

**KNOWLEDGE SHARING ON WILLINGNESS TO PAY HIGHER  
PRICES OF PROCESSED BANANA PRODUCTS IN THE THAI  
MARKET**



**A THEMATIC PAPER SUBMITTED IN PARTIAL  
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Thematic paper  
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**KNOWLEDGE SHARING ON WILLINGNESS TO PAY HIGHER  
PRICES OF PROCESSED BANANA PRODUCTS IN THE THAI  
MARKET**

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on  
January 12, 2019



.....  
Mr. Tree Hirunyalawan  
Candidate

.....  
Assoc. Prof. Vichita Ractham,  
Ph.D.  
Advisor

.....  
Assoc. Prof. Sooksan Kantabutra,  
Ph.D.  
Chairperson

.....  
Duangporn Arbhasil,  
Ph.D.  
Dean  
College of Management  
Mahidol University

.....  
Asst. Prof. Decha Dechawatanapaisal,  
Ph.D.  
Committee member

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Tree Hirunyalawan

## **KNOWLEDGE SHARING ON WILLINGNESS TO PAY HIGHER PRICES OF PROCESSED BANANA PRODUCTS IN THE THAI MARKET**

TREE HIRUNYALAWAN 6049073

M.M. (MARKETING AND MANAGEMENT)

THEMATIC PAPER ADVISORY COMMITTEE: ASSOC. PROF. VICHITA RACTHAM, Ph.D., ASSOC. PROF. SOOKSAN KANTABUTRA, Ph.D., ASSOC. PROF. DECHA DECHAWATANAPAISAL, Ph.D.

### **ABSTRACT**

The purpose of this study is to find what knowledge can influence consumers to pay higher prices for processed banana products in the Thai market. There might be an opportunity for suppliers to have a higher margin if they know what factors can influence consumers to buy products at higher prices. Consumers will also be able to benefit by justifying the money they spend.

In-depth personal interviews and observations were adopted as the data collection approach by asking farmers who both grow bananas and sell processed banana products in the Thai market and consumers who buy and consume processed banana products.

The result of this research study found that knowledge sharing from farmers/processors to consumers is important. Knowledge from farmers/processors should be filtered and selected before sharing to consumers based on the 5 groups of consumer categories. In this research, knowledge from farmers/processors cannot fulfill all types of consumers. There are some consumer types that need a different kind of knowledge from different sources.

**KEY WORDS:** Knowledge Sharing / Processed Banana Products / Banana / Consumers' Motivation / Willingness to Pay Higher Prices

36 pages

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## **CHAPTER I**

### **INTRODUCTION**

Nowadays, consumers are concerned more about health effects as it is becoming important for food manufacturers to ensure that their products are clean, not contaminated by chemicals or bacteria or have unpleasant. Especially, in the world of information and communication, the information becomes an important factor of the purchasing decision. From the food industry in general, things are becoming more personalized to match with consumers' wants and needs.

There are plenty of fresh fruit vendors on almost every street corner in Thailand with a wide range including pineapple, watermelon, papaya, and mango as well as the exotic: dragon fruit, durian, and jackfruit. Thailand is a great place to grow fruit because of the hot tropical climate and fertile plains.

Bananas are also considered as one of the most widely grown tropical fruits (Mohapatra, Mishra, & Sutar, 2010). As for Thailand, it ranked 12 with a value of \$217,766,000 (FAOSTAT, 2009) among all producers around the world originating in Southeast Asia. Bananas can be grown in small scale farms, with low production costs and harvest begins 14 months after planting with a yield of up to 10 years, so farmers can have income by harvesting of banana throughout the year. There are 5 important commercial cultivars of banana in Thailand which are Kluai Hom Thong, Kluai Namwa, Kluai Khai, Kluai Hakmuk and Kluai Lep Mu Nang (Thonnalak and Silayoi, 2010).

Bananas are popular in Thailand because of its nutrient composition; fiber, vitamins, potassium, magnesium, minerals and energy. It is an important staple food worldwide. All those nutrients can help with your blood pressure, heart, bones, digestion and so on (Mohapatra, Mishra, & Sutar, 2010).

Benefits from banana products can be divided into two types, direct consumption and processed for example banana chips, toffee banana, banana jam, dried banana. There are many methods for processing bananas such as boiling, baking and frying. Processing bananas can make them more valuable (Tiwari, 2009).

Even though, bananas are indigenous to Thailand, related to the Thai ways of life from birth to death and have a lot of nutrients and benefits, processed banana products in Thailand are still underpriced. There might be a number of reasons why these products are not priced higher in markets. Knowledge is one reason that can change consumers' perceptions.

To find out these reasons, it might be worthwhile to follow the banana supply chain to see what knowledge should be shared from banana farmers to banana consumers, to see where there might be an opportunity for suppliers to have a higher margin if they know what factors can influence consumers to buy products at higher prices. Consumers will also be able to benefit by justifying the money they spend based on the quality of the manufacturing and the sources of the products.

### **1.1 The Research Question of This Study**

What knowledge will help consumers justify paying higher prices for processed banana products?

### **1.2 Study Purpose**

To understand knowledge sharing of the banana processing from farmers/processors to consumers.

### **1.3 Expected Benefits**

After identifying the knowledge being shared from farmers/processors to consumers, a set of recommendations can be made to both banana suppliers and consumers. From the consumers' perspective, they can justify money they spend on buying food products at a higher premium based on the knowledge they have gained. From suppliers' site, if they know what knowledge can influence consumers to buy products at higher price, they can focus more on these knowledge factors to have a higher margin.

## **CHAPTER II**

### **LITERATURE REVIEW**

There are 3 important factors to be considered in the literature review regarding the willingness to pay higher prices for processed banana products which are knowledge management, banana processing, and consumers' motivation to purchase.

#### **2.1 Knowledge Management**

Knowledge is designated as a reasonable belief that increases an entity's capability for effective action (Huber 1991, Nonaka 1994). It might be seen from different aspects such as an object, a state of mind, a process, or a position of having access to information and a capacity.

Polanyi (1962, 1967) and Nonaka (1994) described that there are two dimensions of knowledge which are tacit knowledge and explicit knowledge. Tacit knowledge is composed of both technical and cognitive elements relating to an individual's mental models comprising of beliefs, mental maps, viewpoints, and paradigms. It is used to approach a particular consumer for example. Explicit knowledge is codified, articulated, and communicated in symbolic form. For example, an owner's manual accompanying the purchase of an electronic product.

Knowledge can be obviously seen as existing in the individual or the collective (Nonaka, 1994). Individual knowledge is initiated by and exists in the individual whereas collective knowledge or social knowledge is formed by and inherit in the combined actions of a group.

The inextricable linkage of tacit and explicit knowledge recommends that only individuals with an essential level of knowledge can practically exchange knowledge: if tacit knowledge is undeniable to the understanding of explicit knowledge, then in order for Individual A to comprehend Individual B's knowledge, some overlap

in their underlying knowledge bases must need to form (a shared knowledge space) (Iivari and Linger, 1999; Tuomi, 1999)

The goal of a knowledge management system is to support creation, share, and apply knowledge in organizations.

### **2.1.1 Knowledge Sharing**

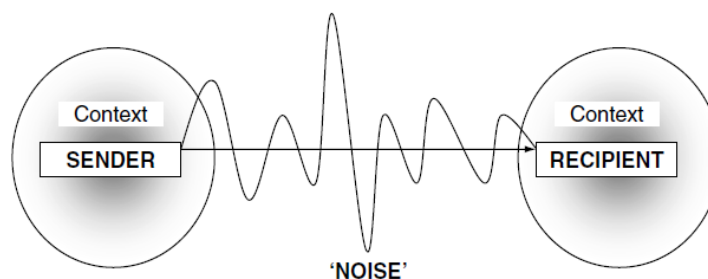
There are 4 important factors influencing knowledge sharing which are knowledge nature, sharing motivation, sharing opportunities, and the culture and work environment (Ipe, 2003). Normally, knowledge sharing starts when more than one person who has common problems or experience meet up to share and exchange ideas, practices, and information (MacNeil, 2003).

There are 2 main types in terms of knowledge sharing which are explicit and tacit knowledge sharing. The explicit knowledge sharing can be shared easier than tacit knowledge sharing because explicit knowledge can be shared and transferred through many kinds of channels such as manuals and books or official training (Ipe, 2003). Even though, it can be shared and applied easier than tacit knowledge, explicit knowledge is still very useful for the organization because it can increase employees' ability to work more effectively (Hansen & Haas, 2001). Tacit knowledge sharing is more challenging than explicit knowledge sharing because it shows knowledge based on the own experience of individuals (Koskinen, Pihlanto, & Vanharanta, 2003). It is hard to demonstrate tacit knowledge in words, but it is very important in term of knowledge sharing's effectiveness.

In this study, both tacit knowledge sharing and explicit knowledge sharing are considered as key knowledge being sent from farmers to consumers at the individual level.

Shannon and Weaver (1957) explained through a simplified communication model in Figure 2.1 that the sender is the person who originally makes the message and sends the message to the recipient. The recipient or receiver has to decode the message from the sender before understanding it and interpreting it. Messages can be affected and distracted by physical noise such as the environment and people. Noise may distract in the channel during the transmission process which might cause the recipient to not receive the correct message the sender wants to send. It is very important that the key

message is delivered to the recipient. In this study, messages can be sent in a form of knowledge between farmers and consumers.



**Figure 2.1 Simplified communication model**

There are many types of knowledge sharing which can be shared between farmers/processors and consumers. Banana processing knowledge is a part of knowledge sharing.

## **2.2 Banana Processing**

The banana supply chain focuses on farmer production inputs, distribution channels, quality and prices. There are lots of challenging factors such as production inputs that affect banana distribution and exports in terms of both the bananas' quality and farmers' revenue. Banana production costs have consistently been increasing which has resulted in farmers lack of motivation to improve the quality of their bananas. Banana farmers need support from the government to get low interest rates as an incentive for production and quality improvements. Banana prices have become unpredictable because banana distribution from farmers to consumers are complex. There are many layers between farmers and consumers. If bananas can be delivered directly from the farm to consumers, this would help reduce delivery time and logistic costs. Additionally, pricing strategies for bananas should correspond with real demand and supply (Suvittawatt, 2014)

The findings demonstrate that extending costs of farm inputs have directly reduced farmers' revenue which has become a critical production challenge (Telphia and Nzeogwu, 2010). Suvittawatt (2014) described that it was not easy for farmers to

appraise information as it was hard to monitor banana market prices. Government extension workers regularly visit farmers to share market information and production information, but the information they share is not consistently updated. Even though, banana price support policies have a direct impact on farmers, farm input subsidies have greater impacts than its policies such as lower fertilizer prices, lower interest rates for loans or expanding credit options that would help farmers continue and improve their production. Also, having new initiatives for banana production specifically would help reduce labor and production costs (Khaimarn, 2003).

There are best practices for banana processes in production, and each process has its own special characteristics. For example, having knife sterilization in the cutting process to minimize the risk of bacteria. The processes are important when receiving harvested bananas and storing them carefully because each process is a critical factor to reduce the risk of bacteria or mold growth and keeping quality high. The best banana processing practices will help delay ripening which leads to high quality and longer life of bananas (Suvittawatt, 2014)

Even though, bananas have a lot of nutrients and benefits, processed banana products in Thailand are still underpriced. There are some reasons which can change consumers' perceptions based on their motivation.

### **2.3 Consumers' Motivation to Purchase**

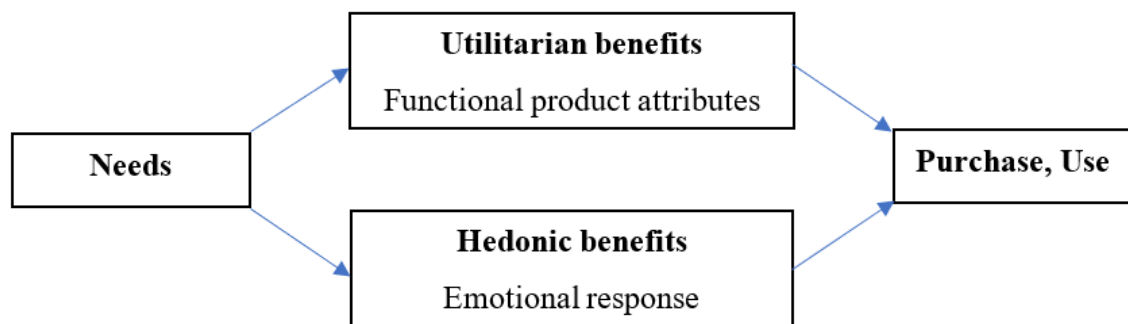
Motivation is the process or act of giving a motive which causes a person to take some action. Motivation can come from needs and wants that influences behavior which leads to some type of reward when those needs and wants are fulfilled (Shanks, 2011). There are many theories describing motivation, mostly motivation is an origin of a basic need to maximize pleasure and minimize physical pain, or it might include specific needs such as eating. Kotler (2002) described that a person has many needs at any specific given time. Some needs are biogenetic; they arise from physiological states of tension such as hunger and thirst. Other needs are psychogenetic such as the need for esteem, belonging, or recognition. A motive drives a person to perform and respond.

Motivation can be referred to the processes that cause people to behave. For example, the objective of buying is to satisfy a need, consumers have motivation behind

the buying activity to meet their satisfaction. Both cultural and personal factors integrate to form a want which is one demonstration of a need (Bettman, 1979).

When motivation is recognized, the consumer goes into the attention phase of the motivation process, the consumer's attention will be directed to stimuli or information which is related a goal. For example, if a consumer has motivation to buy a car, then he will focus his attention on gathering and finding information about cars. This will move them from the attention phase to the information acquisition phase. This need may be utilitarian (a desire to accomplish some practical or functional benefit, as when a consumer eats organic fresh vegetables for nutritional reasons). The other need may be hedonic (relating to emotional responses, an experiential need, as when a consumer thinks longingly about a juicy steak) (Solomon, 2006).

There are two types of expected benefits shown in Figure 2.2 based on different purchasing behavior and consumption of consumers.



**Figure 2.2 Types of expected benefits**

### **2.3.1 Utilitarian Benefits**

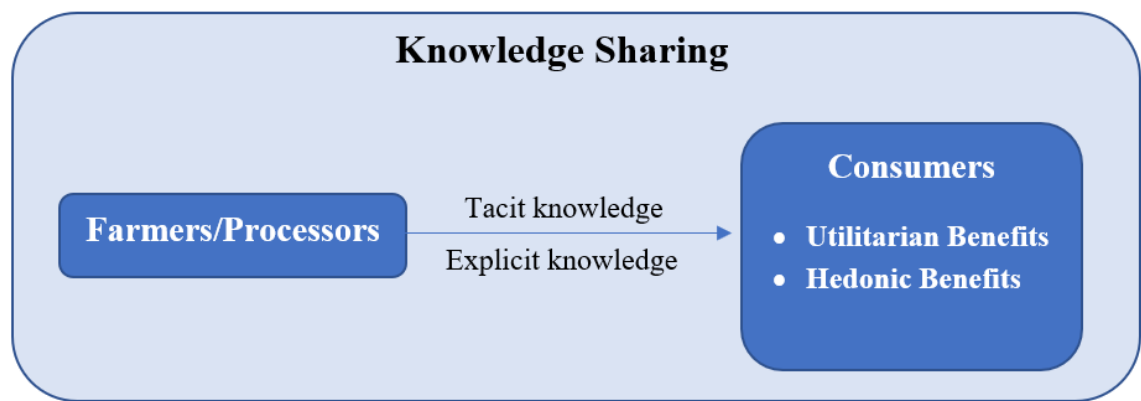
Utilitarian benefits are practical and are more related to necessity than luxury. For example, consumers care about the camera's battery life and resolutions (Chitturi, 2009). Those benefits are derived from functional product attributes.

### **2.3.2 Hedonic Benefits**

Hedonic benefits are identified as those pertaining to experiential and aesthetic benefits which might be called luxuries. For example, consumers buy a phone

due to its aesthetic look from its color and shape which are hedonic benefits (Chitturi, 2009)

To analyze the knowledge being shared from banana farmers to banana processors to consumers or the knowledge sent from farmers to consumers directly, there are many factors to be considered which might lead into willingness to purchase banana processing products based on the consumers' motivation. Figure 2.3 shows the proposed theoretical framework.



**Figure 2.3 Proposed Theoretical Framework**



## **CHAPTER III**

### **RESEARCH METHODOLOGY**

Research methodology is the specific techniques or procedures to indicate, select, identify, and analyze information. In this chapter, research objective, population and sample selection, research instruments, and data collection methods are described.

#### **3.1 Research Objective**

This research is conducted to provide a better understanding of the impact of knowledge sharing and the willingness to pay higher prices by consumers. This research focuses on processed banana products in the Thai market because bananas are indigenous to Thailand. They contain a lot of nutrients and benefits. Bananas have various uses in the food industry which can be turned into many processed products.

Banana production is mainly divided into two different groups; the majority being small-scale farmers that mainly produce bananas for self-consumption in family and for the domestic market. Another group involves large companies and plantations that supplies both international and domestic markets (FAO, 2010).

To get knowledge throughout the process of producing and selling processed bananas, in-depth personal interviews and observations will need to be adopted as the data collection approach by asking farmers who grow bananas and vendors who select bananas to be processed and sell these products in the Thai market. After getting the result of the interviews, both explicit and tacit knowledge are exposed which lead questions that can be asked to consumers. These questions can be used in the interview to gather and affirm whether if they are aware of (something unique/special about the source of bananas, farming/manufacturing practices) which they would be willing to pay higher prices or not.

### **3.2 Population and Sample Selection**

Mcdaniel and Gates (2013) described population which has information needed by researcher to meet the research objective. To identify the population of interest, there are some screening questions which need to be asked to respondents to ensure that they are relevant to the research topic, otherwise it can lead into bad data which causes misleading and ineffective results in the data analyzing phase. Additionally, a sampling method is also required because it's not applicable to collect all information from the whole population.

For this research, the representatives of the population of interest from the interviewees are Thai farmers who have grown bananas for more than 10 years, Thai vendors who have sold and/or processed bananas for more than 10 years and Thai consumers who have eaten and bought processed bananas. The sample size for this interview is 45 people, which consists of 15 farmers/processors and 30 consumers.

### **3.3 Research Instruments**

To capture what farmers and vendors say, interviews were conducted. Kvale (1996) described that interviews in qualitative research seek to explain the meanings of central themes of the subjects in the world. The most important task in interviewing is to understand and find the true meaning of what the interviewees say.

Interviews are helpful for seeking the story behind an interviewee's experiences. The interviewer can pursue in-depth information around the topic. Open-ended questions in the interviews are used because this approach provides greater freedom to the interviewees and in-depth data can be collected.

Unlike the questionnaire, the interviewer has an opportunity to probe or ask follow-up questions. Both explicit and tacit knowledge may be revealed during the interview. However, to capture the level of importance and attitude of consumers.

### **3.4 Data Collection Methods**

Primary data is described as new data, either by observation, interview, survey, or experiment, gathered and collected to solve research objectives or problems (Mcdaniel and Gates, 2013). In this research, data was gathered from 30 consumers as representatives of a sampling method through the interview who buy and eat processed banana products. Additionally, data was also collected by interviewing 15 farmers/processors who have their own organic farms and sell their products at Sookjai market.

Sookjai market is a place where consumers and sellers of organic vegetables and fruits can see each other. It is a small market with many kinds of agricultural crops including OTOP. All products in this market are tested for chemical contamination which is one of the strict quality control processes. There are many processes including farmer health checkup to ensure that farmers are healthy after planting organic produce to use as evidence to prove that those farmers are not using chemical fertilizers to pump up yields.

One of the main reasons why Sookjai market was created was to eliminate middlemen and to have a direct channel to have fair trade between farmers and consumers. This becomes an opportunity for both farmers and consumers to exchange knowledge with each other as well.

Sookjai farmer's market is one of the Sampran models. The vision of the Sampran model is to balance local food systems by finding new opportunities for farmers who had heavily used fertilizers but now use organic farming practices.

The Sampran model aims to connect local farmers directly to consumers through organic value chains with fair trade. Currently, there are many market channels under Sampran models such as Sookjai weekend farmer's market, Sampran Riverside, Sookjai market roadshow and the Sookjai organics website.

## **CHAPTER IV**

### **DATA ANALYSIS**

The data is collected and analyzed based on interview questions with both farmers and consumers. The findings show what knowledge can influence consumers to pay higher prices for processed banana products. Some answers from farmers are used to ask consumers whether they are willing to pay higher prices or not if they gain some tacit and explicit knowledge from farmers directly. Moreover, the questions from previous research are used as well.

#### **4.1 Demographic Profiles of Respondents**

In this chapter, demographic profiles of farmers/processors and consumers are described.

##### **4.1.1 Farmers/Processors**

Fifteen farmers/processors who both grow bananas and do processed bananas were interviewed at Sookjai market, Sampran Riverside, Nakhon Pathom. Ten farmers were men and five farmers were women. All of the participants were in the age range of 40-65 years old. All of them used to grow plants using chemicals before changing to grow organic plants especially bananas. They all have at least 3 year experience in organic farming practices.

##### **4.1.2 Consumers**

The researcher interviewed 30 respondents who buy and eat processed banana products. They were divided into different segments as described in Table 4.1 Demographic Data.

**Table 4.1 Demographic Data**

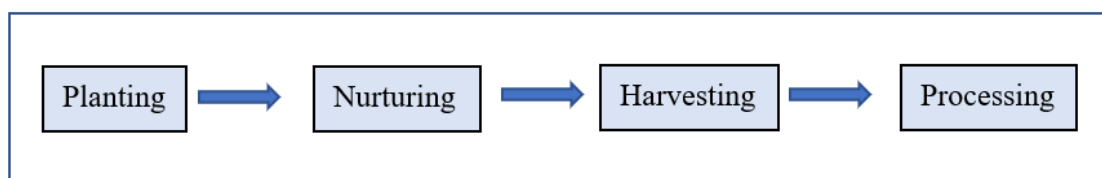
<b>Demographic</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	10	33.33
Female	20	66.67
<b>Age</b>		
15-20	5	16.67
21-25	7	23.33
26-30	8	26.67
31-35	5	16.67
More than 35	5	16.67
<b>Monthly Income (Baht)</b>		
Below 15000	5	16.67
15,000 – 25,000	2	6.67
25,000 – 35,000	3	10
35,000 – 45,000	10	33.33
45,001 and above	10	33.33
<b>Education Level</b>		
High School	5	16.67
Bachelors	15	50
Masters	10	33.33
<b>Occupation</b>		
Students	5	16.67
Employees	20	66.67
Business owners	5	16.67

## 4.2 Knowledge Influencing purchasing processed banana products

Even though bananas have a lot of nutrients and benefits, processed banana products in Thailand are still underpriced. Knowledge sharing from farmers to consumers is one thing impacting willingness to pay higher prices of processed banana products based on consumers' motivation. Farmers/processors' knowledge and each type of consumers' wants and needs depending on their motivation are described.

### 4.2.1 Farmers/Processors

There are 4 main areas from farmers who both grow and do processed bananas starting from planting, nurturing, harvesting and processing as shown in Figure 4.1. Each step needs specific knowledge of tacit and explicit knowledge.



**Figure 4.1 Four stages of processed bananas**

**Planting** – Somyod, a farmer who has grown banana plants for more than 10 years first stated that before starting growing banana plants they need to prepare the soil by ensuring that it is not too wet or too dry. Only good suckers should be selected to plant.

“I only select a healthy banana sucker to be planted by looking at its height, it should be around 1-2 m in height and has sword-shaped leaves. Having big and round leaves is not a good sucker. It means it lacks nutrition from the parent plant,” he said.

Banana plants like direct sunlight, so planters need to select the area where bananas can receive direct sunlight and also other factors such as drainage.

“I need to ensure there is sufficient space, banana plants require a hole around 50cm wide and 50cm deep and the area I choose to plant bananas must have good drainage. Bananas require a lot of water but are prone to decomposition if the water does not drain properly,” he said.

Farmers at Sookjai market totally changed their behaviors by turning into organic farmers. They said organic bananas have a natural sweet taste and good texture which is better than general bananas or bananas where chemicals were used. Apart from taste, most farmers at Sookjai market decided to plant in an organic way due to their own health concerns.

“I selected to plant organic bananas because I used to grow banana plants using chemicals and I found that my health was getting worse. Sometimes I was unable to breathe and one of my relatives got cancer. After I grew organic plants for more than 3 years, I found my health got better,” they said.

**Nurturing** – They explained that they use 100% non-chemical fertilizers. Even though growing organic plants need to spend a lot of effort in taking care of them to prevent insect-eaten or diseases, they still insist growing them because there are more advantages than disadvantages.

“I need to always check and observe its leaves. If I find some dead spots or insect-eaten on the banana leaves, I need to cut them off immediately to avoid the weeds which absorb all the nutrients from the main plants. After removing the dead leaves, I chop and place them around the banana plants to create mulch which provides nutrients to the soil,” they said.

Water is another factor which is very important for organic plants. Farmers need some processes to clean up the water before using it, especially if chemicals are used.

“Bananas like water but not that much, I need to avoid overwatering because it can cause its roots to rot. Organic produce needs to ensure that the water you use is clean especially if your neighbor’s farms use chemicals. You need to have a clarifier and wait for almost a week before you can use it,” they said.

To ensure that organic bananas look good and have the size, farmers need to take care of them by always fertilizing them and keeping the mother plant as the main plant.

“I had my own organic fertilizer in the past but it wasn't producing the results I wanted. I reformulated it and now the bananas are bigger and look nicer. I fertilize my produce 3-4 times per week. When my banana plants are mature, there will

be several suckers. I need to remove them all but keep only one to become the next mother plant. This will help improve fruit yield and mother plant health. For Kluai Hom, I need to support them because their fruit is heavy, so I need to use bamboo tree sticks to hold them from strong wind,” they said.

**Harvesting** – Most farmers mentioned the same for banana harvesting. They look at the shape before cutting off the tree to represent ripening. However, there are some signals that show it is almost time for farmers to get ready to prepare to cut off banana plants.

“Before harvesting bananas, I need to wait for the purple flower to emerge first and I will only harvest bananas when their flowers are dying. If you observe banana plants that have lost most of their leaves, it is a good time to harvest,” they said.

Nuttapong, a farmer who grows only organic banana plants for more than 4 years said that there are other factors to consider as well to see when bananas are ready to be harvested which are tacit knowledge based on their farmers’ experiences such as size and color.

“You cannot just look at the size of bananas because it depends on the variety of banana. It might not be a good indicator for deciding when to harvest them. Based on my experience, I look at its color and shape. Its color should start changing from dark green to a light greenish yellow with a plump shape but some bananas do not turn a greenish yellow, but they are still sweet. Bananas in winter are bigger than bananas in summer because there is a lot of water in the season however, they are not as sweet as bananas in summer,” he said.

**Processing** – there are many types of banana processing such as dried bananas, banana puree, banana powder, banana jam, banana chips. Based on the interview, most of them do dried bananas and banana chips. The researcher was able to observe that even though they get the same source of bananas to be processed, they still have their own tacit knowledge by using different techniques to make processed bananas delicious.

Samrong, one of the banana processors described some tacit knowledge she applied when doing banana chips as follows



“I will select bananas that have ripened to about 70% to be processed. This level is the best to do banana chips because it is not too sweet and not too hard to slice. Kluai Hom and Kluai Namwa are the most popular ones to do processed bananas but not every banana is suitable to do banana chips. Kluai Hom can be processed to banana chips in salty and sweet flavors but Kluai Namwa is only suitable to be processed in a sweet flavor, it should not be processed in salty flavor because it will become hard not crispy,” she said.

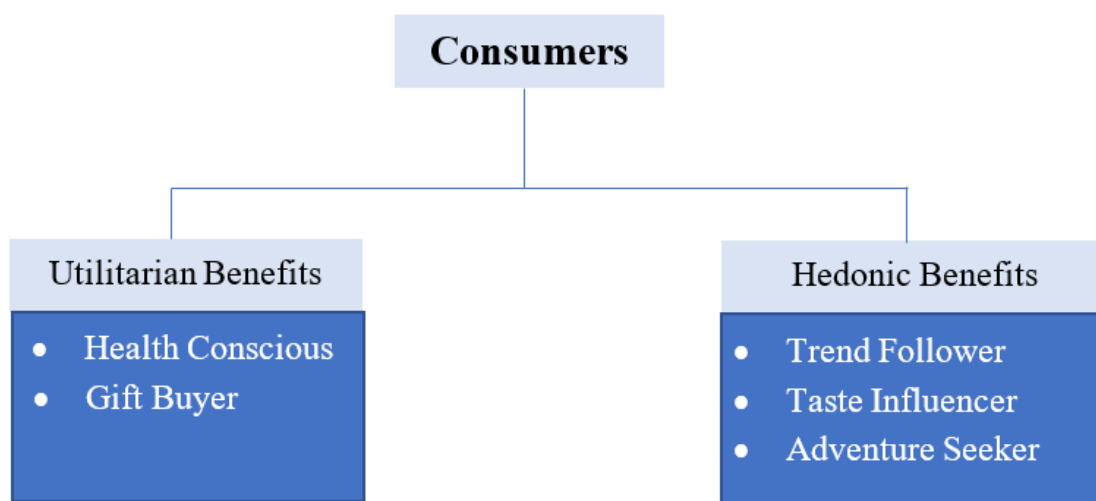
She continued describing some techniques and tools she used to learn from the internal knowledge sharing at Sam Phran for doing banana chips and sun-dried bananas.

“For sun-dried bananas, I use a solar dryer dorm because it can control the temperature and help to prevent from dust and flies. For banana chips, I use palm oil for frying instead of coconut oil because I used to use it and found that those banana chips were rancid and not crispy when compared with the palm oil” she said.

This can be summarized that farmers have both tacit knowledge and explicit knowledge in each step for growing bananas and processing bananas. Even though, these kinds of knowledge are important from farmers’ perspective, it does not mean all knowledge should be shared to consumers because there are many types of consumers based on their motivation. Each consumer type requires different knowledge from farmers in terms of the willingness to pay higher prices for processed banana products.

#### **4.2.2 Consumers**

There are many kinds of consumers based on the interview. Each type of consumer is categorized by motivational benefits as described in Figure 4.2 Consumers who are motivated by utilitarian benefits are consumers who are health conscious and gift buyers. Consumers who are motivated by hedonic benefits are consumers who are trend followers, taste influencers, and adventure seekers. Each type of consumer requires different knowledge in terms of the willingness to pay higher prices for processed banana products.



**Figure 4.2 Consumer Type**

### **Health Conscious**

This group of consumers always takes good care of health. They are concerned about practices which are beneficial for keeping good health. They exercise about an hour long 4-5 times per week. They usually eat fresh organic vegetables and fruit. 60% of this group have a bachelor's degree and 40% have a master's degree. The average monthly income of this group is higher than 45,000 baht per month. People in this category rarely eat processed banana products.

Oranuch, one of the consumers said that she exercises because she likes to stay healthy and in good shape.

"I believe processed bananas are too sweet or oily when comparing to fresh bananas. I think the nutrition will diminish with processed bananas. If I need to choose, I would prefer the original flavor without adding sugar or salt," she said.

She also described she does not buy it often. Her friends and relatives usually buy it for her as a souvenir when they travel.

People in this category read food labels before they buy it. They need to know these products are good and safe for their health. Below are the answers from people in this category when asking them about what they look at when buying a food product

“I always look at products that have been certified by the Food and Drug Administration (FDA), see the country of origin, list of ingredients. It needs to have a very clear and an easy to find expiration date and manufacturing date on food labels,” they said.

There are 2 different aspects when asking about the willingness to pay higher prices for organic bananas. Consumers who were born and grew up in Bangkok are willing to pay more if they know that these products are manufactured by using organic bananas. On the other hand, for consumers who grow in provincial areas, they believe bananas are natural by themselves. Therefore, there are no reasons to pay extra for organic bananas based on their experience.

### **Trend Follower**

Most people in this group are students who are 16-23 years old. They mentioned that they do not read product labels thoroughly when purchasing something. They do not take interest in whether processed products are 100% natural or not.

Pimnapa, she is 22 years old and she loves one of the Korean bands a lot. She follows his concerts everywhere both in Thailand and Korea. By the interviewer's observation, it showed most interviewees did not quite understand the meaning of being organic or even know the benefits of some nutrients.

“I do not read product labels much because I think all the products on the shelves should be safe. I am not sure what organic is. I think antioxidants are good for health but I am not sure how they work,” she said.

Consumers in this category prefer to eat processed bananas such as banana crisps because they like its touch and taste, especially sweet banana crisps. They usually eat these kind of products while they are reading books or working in the office. From their perspective, they like barbeque and cheese flavors because they are familiar with these tastes like the other well-known potato chips they often eat.

They described that they are willing to pay extra for processed banana products if manufacturers have some premium ingredients mixed into them such as honey, chocolate, even though these kinds of ingredients are not good for health. When the researcher asked them for more details, it was shown that the most important thing

for them to buy is their beloved celebrities or Korean singers/actors. More than 90% of this group said

“I will definitely buy it if there are some pictures of my favorite superstar on the packaging. I will not hesitate to buy it because I love him and would like to collect everything about him. Even though the taste might not be good, I will buy it anyway,” they said.

### **Taste Influencer**

There are wide age ranges for people in this group. They have average incomes starting from 25,000 baht per month. Consumers in this group mainly focus on taste. They have experience eating many kinds of processed banana products such as banana crisps, sun-dried bananas. They have different aspects in terms of tastes. Some consumers like salty banana crisps because they have a perception that it is a snack but some people like it sweet because they think it is a kind of dessert. Apart from tastes, they also have their own preferences in terms of texture such as soft and crispy.

Consumers realized that banana crisps might not be good for their health because they need to pass the frying process, but they still buy them anyway.

Thawee, who is a representative consumer for this group mentioned that he likes eating salty banana crisps. He enjoys eating it while he works.

“I know fried bananas might not be good for health but I still eat them anyway. They have their own special smell, taste and texture. Compared to others fried products, bananas still have a lot of benefits. If I do not eat them too much, I think it is fine,” he said.

Consumers in this group buy it because they have tasted it before. For a new brand that they have never tried before, they prefer samples to allow them to try it first. If they like it, there is a good chance they will buy it again.

They do not focus much on organic bananas as long as manufacturers can produce the product they are satisfied with, especially its taste.

Even though they consider buying products based on taste, they still look at the product label to see both manufacturing date and expiration date because sometimes they do not consume it all at once.

### **Adventure Seeker**

Consumers in this group category have long experiences eating processed bananas. Their parents and friends usually buy it for them.

Saowaros, one of the consumers in this group mentioned that she did not focus on prices much as long as there are new brands she has never tried before. Even though it is the same product such as sun-dried bananas, she still wants to try and test new brands.

“I love to try new things to find out what I like the most, I feel enthusiastic seeing new brands I have never eaten before, especially processed bananas which are one of my favorite products I eat all the time,” she said.

Apart from knowing the new brand she knows from others. She also likes to try new brands which are popular at that moment. For example, if there are new advertisements on TV or social media about something new related to food products, she tries to find those brands as soon as she can. She wants to keep up with the latest food trends.

Thanavit, another consumer mentioned that if there are any new processes for bananas he has not never seen or tried before, he is more than willing to pay more to try it.

“If there are new technologies for processed bananas, I am willing to pay higher for it. Moreover, if you can apply bananas with other materials even though those materials are not really good for health but the end result after mixing them together are delicious, I would want to try and buy it at premium prices”

### **Gift Buyer**

There are consumers who buy processed bananas products as a gift to others. There are two interesting different subgroups in this category. The first group are consumers who always buy these kinds of products for others as a gift but do not actually consume it. Another group are consumers who both like consuming processed bananas and buying for others.

Both groups mentioned the same thing about the reason why they choose processed banana products as a gift for others.

Tunyarat, one of the gift buyers described that she buys many kinds of processed banana products, especially sun-dried bananas for her father because her father likes it

“I buy it for my father because he likes bananas, especially sun-dried bananas and banana crisps. However, I choose to buy only original sun-dried bananas without adding any extra flavors or preservatives for him. I rarely buy banana crisps for him because I am afraid that there might be a negative impact on his health due to frying processes,” she said.

She also usually buys processed bananas in some special events such as New Year for her relatives or when she visits her friends or cousins who she has not seen for a long time.

Most consumers in this group said that they selected processed bananas because they are good for health, even though they do not know exactly what nutrients in bananas are. Sun-dried bananas are suitable for seniors because they are easy to eat because of its softness. More importantly, more than 90% in this group mentioned that packaging is one of the key factors they always look at.

“Good and clean packaging must be provided, also product labels such as manufacturing date, expiration date, ingredient list must be clearly seen because sometimes the receivers do not eat them all at once, so the expiration date is required for future references,” they said.

As gift buyers, they are willing to pay premium prices if the packaging looks luxurious or looks unique compared to other manufacturers. However, they might not buy it to consume it themselves because people in this group believe that there are no reasons to pay higher for packaging that they do not care about.

In conclusion, consumers who have different kinds of motivation are willing to pay higher prices of processed banana products differently. It depends on whether knowledge being shared from farmers/processors meets what consumers want and need or not. Even though farmers and processors have deep tacit knowledge and explicit knowledge, it does not mean all of them should be shared to consumers because some of them are not in their consideration at all. To influence consumers to pay higher prices with willingness, only receiving knowledge from farmers and processors is not enough, there should be some recommendations for both farmers/processors and consumers.

This is to ensure that farmers or processors can focus more on these knowledge factors to gain a higher margin while consumers can justify money they spend on buying food products with higher prices based on the knowledge they have gained.

## **CHAPTER V**

### **RECOMMENDATIONS AND LIMITATIONS**

In this chapter, both tacit knowledge and explicit knowledge are shared from farmers/processors and mapped to each type of consumer. Additional recommendations are added to fulfill consumers' wants and needs based on theoretical and practical implications. Moreover, limitation and further research are also included.

#### **5.1 Theoretical Implications**

The main purpose of this paper is to analyze the knowledge being shared from banana farmers/processors to consumers. It can be seen that knowledge sharing from farmers/processors to consumers is important based on the knowledge management aspect. Consumers are willing to pay more depending on their personal motivation whether they buy it because of hedonic benefits or utilitarian benefits. Both tacit and explicit knowledge from farmers/processors need to match with what consumers need.

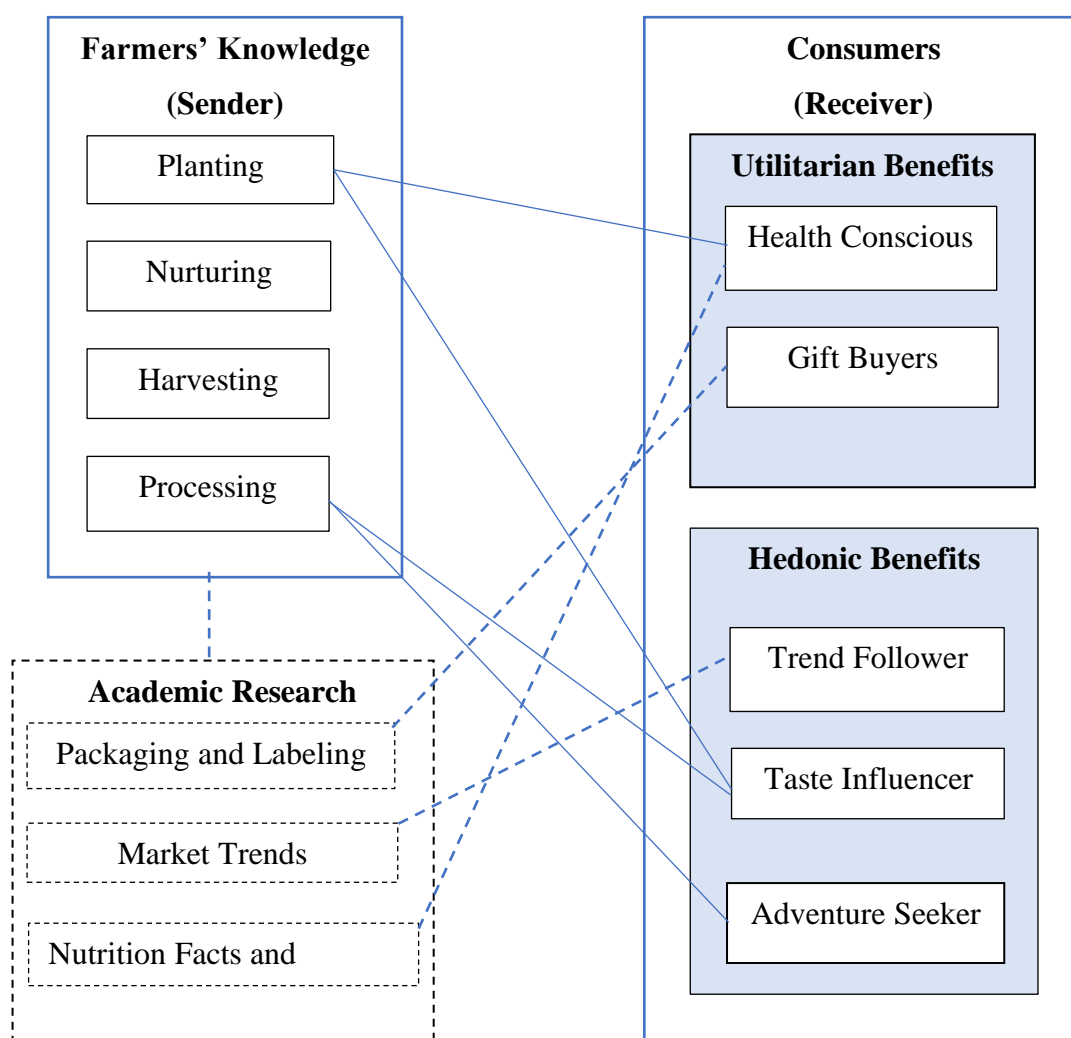
#### **5.2 Practical Implications**

From this research, consumers can be influenced to pay higher prices for processed banana products based on the 5 groups of consumer categories which are Health Conscious, Trend Follower, Taste Influencer, Adventure Seeker, and Gift Buyer. This finding can give an insightful relationship between farmers/processors and consumers in each type of category. The following recommendations can be applied to both manufacturers and consumers as knowledge givers and knowledge receivers respectively.

This research shows that only knowledge from farmers/processors is not enough to share with consumers because there are many types of consumers. Only



planting knowledge and processing knowledge from farmers/processors should be shared with consumers who are health conscious, taste influencers, and adventure seekers. Nurturing and harvesting knowledge is not considered a key factor for consumers' willingness to pay higher prices. In this research, knowledge from farmers/processors cannot fulfill all types of consumers as shown in Figure 5.1, consumers who are gift buyers and trend followers need a different kind of knowledge from different sources which is from academic research. This should be shared with both farmers/processors and consumers. For example, packing and labeling knowledge, market trends, nutrition facts and benefits.



**Figure 5.1 Knowledge sharing from farmers/processors to consumers**

## **5.3 Recommendations**

Most people believe that bananas in the market today are 100% natural, but they are not actually. This is a reason why some consumers are not willing to pay more when asked “Are you willing to pay more if you know that processed banana products are manufactured from organic bananas?”. Moreover, they are not sure what the exact meaning of being organic is. If they know how strict the processes farmers need to follow the standard to get certified, they might be willing to pay more. Below are recommendations for manufacturers who would like to sell more based on each type of consumers’ perspective.

### **5.3.1 Health Conscious**

For this group, it would be good if they receive additional knowledge apart from the existing knowledge they already have since consumers in this category are health conscious, so they have better knowledge than the other groups. For example, manufacturers might not need to provide too much detail that bananas have high potassium and manganese or antioxidants. Even though they do not significantly concentrate much on this nutrition, manufacturers need to ensure to provide mandatory information on product labels such as manufacturing date, expiration date, ingredient list, net weight or volume, name and address of the manufacturer.

They will be willing to pay more if manufacturers are able to find a way to mix between bananas and other healthy materials such as almond. Moreover, they are also willing to pay extra if bananas are organic, but they need to be certain that they are 100% organic. For some consumers, they do not realize that there are some organizations that take care of these organic products such as IFOAM. If they know that these products are certified by IFOAM, it might increase their willingness to pay more.

### **5.3.2 Trend Follower**

In terms of knowledge sharing to these kind of consumers, it is quite hard to share knowledge to them because they do not pay much attention to this. Manufacturers might take advantage of their interests by having celebrities or Korean stars or anyone who has become a big influencer at that moment to promote the products. By having a picture of these stars, they might be willing to pay more, especially if they have a

collection set or limited edition. Even though they do not pay much attention to taste, if manufacturers can make them love the taste as well, it would be good for them in terms of repurchasing.

### **5.3.3 Taste Influencer**

It is quite straight forward for this type of consumer. They do not concentrate much on price, nutrition or even packaging. It is hard from the manufacturers' perspectives to make everyone satisfied with the taste because each consumer has a personal taste preference. For example, someone likes sweet, but someone does not. Therefore, sellers need to provide real products for them to try and test first. If they can make these types of consumers satisfied with the taste, there will be a high opportunity for them to repurchase. Moreover, they might tell their friends as well.

In term of knowledge sharing, if they know some techniques for making high quality processed bananas from farmers. For example, if they know that not every type of banana can be processed or even if it can be processed, it might not be as delicious as others. They might be willing to pay higher.

### **5.3.4 Adventure Seeker**

These types of consumers can be found in almost every generation who likes to try new things. For them to buy the products, there should be a way to let them become aware of the new kind of products or new processes for making processed banana products. It might be something manufacturers can persuade consumers in advertisements. Manufacturers might not need to implement the new methodology or innovate the new stuff for making processed bananas, but they might find an existing source which is not yet well-known or published in the market and let consumers know that there are many ways to produce processed bananas such as using Parabola dome which might come up with a different taste and texture.

Apart from bananas themselves, if manufacturers can find a good mix between bananas and other stuff which might be healthy or unhealthy, it would be a very high potential for these types of consumers to buy it, no matter how much it is. For

example, processed banana with strawberry. They need very good market research to ensure that consumers will love it otherwise they will fail undoubtedly.

### **5.3.5 Gift Buyer**

There are many consumers who buy processed banana products as a gift to others. Most of them realized that bananas are natural and a good gift for seniors. They usually buy it when traveling to other parts of Thailand and bring it back as a souvenir to colleagues or family.

The interesting part of these types of consumers is that they care more about packaging than its taste. They are willing to pay higher to be sure that the receivers are satisfied when they get it. However, they would like to buy it for others, they will not buy it for themselves.

To persuade these types of consumers to pay more for processed banana products, manufacturers need to provide good packaging or luxurious packaging if they want consumers to pay premium prices. Moreover, they need to ensure to provide important information on product labels such as manufacturing date, expiration date, ingredient list, net weight or volume, nutrition facts, name and address of manufacturers. Adding specific knowledge about bananas is also valuable to this consumer.

In conclusion, knowledge sharing from farmers/processors to consumers is important based on the knowledge management aspect. Knowledge from farmers/processors should be filtered and selected before sharing to consumers because consumers can be influenced to pay higher prices for processed banana products based on the 5 groups of consumer categories. Knowledge from farmers and processors is not enough to fulfill what consumers need and want. Knowledge from academic research can become a helper to ensure that farmers/processors have additional knowledge that matches with consumers' motivation to pay higher prices to receive higher margin. Additionally, it can help consumers justify money they spend on buying processed banana products with higher prices based on the knowledge they have.

## **5.4 Limitation**

The data analysis is gathered only from farmers who sell at Sookjai market, Sampran Riverside, Nakhon Pathom, where orchard farmers in the communities can bring their own organic products to sell free of charge. This could expand to other farmers who grow bananas in different areas as well.

## **5.5 Further Research**

After we get insightful knowledge from farmers/processors that corresponds with what consumers' needs, the next step should be working on how to communicate this information to consumers. Further research might need to investigate what market channel is appropriate to communicate these messages out to each type of consumer.

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## **APPENDICES**

## **Appendix A**

### **Interview Questions**

#### **Questions for Farmers/Processors**

The purpose of interview is to explore two dimensions of knowledge which are tacit knowledge and explicit knowledge from farmers/processors. The following questions were asked.

1. How long have you grown organic banana plants?
2. Why do you choose to grow organic banana plants?
3. Why did you change from growing banana plants using chemicals to 100% non-chemicals (organic)?
4. What steps do we need to know when growing organic banana plants from planting until harvesting?
5. Why do you process bananas?
6. What kinds of processed bananas do you do?
7. What techniques do you apply when processing bananas?
8. When do you sell processed banana products?

#### **Questions for Consumers**

The purpose of interview is to identify what information will help consumers justify paying higher prices for processed banana products based on their own motivational lifestyle. The following questions were asked.

1. How often do you eat snacks?
2. How often do you exercise?
3. Have you ever eaten organic vegetables and fruit? If yes, how often do you eat them?
4. Do you know the true benefits of antioxidants?
5. Have you ever eaten processed banana products?
6. What kinds of processed banana products have you eaten?
7. Why do you choose to consume processed banana products?
8. When you purchase a processed banana product, what do you look at?

9. Do you often buy the product for yourself or for others?
10. Do you know the benefits or nutrients in bananas?
11. If you know that farmers grow organic bananas with 100% non-chemical fertilizers, how much more are you willing to pay for processed bananas?
12. If you know that the source of bananas being processed are from well-known places, how much more are you willing to pay for processed bananas?
13. If you know that farmers need to always nurture and maintain their banana plants, for example, check and cut off some dead spots or parts eaten by insects remove suckers to improve fruit yield and mother plant health, how much more are you willing to pay for processed bananas?
14. If you know that organic bananas are more naturally sweet than general bananas, how much more are you willing to pay for processed bananas?
15. If you know that growing organic plants don't use chemicals, help save the environment, and farmers' health, how much more are you willing to pay for processed bananas?
16. If you know that bananas can be more easily digested at 105 minutes, which is faster than apple (210 minutes), how much more are you willing to pay for processed bananas?
17. If you know that bananas have high antioxidants, how much more are you willing to pay for processed bananas?
18. If you know that bananas have high potassium and manganese which help prevent muscle contraction, how much more are you willing to pay for processed bananas?
19. If you know that processed banana products are certified such as GMP (Good Manufacturing Practice), HACCP (Hazard Analysis Critical Control Price), how much more are you willing to pay for processed bananas?
20. What kind of knowledge or information would influence your willingness to pay higher prices for processed banana products?