

ATTITUDES OF CONSUMERS IN BANGKOK METROPOLITAN AREA
TOWARDS BUYING ORGANIC FOOD



Presented in Partial Fulfillment of the Requirements for the
Master of Arts Degree in Business English for International Communication
at Srinakharinwirot University

May 2013

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A MASTER'S PROJECT
BY
CHIVARA SUNTORNPITH

Presented in Partial Fulfillment of the Requirements for the
Master of Arts Degree in Business English for International Communication
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This study attempted to investigate the attitudes of consumers in Bangkok Metropolitan area towards buying organic food, and to compare the differences between consumers' attitudes towards buying organic food based on gender and educational level. A questionnaire developed based on the Tri-component attitude model of Schiffman and Kanuk (2000) was completed by 90 consumers purchasing organic food at Lemon Farm. This instrument comprised of 18 items that can be grouped into (a) Cognition, (b) Affect, and (c) Conation. The results were calculated in terms of percentage, mean scores, and standard deviations. T-test was also employed to identify the differences between the attitudes of consumers towards organic food based on gender and educational level.

The findings revealed that consumers' attitudes towards buying organic food were high. Based on the Tri-component attitude model, the result revealed that the mean score of each component was also found to be high. In addition, the results showed that there was no significant difference between consumers' attitudes towards buying organic food and gender while there was a significant difference between attitude and educational level. That is, participants who held lower than Bachelor's degree had higher attitudes towards buying organic food than those who held Bachelor's degree or higher.

เจตคติของผู้บริโภคในเขตกรุงเทพมหานครที่มีต่อการเลือกซื้ออาหารเกษตรอินทรีย์



เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒเพื่อเป็นส่วนหนึ่งของการศึกษา

ตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต

สาขาวิชาภาษาอังกฤษธุรกิจเพื่อการสื่อสารนานาชาติ

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ดร. อุสาศ์ภรณ์ สุขารมณ

การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาเจตคติของผู้บริโภคในเขตกรุงเทพมหานครที่มีต่อการเลือกซื้ออาหารเกษตรอินทรีย์และเปรียบเทียบความแตกต่างของเจตคติ โดยจำแนกตามเพศและระดับการศึกษา เครื่องมือที่ใช้ในการวิจัย คือ แบบสอบถามตามองค์ประกอบของเจตคติ 3 ด้านจากทฤษฎีของชิฟแมนและคานุก (2000) โดยมีกลุ่มประชากรในการวิจัย คือ ผู้บริโภคที่เลือกซื้ออาหารเกษตรอินทรีย์จากร้านเลมอนฟาร์มจำนวน 90 คน แบบสอบถามมี 18 ข้อคำถามตามองค์ประกอบของเจตคติ 3 ด้าน คือ (1) ส่วนของความนึกคิด (2) ส่วนของความรู้สึก (3) ส่วนของแนวโน้มพฤติกรรม ผลของการวิจัยครั้งนี้ประมวลโดยใช้สถิติ ได้แก่ ค่าร้อยละ ค่าเฉลี่ย และค่าความเบี่ยงเบนมาตรฐาน นอกจากนี้ยังมีการประมวลผลโดยการทดสอบค่าที (t-test) เพื่อศึกษาความแตกต่างระหว่างระดับเจตคติจากตัวแปรอิสระที่กำหนด คือ เพศและระดับการศึกษา

ผลของการวิจัยพบว่าผู้บริโภคอาหารมีระดับเจตคติต่อการเลือกซื้ออาหารเกษตรอินทรีย์โดยรวมอยู่ในเกณฑ์สูง และมีระดับเจตคติเฉพาะด้านอยู่ในระดับสูงทั้ง 3 ด้าน ส่วนผลการศึกษาเปรียบเทียบเจตคติระหว่างเพศชายและเพศหญิง พบว่าเจตคติที่มีต่อการเลือกซื้ออาหารเกษตรอินทรีย์ของผู้บริโภคเพศชายกับเพศหญิงไม่แตกต่างกัน ในขณะที่ผู้บริโภคที่มีระดับการศึกษาต่างกันมีเจตคติต่อการเลือกซื้ออาหารเกษตรอินทรีย์ที่แตกต่างกันอย่างมีนัยสำคัญทางสถิติ โดยผู้บริโภคที่มีระดับการศึกษาต่ำกว่าปริญญาตรีมีเจตคติต่อการเลือกซื้ออาหารเกษตรอินทรีย์สูงกว่าผู้บริโภคที่มีระดับการศึกษาระดับปริญญาตรีหรือสูงกว่า

The Master's project advisor, Chair of Business English for International Communication Program, and Oral Defense Committee has approved this Master's project, *Attitudes of Consumers in Bangkok Metropolitan Area towards Buying Organic Food*, by Chivara Suntornpipith as partial fulfillment of the requirements for the Master of Arts Degree in Business English for International Communication of Srinakharinwirot University.

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.....Dean of the Faculty of Humanities

(Dr. Wanee Aujsatid)

May....., 2013

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Chivara Suntornpipith

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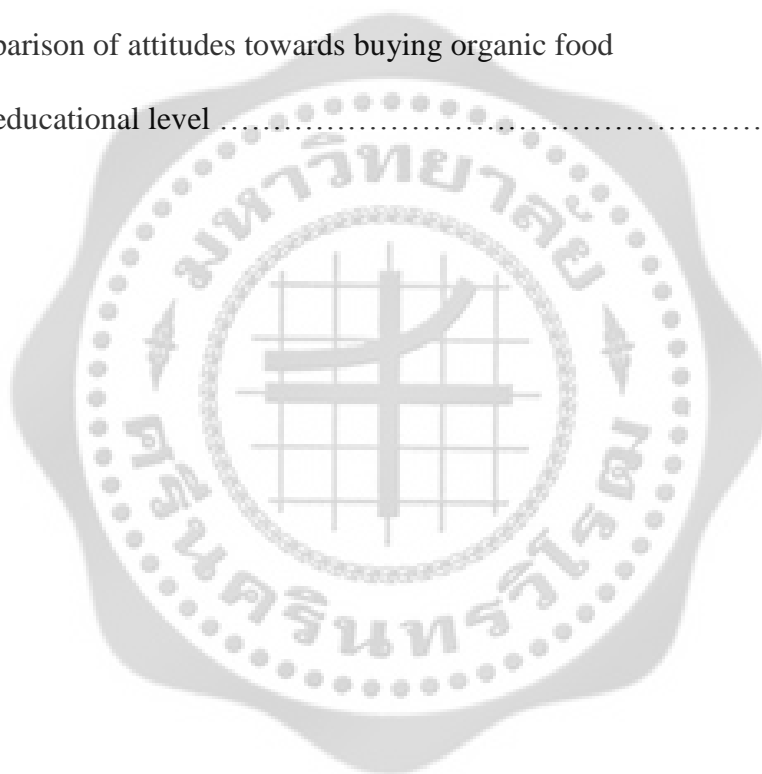
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CHAPTER ONE

INTRODUCTION

Background of the Study

Over the last several decades, consumers' health awareness has increased due to knowledge about the high levels of pesticides used by farmers and the possibility of toxic residues in food (Holistic Med, 2007). In conventional farming, farmers use chemicals to deal with pests and diseases and to help their crops grow faster. Various studies which have raised concerns among consumers have shown high levels of chemical residues in vegetables and fruit (Marcola, 1997; Poapongsakorn, Ruhs, & Tangjitwisuth, 1998; Woods, 2011). According to Green's research (2000), at least 300,000 people in Western countries died from heart diseases, diabetes, cancers, and other serious lasting diseases each year because of unhealthy nutritional choices and food containing toxic and residues, and a lack of physical activity. Therefore, there is now an increasing emphasis on healthy lifestyles which involves making different food choices

As Alvensleben and Altmann (1987) stated that the consumption of organic food was related to decreasing confidence in the quality of conventional food and increasing concern for health. Thus, organic food can be one of food choices. It also seemed that the importance of nutrition and the benefits of organic food for health promotion and disease prevention have been increasingly documented in scientific studies (Dreezens, Martijn, Tenbult, Kok, & Vries, 2005; Heaton, 2001; Schifferstein & Ophuis, 1998). Consequently, people who are concerned about prevention of disease are paying more attention to their diet by avoiding food that lack nutritional benefits, unhygienic, or that contains toxic residues. Despite a lack of evidence to definitively state that organic food are significantly different from conventional food in terms of their safety, organic food

provide a variety of benefits. Some studies show that organic food has more beneficial nutrients such as antioxidants, vitamin C, minerals, and secondary nutrients (phytonutrients) and has lower levels of contaminants such as pesticides, antibiotics, and nitrates than those produced by conventional farming (Schifferstein & Ophuis, 1998; Woese, Lange, Boess, & Bogl, 1997). In addition, organic food can help some people with allergies to food, chemicals or preservatives to find their symptoms lessen when they eat only organic food (Health Guide, 2011). As a result, organic food is becoming more popular globally because of these health concerns.

Markets and Markets (2011) estimated that the revenue for global organic food in 2008 is US \$51 billion and is expected to reach US \$104.5 billion by 2015. In South-East Asia, the increasing popularity of organic food can be seen in Figure 1.

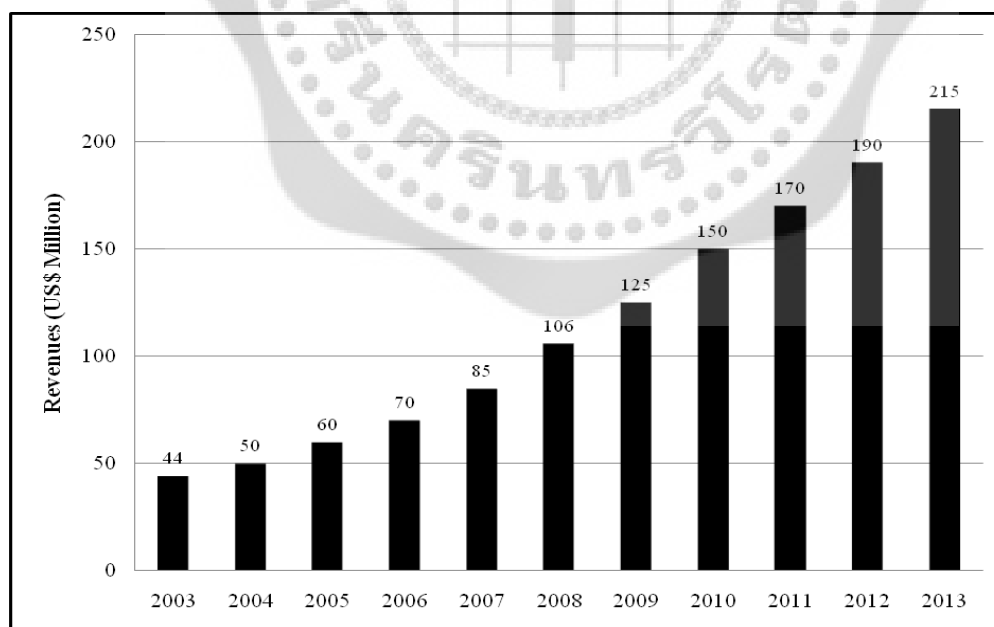


Figure 1 The South-East Asian Market for Organic Food Revenue Forecasts, 2003 – 2013 (Organic Monitor, 2006)

As seen in Figure 1, the South-East Asian market revenue forecast in 2003 was US \$44 million. In addition, it is also expected to increase significantly to US \$215 million in 2013. This forecast can be attributed to an increase in consumer popularity in organic food, along with increasing concerns about health risks and the environmental impact of conventional food production methods (Organic Monitor, 2006).

Similar to people in many countries, Thai people who are concerned about their health pay attention to their diet. Many of them choose to consume organic food in order to promote their good health (Green Choice, 2005). Therefore, the study was established to examine the attitudes of consumers in Bangkok Metropolitan area towards buying organic food.

Objectives of the Study

The research objectives are summarized as follows:

1. To investigate attitudes of consumers in Bangkok Metropolitan area towards buying organic food.
2. To compare the differences between consumers' attitudes towards buying organic food based on gender and educational level.

Research Questions

This research seeks to answer two following research questions:

1. What are the attitudes of consumers towards buying organic food?
2. Are there any significant differences in consumers' attitudes towards buying organic food based on gender and educational level?

Significance of the Study

This study will provide useful information for individuals in the organic food business. Organic food marketers and sales personnel will better understand the attitudes that influence the buying decisions of consumers and know how to improve marketing strategies for their products. Furthermore, a better understanding of such attitudes will assist organic food marketers to plan more effective marketing strategies. The results of this study could be implemented as recommendations to improve the marketing strategies of organic products.

Scope of the Study

The objective of this research is to examine the attitudes of consumers towards buying organic food. The research instrument is a questionnaire. The 90 Thai customers purchasing at the Lemon Farm voluntarily participate in the study. The variables in this study are (a) the dependent variables which comprise the attitudes of consumers towards organic food, and (b) independent variables that include gender and educational level.

Definition of Terms

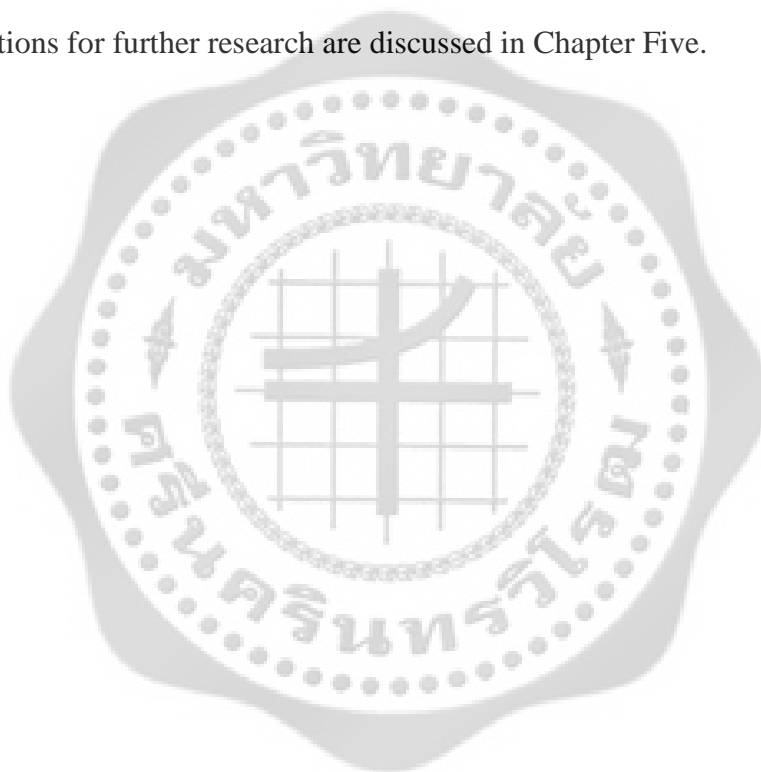
The following terms, employed throughout this study, are defined below.

Organic Food refers to food raised, grown, store, processed, and/or packed without the use of chemicals.

Attitudes refer to the beliefs, feelings, and behavioral tendencies of consumers towards organic food.

Organization of the Study

This study is presented in five chapters. Chapter One deals with the background of the study, the objectives of the study, and the research questions. The significance of the study and the scope of the study are also included. Chapter Two reviews the related literature and research studies relevant to this study. Chapter Three presents the methodology employed to answer the research questions. Chapter Four reveals the results of the study. The conclusions, including limitations of the study, and recommendations for further research are discussed in Chapter Five.



CHAPTER TWO

LITERATURE REVIEW

The purpose of this chapter is to review theories used to investigate attitudes of consumers in Bangkok Metropolitan area towards buying organic food and differences between consumers' attitudes towards buying organic food based on gender and educational level. This chapter presents an overview of related literature and research to understand the concept of this study. The literature review is divided into three sections:

1. Organic Food
2. Attitudes
3. Related Research



Organic Food

There was no common definition of organic food products because different countries had different standard for products to be certified as organic. According to Essoussi and Zahaf (2008), the term "organic" was rooted in "bio" from Greek and "bios" meant life or way of living. Chinici, D'Amico, and Pecorino (2002) defined organic food products as products that were minimally processed to maintain the integrity of the food without artificial ingredient, preservatives or irradiation. In addition, Padel and Foster (2005) defined that organic food was produced without using of conventional pesticides, fertilizers made with synthetic ingredients, bioengineering, or ionizing radiation. Similarly, Jones, Hill, and Hilier (2001) explained that organic food referred to food raised, grown, store, and/or processed without the use of synthetically produced chemicals or fertilizers , herbicides, pesticides, fungicides, growth hormones and regulators or generic modification. Besides, organic meat, poultry, eggs, and dairy

products from animals with non antibiotics or growth hormones were also considered as organic food. According to the definitions above, organic food could be food raised, grown, store, processed, and/or packed without the use of chemicals.

Attitudes

There are various opinions from different researchers on how attitudes can be defined. According to Schiffman and Kanuk (2000), attitudes were a learned predisposition to behave in a consistently favorable or unfavorable way with an object. That is, attitudes were formed as a result of direct experience with the product, word-of-mouth, information acquired from others, or exposure to mass-media advertising. Likewise, Eagly and Chaiken (1993) defined that attitudes were psychological tendency expressed by evaluating a particular entity with some degree of favor or disfavor. Ajzen and Fishbein (1977) concluded that attitudes were an expression of feelings about the object whether consumers like it or not. They also added that attitudes were statements or evaluative judgments relating to an object, person or an event. Moreover, Kerch and Crutchfield (1948) defined attitudes as the organization of motivation, emotion, and perception that result from individual experience. Hellriegel, Slocum, and Woodman (2001) claimed that attitudes were individual feelings, beliefs, opinions, and behavioral tendencies aimed at specific objects, people, issues, or events which could be either favorable or unfavorable. According to Chantarasathit (1997), attitudes were psychological function that controlled a person's behavior. Additionally, Clow and Baack (2002) defined attitudes as a mental position taken toward a topic, a person, or an event that influences the holder's feelings, perceptions, learning processes, and subsequent behaviors. In summary, attitude is feelings, beliefs, opinions, and behavioral

tendencies aimed at specific objects, people, issues, or events which can be either favorable or unfavorable.

The Model of Attitude

In order to understand attitude, Schiffman and Kanuk (2000) developed the Tri-component attitude model. It consists of three major components: (a) cognition, (b) affect, and (c) conation. A simple representation of the Tri-component Attitudes Model is shown in Figure 2.

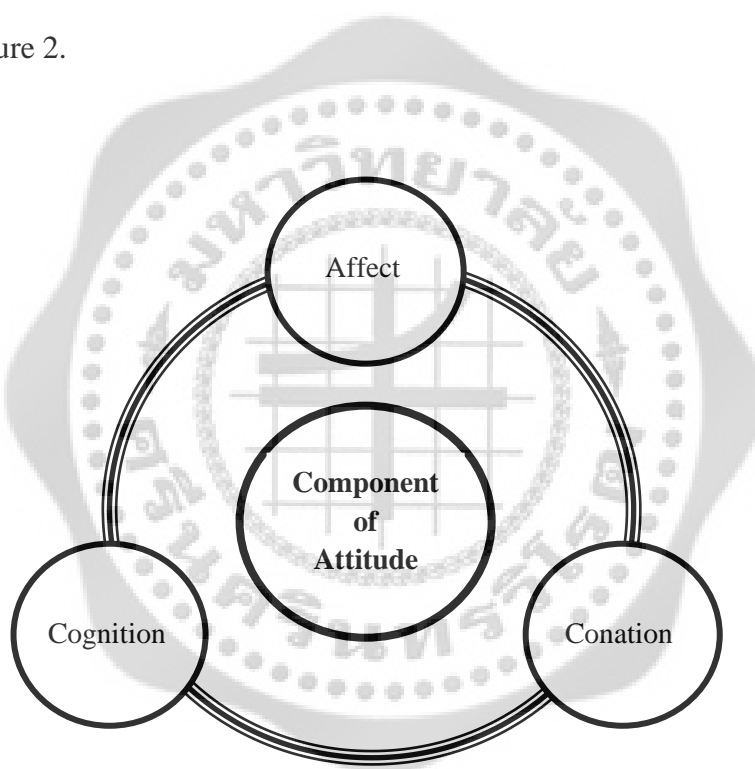


Figure 2 The Tri-component Attitude Model (Schiffman & Kanuk, 2000)

The first component is Cognition. The cognition is the knowledge and perceptions which are obtained by a combination of direct experience with the object and related information from various sources. This knowledge and resulting perceptions commonly take the form of beliefs. The consumer believes that an object possesses various attributes and that specific behavior will lead to specific outcomes.

The second component is Affect. This refers to a consumer's emotions or feelings about a particular product or brand. These emotions and feelings are frequently treated as primarily evaluative in nature. Emotional states, such as happiness, sadness, shame, disgust, anger, distress, guilt, or surprise may enhance or develop positive or negative experiences. Recollections of such experiences may impact on what comes to mind and how the individual acts.

The final component of the Tri-component attitudes model is Conation. This refers to the connection of knowledge and affect to behavior. It is concerned with the likelihood or tendency that an individual will undertake a specific action or behave in a particular way with regards to the attitudes object.

In this study, the researcher applied the attitude model base on Schiffman and Kanuk's idea (2000) to examine consumers' attitudes toward buying organic food. This model helped the researcher to explore consumers' attitudes towards buying organic food clearly. It also helped the researcher to reveal consumers' knowledge and perceptions, feelings, and behavioral tendency towards organic food.

Related Research

The researcher divided the related research into two parts: (a) Organic food and (b) Attitudes towards buying organic food.

Organic Food

In recent years, many researchers have conducted studies regarding organic food from a wide range of perspectives. These cover the nutritional status of organic food, consumer characteristics, and the impact of the price of organic food. Regarding the nutritional status of organic food, some studies have concluded that organic production

methods lead to increases in nutrients compared to food produced using synthetic inputs. Heaton (2001) found that on average organic crops are not only higher in vitamin C and essential minerals, but also higher in chemicals that are often beneficial in the treatment of cancer. Worthington (2001) reviewed 41 studies that compared crops produced with organic farming systems to crops produced using modern conventional farming systems. It was reported that organic crops contained 27% more vitamin C, 21.1% more iron, 29.3% more magnesium, and 13.6% more phosphorus than did conventional crops. In addition, Dreezens, Martijn, Tenbult, Kok, and Vries (2005) examined twelve kinds of food and found that the organic food showed increased quantities of vitamins A, C, E, and the B groups, increased elements such as zinc, increased minerals such as calcium, and increased fiber.

Conversely, other studies have found no differences in nutrients between organic and conventional production methods. Woese, Lange, Boess, and Bogl (1997) reported an extensive literature base on 150 comparative studies published between 1926 and 1994 that examined the quality of food grown under different production methods. They concluded that no major differences in nutrient levels were observed between the different production methods. Similarly, Bourn and Prescott (2002) looked at 49 studies and found that there was no strong evidence that organic and conventional food were different in concentrations of various nutrients. They also reported that organic food did not taste any better than conventional food.

Other studies have attempted to characterize the typical organic consumer such as common features of those people who were interested in organic food. Wier and Andersen (2003) concluded that higher income or age increased the purchasing of organic products. They also confirmed that education level increased the purchasing of organic products. That is, the higher the education the level, the more likely a consumer was to

buy organic products. Similarly, Dimitri and Oberholtzer (2009) revealed that consumers of all ages and races who had higher levels of education were more likely to buy organic products than less-educated consumers. Lockie, Lyons, Lawrence, and Mummery (2002) indicated that income had an effect on the consumption of organic food but it did not necessarily have an impact on the interest in organic products. In terms of gender, Mei-Fang (2007) noted that men tend to be less interested in organic food products in general. Furthermore, Schafer and Keith (1981) indicated that expenses for organic food of couples without children were significantly lower than families with children.

From the price perspective, Gil, Gracia, and Sanchez (2000) stated that consumers were willing to pay premium prices for organic food. Rundgren (2000) discovered that the perception of health risks influenced the willingness to pay higher for food. Similarly, Boccaletti and Nardella (2000), they found that Italian consumers were generally aware and afraid of pesticide residues and more willing to pay higher prices for pesticide free products. For about 70% of the consumers, a premium of 10% above the regular price was acceptable. Yiridoe, Bontiankoman, and Martin (2005) stated that the acceptable level of a price premium for organic food was between 10-20%.

Attitudes towards buying organic food

Several studies have been conducted to explore attitudes of consumers towards buying organic food. Related research is reviewed and summarized as follows:

Firstly, Saba and Messina (2002) conducted a study about attitudes towards organic food and risk/benefit perception associated with pesticides in Italy. The aim of this study was to examine beliefs, attitudes and intentions in the consumption of organic fruit and vegetables and to evaluate the influence of trust in institutions responsible for regulating or using pesticides on perception of risks and benefits associated with pesticide

residues in food. A total of 950 people were recruited from the consumer panel provided by an Italian market research company. The sample was representative of the Italian population according to gender and age. The participants were visited in their own homes and asked to fill in a questionnaire. The questionnaire was constructed to assess participants' attitudes towards the consumption of organic fruit and vegetables and to measure the perception of risks and benefits associated with pesticide residues on food. It contained questions on cognition, affect, and conation. The results of the study indicated that the participants who had less positive attitudes towards organic fruit and vegetable, perceived fewer risks and more benefits associated with pesticide use.

Another study was carried out by Urena, Bernabeu, and Olmeda (2008). They studied differences in women and men's attitudes and willingness to pay for organic food in Spain. Data was gathered from surveys addressed to a representative sample of regular food shoppers for home consumption who resided in Castilla-La Mancha in Spain. Four hundred and sixty four interviewees were randomly selected and personally surveyed face-to-face in stores, supermarkets, and malls. They revealed that the attributes most highly valued by all organic food consumers were flavor, visual appearance, and guarantees of the absence of toxic residue. In terms of gender, women were more concerned than men about topics related to health, nourishment, and the environment. Men, however, were more willing to pay higher prices than women, while women had a better understanding of organic food than men and also demanded more information.

Besides, Morakrant, Kittimahajaroen, and Hanboonsat (2009) examined the factors in the decision to purchase organic food in the Bangkok area. The researchers used a survey with a random sampling method to collect data at Silom Road, Lumpini Park, Sapanmai, Lad-phow, Yaowarat, Phatunam, the Victory Monument and the Ramkamhang area. The questionnaire focused on questions related to the decision to

purchase organic food, knowledge about the product, and reasons for purchasing. The research employed descriptive statistics; for example, mean, percentage, and correlation using, to analyze the data. The results revealed that only 19% of the respondents clearly understood the concept of organic food. About 29% of the respondents knew about organic food but could not differentiate between pesticide safe, hydroponic, natural food, and organic food. The main reasons for organic food purchase were good health and fresh products with no residue. The data analysis revealed that there would be a relationship between the personal factors of age, educational level, and the purchase of organic food. However, the results showed no relationship between these factors.

In addition, Sangkumchaliang and Huang (2009) examined consumers' attitudes and willingness to purchase organic food products for 390 respondents living in Chiang Mai, Thailand. The objective of the study was to explore perceptions and attitudes of organic product consumers. The face-to-face interview was conducted with respondents. The findings revealed that 90% of the respondents had already heard of the term "organic", and 69% of the respondents had bought organic food. The results indicated that the perception that organic products were environmentally friendly were significant motives for health conscious consumers and affected organic food consumption. Besides, buyers of organic food tended to have higher education levels and children in their household compared to those who did not. Furthermore, consumers' perceptions of product prices and trust in organically produced products were also important.

Furthermore, Yi (2009) conducted a study in Hong Kong in order to examine consumer attitudes towards organic food consumption. The questionnaire consisted of three types of questions. They were true-false questions, multiple-choice questions, and Likert scale questions. The questionnaires were distributed to 330 respondents who were either buyers or non-buyers of organic food. The survey was completed through face-to-

face interviews in order to minimize misunderstanding of the questions. The findings of the study revealed that there was a significant difference between attitudes and gender. On the other hand, age, education, and income did not have a positive correlation with organic food consumption.

Lastly, Chinese consumers' purchasing intentions for organic food were investigated by Yin, Wu, Du, and Chen (2010). Four hundred and thirty two consumers in Guangzhou, Zhuhai, and Shenzhen were surveyed. The results showed that the respondents' buying intention were strongly affected by income, degree of trust in organic food, degree of acceptance of organic food prices, and the respondents' concerns for their health and well-being. Age of consumers, education levels, and ecological concerns were factors that only slightly affected their intent. Similarly, the survey found that people were willing to spend more money on organic food. The results of this study revealed that willingness to pay more for organic food was 135.3% greater than willingness to pay more for conventionally produced and processed food.

In summary, the above research demonstrates the attitudes of consumers towards organic food in various locations and demographic variables. It will be interesting to further explore some related aspects in different locations and demographic variables. In terms of attitudes towards buying organic food, there is no study specifically concerned with differences in attitudes towards buying organic food base on gender and educational level of consumers in Bangkok Metropolitan area. This study, therefore, is designed to explore the attitudes of consumers in Bangkok Metropolitan area towards buying organic food and differences in consumers' attitudes base on gender and educational level.

CHAPTER THREE

METHODOLOGY

This research employed descriptive and quantitative statistics to study the attitudes of consumers towards buying organic food. This chapter describes the methods employed to answer the research questions and it is divided into four parts: the participants of the study, the instrument used in the study, the procedure of data collection, and data analysis.

The Participants of the Study

This study used a random sampling to identify 90 consumers purchasing at nine branches of Lemon Farm. Lemon farm was selected to conduct this study because it is an organic product store rated as the first rank of health product store in Thailand by the website of Thai Green Market (Thai Green Market, 2011). Moreover, the Lemon Farm has been known to provide high quality and safety products for more than fifteen years. Lemon farm is a company running health food stores focusing on products for healthy and balanced nutrition. Lemon Farm has nine branches: (a) Chaeng Wattana, (b) Prachachuen, (c) Kaset, (d) Sukhumvit 39, (e) Phetkasem 57, (f) Praditmanudham, (g) Ramkamhaeang, (h) Srinakarin, and (i) Paradise Park (Lemon Farm, 2011).

The Instrument Used in the Study

A questionnaire was developed based on the Tri-component attitude model of Schiffman and Kanuk (2000). The questionnaire was created into two versions; English and Thai. The questionnaire consisted of two parts. The first part, demographic information of the participants, included questions regarding the personal information of

the participants: gender and educational level. The second part, attitudes towards buying organic food, consisted of 18 statements concerning attitudes towards buying organic food (See Appendix A). The questionnaire was translated from Thai to English (see Appendix B) and language translators were asked to back-translate and revised when appropriate. Table 1 lists the variables extracted from the questionnaire and shows items are included for analysis.

Table 1 Questionnaire Description

Factors	Number of Items
Cognition	1 - 8
Affect	9 - 14
Conation	15 - 18

The questionnaire consisted of eighteen questions, with a five-point Likert scale ranging from very low (1) to very high (5). A score of 1 represents very low, 2 represents low, 3 represents moderate, 4 represents high, and 5 represents very high.

Procedures of the Study

Pilot Study

To standardize and design the questionnaire, the researcher consulted with three experts. The experts' feedback and suggestions helped to develop the content validity of the questionnaire. The designed questionnaire was piloted with 20 consumers purchasing at Lemon Farm in September 2011. The purpose of the pilot study was to examine whether the participants understood all questions and responded in accordance with the questionnaire instructions. The test revealed that there were some irrelevant items that confused the participants. Therefore, the researcher removed them from the questionnaire to reduce participants' confusion.

Reliability using Cronbach's alpha was conducted to ensure the consistency or stability of the questionnaire. The result of reliability of this questionnaire was found at .90 (See Appendix C). That was, the questionnaire used in this study had the good reliability, since reliability of less than .60 was generally considered as poor, that in a range of .70 was acceptable and that over .80 was good (Sekaran, 2007).

Data Collection

Ninety questionnaires were randomly distributed to consumers at nine branches included : (a) Chaeng Wattana, (b) Prachachuen, (c) Kaset, (d) Sukhumvit 39, (e) Phetkasem 57, (f) Praditmanudham, (g) Ramkamhaeang, (h) Srinakarin, and (i) Paradise Park every weekends in October 2011. The questionnaire was distributed to 10 consumers in each branch. The researcher stood in front of the entrance of each Lemon Farm branches and asked the consumers for participation. The researcher clarified the objectives of the study to the participants before distributing the questionnaires.

Data Analysis

The data gathered from the questionnaires were examined and analyzed in line with the research questions. In order to analyze the data, the statistical analysis of Statistical Package for Social Science (SPSS) version 10.5 was used. There was checked of basic descriptive statistics conducted to ensure the accuracy of data entry. Descriptive statistics included percentage, mean, and standard deviation were employed to describe the respondents' attitudes towards organic food. T-test was employed to identify the differences between the attitudes of consumers towards buying organic food based on gender and educational level. A five-point Likert scale was used to rate the attitude levels

of consumers towards buying organic foods. The value of mean was interpreted according to Pisarnbut (2007) as follows:

1.00 - 1.80 = Very low

1.81 - 2.60 = Low

2.61 - 3.40 = Moderate

3.41 - 4.20 = High

4.21 - 5.00 = Very high

Summary

In conclusion, this chapter described the methodology of the study. A questionnaire was used as the instrument to collect data of demographic information of the participants and consumers' attitudes towards buying organic food. The five-point Likert scale was employed. Percentage, means, and standard deviation were used to analyze the results of this study.

CHAPTER FOUR

FINDINGS

This chapter presents the findings of this study. The results are presented in two parts: demographic information of the participants and attitudes towards buying organic food.

Demographic Information of the Participants

This part provides general information of the 90 participants regarding gender and educational level. The demographic data are presented in percentage (%). The findings are presented in Table 2 as follows:

Table 2 Demographic Information of Participants

Demographic Information	Frequency	Percentage
Gender:		
Male	42	46.67
Female	48	53.33
Total	90	100.00
Educational Level:		
Lower than Bachelor's degree	20	22.22
Bachelor's degree or higher	70	77.78
Total	90	100.00

From Table 2, the participants consisted of 42 males (46.67%), and 48 females (53.33%). The data gathered on educational level revealed that 20 participants (22.22%) held lower than a Bachelor's degree, and 70 participants (77.78%) held a Bachelor's degree or higher.

Attitudes towards Buying Organic Food

This part reveals the attitudes of the participants towards buying organic food.

The standard five- point Likert scale was employed and the results are demonstrated in Table 3.

Table 3 Attitudes of Consumers towards Buying Organic Food

Attitude Components	Mean	SD	Meaning
Cognition	3.69	.51	High
Affect	3.61	.55	High
Conation	3.42	.69	High
Total	3.60	.49	High

As presented in Table 3, the results reveal that the overall attitudes of participants towards buying organic food were high ($M = 3.60$, $SD = .49$). In terms of the Tri-component attitude model, cognition was ranked as the highest level ($M = 3.69$, $SD = .51$), followed by affect ($M = 3.61$, $SD = .55$), and conation ($M = 3.42$, $SD = .69$).

In order to compare the differences between consumers' attitudes towards buying organic food based on gender and educational level, the mean score, standard deviation, and t-test values were used as indicated in the Table 4, and Table 5.

Table 4 Comparison of attitudes towards buying organic food by gender

Attitude Components	Gender	Mean	SD	T - Value
Cognition	male	3.71	.58	.31
	female	3.67	.44	
Affect	male	3.62	.56	.03
	female	3.61	.55	
Conation	male	3.35	.78	-.88
	female	3.48	.59	
Total	male	3.60	.59	-.12
	female	3.61	.43	

Note: * = $p < .05$

Table 4 shows that there were no significant differences in the participants' attitudes towards buying organic food based on gender. In other words, male and female participants did not have different attitudes towards buying this organic food. The average score of male participants was 3.60 ($SD = .59$) and the average score of female participants was 3.61 ($SD = .43$). According to the Tri-component attitude model, for male participants, cognition was rated at the highest level ($M = 3.71, SD = .58$), followed by affect ($M = 3.62, SD = .56$), and conation ($M = 3.35, SD = .78$) respectively. For female participants, cognition was rated at the highest level ($M = 3.67, SD = .44$), followed by affect ($M = 3.61, SD = .55$), and conation ($M = 3.48, SD = .59$) respectively.

Table 5 Comparison of attitudes towards buying organic food by educational level

Attitude Components	Educational Level	Mean	SD	T - Value
Cognition	Lower than Bachelor's degree	3.98	.46	2.96*
	Bachelor's degree or higher	3.61	.49	
Affect	Lower than Bachelor's degree	3.75	.63	1.26
	Bachelor's degree or higher	3.57	.53	
Conation	Lower than Bachelor's degree	3.69	.69	2.01*
	Bachelor's degree or higher	3.34	.67	
Total	Lower than Bachelor's degree	3.84	.51	2.46*
	Bachelor's degree or higher	3.54	.47	

Note: * = $p < .05$

Table 5 reveals that there were significant differences in overall consumers' attitudes towards buying organic food based on educational level. That is, participants who held lower than Bachelor's degree had higher attitudes towards buying organic food than those who held Bachelor's degree or higher. The overall mean score of the consumers who held lower than a Bachelor's degree was 3.84 ($SD = .51$), while those of consumers who held a Bachelor's degree or higher was 3.54 ($SD = .47$).

In terms of the Tri-component attitude model, for the cognition and conation components, there were significant differences between attitudes toward buying organic food and educational level. However, there was no significant difference between consumers' attitudes and educational level for the affect component. Consumers who held lower than a Bachelor's degree scored the highest in cognition ($M = 3.98, SD = .46$), followed by conation ($M = 3.69, SD = .69$), and affect ($M = 3.75, SD = .63$). For the consumers who held a Bachelor's degree or higher, cognition was also rated at the highest level ($M = 3.61, SD = .49$), followed by affect ($M = 3.57, SD = .53$), and conation ($M = 3.34, SD = .67$).

Summary

The purposes of this study were to investigate the attitudes of consumers towards buying organic food and to compare the differences between consumers' attitudes towards buying organic food based on gender and educational level. The findings revealed that consumers' overall attitudes towards buying organic food were high. In terms of the Tri-component attitude model, cognition was ranked as the highest level, followed by affect, and conation. In addition, the results reveal that there were no significant differences in consumers' attitudes towards buying organic food based on gender, while there were significant differences based on educational level. Participants who held lower than a Bachelor's degree had attitudes towards buying organic food higher than those who held a bachelor's degree or higher.

CHAPTER FIVE

CONCLUSION AND DISCUSSION

This chapter contains three main sections: conclusion, discussion, and limitations of the study and recommendations for further research. The details are as follows:

Conclusion

This study attempted to investigate the attitudes of consumers towards buying organic food, and also to compare the differences between consumers' attitudes towards buying organic food based on gender and educational level. The instrument used for collecting data in this study was a questionnaire. The results revealed that the attitudes towards buying organic food were high. The mean score of each factor of the Tri-component attitude model were also found to be high. In addition, the results showed that there were no significant differences in consumers' attitudes towards buying organic food based on gender, while there were significant differences based on educational level. Participants who held lower than a Bachelor's degree had higher attitudes towards buying organic food than those who held a bachelor's degree or higher.

Discussion

The following presents a discussion of the major findings in accordance with the research questions.

Research Question 1:

What are the attitudes of consumers towards buying organic food?

From the findings, it could be concluded that the overall attitudes of the consumers towards buying organic food were high. They considered organic food and

beneficial to health, non-harmful to the environment, and lower in quantity of residue than conventional products. The results of this study were supported by the studies of Chinici, D'Amico, and Pecorino (2002) and Harper and Makatouni (2002). It was found that consumers had high attitudes towards organic food because organic food was considered to be healthier than conventional food. Such positive attitudes concern food quality, taste, absence of chemicals, and relative freshness. Moreover, the results of this study revealed that more than 60% of consumers satisfied with the safety and nutrition that they received from organic food. Fotopoulos and Krystallis (2002), Wier and Calverly (2002), and Larue, West, Gendron, and Lambert (2004) found that organic food was thought to be more nutritious and safer than conventional products. Alvensleben and Altmann's study (1987) indicated that the consumption of organic food was related to decreasing confidence in the quality of conventional food and increasing concern for health. Consumers' concerns for their own health have a positive effect on their willingness to purchase organic food which means that the health and safety characteristics of organic food are the main attributes that attract consumers. Besides, 65% of consumers in their study considered that organic food was free from chemical usage and they were ready to buy and consume it. They also considered that the higher price of organic food was acceptable. The results of the study were also supported by Boccaletti and Nardella (2000), who found that Italian consumers were generally aware and afraid of pesticide residues and more willing to pay higher prices for pesticide free products. For about 70% of the consumers, a premium of 10% above the regular price was acceptable.

Research Question 2:

Are there any significant differences in consumers' attitudes towards buying organic food based on gender and educational level?

The findings of this study showed no significant difference between attitudes towards buying organic food based on gender. That is, male and female participants did not have different attitudes towards buying organic food. The results of this study are consistent with Thompson and Kidwell (1998) who studied consumer preference and demand for organic food. Their results revealed that gender effects were not statistically significant. Byrne, Toensmeyer, German, and Muller (1991) focused on identifying the demographic characteristics of households buying organic food. Their result also revealed that there was no significant relationship between attitudes towards buying organic food and gender. It is possible that public concern about food quality has intensified in recent years, so both women and men are worried about the quality of food they eat. The public concern might be the reason for both males and females to buy and consume organic food.

However, the findings of this study are inconsistent with the research of Yi (2009). She studied consumer behavior towards organic food consumption in Hong Kong and found gender differences to be related to consumers' attitudes towards buying organic food. Young females with a high school degree or less and above average household income were the group found to have the highest probability of purchasing costlier organic produce. Women have been found to be more interested in organic food than men, and to be more frequent buyers than men (Davis, Titterington, & Cochrane, 1995; Wandel & Bugge, 1997; Mei-Fang, 2007). This may be partly because women are usually the primary grocery shoppers in most households, and consequently are more informed about nutrition and food safety.

In terms of educational level, the study revealed that there were significant differences in attitudes based on educational level. Participants held lower than Bachelor's degree had higher attitudes towards buying organic food than those who held Bachelor's degree or higher. It is possible that participants who held lower than a Bachelor's degree may know fewer ways or method to promote their good health. One of those ways is organic food consumption. In contrast, those participants who held Bachelor's degree or higher would know various and selective ways to promote their good health rather than consuming organic food; for example, avoiding to consume vegetables that contain high-level of pesticides, using proper ways to get rid of toxic residues from vegetables, going to fitness, and doing detoxification. The finding of this study is supported by several studies investigating attitudes towards organic food. For instance, Misra, Huang, and Ott (1991), and Thompson and Kidwell (1998) revealed that higher levels of education decreased willingness to pay for organic food. One possible explanation of this finding is that more educated consumers consider that it is unreasonable to pay higher prices for organic food. Consumers with higher education may have had a better understanding of the true risks associated with residue contamination on fresh produce. Therefore, the consumers were more likely to believe that the benefits received from food free of pesticide residues did not justify the additional cost. Another possible explanation for the negative relationship between education and willingness to pay might be that the consumers who had higher educational level tended to expect higher quality and demand a safe product without having to pay extra for organic food (Zellner & Degner, 1989).

The results of this study are contradictory to Magnusson, Arvola, Koivisto, Aberg, and Sjoden (2001), and Wier & Andersen (2003). These researchers concluded that higher educational level increased the likelihood of purchase of organic products. The

researchers also found that people with higher educational levels were more likely to express high attitudes towards organic products, and require more information about their production and process methods. Moreover, the consumers were more willing to pay a premium for organic food (Jolly, 1991; Wandel & Bugge, 1997). Dimitri and Oberholtzer (2009) also revealed that consumers who had higher levels of education were more likely to buy organic products than less-educated consumers. It is possible that consumers with higher educational achievements tended to have higher incomes (Sangkumchaliang & Huang, 2009) and higher income households were more likely to form high attitudes about organic food and to purchase more of them (Magnusson, et al., 2001). Therefore, without any cost concern, consumers with higher educational levels and income seem to have more confidence and effort in buying and consuming organic food. Moreover, the consumers with higher educational levels tend to gain more information about the benefit of organic food from many sources; for example, educational institutes, workplaces, and shopping centers, than those consumers with lower educational levels. Consequently, attitudes towards buying organic food of the consumers with higher educational levels are higher than consumers with lower educational levels.

Limitations of the Study and Recommendations for Further Research

This study has some limitations. Firstly, the number of participants in the study was limited to 90 consumers purchasing at Lemon Farm; it might not, therefore, accurately reflect the wider population. Further studies should investigate a larger number of participants and also choose participants from various places other than Lemon Farm. The findings may then more completely reveal consumers' attitudes in this area. Secondly, this study employed a questionnaire; consequently, it may not provide in-depth

results. Conducting a short interview with consumers and getting them to complete an open-ended questionnaire are recommended for further studies in order to reveal more in-depth information about consumer attitudes towards buying organic food. Lastly, the demographic variables used in this study were only gender and educational level. Therefore, further studies could investigate other demographic variables such as age, income, marital status, and/or occupation in order to find out whether these factors have any significant impact on attitudes towards buying organic food.



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APPENDIX A

THAI VERSION OF QUESTIONNAIRE

แบบสอบถาม

เรื่อง เจตคติของผู้บริโภคต่อการเลือกซื้ออาหารเกษตรอินทรีย์

แบบสอบถามเจตคติของผู้บริโภคต่อการเลือกซื้ออาหารเกษตรอินทรีย์ประกอบไปด้วยข้อคำถามจำนวน 2 ตอนคือ ตอนที่ 1 ข้อมูลส่วนบุคคล และ ตอนที่ 2 เจตคติของผู้บริโภคที่มีต่ออาหารเกษตรอินทรีย์ ขอความกรุณาตอบแบบสอบถามทุกข้อ และการตอบคำถามของท่าน ผู้วิจัยขอรับรองว่า ข้อมูลทั้งหมดนี้จะถูกเก็บเป็นความลับ

ตอนที่ 1 ข้อมูลส่วนบุคคล

คำชี้แจง โปรดตอบแบบสอบถามโดยกาเครื่องหมาย ลงใน หรือเติมตัวเลขลงในช่องว่างที่ตรงกับความเป็นจริง

1. อายุ _____ ปี

2. เพศ

ชาย

หญิง

3. ระดับการศึกษา

ต่ำกว่าปริญญาตรี

ปริญญาตรีหรือสูงกว่า



ตอนที่ 2 เจตคติต่อการเลือกซื้ออาหารเกษตรอินทรีย์

คำชี้แจง โปรดพิจารณาข้อความในแต่ละข้อว่าตรงกับความเป็นจริงของท่านเพียงใดและใส่เครื่องหมาย

✓ ลงในช่องหมายเลขทางขวามือเพียงช่องเดียวที่ตรงกับระดับความคิดเห็นของท่าน

ข้อความ	น้อยที่สุด	น้อย	ปานกลาง	มาก	มากที่สุด
1. อาหารเกษตรอินทรีย์เป็นผลิตภัณฑ์ที่มีประโยชน์ต่อสุขภาพ					
2. อาหารเกษตรอินทรีย์เป็นผลิตภัณฑ์ที่ปราศจากการใช้สารเคมี เช่น ปุ๋ย ยาฆ่าแมลง ฯลฯ					
3. อาหารเกษตรอินทรีย์มีกระบวนการผลิตที่เป็นมิตรต่อสิ่งแวดล้อม					
4. อาหารเกษตรอินทรีย์เป็นผลิตภัณฑ์ที่มีราคาแพงและเป็นการสิ้นเปลืองค่าใช้จ่ายโดยไม่จำเป็น					
5. ราคาของผลิตภัณฑ์อาหารเกษตรอินทรีย์มีความเหมาะสมกับคุณภาพที่จะได้รับ					
6. ความหลากหลายของอาหารเกษตรอินทรีย์มีผลต่อการตัดสินใจเลือกซื้อ					
7. อาหารเกษตรอินทรีย์ที่มีเอกสารประกอบอย่างชัดเจนมีผลต่อการตัดสินใจเลือกซื้อ					
8. คำอธิบายของพนักงานขายเกี่ยวกับวิธีการผลิตและคุณประโยชน์ของผลิตภัณฑ์อาหารเกษตรอินทรีย์มีผลต่อการตัดสินใจเลือกซื้อ					
9. ฉันพึงพอใจในรสชาติอาหารเกษตรอินทรีย์					

ข้อความ	น้อยที่สุด	น้อย	ปานกลาง	มาก	มากที่สุด
10. ฉันรู้สึกสบายใจและเชื่อมั่นว่าตนเองจะมีสุขภาพดีเมื่อได้บริโภคอาหารเกษตรอินทรีย์					
11. ฉันพึงพอใจในประโยชน์ที่จะได้รับจากการบริโภคอาหารเกษตรอินทรีย์					
12. ฉันพึงพอใจในความปลอดภัยต่อสุขภาพเมื่อบริโภคอาหารเกษตรอินทรีย์					
13. ฉันพึงพอใจในราคาของอาหารเกษตรอินทรีย์เมื่อเทียบกับคุณประโยชน์ต่อสุขภาพที่จะได้รับ					
14. ฉันชอบอาหารเกษตรอินทรีย์ที่มีเอกสารประกอบการเลือกซื้ออย่างชัดเจน					
15. ฉันพร้อมที่จะซื้ออาหารเกษตรอินทรีย์มาบริโภคเนื่องจากเป็นผลิตภัณฑ์ที่มีคุณประโยชน์ต่อร่างกาย					
16. ฉันพร้อมที่จะซื้ออาหารเกษตรอินทรีย์มาบริโภคเนื่องจากเป็นผลิตภัณฑ์ที่ปราศจากสารเคมีตกค้าง					
17. ฉันพร้อมที่จะซื้ออาหารเกษตรอินทรีย์มาบริโภคเนื่องจากมีรสชาติอร่อย					
18. ฉันพร้อมที่จะซื้ออาหารเกษตรอินทรีย์ในราคาที่เป็นอยู่ในขณะนี้เมื่อเทียบกับคุณประโยชน์ต่อสุขภาพที่ฉันจะได้รับ					

** ขอขอบพระคุณที่ให้ความร่วมมือในการตอบแบบสอบถาม **



APPENDIX B

ENGLISH VERSION OF QUESTIONNAIRE

Questionnaire

Attitudes of consumers towards buying organic food

This questionnaire is designed to explore *the attitudes of consumers in Bangkok metropolitan area towards buying organic food*. The questionnaire consists of two parts. The first part is demographic information, and the second part is attitudes towards organic food. Please fill out all questions. All responses will be kept confidential.

Part 1: Demographic Information

Directions: Please make a checkmark ✓ in the or fill the number in the blank that applies to you.

1. Age _____ years

2. Gender

Male

Female

3. Educational Level

Lower than Bachelor's degree

Bachelor's degree or higher

Part 2: Attitudes towards organic food

Directions: Please rate your attitude by marking ✓ on the statement level which you agree.

Statements	Very low	Low	Moderate	High	Very high
1. Organic food products benefit for health.					
2. Organic food products are free from chemical use such as chemical fertilizer, pesticides.					
3. The production process of organic food products is friendly to environment.					
4. Organic food products are expensive and wasteful expense.					
5. Organic food product price is reasonable to its quality..					
6. A variety of organic food advertisement has an effect on buying decision.					
7. Organic food with product details has an effect on buying decision.					
8. A salesperson's explanation regarding the production process and the benefits of product influences buying decision.					
9. I am satisfied with taste of organic food.					
10. I feel comfortable and confident that I will have a good health when I consume organic foods.					

Statements	Very low	Low	Moderate	High	Very high
11. I am satisfied to get the benefits of organic food.					
12. I am satisfied with the safety of organic food to my health.					
13. I am satisfied with the product price compared to the health benefits that I can get.					
14. I am satisfied to organic food with clear purchasing documents.					
15. I am ready to buy and consume organic food because of its benefit.					
16. I am ready to buy and consume organic food because of its chemical residue free					
17. I am ready to buy and consume organic food because of its taste.					
18. I am ready to buy organic food at current prices compared with the health benefits I get.					

**** Thank you for the time you have spent to answer the questionnaire ****



APPENDIX C
RELIABILITY

Reliability Statistics

Item	Cronbach's Alpha
1	.89
2	.90
3	.89
4	.91
5	.89
6	.90
7	.89
8	.89
9	.89
10	.89
11	.90
12	.89
13	.89
14	.89
15	.89
16	.89
17	.90
18	.89
Overall	.90



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