	Med	Low	Very Low	□	
1. Cashew Products							
1.1 Make the trademark to be easy to recognized	19.00	50.50	23.50	3.00	4.00	3.78	0.925
1.2 Improve features of products to be more attractive	21.00	52.00	24.00	1.00	2.00	3.89	0.812
1.3 Produce the product with appropriated amount	26.25	42.75	28.00	2.00	1.00	3.91	0.841
1.4 Produce the product with good quality	26.25	49.75	21.00	3.00	0.00	3.99	0.771
1.5 Produce the product with good taste	24.25	49.75	25.00	1.00	0.00	3.97	0.730
2. Price of Cashew							

Further ways to improve the Cashew product quality of Ranong province's SMCE group	Opinion Level						S.D.
	Very High	High	Percentage Med	Low	Very Low	□	
2.1 The product price is reasonably indicated	25.25	44.50	25.25	3.00	2.00	3.88	0.890
2.2 The price is appropriately indicated in terms of the product's features (i.e. size and amount)	28.25	45.75	22.00	3.00	1.00	3.97	0.845
2.3 The price is appropriately indicated in terms of product's quality	24.25	48.50	22.25	3.00	2.00	3.90	0.870
2.4 The indicated price is match by the government's requirements	19.25	53.50	22.25	2.00	3.00	3.84	0.861
2.5 The indicated price is appropriated compared to the profit and capital	30.00	45.75	19.25	4.00	1.00	4.00	0.863
3. Quality of Cashew							
3.1 To improve the cashew products of Ranong's SMCE for the industrial standards	22.25	45.25	28.50	2.00	2.00	3.84	0.862
3.2 The product has requirements to be obtain the accreditation such as quality accreditation	20.25	51.50	23.25	3.00	2.00	3.85	0.845
3.3 The produce and expire date are indicated clearly on the product	23.25	43.50	26.25	4.00	3.00	3.80	0.942
3.4 The quality is followed by the advertisement	19.25	47.50	24.25	7.00	2.00	3.75	0.914
4. Product Advertisement							
4.1 The product from Ranong SMCE has the advertisement spot aired on TV channels or local TV programs	19.00	32.75	26.75	12.50	9.00	3.40	1.189
4.2 The product has advertisement on radio channels	12.25	45.00	26.25	7.50	9.00	3.44	1.088
4.3 The product has advertisement in newspapers and magazines	16.25	35.75	25.50	12.50	10.00	3.36	1.187
4.4 The product has advertisement on billboards or advertisement area on public bus	23.25	33.25	26.00	11.50	6.00	3.56	1.142
5. Product Distribution							
5.1 The product from Ranong SMCE are available in common convenient stores	22.50	39.75	22.50	8.25	7.00	3.63	1.128
5.2 The product is available in the supermarkets	21.50	38.00	20.25	12.25	8.00	3.53	1.186
5.3 The seller/the employee provided good advices regarding the product	20.50	36.75	27.50	7.25	8.00	3.55	1.134
5.4 The product is available in direct sales channel	21.50	33.75	25.50	12.25	7.00	3.51	1.161

Cashew products: 1) Make the trademark to be easy to recognize – The study showed that most of respondents provided a high opinion with 50.50/100 and a high overall mean at 3.78 S.D .925. 2) Improve features of products to be more attractive – Most of the respondents provided a high level of opinions with 52/100 and also a high level of overall mean at 3.89, S.D .925. 3) Produce the product with appropriated amount – Respondents mostly showed high opinions with 42.75/100 followed by a medium level at 28/100. The overall mean was in a high level at 3.91 and S.D .841. 4) Produce the product with good quality. A high level of opinion was also the major opinion of this category with 49.75/100 followed by a very high at 26.25/100. The overall mean was in high level at 3.99 and S.D .771. 5) Produce the product with good taste – Similar to the previous category, respondents mostly provided a high level with 49.75/100 and followed by medium level with 25/100. Overall mean was in the high level at 3.97, S.D .730.

Price of Cashew: 1) The product price is reasonably indicated – Most of respondents provided a high level with 44.5/100 and followed by a very high at 25.25/100. The overall mean was in high level at 3.88, S.D .890. 2) The price is appropriately indicated in terms of the product's features (i.e. size and amount), this category also scores mostly high level from the respondents at 45.75/100 and followed by very high at 28.25/100. The overall mean was in high range at 3.97, S.D .845. 3) The price is appropriately indicated in terms of product's quality – Most of respondents responded at a high level with 48.5/100 and followed by very high at 24.25/100. The overall mean was also in the high level at 3.90 and S.D at .870. 4) The indicated price was matched by the government's requirements. High level of opinion is also the most response at 53.50/100 and the overall mean is in high level at 3.84, S.D .861. 5) The indicated price was appropriated compared to the profit and capital – The study found that most respondents provided high level of opinion at 45.75/100 and followed by a very high at 30/100 with a high overall mean at 4.00, S.D .863.

Quality of Cashew: 1) The product from Ranong SMCE has the official seal from Thailand Industrial Standards – Most respondents showed high opinions regarding this category with 45.25/100 followed by a medium level at 28.50/100. The overall mean scores the high level at 3.84, S.D .862. 2) The product had the quality assurance – Most of respondent still provided a high level of opinion at 51.5 and the overall mean was in high range at 3.85, S.D .862. 3) The produce and expire date are indicated clearly on the product – High level was the major opinion with 43.5/100 and followed by the medium level at 26.25/100. The overall mean still was in the high level at 3.80, S.D .942. 4) The quality is followed by the advertisement – Similar to the previous category, high level was the most response with 47.5/100 followed by the medium level at 24.25/100. The overall mean was in high with 3.75, S.D .914.

Product Advertisement: 1) The product from Ranong SMCE had the advertisement spot aired on TV channels or local TV programs – Most of respondents showed high level with 32.75/100 followed by a medium level at 26.75/100 with a medium overall mean at 3.40 and S.D 1.189. 2) The product has advertisement on radio channels – Respondents mostly provided the high level with 45/100 and followed with medium level at 26.25. The overall mean showed a medium level at 3.44 and S.D 1.088. 3) The product has advertisement in newspapers and magazines – High level of responses were still the major amount of this category with 35.75/100 and followed with medium level at 25.50/100. The overall mean was in a medium level at 3.36, S.D 1.187. 4) The product had advertisement on billboards or advertisement area on public bus – Similar to previous category, most respondents showed a high level at 33.25/100 followed by a medium level at 26/100 and a high overall mean at 3.56, S.D 1.142.

Product Distribution: 1) The product from Ranong SMCE are available in common convenient stores – Respondents mostly showed a high level at 39.75/100 and followed by the very high level at 22.5/100. The overall mean was in high level at 3.63, S.D 1.128. 2) The product is available in the supermarkets – Respondents mostly showed the high level with 38/100 followed by very high level at 21.5/100. The overall mean was in the high range at 3.53 with S.D 1.186. 3) The seller/the employee provided good advices regarding the product – The response result showed majorly with a high level of opinions at 36.75/100 followed by a medium level at 27.50/100 with a high level of overall mean at 3.55, S.D 1.134. 4) The product is available in direct sales channel – a high level of opinion scores highest responses in this category with 33.75/100 followed by medium level at 25.5/100. The overall mean was in high level at 3.51 and S.D at 1.161.

4. Conclusion and Discussion

This study on the development of cashew nut products from the SMCE group of Ranong province which consists of two objectives 1) to study the status and features of cashew nut products and 2) to find further ways to improve the product quality is compatible with a research study from Thamtanarak, (2005) which studied about ways to improve vegetable and fruit products with a sublimate drying method. The present study is also compatible with the study from Kedit, & et.al, (2003) which studied the success of transforming fruit products of housewives from the 2nd village of Takeanluean district, Mueang region, Nakhon Sawan province for the OTOP (one tambon one product); as well as the study from Nuisri, (2003) which studied for the transforming products from the toddy palm from the Ban Lao Kwan community, To Tae district, Wat Boat region, Phitsanuloak province.

The research instruments consisted of the quantitative instrument which were the questionnaire regarding the needs of improvement in cashew products and the qualitative instrument which was the in-depth interview with members and entrepreneurs of Ranong's SMCE to study the general data of cashew nut products. These instruments conform to the study from Nuisri, (2003) regarding the enterprise community and self dependency: The case study from the transforming product from the toddy palm from the Ban Lao Kwan community, To Tae district, Wat Boat region, Phitsanuloak province by the methodology of quantitative and qualitative study as well as the documentation study and workshop participation. The study had three population and sample group which were 1) Population from every family, 2) the knowledgeable and social-driven people, and 3) The toddy palm transformers. The data was collected by interviewing using questionnaires, structured interviews, non-structured interview, analyzing the content of documents, and the analyzing of the result from workshop participation. Moreover this study was also compatible with Rattanareuthai (2006) Nuisri, (2003) which studied the needs of producing technology of mangosteen from members of mangosteen quality improvement group from the Khlung district, Chantaburie province. This study has an objective to study the member of mangosteen quality improvement group by collecting

the data from structured interviews with members

The interviewing results from the members and entrepreneurs from Ranong's SMCE regarding ways to improve the product quality could be sum up in six points which are 1) A cashew specialist is required in order to improve the product, These results were supported by the research from Sitthiwarongchai and Sriviboon, (2014) which studied to analyze and evaluate ways to develop capacity of mangosteen product processing. 2) Raw products for cashew production are still not 100% flawless. The cashew should be under care since cultivating and the cashew field should be nourished in order to produce a fine quality of cashew, 3) The packaging needs to be improved to draw the attention as a good souvenir, 4) The product needs to be expanded in various lines 5) The signature of Ranong province should be added in the product, and 6) Reinforce the promoting and advertising of products in order to make products well known and expand the market to be able to reach to the consumer and to be more convenient for consumer to buy. These results were supported by the research from Yongruepraphan, (2004) which studied the successful transformation of fruit products of the housewives for the OTOP (one tambon one product). The result from this present the successful of transforming products based on high scores for all four dimensions which would be sorted from the highest to lowest by the leader, the management, the occupational improvement, and the training. The recommendations from this study indicated that the product transformation process and the concerned problems could be addressed by the cooperation between housewives members and concerned government officers.

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References

- Ketdit, K et.al. (2003). *The successful of transforming the fruit products of the housewives group from the 2nd village of Takeanluean district, Mueang region, Nakhon Sawan province*. Thesis of Humanities and Social Sciences Faculty, Rajaphat University of Nakhon Sawan.
- Nuisri, P. (2003). *The needs of producing technology of mangosteen from the member of mangosteen quality improvement group from the Khlung district, Chantaburie province*. Thesis of the Master Degree of Education. Sukhothai Thammatirat Province.
- Rattanareuthai, C. (2006). *Attitudes and Buying Behaviour of Consumers at Thevaraj Market in Dusit District, Bangkok*. Suan Sunandha Rajabhat University.
- Sitthiwarongchai, Cholpassorn and Chutikarn Sriviboon. (2014). *Capacity Enhancement for Agricultural Workers in Mangosteen Product*. Bangkok, Suan Sunandha Rajabhat University, Bangkok Thailand.
- Thamtanarak, B. (2005). *The development of the vegetable and fruit products with sublimate drying method*. Thesis of Institute Technology of King Rama IV, Phra Nkhon Nuea.
- Yongruepraphan, P. (2004). *The enterprise community and self-dependency: The case study from the transforming product from the toddy palm from the Ban Lao Kwan community, To Tae district, Wat Boat region, Phitsanulok province*. Thesis of the Master Degree of Arts. Naresuan University.