THAI CONSUMERS' PERCEPTION TOWARDS BLACK GARLIC

PUI SENG LEE

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……………………..…...………......
Miss Pui Seng Lee
Candidate

....
Asst. Prof. Randall Shannon,
Ph.D.,
Advisor

....
Asst. Prof. Chanin Yoopetch,
Ph.D.
Chairperson

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

....
Ronald Surachai Thesenvitz,
Ph.D.
Committee member

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Pui Seng Lee

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PUI SENG LEE 5949098

M.M. (MARKETING AND MANAGEMENT)

THEMATIC PAPER ADVISORY COMMITTEE: ASST. PROF. RANDALL SHANNON, Ph.D., ASST. PROF. CHANIN YOOPETCH, Ph.D., RONALD SURACHAI THESENVITZ, Ph.D.

ABSTRACT

This research aims to explore Thai consumer's perception towards black garlic and their motivations toward black garlic purchasing decision. Online questionnaire is being used as an instrument to conduct a quantitative research. 200 samples were collected using convenience sampling method, whereas a screening question was put at the beginning of questionnaire asking if respondents have ever purchased any supplementary foods within last one year. The period of samples collection is between March to April 2018. The collected data was analyzed using descriptive and crosstabulation in SPSS.

The study reveals that consumers do perceive black garlic as foods that benefit their health in terms of cholesterol reduction and antioxidant. But, as of present, they do not consider these main benefits of black garlic are necessary. Instead, if they happen to encounter with these health issues in the future, they would consider purchasing black garlic to consume. The study also found that the more positive respondents are towards white garlic, the more positive they are towards black garlic. Vice versa, the more negative respondents are towards white garlic, the more negative they are towards black garlic. And if sample products are offered, the likelihood score that respondents would try the product is higher. From these results, researcher concludes that there is opportunity for black garlic to successfully market in Thailand. Product sampling will be an effective way to encourage purchasing decision as respondents who have appetite for white garlic would be more likely to try black garlic and more than 70% of respondents are positive on white garlic. Avoidance approach is recommended to use on communication as consumers do not consider benefits of black garlic are necessary until they expect to experience those relating health problems in the future.

KEY WORDS: Marketing Mix Factor/ Consumer Behavior/ Black Garlic

96 pages

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CHAPTER I
INTRODUCTION

1.1 Introduction:

For over 40 centuries, garlic has been used as food for favoring and as medicinal ingredient for human vitality remedies purpose. Greek and Roman athletes used garlic as the agent to supply strength and courage prior to the sporting events. Egyptian fed garlic to the working class as in the building of the pyramids to maintain and increase strength. There is also a belief that Egyptian pharaohs use garlic for providing spiritual benefits. Evidences in ancient Chinese shows that garlic was used as daily diet with food and as, in combination with other herbs, a healing tonic to aid health problems; such as respiration, digestion, worm infestation, fatigue, headache and even depression (Rivlin, 2001).

Despite its peculiar smell which makes it not enjoyed by many people, it is widely used globally. In figure 1.1, the garlic global consumption in year 2015 is amounted to 25,092 thousand tons with the highest concentration in China. The global garlic consumption shows stable growth from year 2007 to 2015, and is likely to continue its growth.

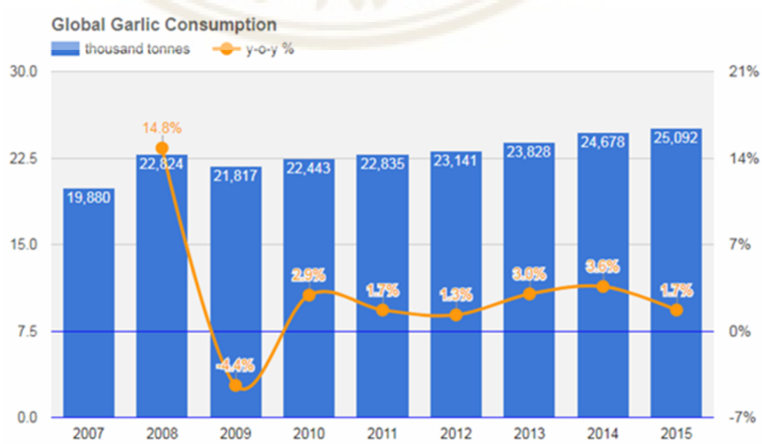


Figure 1.1 Global Garlic Consumption

Source: Global garlic consumption (2015)

According to FAO (Food and Agriculture Organization), the largest producer of garlic is China with production volume of 20,058,388 tons in year 2014. India takes the number two spot, followed by Republic of Korea. While Thailand is being ranked as the 20th largest producer with a production volume of 72,109 tons in year 2014.

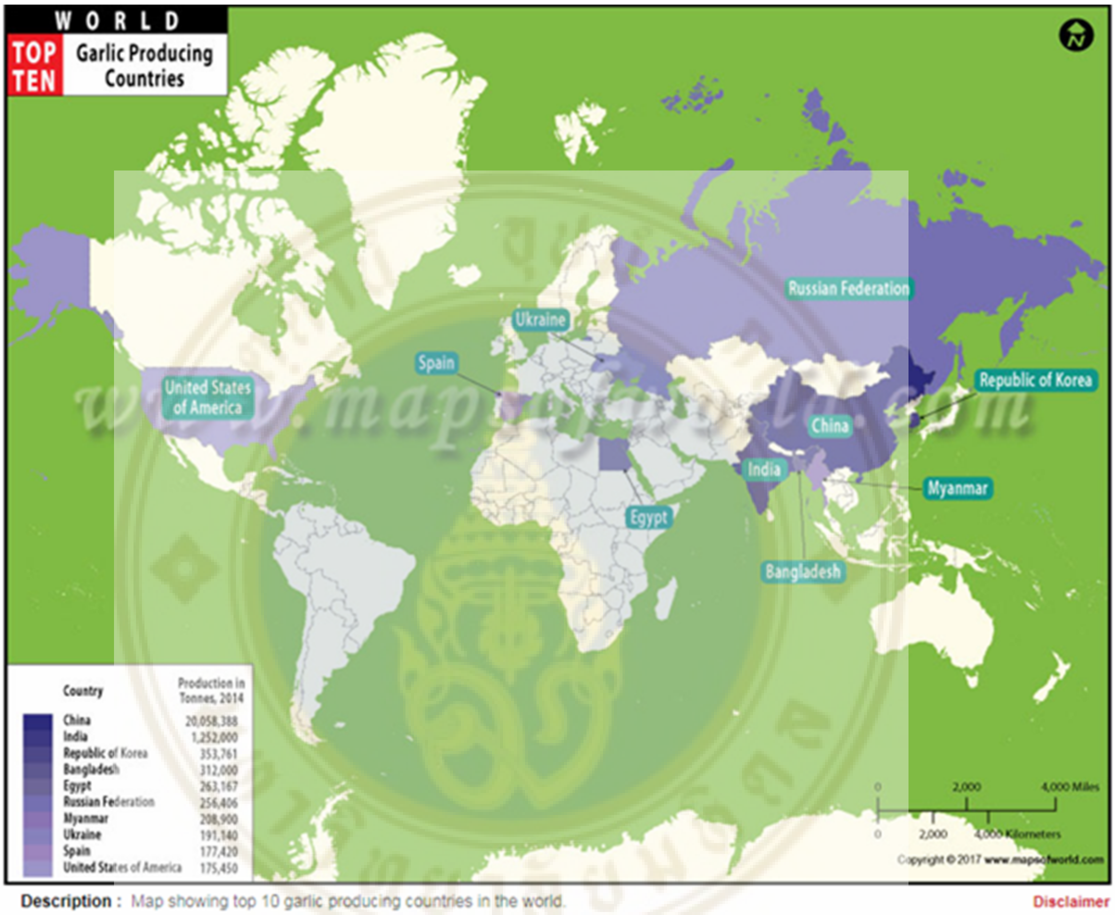


Figure 1.2 **World Top Ten Garlic Producing Countries**
Source: Global garlic consumption (2015b)

In year 2016, 99.43% of garlic production in Thailand is from Northern region, including Chiangrai, Phayao, Lampang, Lamphun, Chiangmai, Maehongsorn, Tak, Phrae, Nan, Uttaradit and Phetchabun, the rest of the 0.57% production is from Northeastern region, including Nakhon Phanom, Srisaket and Chaiyaphum. Most of the locally produced garlics are being merchandised within Thailand; only about 3-4% of the total yields will be exported then sold to Thai restaurants and Asian consumers that prefer Thai garlics, which have a more pungent flavor. Aside from garlics farmed to export and consume locally, garlic demands are largely fulfilled by importation with as much as 71,962 tons in year 2014, almost equal to its own local production quantity (Strategy garlic, 2016).

Despite the fact that there are more than 400 species of garlic varieties, there are only four types that can be found in supermarkets today. Hardneck Garlic (Allium Sativum Ophioscorodon) tends to have more intense flavor with 4 to 12 cloves in each bulb and characterized by hard woody central stalks. It is also the specie that offers the most healing properties. Softneck garlic (Allium Sativum Sativum), or often called "culinary garlic", is the most common type usually found in the supermarkets as it lacks the central stalk and produces many more cloves from eight to more than thirty cloves in each bulb. Softneck garlic has a grassier, plant-like taste and doesn't have intense garlicky flavor as its hardneck sibling. In the food industry, softneck garlic is being used in most processed garlic food such as garlic powder and seasoning. Creole Garlic tends to have up to twelve cloves and has light pink to almost purple color to the entire bulb. Unlike the hardneck and softneck garlic, the Creole garlic grows better in warmer climates. Elephant garlic (Allium Ampeloprasum), also called Buffalo garlic, got its name from its large bulb size. It is milder than most garlic and has an onion-y edge to the taste (Ahn, 2014).

More than just great flavoring, many consumers might not be aware of what health benefits garlics can provide. The raw garlic by itself contains many phytocompounds (plant nutrients) which act together to create bio-functional properties that can nourish human body. Nutrients that raw garlic contains are magnesium, calcium, phosphorus, selenium, vitamin b6, vitamin c and, most importantly, allicin. Allicin is the yellowish, organosulfur compound that comes with the garlic's pungent aroma. In fact, garlic do not technically contains allicin, but rather, it contains two agents in separate compartments that react to form allicin: alliin and allinase. Whenever the garlic is being attacked by chopping or crushing, the two enzymes will react to form allicin, which is the natural defensive system of garlic to protect itself from insects and fungi. Allicin has been studied for its ability to serve as antioxidant to prevent cancer, enhancement for immune system, prevention from heart related condition; such as heart attack, atherosclerosis and stroke, as it can lower bad cholesterol and increase good cholesterol. Other benefits such as treatment for drug resistance bacterial infections, fungal infections and prevention from common cold are also evidenced from the clinical studies (What are the benefits of allicin, 2010). The more the garlic is being chopped or crushed, the more allicin will be converted from the alliin stored in the fresh garlic clove. Unfortunately, allicin is short-lived. It will break down and will not reach the biologically active level to human body once it reaches the digestive system neither when the garlics are consumed fresh or powdered. The allinase compound will even be destroyed by the strong acid in human's stomach. Once it is produced from the action of chopping or crushing of fresh garlic, the allicin will break down within 16 hours at 23 °C, and in less than an hour in most cases (Ilić, et al., 2011).

Today, many different types of garlic supplements are commercially available such as garlic powder, garlic oil and garlic extract, each of which may comes in tablet, capsule or liquid forms. These supplements are claimed to provide health benefits, but they cannot maintain the allicin. Although many of these supplements have their labels claimed the allicin potential, but it only refers to how much allicin could be formed when alliin is converted, not how much allicin is actually active.

This is where black garlic can come into play. The actual origin of black garlic invention is still mysterious. However, black garlic has long been consumed in South Korea, Japan and Thailand for centuries, and has only been introduced into other countries around ten years ago. One ancient story from Korea said that its recipe is the happy result from an accident when someone inadvertently left a few bulbs of garlic in a clay pot in the sun, then after a few weeks, the black garlic was discovered. Another modern story said that the black garlic was first introduced by a Japanese researcher in 2005. Then, the other story claimed that it is originated hundreds of years ago in Japan. So there is no definitive answer as to when and how the black garlic was being first produced, but it is known that the black garlic was being introduced to the modern culinary market since early 21 century. And now there are many companies from Korea, Japan, China, Europe and United States producing black garlic using conventional white garlic to cure in modern machines. The curing methods used by those machines involve using heat, humidity, drying and aging.

The garlic that is used in black garlic production are simply the pre-dried garlic consumers usually find in modern trades. In the very initial stage of garlic production, once the leaf top of the garlic plants start to discolor and dry, the garlics will be ready to harvest. If the garlics are harvest too late, the bulbs become discolor, the outer covering skin starts to crack and the bulb might begin to split open, revealing the individual cloves. At this harvesting stage, the garlic bulbs are still fresh and juicy, which is the condition that is not ready to be marketed because they can be difficult to store and spoiled very quickly from fungal infestation. After the fresh garlic are being harvested they will be transferred to the curing stage, which usually takes several weeks depending on the bulb size and volume. In traditional culture where the garlic volume is small, household could cure the garlic bulbs by leaving them in windows, hanging in the rafter of the barns, garages, packing houses or anywhere that has good air circulation, dry and protected from direct sunlight and rain. The best temperature to store garlic is around 55 degree Fahrenheit. Storing in a too hot temperature will invite fungi and storing in a too cold temperature can make them sprout. In a commercial big production lot, the garlic bulbs will be cured in a forced air dryer machine. When the garlic bulbs are completely dried, cleaned and discard damaged bulbs, the stems and roots will be trimmed to be ready for shipping (Davis, 2014).

The most common type of garlic that is used for black garlic production is the softneck garlic which is more widely available in the market and usually yields more cloves in a bulb. In the making of black garlic, after the whole cured garlic bulbs have gone through classifying and cleaning process, they will be placed in the fermenting machine. Although the process is called fermenting but it is actually more like an aging process which involves enzymatic breakdown from pure garlic over time. The slow roasting process is converting the sugar in the garlic cloves from white to brown color and then to black under the influence of heat. There are no additives, preservatives, burning or any microbial action. After the garlic bulbs are laid on the trays, they will be transferred into the machine. The technicians will then control the machine to make sure that the garlics are exposed to the right heat and humidity range throughout the aging process. The garlic will be kept under controlled environment of 60-77 degree Celsius and 80-90% RH humidity for 60 to 90 days, depending on the size and the quantity of garlics. As shown in figure 1.3, after 30 days in the fermenting machine, the garlic meat will start to turn slightly brown, then start to turn black in day 40. In day 60, the garlics will turn completely black and much of the garlicky taste and smell will be gone. And by day 90, the black garlic meat inside the bulb will dried up from the oxidization and separated from the skin, leaving with the soft, chewy texture with flavors reminiscent of balsamic vinegar and soy sauce, with a sweet prune-like taste of healthy black garlic (Kimura, et al., 2017).

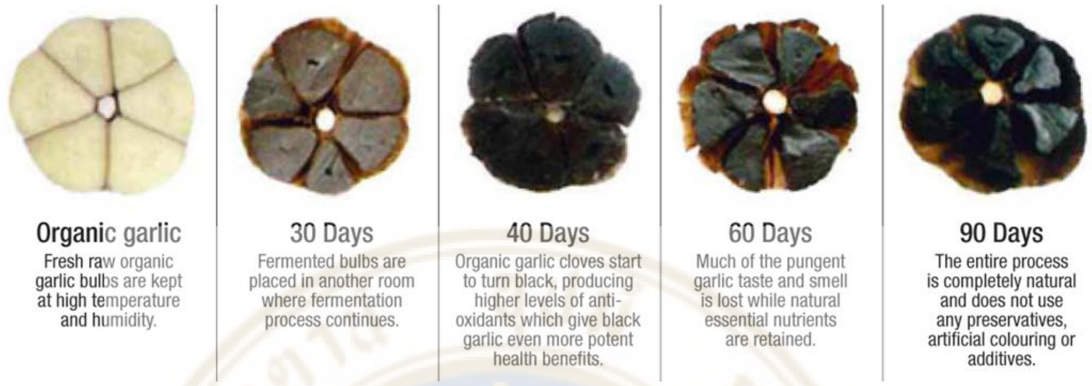


Figure 1.3 The Slow Roasting Process in Black Garlic Production
Source: What is black garlic (2017)

Black garlics are widely sold as health supplementary food in Korea, Japan and China in forms of black garlic itself, capsules, powder, drinks, paste, puree, jelly, candy and many others. There are many researches which confirm that black garlics can provide stronger health benefits when comparing to fresh garlics. One study done by a group of Korean researchers in year 2009 tested the ability of black garlic in providing the antioxidant effect in mice, which strongly correlated with the decreased risk of diabetic complications, by feeding them with diet containing black garlic for seven weeks. The lab tests resulted that consumption of aged black garlic exerts 4.5 times higher antioxidant effect than garlic in vitro in mice, thus could be useful in preventing diabetic complications (Lee, et al., 2009). Another study published in year 2011 done by a group of medical students from China tested the anticancer effect of black garlics. During the test, tumor-bearing mice were treated with various dosage of aged black garlic extracts for two weeks. The result shows a significant antitumor effect of aged black garlic extracts, which may partly due to its antioxidant and immunomodulatory effects from SAC (s-allylcycteine), a highly beneficial sulfur compound which biologically converted from allicin during fermentation process (Wang, et al., 2011). When comparing to the allicin, SAC is a more prevalent compound which can contributes to many health benefits such as its antidiabetic, antioxidant, and anti-inflammatory. Other promising beneficial actions of black garlics that were claimed are reduction in blood sugar, reduction in bad cholesterol, inhibition of cancer growth, anti atherosclerosis and antitumor development. Upon fermentation, black garlics could result in higher amount of essential amino acids when comparing to the raw garlics. The figure 1.4 below shows the average black garlics fermentation outcome on useful essential amino acids.

Table 1.1 Amino Acids Concentration Comparison Between Fresh Garlic and Black Garlic

	Components of black garlic compared with fresh garlic	Original concentration
Water-soluble sugar	Increased 1.88–7.91-fold	450 mg/g
Polyphenol	Increased 4.19-fold	13.91 mg GAE/g
Flavonoid	Increased 4.77-fold	3.22 mg RE/g
Amadori & Heyns	Increased 40–100-fold	10 μg/g
Fructan	Decreased 0.15–0.01-fold	580 mg/g
Leucine	Increased 1.06-fold	58.62 mg/100 g
Isoleucine	Increased 1.67-fold	50.04 mg/100 g
Cysteine	Decreased 0.58-fold	81.06 mg/100 g
Phenylalanine	Increased 2.43-fold	55.64 mg/100 g
Tyrosine	Decreased 0.18-fold	449.95 mg/100 g

Note: GAE = gallic acid equivalents; RE = rutin equivalents.

Source: Kimura, et al. (2017b)

According to many existing producers of black garlic, black garlics are currently being consumed among consumers in Korea, Japan, China, Europe and United States. It becomes popular in both health supplemental food purpose and culinary purpose. Its appearance on several American foods related television programs such as Top Chef and Iron Chef also makes it a popular culinary ingredient. Its demand also gained from being used as ingredient in modern cookbooks and celebrity chefs' menus. Chefs were using black garlic for making purees, dressings, sauces, and as adding to pizzas, pastas or rice dishes (www.specialtyproduce.com). In Japan, the number of the black garlic companies reaches over 500 last year in Japan alone, and some of them expanded their production plants to other countries. As for in Thailand, black garlics are mostly produced by small local SME firms, targeting on consumers who consume for health benefits purpose. There are already few companies existing in Thailand that produce and selling black garlics, but black garlic products sold by these producers are not actively being distributed and marketed. B-Garlic by Nopphada is a black garlic manufacturer and seller of black garlic product. Products are distributed to coffee shops, small chained health retails and restaurants in upcountry area. They also have their own webpage selling black garlic products online. Products include black garlic packaged in standing paper box and in screw glass bottle packages. Products are available from 20 grams to 1 kilogram size, selling at 50 to 1,200 baht. King Black Garlic is also another producer and distributor that sells black garlic. Their products include peeled and unpeeled black garlic packaged in standing paper box, ziplock pouch and screw glass bottle selling at 580 to 2,150 baht. Aside from selling black garlic as food, they also sell in forms of black garlic extract, honey and soap. King Black Garlic only sells their products through their webpage, arranges delivery by themselves and don't distribute their products to retail stores or resellers. Another producer and seller call Black Garlic (Thailand) even target on exporting black garlic to end consumers in other countries. They run their own facebook page selling black garlic products online to foreign consumers and ship the products out worldwide. There are many other existing black garlic products competitors in Thailand, but majority of them are not effectively reached out to the end consumers.

According to the data from CEIC and IMF, consumer behavior has undergone a major change in recent year, especially throughout developing countries in Asia. Their consumption spending has moved beyond necessities toward discretionary goods. For example, the discretionary goods and services rose from 40% in 2000 to a share of 50-60% of total spending in 2015. Referring to the CEIC and IMF data, when per-capita income exceeds 20,000USD, the growth in necessities consumption spending will becomes flat or insignificant.

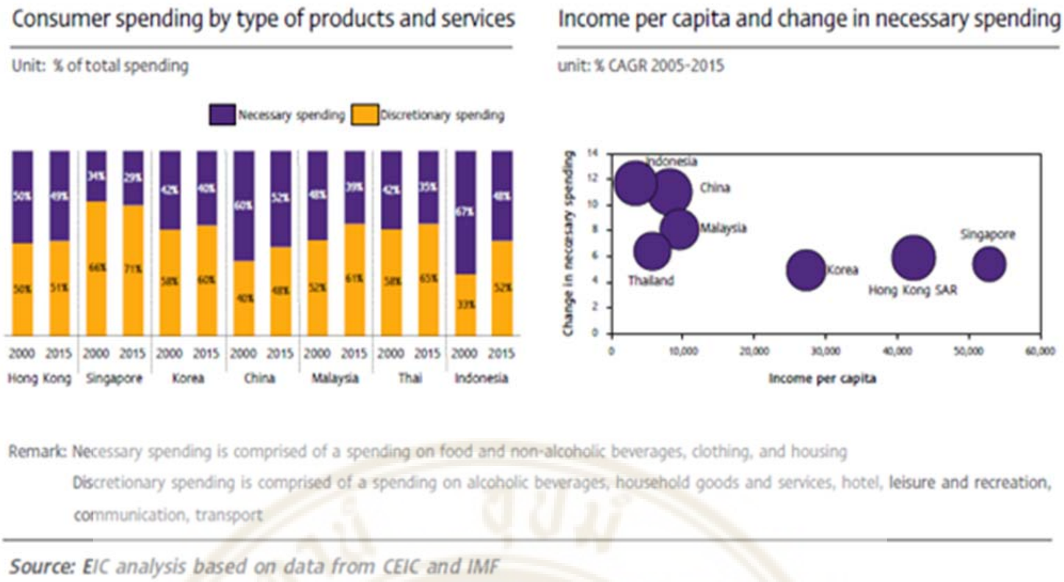


Figure 1.4 As Per-capita Incomes Rise, the Share of Spending on Necessities Declines

Source: Amornvivat, et al. (2017)

To magnify further over the spending on discretionary goods, let's look at the Global health and wellness market data from World Bank and the Global Wellness Institute in figure 1.6. According to the data, global wellness market value grew by 14% per year between 2010 and 2015, but global healthcare market grew only by 4% during the same period. So today's consumers do not want just good health, but also well-being, which includes health food, health tourism, exercise and alternative medicine. The data also reveals that those wellness spending increasingly shifts towards internal care rather than external care. For example, consumers spending on beauty and anti-aging is losing its share from 35% in 2010 to 26% in 2015. On the other hand, consumer spending on wellness which enhances internal care is growing its share. Products for internal wellness include healthy food, fitness & mind-body, preventive & personalized medicine, and complementary & alternative medicine, which black garlic falls into the first and last categories.

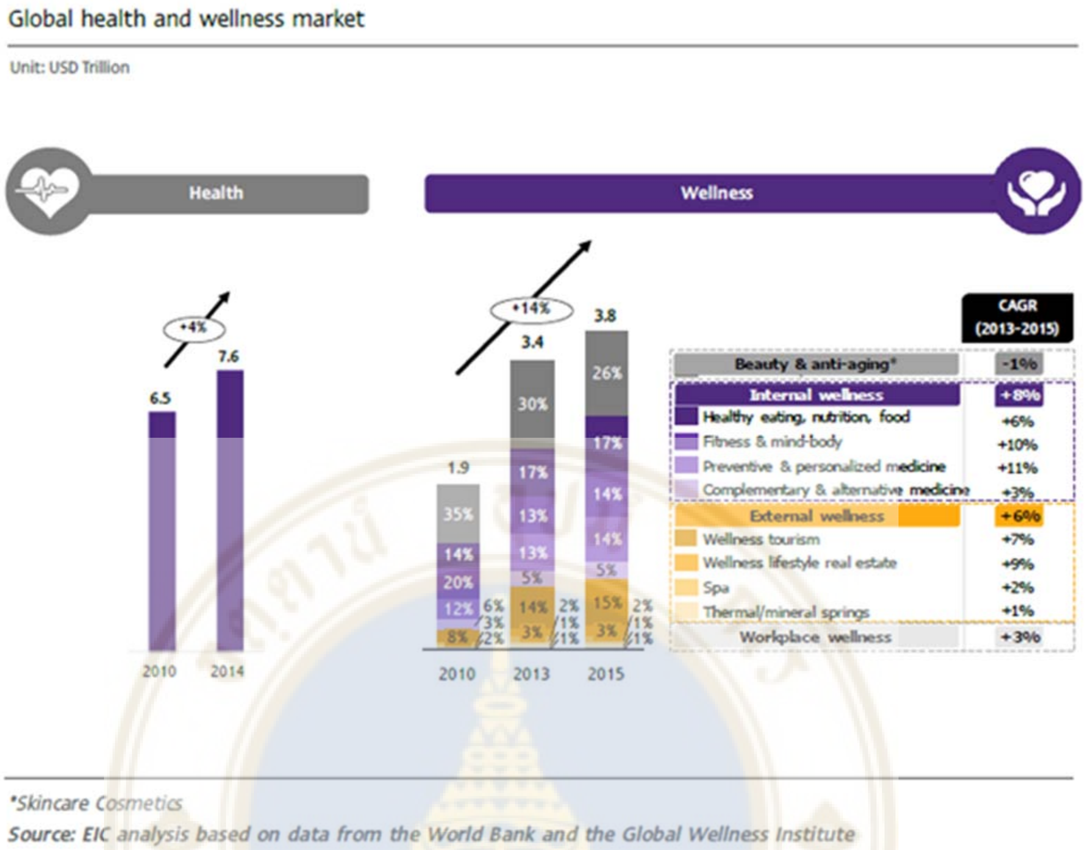


Figure 1.5 Global Health and Wellness Market

Source: Amornvivat, et al. (2017b)

It is clear that products fall into the healthy food and alternative medicines categories will capture the new global consumption trend, but could this trend be applied with the Thai consumers? From the consumer trends in Thailand 4.0 research published in June 2017 by EIC (The Economic and Business Intelligence), the group of consumers age between 30-59 years old can be the ideal target for black garlic product. According to the EIC research conducted on 5,701 samples living in Thailand, Thai people are concerned about their health but rarely exercise. When asked about what concern them most, more than 40% of them answered that they worry most about their health, especially those with age above 30 years old. Interestingly, only one out of five of those who worry about their health do regular exercise, despite the fact that it is the basis for good health. Alternatively, those consumers said that they increasingly turn to food supplements instead. The EIC research surveyed the participants further on the dietary supplement topic and found that over 55% of consumers age between 30-59 years old take dietary supplements. Moreover, their demand for dietary supplement increases with age, contrary to their tendency to exercise. This result reflects well with the busy lifestyle of today's consumers in which dietary supplements are perceived to be the convenient way to maintain their good health.

Given the evidence that the new consumer spending trend is growing towards internal care, or so called the beauty from within. And Thai consumers are becoming more aware about health and leaning more towards taking dietary supplements than doing regular exercise. Black garlic product will have potential in Thai market especially among consumers age between 30 - 59 years old as they are the target group that tends to spend on healthy food and alternative medicines made from those healthy foods. But by the fact that, for Thai consumers, garlics are perceived as food ingredient that used for flavoring and black garlics are produced to be eaten alone as supplement, it will be important to research further on consumers' attitudes and behaviors towards dietary supplements and their perceptions towards black garlics.

1.2 Objectives

1. To explore consumers' perception towards black garlic.
2. To explore the motivations toward black garlic purchasing decision.

1.3 Limitations of the Research

This research will focus on exploring consumer awareness and interest in black garlic. This research will limit to people who agree that they concern about their health. The research will be done through questionnaire collect during February - March 2018.

1.4 Benefits of the Research

Understanding the process into purchasing black garlic as healthy product of consumers in Thailand.

The knowledges gain from this research can be used to improve and apply to marketing strategy of existing black garlic producers selling products to Thai consumers.

1.5 Conceptual Framework

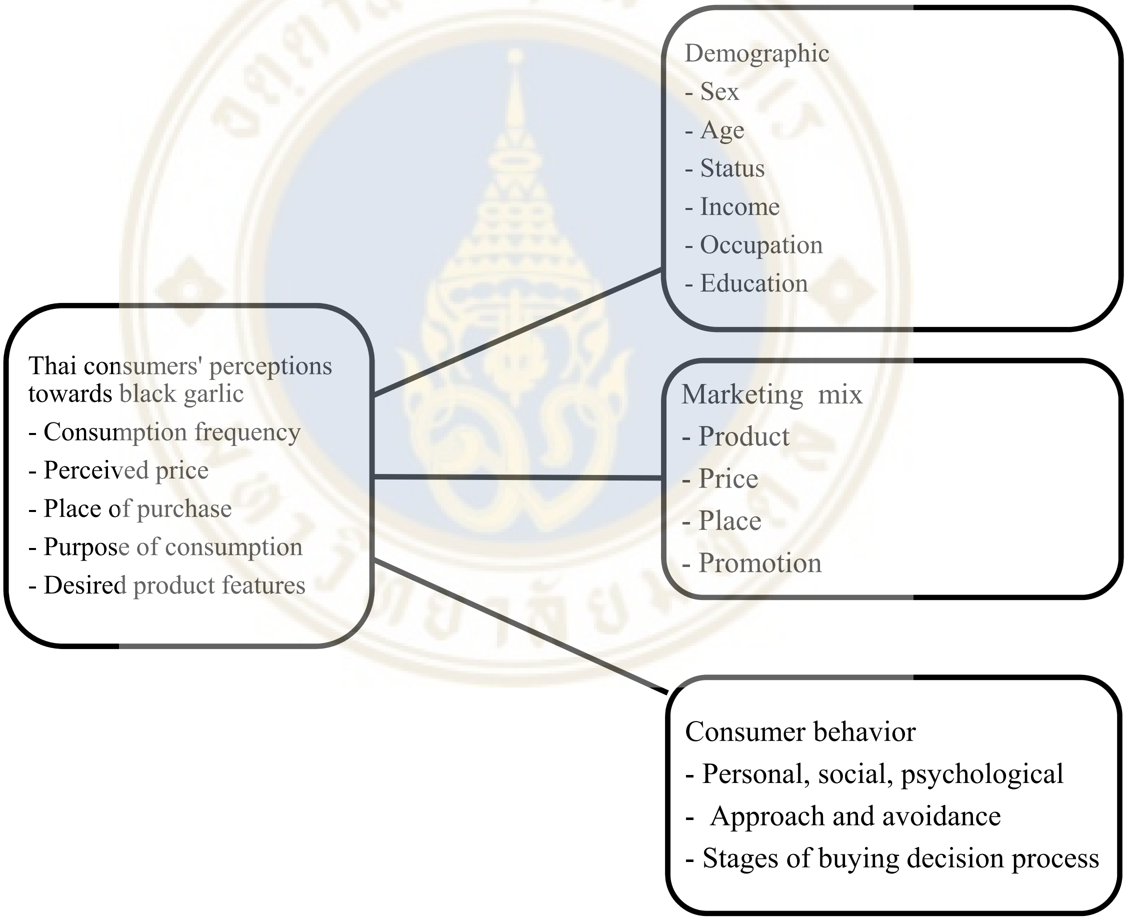


Figure 1.6 Conceptual Framework

1.6 Definition of terms used:

Terms in this study are defined as follows:

1.6.1 Black Garlic

Black garlic is a caramelized form of garlic which browned from normal white garlic through a reaction known as Maillard. It is made by heating the garlic bulb over the course of several weeks until achieve black cloves. The taste is sweet and prune-like with hints of balsamic vinegar.

1.6.2 Supplementary Food

Supplementary food refers to the food products that are intended to augment or supplement the typical dietary intake with the aim to promote health. Supplementary food can be considered as the subset of foods, which can include vitamins, minerals, herbs or foods consume together with or in addition to normal meals. Examples of supplementary foods are Vitamin C pills, Zinc pills, Lingzhi extract, Ginseng root, Bird nest, Goji berries, Chicken essence.

1.6.3 Marketing Mix

Marketing mix is a combination of factors that can be controlled by a company to influence consumers to purchase its products or services. It is also generally accepted as the use of the 4Ps - product, price, place and promotion - to describe the strategic position of a product or service selling in the marketplace.

1.6.4 Consumer Behavior

Consumer behavior is the study of how people make decision to buy products or services. It is a subcategory of marketing that blends elements from psychology, sociology, anthropology and economics.

CHAPTER II
LITERATURE REVIEW

This chapter will discuss on the literatures and past researches related to this study in three main parts, including the consumer behaviors, the marketing mix and the related past research works.

2.1 Consumer Behaviors

This part will emphasizes on four sections, including (1) the definition of consumer behavior, (2) the factors influencing buying behavior, (3) the five different approaches of consumer behavior and (4) the stages of buying decision process.

2.1.1 Definition of Consumer Behaviors

Consumer behavior is a young and growing field of marketing that ties the study of human psychology, motivations and behavior. Many corporations try to gather the data and use the findings about consumer behavior to determine how best to market their products and services. In marketing literature, there are a lot of definitions to the term consumer behaviors. The following are the definitions of the term consumer behaviors.

Consumer behavior is the study of individuals, groups or organizations and all the activities associated with the purchase, usage and disposal of products and services. It also includes the study on consumer's emotional, mental and behavioral responses that happen before or after these aforementioned activities (Angeline G., 2011).

Peter and Olson (2008) define consumer behavior as the study of psychological, social and physical actions when people buy, use and dispose products, ideas, services and practices.

Solomon (2006) define consumer behavior as the process of decision making and physical activity involved in acquiring, evaluating, using and disposing of goods and services to satisfy needs and want.

Belch and Belch (2007) defined consumer behavior as the process and activities of people engage when searching for selecting, purchasing, using, evaluating and disposing of products and services as if satisfy their need and desires.

Understanding consumer behavior is a broad and complicated task, but with the right research strategy, companies can get the advantage of understanding how consumers make decisions on what they buy, want, need and perceive about the products. By understanding consumer behavior, companies can also benefit from being able to identify the opportunities that are not currently met.

2.1.2 Factors Influencing Buying Behavior

Consumer behavior is the study of how consumers select, buy and use the products and services. A consumer might wants to take supplementary food, while another consumer might prefer to cook their own healthy meals. People who share very similar characters might make different purchasing decisions. A consumer might like the product, but he/she might not buy it. To understand how consumers make their buying decisions, it is necessary to understand the factors that affect consumer behavior: personal factors, social factors and psychological factors.

Buying behavior is influenced by a broad range of personal factors. Personal factors that can influence how a person makes decision include age, gender culture, profession or background. Men and women need and buy different products (Ward & Thuhang, 2007). They shop differently and have different attitudes about shopping. Things that consumers want to buy change as they age. A child wouldn’t want to spend his/her 100 baht on fashions, but it can be a big priority as he/she becomes a teen. When he/she ages, the priority might be to spend that money on healthy food or wrinkle cream. Chronological age is the actual age in years, but cognitive age is the age consumers perceived themself to be. A person’s cognitive age affects his or her activities and sparks interests consistent with his or her perceived age. Cognitive age is a significant predictor of consumer behaviors, including people’s dining out, going to bars and dance clubs, playing computer games and shopping (Barak & Gould, 1985). Nowadays, companies discovered that many consumers feel younger than their chronological age, thus refuse products that feature ‘old folks’. This study will try to explore if consumers with different personal factors can have attitudes towards supplementary food and black garlic consumption.

Contrasting to the personal factors, social factors are more outward and diverse. They depend on the world around a consumer. Social factors can include a person's family, social interaction, work, communities or any group of people that a consumer affiliates with. It can also include a person's social class, which associates with his/her income, living conditions and education. In this literature, social factor will be categorized into culture, subcultures, social class, reference groups and family. Culture refers to the shared beliefs, customs, behaviors and attitudes that characterize a society. It is passed down from group of people within a shared community and considered as the broadest influence on a consumer's behavior. A person's culture tell him/her how he/she should live life, which heavily impact things he/she decides to purchase. In developed countries, another big trend is the change of eating habits. Most of the societies start to choose diet with more healthy foods especially with balanced nutritional meals. This boom of the health awareness movement has filled the shelves of the supermarkets with natural and the organic foods (The raising popularity of organic shops, 2017). Subculture is a group of people within a culture who are different from the dominant culture but share something in common. Consumption subcultures cut across demographic, geographic and social boundaries. Consumers with consumption subculture tends to consume based on shared commitment to a common brand or product. Subcultures are important to marketers because they can represent sizeable market segments which are profitable and influential. Many new trends and fashions are emerging spontaneously from within the subculture groups. While health awareness can be a growing global culture trend, it can also be considered as a shared subculture among many groups of people with different demography. Consumers living in different locations, with different ages and different professions could share similar practice of healthy food consumption. Social class refers to a group of people who have the same social, economic or educational status in society. Consumers with similar lifestyles, jobs and tastes are seems to be prevailed among the people in the common groups and they mostly socialized between each other and affect their behavior in the same social class (Fotopoulos and Krystallis, 2002). Reference groups are groups that a consumer identifies with and may want to join. Reference groups influence consumers' attitudes and behavior since consumers belong to certain reference group will make judgments, opinions and actions based on the values presumed by that group. Examples of reference group can be family, clubs, sport teams, political parties or anyone that a person admires. Opinion leaders can act like reference group since they heavily impact social influence from their product knowledge, expertise and credibility. According to Bergstrom (2018), an opinion leader is anyone who has an active voice in a community, anyone who can speak out and is often asked for advice. Opinion leaders are also known as influencers and each of them typically have high level of involvement with certain product category. Health and fitness movement, especially customers of sport and nutrition magazines, is now influencing many industries including food, travel, entertainment and others. These customers tend to be opinion leaders in their social groups by recommending their group to use the supplements advertised in the magazine they read. Family is the most important consumer buying organisation in society. And in countries where parents live with their grown children, their influence can be substantial (Kotler, 2001). Family member have different roles such as initiator, decider, influencer, buyer and user. Depending on the size, structure and hierarchy of the family, the impacts of family members on different product categories are changing in buying decision process (Padel & Foster, 2005). For example, some ads are aiming to make the children nag their parents for certain products that the children don't even use themselves. So as to today, companies are interested in which family members have the highest influence over certain purchases.

Psychological factors is essential for any marketers to take into account when creating campaigns, as each consumer's response to a particular marketing campaign will be based on their motivations, perceptions, attitudes, and ability to learn and understand information. These factors are what consumers use to interact with their world. Consumers use them to recognize their feeling, analyze information, formulate thoughts and take action. By not being careful on the consumers' psychological factor, marketers might risk their campaign end up failing because it is not appealing or not understood by the target audience. Motivation is the force which energizes behavior, gives direction to it and underlines the tendency to persist (Bartol & Martin, 1998). A need becomes a motive when it is aroused to a sufficient level of intensity. Recent studies proved that motivation may affect reasoning through reliance on a biased set of cognitive process (Eagly & Chaiken, 1993). According to theory of individual differences in motivation, behavior is regulated by two distinct systems, an approach system and an avoidance system. According to The Behavioral Activation System (Gray, 1990), an approach system is the system that regulates appetitive behavior toward potential rewards; and an avoidance system is the system that regulates behavior away from potential threats or punishments. People with approach motivation are more responsive to cues of reward, while people with avoidance motivation are more responsive to cues of threat and punishment (Carver, Sutton & Scheier, 2000). Different products require different approach. Most car insurance companies, for instance, would use avoidance approach. Many health and beauty products, however, are applying the approach motivation. According to a study about self-regulation of healthy eating (Myles, 2017), healthy eating requires both trying to eat healthy foods (approach motivation) and trying to avoid unhealthy foods (avoidance approach). The experiment was done by using a 21-day meals design and the research resulted that approaching motivations were more difficult to convince than avoidance motivations. Rossiter and Percy's Purchase Motivations & Emotions in figure 2.1 proposes eight motivations which energize purchase decisions; five negative motives and three positive motives. These motivations are believed to provide positive reinforcement or negative reinforcement as illustrated in the table below, in which the five negative motives can serve as the motivations for the consumption of supplementary food.

Table 2.1 Rossiter and Percy's Purchase Motivation & Emotions

Motivation	Emotional Sequence
NEGATIVE	
Problem removal	Annoyance → Relief
Problem avoidance	Fear → Relaxation
Incomplete satisfaction	Disappointment → Optimism
Mixed approach avoidance	Conflict → Peace-of-mind
Normal depletion	Mild annoyance → Convenience
POSITIVE	
Sensory gratification	Dull (or neutral) → Sensory anticipation
Intellectual simulation	Bored (or neutral) → Excited
Social approval/ conformity	Apprehensive (or ashamed) → Flattered/ proud

Source: Rossiter & Percy (1991)

A motivated consumer is ready to act, but how the consumer acts is influenced by his/her perception of the situation. Perception is how a consumer select the information, interpret the information and make sense of it in his/her brain. The consumer do this through the stimuli that affect the five senses - sight, hear, touch, smell and taste - individually or in combination. This perception process is unique to each consumer and depend on combination of factors such as experiences, expectations, needs and the momentary set. A number of processes are supporting or interfering with how consumer perceive information, which includes selective exposure, selective attention, selective comprehension and selective retention (Trehan & Trehan, 2007). Collectively, these processes explain how and why consumers choose to digest certain messages and ignore others. To make sure that the advertisement message gets to the target audiences and they remember it, companies need to use repetition.

Learning refers to the process by which consumers do or change their behavior after they gain information or experience. Companies are trying to get consumers to learn about their products in many ways, such as giving free samples of new product for grocery shoppers to try or attach the samples over brochures placed at drug store. While giving free samples is an expensive strategy, but it gets consumers to try and learn the product before making buying decision, especially right at the point of sales. According to Osselaer and Alba (2000), consumers learn the relationship between product attributes and quality. They will differentiate among brands that possess different attributes, and treat as commodities for those brands that share the same attributes. Thus, marketers should make sure that the message deliver doesn't possess same attributes as the message of competitors. Another type of learning is Operant or Instrumental Conditioning, which occurs through repetition of behavior that has positive or negative consequences. Example would be a free glass of milk tea after certain number of purchases. Another learning process is Classical Conditioning which occurs when a conditioned stimulus (CS) is associated to an unconditioned stimulus (US) to get a particular response (McLeod, 2014). For example, a consumer might really likes pizza dishes at a restaurant and the restaurant adds black garlic as topping to the pizza of the month menu. As the result, the consumer likes the black garlic and it could be because of the Classical Conditioning that occurred. That is, the pizza at a restaurant produce good feeling and the customer may associate the black garlic with the food, thus producing a good feeling about black garlic too.

Attitudes are 'mental position' of emotion feelings and action tendencies consumers have about a product or service. Because attitudes are based on what a consumer values or beliefs, they are difficult to change. Attitude measurements are necessary to find out how a marketing campaign influence people. Measuring consumers' attitude can also help predict the demand for new product emerges in the market or existing products' future (Chisnall, 1995). And knowing what supplementary food product benefits consumers care about will help marketers to create an effective communication execution.

In conclusion, the main goal of marketing is to satisfy customers' needs and wants and get them to buy and use the product or service. Understanding the factors that affect consumer buying decision - personal factors, social factors and psychological factors - helps marketers to adapt and improve the marketing strategies that are more effectively reach to the target consumers.

2.1.3 Five different approaches of consumer behavior

In marketing, a good understanding of customers' lives to the maximum extent possible is crucial to ensure that the most appropriate products and services are being marketed to the right people in the most effective way possible (Kotler & Keller, 2012). Consumer behavior has been the subject interested by economists, psychologists and management experts. Economists were the first to taken up the study in the nineteenth century, thus, develop an approach named Economic Man Approach. Psychologists and management experts then enter the consumer behavior field later. The Psychodynamic Approach suggests that consumer behavior is determined by the human hard-wired instinct. Then the Behaviorist Approach was developed suggesting that consumer behaviors are resulted as a response to stimuli, or the environment he is in (Sammons, 2005). Then the Cognitive Approach claims that buying decision depends on how consumers process information, how they treat information received and how it leads to responses. The Cognitive model follow five step classification namely problem recognition, information search, alternative evaluation, choice and outcome evaluation (Schiffman, Kanuk and Wisenblit, 2010). Then the Humanistic Approach is developed. After the Humanistic Approach is developed, more and more marketers are believing that the cognitive approach poses some major limitations. First is that it neglects consumers' emotion when they make decision. Second is that it does not consider the concept of volition, the process which different living organisms are thought to developed and diversify from earlier forms or gradual development. Third limitation is that the approach does not consider egoism. Which, humanistic approach aims to understand human subjectivity.

2.1.4 Stages of buying decision process

The American Marketing Association has developed a stages model of buying decision process. In this model, consumer will pass through five stages, which are problem recognition, information search, evaluation and selection of alternatives, decision implementation and post-purchase evaluation.

Problem recognition is the first stage of buying decision. It is when consumers recognize their problem or need, typically defines as the difference between the consumers' current state and the desired state. The needs are trigger when consumer is exposed to internal or external stimulus. Hunger and thirst are internal stimuli, whereas design of package is external stimuli. Social factors, such as culture, sub-culture and reference group, can also cause consumers to change their needs, and the strength of the consumers' need will be the drive for the entire decision process (William, 2002).

When consumers discover a problem, they are likely to engage in internal and external information search. Internal search is when consumers scan their own memory for suitable brands. External search is when consumers search for more options on top of the list of choices in their memory, which can come from internet search, manufacturer websites, shopping around, product reviews or referrals. In fact, if a consumer is aware of the brand, he/she might not consider purchasing it. The consumer will distill the brand list into a set of alternatives that represent his/her purchase options, called consideration set (Clow; & Black, 2001). The main objective of advertising and promotion is to increase likelihood that the brand name is included in consumer's consideration set. Repetition of the brand or message through advertising to different consumers' touchpoints is how marketers increase top of mind brand awareness for the product.

Consumers may make comparisons among choices of alternatives after they got information and distill choices to get the consideration set. The products or services choice within the consideration set that can satisfy needs will be selected. The decision criteria related to benefits may be from either the consumer's utilitarian needs or hedonistic needs.

Decision implementation step occurs when the consideration set has been considered and narrowed down to choice that consumer will finally buy. The consumer may has an intention to buy the most preferred brand, but end up making decision to buy another brand. This is due to two main factors that can intervene between purchase intention and purchase decision. The first factor is the attitude of other people. The preference towards a brand will increase if someone that the consumers respect has favor towards that brand. The second factor is the perceived risk or the unanticipated situational factors that may occur to switch the purchase intention (William. 2002: 58).

After consumers use the product, they will make a post purchase evaluation. The evaluation can come out in three different results. First, the actual performance matches with the consumers' expectation, leading to neutral feeling. Second, the performance exceeds the consumers' expectation, leading to a positive disconfirmation of expectation. When the consumers are satisfied, they will exhibit a higher chance of repurchase. Last, the performance is below expectations, causing a negative disconfirmation of expectation or dissatisfaction. The suggestion is that the product claims must represent the product's performance. By not delivering the claimed product benefits may results in dissatisfaction and cause consumers to form negative attitudes toward the brand or eliminate the brand from their purchase options.

This stage of buying process helps marketers create the strategy to recruit and retain customers to purchase their products in the future. But marketers must also be aware that, in reality, consumers often skim or even reverse some stages. And in some cases, information searches often precede brand preference formation and search behaviors can vary according to each consumer's characteristics (Stoyanova, 2014). This research will focus on exploring on the problem recognition, information search, and selection of alternatives stages.

2.2 Marketing Mix

The marketing mix refers to the set of actions or tactics that a company uses to promote its brand or product to the market (The Economic Times). There are typically four elements that make up a typical marketing mix are price, product, promotion and place. All elements influence one another. They make up the business plan for a company and if handles effectively, they can give great success.

Product refers to any tangible or intangible item marketers sell to consumers to satisfy their needs and wants. The product must deliver at least minimum level of consumers' expected performance.

Price refers to the value that marketers place on a product. The price is also depends on the production cost, target segment, consumers' willingness to pay, supply-demand and consideration of competitors. Price can also be used to differentiate and judge the image of a product.

Place not just refers to the point of sale. Place is actually refers to placing the right product to the right locations that can be easily accessed by consumers. The right location and product placement can be done through exploring on the channels of distribution that consumers purchase products from.

Promotion refers to all activities executed to make the products or services known to the consumers and trade parties. Marketers need to plan promotional activities with the communication process in mind. The elements of communication process include sender, encoding, message, media, decoding, receiver, feedback and noise (Kotler, 2001).

This research work will try to understand how consumers behave towards product, price and place of supplementary food products, and explore how they perceive these elements should be for black garlic.

2.3 Related Research

Since this research is focusing on the marketing mix and consumer behavior factors affecting black garlic consumption, the past researches will be related to factors of marketing mix and consumer behavior associated to supplementary or functional foods.

Kitthanabhumi (2005) studied on market factors that influence the buying behavior of various types of consumer supplement product in Bangkok area. The research found that personal factors have various effects over consumers' decision to purchase supplement product. The hypothesis testing found that consumer behaviors toward supplement food is associated with their decision to choose different types of supplement food. The marketing mix - product, price, place and promotion - is associated with the decision to buy supplement food that promote health. The placement factor of marketing mix is associated with decision to buy supplement food that help with acne. The promotion, product, personal and social factors together associated with decision to buy supplement food that help maintain optimum brain function.

Thitapha & Manu (2011) study on the marketing mix factors that affect consumers buying behavior on brain and memory maintenance supplements in Bangkok. Most respondents in the research that found to be the consumers were female, aged lower or equal to 30 years old, single widowed divorced or separated, holding lower or equivalent o bachelor degree, work as private firms' employees and have average income of lower than or equal to 20,000 baht per month. The result shows that the consumers purchase supplements three times per every six months and would spend 1,290 baht on each purchase. The research also found that age, price and place factors are associated with the frequency of the purchase. Also, occupation, monthly income, place and promotion factors are associated with the price consumers willing to pay for the supplement.

Annop and Sarawan (2015) study on the factors related to decision making to buy functional food products for senior citizens in the Bangkok metropolis. The research found that all marketing mix factors are correlated with their buying decisions. The highest is the place, second is promotion, while product is the last factor. The research also reveals that family and reference group are the two factors that correlated with the buying decision.

Chaihiranwattana (1997) also reveals his study that approval from Food and Drug Administration (FDA), quality of products and suggestions from doctors are the three most rated factors that correlated with consumers' buying decision. The research adds that gender is not correlated to the purchasing decision.

Seksan & Warangkhana (2014) study of consumer behavior on vitamin supplement products in Bangkok shows that respondents have very good perception on the product, place and promotion factors, but average perception towards price factor.

This research also found that consumers buy supplement three times every six months, while they purchase because their reference group also purchase the supplement brand

In conclusion, there have been many past researches studying on consumer behavior and marketing mix which focus on different supplementary food, functional food or vitamin products. Many researches confirms that the reference group, opinion leader and family have high influence on the choices consumers decide to buy. On the other hand, those researches also result that product, place and promotion factors are related to consumer buying decision. Although these research focuses on the relationship of marketing mix and consumer behaviors factors towards consumption of supplementary food, there is no specific study on those factors towards black garlic product. This research, therefore, attempted to study the how marketing mix and consumer behavior could influence the consumers' buying decision on black garlic.

CHAPTER III
METHODOLOGY

This chapter will presents the methodology of the research. It contains subjects of the study, procedures of the study, research instrument, data collection and data analysis. The details are as follows:

3.1 Informants of the Study

The informants of this study consist of 200 participants who have previously bought supplementary foods within the last one year prior to doing the questionnaire. The participants from both male and female of different ages, marital status, education, occupation and income were included in the survey.

3.2 Procedures of the Study

The primary data was collected using convenient sampling method which the online questionnaire was distributed through LINE messenger, Facebook, Sanook.com and Pantip.com. Convenient sampling is being selected as the research method to explore on consumers' perception on supplementary foods and black garlic. However, the screening question is put at the beginning to select only those participants who have been purchasing supplementary food during the last one year. Skip pattern question was being used to enable researcher to separately explore participants who have previously consumed and who have never consumed black garlic before.

3.3 Research Instrument

This research used online survey as a tool to collect data. Quantitative research method is being used. This research was done through questionnaire conveniently distributed to participants by online sharing of questionnaire link. The questionnaire was created based on the literature review that separated into four parts: marketing mix factors towards purchasing supplementary food, consumer behavior towards purchasing supplementary food, consumer behavior towards black garlic, and the demographic profile.

3.4 Data Collection

200 samples who have been purchasing supplementary foods during the last one year were asked to complete the questionnaire through online questionnaire link sharing. The timeframe that data is being collected is between March to April 2018. Once the respondents answered to the questionnaire reached 200, the researcher stop accepting more answers from the respondents, then the data were used to analyzed. 200 sample size is considered as adequate for the statistical analysis as, according to previous research on Multivariate Analysis by Joseph Hair, 44 previously published and 220 created datasets were collected and found evidence that smaller sample sizes (ex: 58 individuals) produce the same results as larger sample sizes (Forcino, Leighton, Twerdy & Cahill, 2015).

3.5 Data Analysis

After data collection has been completed, the researcher classified the information into four parts: the demographic information of the respondents, the measurement of effects on marketing mix towards supplementary food from respondents, the measurement of effects on marketing mix towards black garlic from respondents, and the measurement of perception towards black garlic from respondents. The descriptive analysis and crosstabulation were used for calculating and analyzing the data using SPSS. The findings were presented in the form of tables.

CHAPTER IV
DATA ANALYSIS

This chapter presents the findings of the data analysis. Details of the data obtained from the surveyed respondents is analyzed and explained, which include four parts: general information of the respondents, 4P's factors towards purchasing supplementary food, motivations towards purchasing supplementary food, and perceptions towards black garlic.

Tables are drawn to display the analyzed data and findings are briefly discussed underneath each table.

4.1 Part I. General Information of the respondents

The questionnaire was distributed via online medias including Facebook, LINE messenger, Pantip.com, and Sanook.com. The profile of respondents are presented in the tables below.

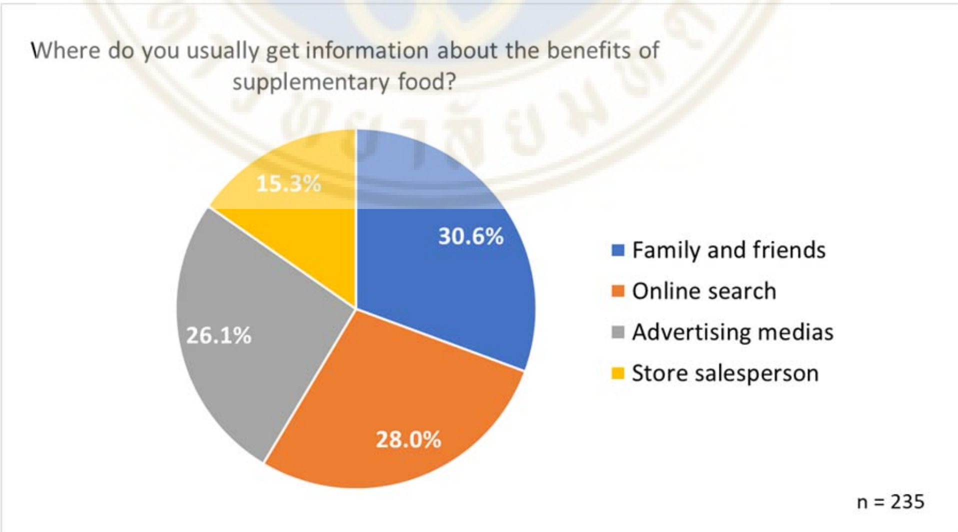


Figure 4.1 Source of information on benefits of supplementary food

68.1% of the respondents are female and 31.9% are male. Which could means that females are more willing to participate in the survey about health and wellness more than males.

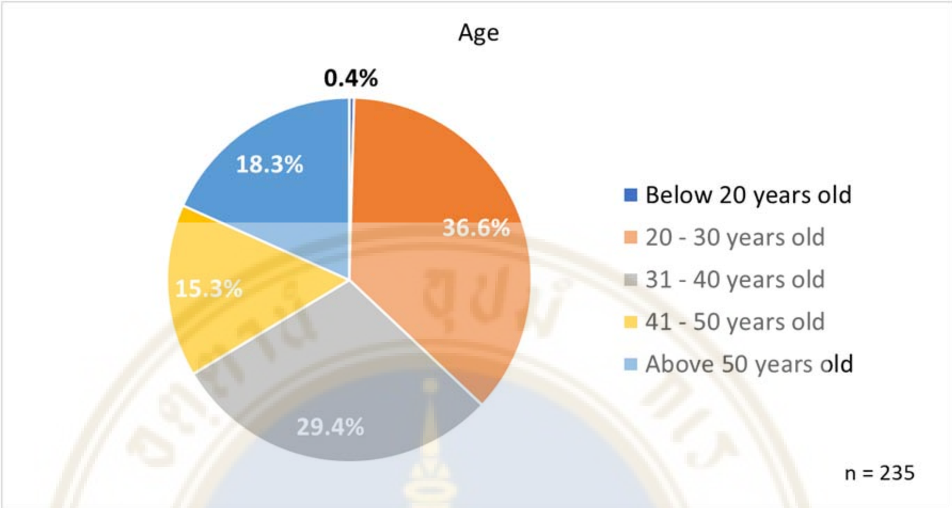


Figure 4.2 Respondents' age

36.6% are between 20-30 years old. 29.4% are between 31-40 years old. 18.3% are above 50 years old. 15.3% are between 41-50 years old. While only one person is younger than 20 years old. So, the majority of the respondents are still in age that still need to work and earn money.

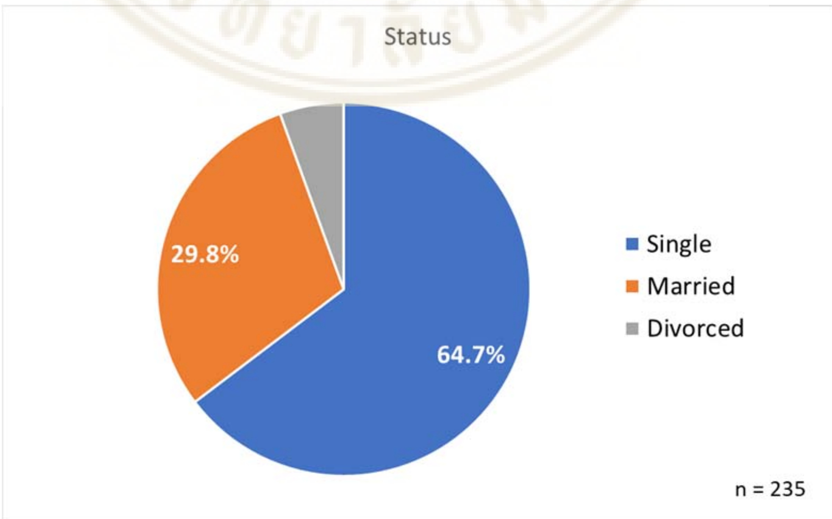


Figure 4.3 Respondents' status

More than half, 64.7%, of the respondents are single. 29.8% are married and 5.5% answered that they are divorced.

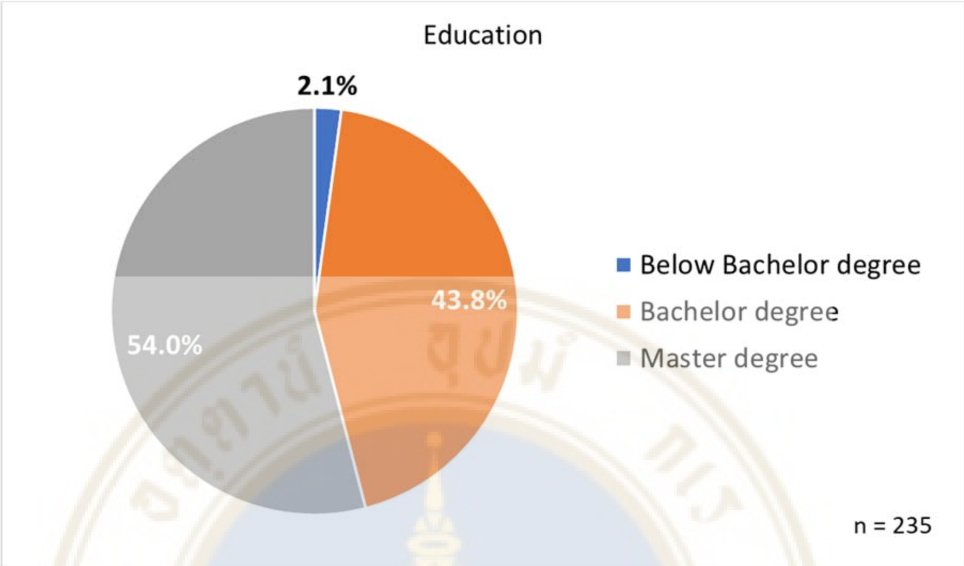


Figure 4.4 Respondents' education

The education is almost half mixed between Master and Bachelor degree. 54% have graduated Master degree, 43.8% have graduated Bachelor degree and only 2.1% is below Bachelor degree.

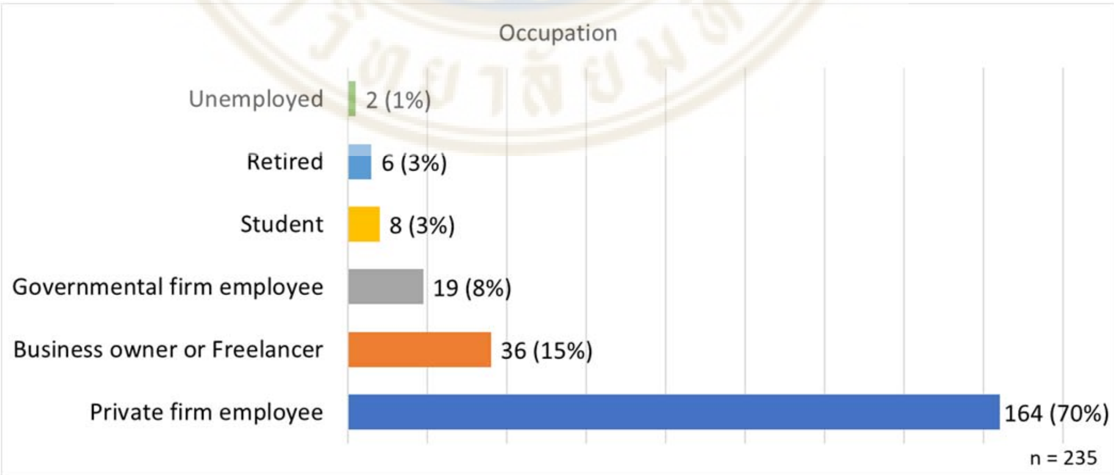


Figure 4.5 Respondents' occupation

Majority of the respondents works for private firms as 70%. 15% said that they are business owners or freelancers. 8% works for governmental firms. 3% are still students. Another 3% said that they already retired and 1% answered that they are currently unemployed. Leading back to the respondents' age result which 18% are over 50 years, the 3% retired proportion shows that Thai people at this age range are still in working age. This result can confirm secondary data that Thai people take more food supplements as they get older, as survey data shows that this group has purchased supplementary foods during the last one year.

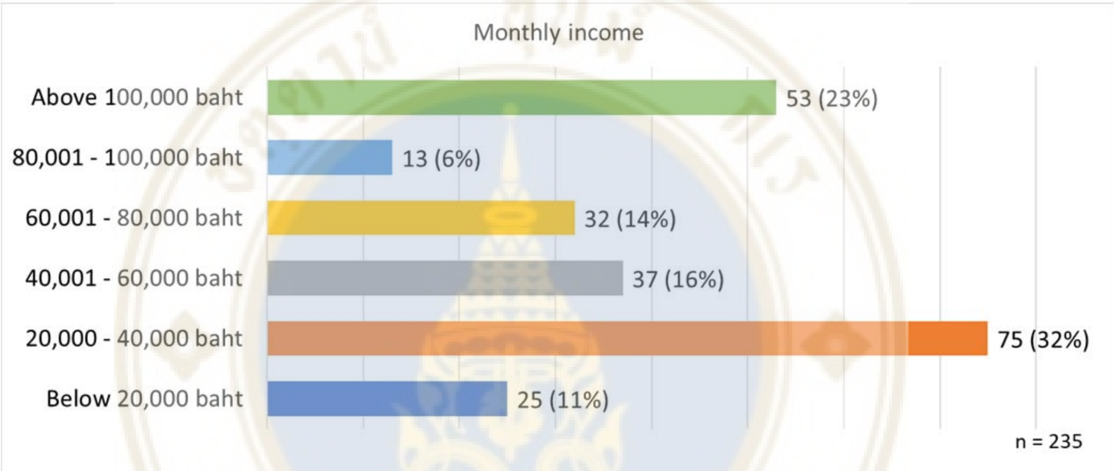


Figure 4.6 Respondents' monthly income

32% earns 20,000-40,000 baht per month. 23% said they earn above 100,000 baht per month. 16% earns 40,001-60,000 baht per month. 14% earns 60,001-80,000 baht per month. 11% earns below 20,000 baht per month. And only 6% earns 80,001-100,000 baht per month. So, most of respondents either earn the income rate of first jobber or of high senior level.

As this research is targeting to explore the behaviors and perceptions of respondents who are users of supplementary food, a screening question asking if the respondents have purchased supplementary good during the last one year is being used. Cross tabulation analysis is being ran between each general information and the screening question to test the significance. Only three variables are more than 95% confident when cross tabulate with the screening question: education, occupation and monthly income.

Table 4.1 Respondents' education and purchased supplementary food during the last 1 year crosstabulation

Please tell me your highest education * Have you purchased any supplementary food during the last 1 year? Crosstabulation

			Purchased any supplementary food during the last 1 year?		Total
			Yes	No	
Education	Below Bachelor	Count	2	3	5
		% within Education	40.0%	60.0%	100.0%
		% within Purchased any supplementary food during the last 1 year?	1.0%	8.6%	2.1%
		% of Total	.9%	1.3%	2.1%
	Bachelor	Count	83	20	103
		% within Education	80.6%	19.4%	100.0%
		% within Purchased any supplementary food during the last 1 year?	41.5%	57.1%	43.8%
		% of Total	35.3%	8.5%	43.8%
	Master	Count	115	12	127
		% within Education	90.6%	9.4%	100.0%
		% within Purchased any supplementary food during the last 1 year?	57.5%	34.3%	54.0%
		% of Total	48.9%	5.1%	54.0%
Total		Count	200	35	235
		% within Education	85.1%	14.9%	100.0%
		% within Purchased any supplementary food during the last 1 year?	100.0%	100.0%	100.0%
		% of Total	85.1%	14.9%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.659[a]	2	.002
Likelihood Ratio	10.225	2	.006
Linear-by-Linear Association	9.621	1	.002
N of Valid Cases	235		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .74.

Cross tabulation result between education and whether respondents have purchased supplementary food during last one year shows that among respondents who have purchased supplementary food during last one year, 57.5% hold Master degree and 41.5% hold Bachelor degree. The high significance value of 0.002 indicates that there is only 0.2% chance that this result is by chance. Comparing to the result that includes all respondents' education before screened out those that have not purchased supplementary foods during last one year, proportion of Master graduates increased from 54% to 58% and of Bachelor graduates decreased from 44% to 42%. This result suggests education as a personal factor that Master graduates are more likely to purchase supplementary foods.

Table 4.2 Respondents' occupation and purchased supplementary food during the last 1 year crosstabulation

Please tell me your occupation * Have you purchased any supplementary food during the last 1 year? Crosstabulation

			Purchased any supplementary food during the last 1 year?		Total
			Yes	No	
Occupation	Student	Count	4	4	8
		% within Occupation	50.0%	50.0%	100.0%
		% within Purchased any supplementary food during the last 1 year?	2.0%	11.4%	3.4%
		% of Total	1.7%	1.7%	3.4%
	Private firm employee	Count	147	17	164
		% within Occupation	89.6%	10.4%	100.0%
		% within Purchased any supplementary food during the last 1 year?	73.5%	48.6%	69.8%
		% of Total	62.6%	7.2%	69.8%
	Governmental firm employee	Count	18	1	19
		% within Occupation	94.7%	5.3%	100.0%
		% within Purchased any supplementary food during the last 1 year?	9.0%	2.9%	8.1%
		% of Total	7.7%	.4%	8.1%
	Business owner or Freelancer	Count	27	9	36
		% within Occupation	75.0%	25.0%	100.0%
		% within Purchased any supplementary food during the last 1 year?	13.5%	25.7%	15.3%
		% of Total	11.5%	3.8%	15.3%
	Retired	Count	2	4	6
		% within Occupation	33.3%	66.7%	100.0%
		% within Purchased any supplementary food during the last 1 year?	1.0%	11.4%	2.6%
		% of Total	.9%	1.7%	2.6%
	Unemployed	Count	2	0	2
		% within Occupation	100.0%	.0%	100.0%
		% within Purchased any supplementary food during the last 1 year?	1.0%	.0%	.9%
		% of Total	.9%	.0%	.9%
Total		Count	200	35	235
		% within Occupation	85.1%	14.9%	100.0%
		% within Purchased any supplementary food during the last 1 year?	100.0%	100.0%	100.0%
		% of Total	85.1%	14.9%	100.0%

Table 4.2 Respondents' occupation and purchased supplementary food during the last 1 year crosstabulation (cont.)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.760[a]	5	.000
Likelihood Ratio	21.512	5	.001
Linear-by-Linear Association	4.411	1	.036
N of Valid Cases	235		

a. 5 cells (41.7%) have expected count less than 5. The minimum expected count is .30.

Cross tabulation between occupation and whether respondents have purchased supplementary food during last one year shows high significance. Result shows that among respondents who have purchased supplementary food during last one year, 73.5% works as private firm employees, 13.5% are business owners and freelancers, and the rest are governmental firm employees, retired, unemployed and students. When comparing with the result before respondents were screened whether they previously purchased supplementary foods within last one year, only private firm employees and governmental firm employees proportion increase. Private firm employees' proportion increased from 70% to 74% and governmental firm employees' proportion increased from 8% to 9%. This result explains that private firm and governmental firm employees are more likely to purchase supplementary foods. This might reflects their less flexible working hours as they can't choose their own work schedule, thus have less time to go exercise and count more on supplementary foods for good health. It can also reflects social factor as public firm and governmental firm employees has more chance of meeting more people and therefore being influenced by their colleagues.

Table 4.3 Respondents' monthly income and purchased supplementary food during the last one year crosstabulation

Please tell me your monthly income * Have you purchased any supplementary food during the last 1 year? Crosstabulation

			Purchased any supplementary food during the last 1 year? Yes	No	Total
Monthly income	Below 20,000 baht	Count	14	11	25
		% within monthly income	56.0%	44.0%	100.0%
		% within Purchased any supplementary food during the last 1 year?	7.0%	31.4%	10.6%
		% of Total	6.0%	4.7%	10.6%
	20,000 - 40,000 baht	Count	67	8	75
		% within Monthly income	89.3%	10.7%	100.0%
		% within Purchased any supplementary food during the last 1 year?	33.5%	22.9%	31.9%
		% of Total	28.5%	3.4%	31.9%
	40,001 - 60,000 baht	Count	30	7	37
		% within Monthly income	81.1%	18.9%	100.0%
		% within Purchased any supplementary food during the last 1 year?	15.0%	20.0%	15.7%
		% of Total	12.8%	3.0%	15.7%
	60,001 - 80,000 baht	Count	31	1	32
		% within Monthly income	96.9%	3.1%	100.0%
		% within Purchased any supplementary food during the last 1 year?	15.5%	2.9%	13.6%
		% of Total	13.2%	.4%	13.6%
	80,001 - 100,000 baht	Count	12	1	13
		% within Monthly income	92.3%	7.7%	100.0%
		% within Purchased any supplementary food during the last 1 year?	6.0%	2.9%	5.5%
		% of Total	5.1%	.4%	5.5%
	Above 100,000 baht	Count	46	7	53
		% within Monthly income	86.8%	13.2%	100.0%
		% within Purchased any supplementary food during the last 1 year?	23.0%	20.0%	22.6%
		% of Total	19.6%	3.0%	22.6%
Total		Count	200	35	235
		% within Monthly income	85.1%	14.9%	100.0%
		% within Purchased any supplementary food during the last 1 year?	100.0%	100.0%	100.0%
		% of Total	85.1%	14.9%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.387[a]	5	.000
Likelihood Ratio	19.367	5	.002
Linear-by-Linear Association	4.356	1	.037
N of Valid Cases	235		

a. 3 cells (25.0%) have expected count less than 5. The minimum expected count is 1.94.

Cross tabulation between monthly income and whether respondents have purchased supplementary food during last one year shows high significance. Result shows that among respondents who have purchased supplementary food during last one year, 33.5% earns between 20,000 to 40,000 baht per month, 23% earns above 100,000 baht per month, 15.5% earns between 60,001 to 80,000 baht per month, 15% earns between 40,001 to 60,000 baht per month, 7% earns below 20,000 baht per month and the rest of 6% earns between 80,001 to 100,000 baht per month. When comparing with result before screened for respondents who previously purchased supplementary foods within one year, group that earns between 60,000 to 80,000 baht per month increase from 14% to 16% and group that earns between 20,000 to 40,000 baht per month increase from 32% to 34%. This suggests that the two groups are more likely to purchase supplementary foods.

4.2 Part II. 4P's factors towards purchasing supplementary food

This section presents factors that affect the purchasing decision of respondents towards supplementary food. The results from questionnaire are presented in tables below.

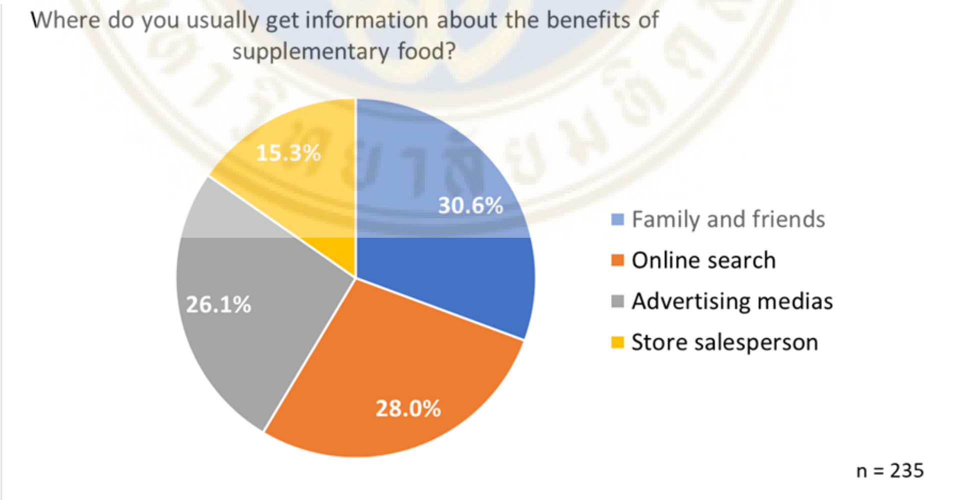


Figure 4.7 Source of information on benefits of supplementary food

Data presented on the above pie chart shows that 30% of respondents get information on benefits of supplementary food through their family and friends, 28%

through online search, 26.1% through advertising medias, and only 15.3% through store salesperson. This result can conclude that family, friends, online search and advertisements are source of information for supplementary food users. But they do not rely on store salespersons to get the information. This can describe the psychological factor that consumers do not listen to what sales and markets are trying to tell them. Rather, they are being pulled to what people in their circles tell them. Reference group can highly impacts the list of consideration set that include in their thought during information search process. Attitudes of reference group can also impact consumers' decision implementation stage.

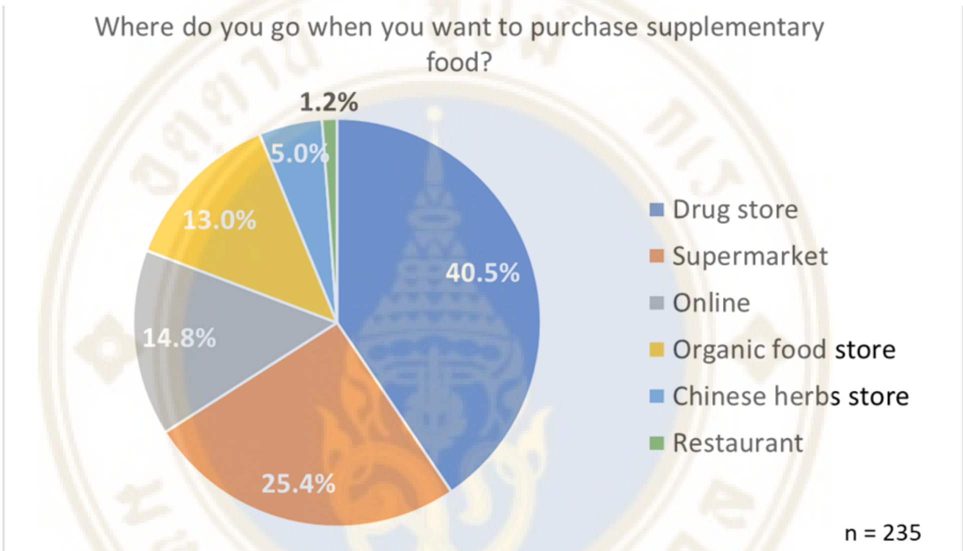


Figure 4.8 Places that respondents purchase supplementary food

From the pie chart above, up to 40.5% of respondents usually purchase supplementary food from drug stores, 25.4% from supermarket, 14.8% from online, 13% from organic food store, 5% from restaurant and 1.2% from restaurant. This result might be from the effects during decision implementation stage which consumers trust the products provided in drug stores, online stores and in modern trades, such as supermarket and organic food store. On the other hand, consumers might perceived that there is risk by purchasing products sell in Chinese herbs stores and restaurants.

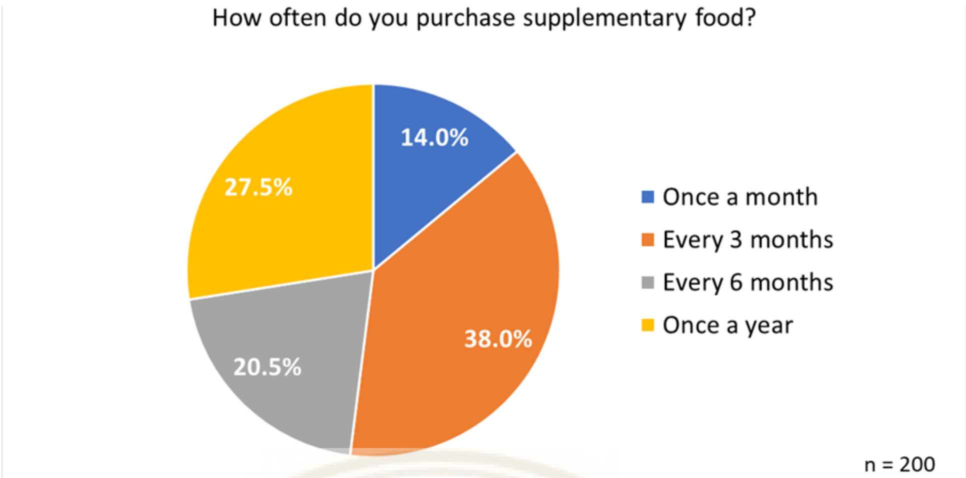


Figure 4.9 Frequency of purchase on supplementary food

The pie chart above shows that respondents usually purchase supplementary food every three months. 38% of respondents purchase every three months, 27.5% purchase once a year, 20.5% purchase every six months and 14% are heavy users who purchase every month. This purchasing frequency result can help marketers decide on how often to feed medias to each unique consumers if they are to promote through online medias.

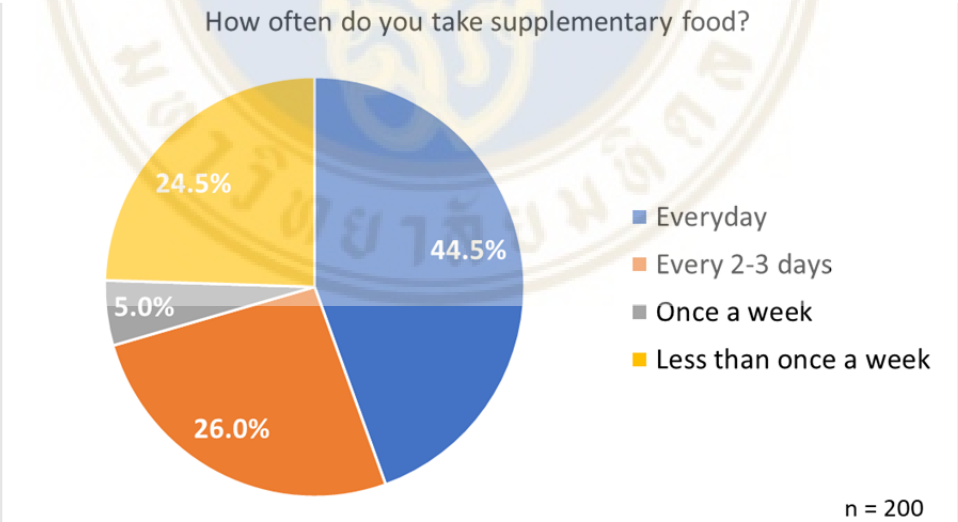


Figure 4.10 Frequency of consumption on supplementary food

The above pie chart shows that majority (44.5%) of the respondents take supplementary food everyday. 26% takes every two to three days. 24.5% take less than once a week. Only 5% takes once per week. The result suggest that if consumers can perceive black garlic as food supplementary product, there is chance that they would consume it on daily basis or at least every two to three days.

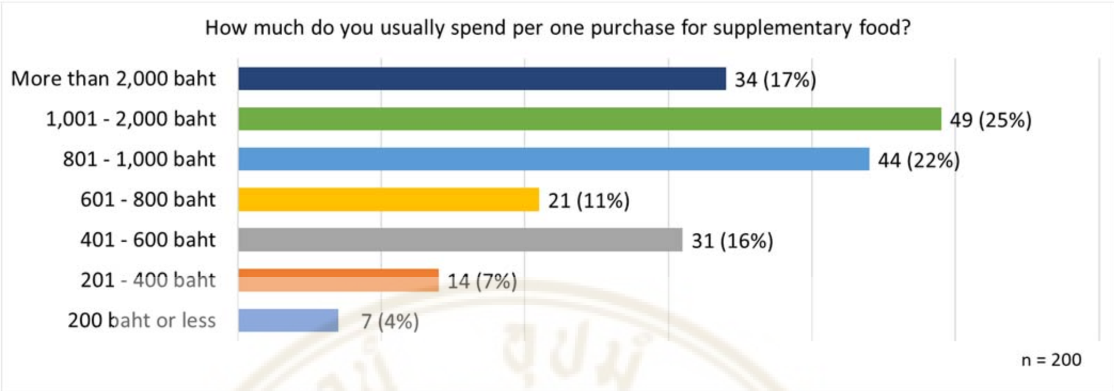


Figure 4.11 Spending per transaction

The chart above shows that most of consumers spend around 800 – 2,000 baht per purchase. 24.5% spend 1,001-2,000 baht, 22% spend 801-1,000 baht, 17% spend more than 2,000 baht, 15.5% spend 401-600 baht. 7% spend 200-401 baht and 7% spend 201-400 baht. By roughly combine the survey results of spending per purchase, purchasing frequency and consumption frequency, the cost of respondents' consumption is at 16 baht per day (1,500 baht per purchase ÷ three months purchasing frequency ÷ daily consumption frequency). So if black garlic is marketed as consuming one serving per day, it is assumed that the cost per serving charged to consumers should be around 16 baht.

Table 4.4 Respondents' supplementary foods purchasing frequency and source of info about benefits of supplementary food crosstabulation

How often do you purchase supplementary food *$Where do you usually get info about benefits of supplementary food Crosstabulation

			Where do you usually get info about benefits of supplementary food [a]				
			Family and friends	Store salesperson	Advertising medias	Online search	Total
How often do you purchase supplementary food?	Once a month	Count	15	10	13	20	28
		% within How often do you purchase supplementary food	53.6%	35.7%	46.4%	71.4%	
		% within Where do you usually get info about benefits of supplementary food	13.2%	17.5%	13.4%	19.2%	
		% of Total	7.5%	5.0%	6.5%	10.0%	14.0%
	Every 3 months	Count	49	21	37	37	76
		% within How often do you purchase supplementary food	64.5%	27.6%	48.7%	48.7%	
		% within Where do you usually get info about benefits of supplementary food	43.0%	36.8%	38.1%	35.6%	
		% of Total	24.5%	10.5%	18.5%	18.5%	38.0%
	Every 6 months	Count	21	12	20	16	41
		% within How often do you purchase supplementary food	51.2%	29.3%	48.8%	39.0%	
		% within Where do you usually get info about benefits of supplementary food	18.4%	21.1%	20.6%	15.4%	
		% of Total	10.5%	6.0%	10.0%	8.0%	20.5%
	Once a year	Count	29	14	27	31	55
		% within How often do you purchase supplementary food	52.7%	25.5%	49.1%	56.4%	
		% within Where do you usually get info about benefits of supplementary food	25.4%	24.6%	27.8%	29.8%	
		% of Total	14.5%	7.0%	13.5%	15.5%	27.5%
Total		Count	114	57	97	104	200
		% of Total	57.0%	28.5%	48.5%	52.0%	100.0%

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

From the crosstabulation data above, among respondents who purchase supplementary food once a month, 71.4% of the response said that benefits of supplementary food are acquired through online search. While among respondents who purchase supplementary food every three months, 64.5% of the response said that benefits of supplementary food are passed on from their family and friends. Looking at all levels of purchasing frequency, it can be observed that store salesperson is the least chosen channel that respondents get information of supplementary foods' benefits from. So social factor can have high influence on consumers' decision to purchase.

Table 4.5 Respondents' supplementary foods consumption frequency and source of info about benefits of supplementary food crosstabulation

How often do you take supplementary food *$Where do you usually get info about benefits of supplementary food Crosstabulation

			Where do you usually get info about benefits of supplementary food [a]				Total
			Family and friends	Store salesperson	Advertising medias	Online search	
How often do you take supplementary food?	Everyday	Count	50	23	41	46	89
		% within How often do you take supplementary food	56.2%	25.8%	46.1%	51.7%	
		% within Where do you usually get info about benefits of supplementary food	43.9%	40.4%	42.3%	44.2%	
		% of Total	25.0%	11.5%	20.5%	23.0%	44.5%
	Every 2-3 days	Count	27	14	17	25	52
		% within How often do you take supplementary food	51.9%	26.9%	32.7%	48.1%	
		% within Where do you usually get info about benefits of supplementary food	23.7%	24.6%	17.5%	24.0%	
		% of Total	13.5%	7.0%	8.5%	12.5%	26.0%
	Once a week	Count	10	2	10	6	10
		% within How often do you take supplementary food	100.0%	20.0%	100.0%	60.0%	
		% within Where do you usually get info about benefits of supplementary food	8.8%	3.5%	10.3%	5.8%	
		% of Total	5.0%	1.0%	5.0%	3.0%	5.0%
	Less than once a week	Count	27	18	29	27	49
		% within How often do you take supplementary food	55.1%	36.7%	59.2%	55.1%	
		% within Where do you usually get info about benefits of supplementary food	23.7%	31.6%	29.9%	26.0%	
		% of Total	13.5%	9.0%	14.5%	13.5%	24.5%
Total		Count	114	57	97	104	200
		% of Total	57.0%	28.5%	48.5%	52.0%	100.0%

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

The crosstabulation data above confirms somewhat similar results to what shown in previous crosstabulation between purchasing frequency and source of information. The frequent consumers of supplementary food learn the information about benefits of supplementary food through family, friends and online search. Where as store salesperson is the least chosen source of information they rely on. For those respondents who consume supplementary foods everyday, 56.2% of responses get information about benefits of supplementary foods from family and friends and 51.7% from online search. Those who consume supplementary food every two to three days, 51.9% of responses get information from family and friends and 48.1% from online search. From here, it could be learned that social factor has high impact on consumer's information search, evaluation and decision implementation.

Table 4.6 Respondents' spending on supplementary foods and source of info about benefits of supplementary food crosstabulation

How much do you usually spend per purchase of supplementary food *$Where do you usually get info about benefits of supplementary food Crosstabulation

			Where do you usually get info about benefits of supplementary [a]				Total
			Family and friends	Store salesperson	Advertising medias	Online search	
How much do you usually spend per purchase of supplementary food?	200 baht or less	Count	5	2	5	5	7
		% within How much do you usually spend per purchase of supplementary food	71.4%	28.6%	71.4%	71.4%	
		% within Where do you usually get info about benefits of supplementary	4.4%	3.5%	5.2%	4.8%	
		% of Total	2.5%	1.0%	2.5%	2.5%	3.5%
	201 - 400 baht	Count	10	0	10	4	14
		% within How much do you usually spend per purchase of supplementary food	71.4%	.0%	71.4%	28.6%	
		% within Where do you usually get info about benefits of supplementary	8.8%	.0%	10.3%	3.8%	
		% of Total	5.0%	.0%	5.0%	2.0%	7.0%
	401 - 600 baht	Count	17	13	15	4	31
		% within How much do you usually spend per purchase of supplementary food	54.8%	41.9%	48.4%	12.9%	
		% within Where do you usually get info about benefits of supplementary	14.9%	22.8%	15.5%	3.8%	
		% of Total	8.5%	6.5%	7.5%	2.0%	15.5%
	601 - 800 baht	Count	10	7	14	9	21
		% within How much do you usually spend per purchase of supplementary food	47.6%	33.3%	66.7%	42.9%	
		% within Where do you usually get info about benefits of supplementary	8.8%	12.3%	14.4%	8.7%	
		% of Total	5.0%	3.5%	7.0%	4.5%	10.5%
	801 - 1,000 baht	Count	28	10	18	30	44
		% within How much do you usually spend per purchase of supplementary food	63.6%	22.7%	40.9%	68.2%	
		% within Where do you usually get info about benefits of supplementary	24.6%	17.5%	18.6%	28.8%	
		% of Total	14.0%	5.0%	9.0%	15.0%	22.0%
	1,001 - 2,000 baht	Count	24	13	21	32	49
		% within How much do you usually spend per purchase of supplementary food	49.0%	26.5%	42.9%	65.3%	
		% within Where do you usually get info about benefits of supplementary	21.1%	22.8%	21.6%	30.8%	
		% of Total	12.0%	6.5%	10.5%	16.0%	24.5%
	More than 2,000 baht	Count	20	12	14	20	34
		% within How much do you usually spend per purchase of supplementary food	58.8%	35.3%	41.2%	58.8%	
		% within Where do you usually get info about benefits of supplementary	17.5%	21.1%	14.4%	19.2%	
		% of Total	10.0%	6.0%	7.0%	10.0%	17.0%
Total		Count	114	57	97	104	200
		% of Total	57.0%	28.5%	48.5%	52.0%	100.0%

Looking at the spending level of respondents on supplementary food. Those big spenders who spend more than 2,000 baht per purchase, 58.8% of the responses get information about benefits of supplementary foods from both online search and family and friends. Those who spend between 1,001 and 2,000 baht per purchase, 65.3% of the responses get information from online search. In fact, by looking at the whole cross tabulation, it can be observed that all spending level get information of supplementary foods benefits largely from family and friends. Those high spenders also rely on getting information from online search, but once the spending level is below 801 baht per purchase, the second biggest source of information becomes advertising medias. This might be the indication of how consumers perceive on the value of supplementary food differently between brands that promoted through their reference groups and through advertisements.

Table 4.7 Respondents' supplementary foods purchasing frequency and places to purchase supplementary foods crosstabulation

How often do you purchase supplementary food *$Where do you go when you want to purchase supplementary food Crosstabulation

			Where do you go when you want to purchase supplementary food [a]						Total
			Organic food store	Chinese herbs store	Restaurant	Online	Supermarket	Drug store	
How often do you purchase supplementary food?	Once a month	Count	5	5	0	9	13	21	28
		% within How often do you purchase supplementary food	17.9%	17.9%	.0%	32.1%	46.4%	75.0%	
		% within Where do you go when you want to purchase supplementary food	11.4%	29.4%	.0%	18.0%	15.1%	15.3%	
		% of Total	2.5%	2.5%	.0%	4.5%	6.5%	10.5%	14.0%
	Every 3 months	Count	17	8	0	19	39	52	76
		% within How often do you purchase supplementary food	22.4%	10.5%	.0%	25.0%	51.3%	68.4%	
		% within Where do you go when you want to purchase supplementary food	38.6%	47.1%	.0%	38.0%	45.3%	38.0%	
		% of Total	8.5%	4.0%	.0%	9.5%	19.5%	26.0%	38.0%
	Every 6 months	Count	12	2	2	10	13	26	41
		% within How often do you purchase supplementary food	29.3%	4.9%	4.9%	24.4%	31.7%	63.4%	
		% within Where do you go when you want to purchase supplementary food	27.3%	11.8%	50.0%	20.0%	15.1%	19.0%	
		% of Total	6.0%	1.0%	1.0%	5.0%	6.5%	13.0%	20.5%

Table 4.7 Respondents' supplementary foods purchasing frequency and places to purchase supplementary foods crosstabulation (cont.)

			Where do you go when you want to purchase supplementary food [a]						Total
			Organic food store	Chinese herbs store	Restaurant	Online	Supermarket	Drug store	
	Once a year	Count	10	2	2	12	21	38	55
		% within How often do you purchase supplementary food	18.2%	3.6%	3.6%	21.8%	38.2%	69.1%	
		% within Where do you go when you want to purchase supplementary food	22.7%	11.8%	50.0%	24.0%	24.4%	27.7%	
		% of Total	5.0%	1.0%	1.0%	6.0%	10.5%	19.0%	27.5%
Total		Count	44	17	4	50	86	137	200
		% of Total	22.0%	8.5%	2.0%	25.0%	43.0%	68.5%	100.0%

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

From the crosstabulation above, it can be concluded that at all purchasing frequency, drug store is the first chosen location of purchase follow by supermarket as the second location and the third most popular location of purchase is online channel. This data shows that consumers perceive drug stores and supermarkets as the place that they can find supplementary foods.

Table 4.8 Respondents' supplementary foods consumption frequency and places to purchase supplementary foods crosstabulation

How often do you take supplementary food*$ Where do you go when you want to purchase supplementary food Crosstabulation

			Where do you go when you want to purchase supplementary food [a]						Total
			Organic food store	Chinese herbs store	Restaurant	Online	Supermarket	Drug store	
How often do you take supplementary food?	Everyday	Count	21	11	0	28	35	61	89
		% within How often do you take supplementary food	23.6%	12.4%	.0%	31.5%	39.3%	68.5%	
		% within Where do you go when you want to purchase supplementary food	47.7%	64.7%	.0%	56.0%	40.7%	44.5%	
		% of Total	10.5%	5.5%	.0%	14.0%	17.5%	30.5%	44.5%
	Every 2-3 days	Count	9	0	2	12	20	40	52
		% within How often do you take supplementary food	17.3%	.0%	3.8%	23.1%	38.5%	76.9%	
		% within Where do you go when you want to purchase supplementary food	20.5%	.0%	50.0%	24.0%	23.3%	29.2%	
		% of Total	4.5%	.0%	1.0%	6.0%	10.0%	20.0%	26.0%

Table 4.8 Respondents' supplementary foods consumption frequency and places to purchase supplementary foods crosstabulation (cont.)

			Where do you go when you want to purchase supplementary food [a]						Total
			Organic food store	Chinese herbs store	Restau rant	Online	Superm arket	Drug store	
	Once a week	Count	4	2	0	0	4	8	10
		% within How often do you take supplementary food	40.0%	20.0%	.0%	.0%	40.0%	80.0%	
		% within Where do you go when you want to purchase supplementary food	9.1%	11.8%	.0%	.0%	4.7%	5.8%	
		% of Total	2.0%	1.0%	.0%	.0%	2.0%	4.0%	5.0%
	Less than once a week	Count	10	4	2	10	27	28	49
		% within How often do you take supplementary food	20.4%	8.2%	4.1%	20.4%	55.1%	57.1%	
		% within Where do you go when you want to purchase supplementary food	22.7%	23.5%	50.0%	20.0%	31.4%	20.4%	
		% of Total	5.0%	2.0%	1.0%	5.0%	13.5%	14.0%	24.5%
Total		Count	44	17	4	50	86	137	200
		% of Total	22.0%	8.5%	2.0%	25.0%	43.0%	68.5%	100.0 %

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

When crosstabulate on the consumption frequency, the results appear similar to when crosstabulate on purchasing frequency. Drug store is the most chosen location, follow by supermarket as the second and online as third most chosen location to purchase supplementary foods.

Table 4.9 Respondents' spending on supplementary foods and places to purchase supplementary foods crosstabulation

How much do you usually spend per purchase of supplementary *$Where do you go when you want to purchase supplementary food Crosstabulation

			Where do you go when you want to purchase supplementary food [a]						Total
			Organic food store	Chinese herbs store	Restaurant	Online	Supermarket	Drug store	
How much do you usually spend per purchase of supplementary food?	200 baht or less	Count	0	0	0	0	7	0	7
		% within How much do you usually spend per purchase of supplementary food	.0%	.0%	.0%	.0%	100.0%	.0%	
		% within Where do you go when you want to purchase supplementary food	.0%	.0%	.0%	.0%	8.1%	.0%	
		% of Total	.0%	.0%	.0%	.0%	3.5%	.0%	3.5%
	201 - 400 baht	Count	4	2	0	2	6	10	14
		% within How much do you usually spend per purchase of supplementary food	28.6%	14.3%	.0%	14.3%	42.9%	71.4%	
		% within Where do you go when you want to purchase supplementary food	9.1%	11.8%	.0%	4.0%	7.0%	7.3%	
		% of Total	2.0%	1.0%	.0%	1.0%	3.0%	5.0%	7.0%
	401 - 600 baht	Count	9	0	2	0	15	25	31
		% within How much do you usually spend per purchase of supplementary food	29.0%	.0%	6.5%	.0%	48.4%	80.6%	
		% within Where do you go when you want to purchase supplementary food	20.5%	.0%	50.0%	.0%	17.4%	18.2%	
		% of Total	4.5%	.0%	1.0%	.0%	7.5%	12.5%	15.5%
	601 - 800 baht	Count	2	2	0	4	11	21	21
		% within How much do you usually spend per purchase of supplementary food	9.5%	9.5%	.0%	19.0%	52.4%	100.0%	
		% within Where do you go when you want to purchase supplementary food	4.5%	11.8%	.0%	8.0%	12.8%	15.3%	
		% of Total	1.0%	1.0%	.0%	2.0%	5.5%	10.5%	10.5%
	801 - 1,000 baht	Count	10	0	0	6	16	36	44
		% within How much do you usually spend per purchase of supplementary food	22.7%	.0%	.0%	13.6%	36.4%	81.8%	
		% within Where do you go when you want to purchase supplementary food	22.7%	.0%	.0%	12.0%	18.6%	26.3%	
		% of Total	5.0%	.0%	.0%	3.0%	8.0%	18.0%	22.0%
	1,001 - 2,000 baht	Count	9	3	0	24	17	29	49
		% within How much do you usually spend per purchase of supplementary food	18.4%	6.1%	.0%	49.0%	34.7%	59.2%	
		% within Where do you go when you want to purchase supplementary food	20.5%	17.6%	.0%	48.0%	19.8%	21.2%	
		% of Total	4.5%	1.5%	.0%	12.0%	8.5%	14.5%	24.5%
	More than 2,000 baht	Count	10	10	2	14	14	16	34
		% within How much do you usually spend per purchase of supplementary food	29.4%	29.4%	5.9%	41.2%	41.2%	47.1%	
		% within Where do you go when you want to purchase supplementary food	22.7%	58.8%	50.0%	28.0%	16.3%	11.7%	
		% of Total	5.0%	5.0%	1.0%	7.0%	7.0%	8.0%	17.0%
Total		Count	44	17	4	50	86	137	200
		% of Total	22.0%	8.5%	2.0%	25.0%	43.0%	68.5%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

Looking at the spending level of respondents of supplementary foods, it can be observed that those high spenders who spend from 1,001 baht per purchase onwards would choose drug store as the first choice, online as second choice, then supermarket as third choice. Those who spend between 201 and 1,000 baht also choose drug store as their first choice, but the second alternative would be from supermarket instead of online. Those who spend 200 baht or less all chose supermarket as their only location to purchase. This can be interpreted that place strategy can have impact on consumers perception on the price of products. Brands that sell at drug stores are perceived to have higher price point and brands that sell at supermarket are perceived to have lower price point.

Table 4.10 Respondents' source of info about benefits of supplementary food and places to purchase supplementary foods crosstabulation

$Where do you usually get info about benefits of supplementary food *$Where do you go when you want to purchase supplementary food Crosstabulation

			Where do you go when you want to purchase supplementary food [a]						Total
			Organic food store	Chinese herbs store	Restaurant	Online	Supermarket	Drug store	
Where do you usually get info about benefits of supplementary food [a]	Family and friends	Count	30	17	2	23	59	79	114
		% within Where do you usually get info about benefits of supplementary food	26.3%	14.9%	1.8%	20.2%	51.8%	69.3%	
		% within Where do you go when you want to purchase supplementary food	68.2%	100.0%	50.0%	46.0%	68.6%	57.7%	
		% of Total	15.0%	8.5%	1.0%	11.5%	29.5%	39.5%	57.0%
	Store salesperson	Count	18	5	2	15	28	46	57
		% within Where do you usually get info about benefits of supplementary food	31.6%	8.8%	3.5%	26.3%	49.1%	80.7%	
		% within Where do you go when you want to purchase supplementary food	40.9%	29.4%	50.0%	30.0%	32.6%	33.6%	
		% of Total	9.0%	2.5%	1.0%	7.5%	14.0%	23.0%	28.5%
	Advertising medias	Count	30	13	2	23	44	67	97
		% within Where do you usually get info about benefits of supplementary food	30.9%	13.4%	2.1%	23.7%	45.4%	69.1%	
		% within Where do you go when you want to purchase supplementary food	68.2%	76.5%	50.0%	46.0%	51.2%	48.9%	
		% of Total	15.0%	6.5%	1.0%	11.5%	22.0%	33.5%	48.5%
	Online search	Count	29	5	0	34	48	72	104
		% within Where do you usually get info about benefits of supplementary food	27.9%	4.8%	.0%	32.7%	46.2%	69.2%	
		% within Where do you go when you want to purchase supplementary food	65.9%	29.4%	.0%	68.0%	55.8%	52.6%	
		% of Total	14.5%	2.5%	.0%	17.0%	24.0%	36.0%	52.0%
Total		Count	44	17	4	50	86	137	200
		% of Total	22.0%	8.5%	2.0%	25.0%	43.0%	68.5%	100.0%

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

From every previous tables explained in part II, the most chosen sources of information on benefits of supplementary foods are family and friends and online search. And the most chosen place to purchase supplementary foods are drug store, online and supermarket. The table above will spot specifically which source of information leads to which purchasing channel. From above data, 57.7% of those who purchase from drug store get information about supplementary foods from family and friends, 52.6% from online search and 48.9% from advertising medias. 68.6% of those who purchase from supermarket get information from family and friends, 55.8% from online search, 51.2% from advertising medias. Logically, 68% of those who purchase from online channel get information about supplementary foods from online search and 68% from family and friends and advertising medias each. So if the product's strategy is to sell at high price, distribution is suggested to be at drug stores and promote through word of mouth strategy.

4.3 Part III. Motivations towards purchasing supplementary food

This section presents factors that are important to purchasing decisions on supplementary foods. The results from questionnaire are presented in tables below.

Table 4.11 Rating on the importance of benefits respondents look for when purchase supplementary foods

Please rate the importance of the benefits you look for when you purchase food supplements	Mean score*		No. of samples	Not at all important (%)	Low importance (%)	Slightly important (%)	Neutral (%)	Moderately important (%)	Very important (%)	Extremely important (%)	Total
Promote immune system	5.1	Moderately important	200	0%	5%	19%	4%	10%	27%	36%	100%
Promote brain function	4.7	Moderately important	200	2%	10%	13%	7%	15%	24%	30%	100%
Promote healthy organs	4.3	Neutral	200	1%	16%	14%	8%	21%	22%	19%	100%
Promote healthy skin	3.9	Neutral	200	11%	10%	14%	13%	14%	17%	23%	100%
Prevent cancer	3.5	Neutral	200	11%	16%	16%	13%	13%	18%	14%	100%
Prevent heart disease	3.4	Slightly important	200	14%	15%	13%	13%	16%	15%	15%	100%
Reduce cholesterol	3.4	Slightly important	200	15%	12%	14%	14%	19%	15%	12%	100%
Promote good body shape	3.0	Slightly important	200	20%	12%	20%	16%	13%	9%	12%	100%

** Mean score: 1 = Not at all important, 2 = Low importance, 3 = Slightly important, 4 = Neutral, 5 = Moderately important, 6 = Very important, 7 = Extremely important*

From the data presents in the table, 23% of respondents answered that benefit of promoting healthy skin is extremely important for them. Also, 36% and 30% answered that benefit of promoting immune system and brain function, respectively, is extremely important. On the other hand, 20% of respondents answered that benefit of promoting good body shape is not at all important. This information might reflects the behavior of nowadays consumers trend of choosing to consume supplementary foods instead of exercise to maintain good health. Thus, those who choose to take supplements instead of exercising care about health over their body shape. For benefits of brain function, immune system and healthy organs, most answers lean towards important side, whereas very low percentage is leaning towards unimportant side. When asked about benefits of cholesterol reduction, cancer and heart disease prevention, which are the major benefits of black garlic product, the answers are scattered almost equally among all levels of importance.

Table 4.12 Rating on the likelihood of the problems respondents experienced with or think they might experience in the future would motivate them to purchase supplementary foods

Please rate the likelihood of the problems you experienced with or think you might experience in the future that would motivate you to purchase supplementary food	Mean score*		No. of samples	Very unlikely (%)	Unlikely (%)	Somewhat unlikely (%)	Neutral (%)	Somewhat likely (%)	Likely (%)	Very likely (%)	Total
Stress	3.6	Neutral	**200**	15%	10%	10%	15%	16%	19%	17%	**100%**
High cholesterol	3.5	Neutral	**200**	10%	17%	16%	10%	21%	15%	12%	**100%**
High blood pressure	3.2	Slightly important	**200**	17%	13%	15%	18%	15%	11%	12%	**100%**
Heart disease	3.2	Slightly important	**200**	18%	15%	14%	9%	21%	12%	12%	**100%**
Hormonal related issues	3.2	Slightly important	**200**	19%	11%	16%	15%	22%	11%	9%	**100%**
Skin problems	3.1	Slightly important	**200**	22%	12%	11%	14%	22%	7%	14%	**100%**
Obese	3.1	Slightly important	**200**	19%	16%	13%	15%	15%	11%	12%	**100%**
Alzheimer	3.1	Slightly important	**200**	19%	14%	18%	12%	16%	12%	11%	**100%**
Headache	3.1	Slightly important	**200**	19%	16%	14%	12%	16%	14%	11%	**100%**
Diabetes	3.0	Slightly important	**200**	19%	14%	18%	13%	17%	11%	10%	**100%**
Asthma	3.0	Slightly important	**200**	21%	16%	9%	16%	15%	17%	8%	**100%**

** Mean score: 1 = Not at all important, 2 = Low importance, 3 = Slightly important, 4 = Neutral, 5 = Moderately important, 6 = Very important, 7 = Extremely important*

From the table above, there is no clear result on which health problem would strongly motivate respondents to consume supplementary foods. Response from each health problem mostly either answered that they are somewhat likely and very unlikely to purchase supplementary foods. However, the health problems that have the highest mean scores on likelihood to persuade consumers to purchase supplementary foods are stress, high cholesterol, high blood pressure and heart disease. By using avoidance approach to motivate consumers to take supplementary foods, these top health problems can be raised for the communication.

Table 4.13 Rating on the importance of variables when purchase supplementary food

Please rate the importance of each variable when purchase for supplementary food	Mean score*		No. of samples	Not at all important (%)	Low importance (%)	Slightly important (%)	Neutral (%)	Moderately important (%)	Very important (%)	Extremely important (%)	Total
Certified by FDA	5.8	Very important	**200**	1%	0%	15%	3%	2%	12%	68%	**100%**
Well known brand	5.4	Moderately important	**200**	0%	5%	12%	5%	10%	26%	44%	**100%**
Availability in stores	5.4	Moderately important	**200**	1%	4%	10%	2%	18%	30%	37%	**100%**
Reasonable price	5.3	Moderately important	**200**	0%	5%	10%	7%	14%	26%	39%	**100%**
Natural ingredients	5.2	Moderately important	**200**	2%	3%	13%	5%	10%	30%	38%	**100%**
Convenience usage	4.9	Moderately important	**200**	3%	7%	12%	8%	8%	32%	32%	**100%**
Variety of benefits	4.5	Moderately important	**200**	3%	6%	17%	15%	15%	15%	30%	**100%**
Have advertisements	4.0	Neutral	**200**	8%	9%	12%	17%	24%	16%	15%	**100%**
Package size variety	3.8	Neutral	**200**	9%	11%	14%	18%	22%	21%	7%	**100%**
Imported product	3.5	Slightly important	**200**	14%	10%	14%	19%	22%	15%	8%	**100%**

** Mean score: 1 = Not at all important, 2 = Low importance, 3 = Slightly important, 4 = Neutral, 5 = Moderately important, 6 = Very important, 7 = Extremely important*

From table above, variables that respondents gave high importance are certified by FDA, well known brand, availability in store, reasonable price, natural ingredients and convenience usage. The variable that respondents clearly gave low importance on is imported product. Variables that respondents neutral to or gave only moderate importance on are package size variety and have advertisement. To sum up, respondents give importance more on the functional benefits instead of credibility of the supplementary foods.

4.4 Part IV. Perceptions towards black garlic

This section go deeper into observing the consumers' perceptions towards black garlics. As black garlic is not well known among Thai people, a screening question is being used to classify between consumers who have and have not consumed black garlic before. Different questions are being asked between the two groups to understand them separately.

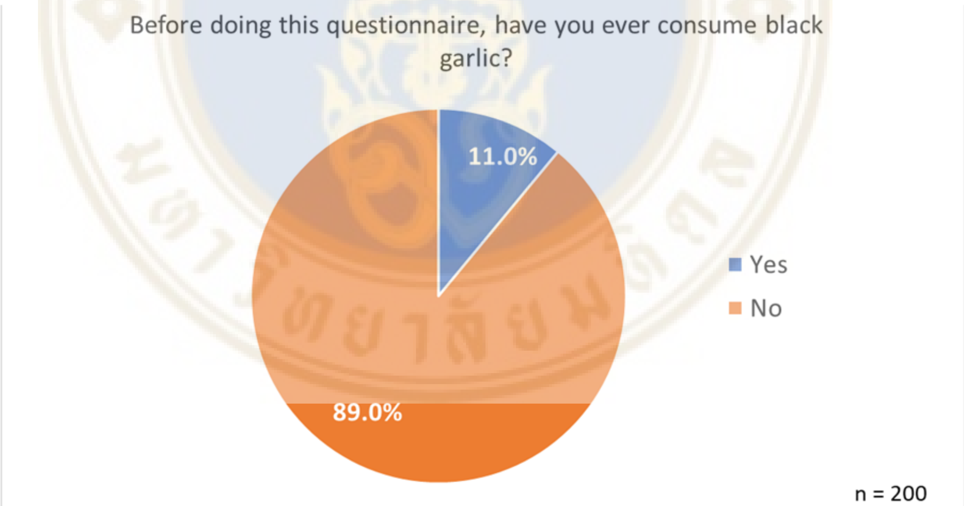


Figure 4.12 Respondents' experience on black garlic consumption

This chart evidence that black garlic is still unpopular in Thailand. The data shows that only 11% of the respondents have consumed black garlic before. The majority of 89% have never consumed it before.

From figure 4.13, table 4.14 and figure 4.15, respondents who have consumed black garlic before will be analyzed. Respondents who have never consumed black garlic before will be analyzed separately from figure 4.29 to 4.38.

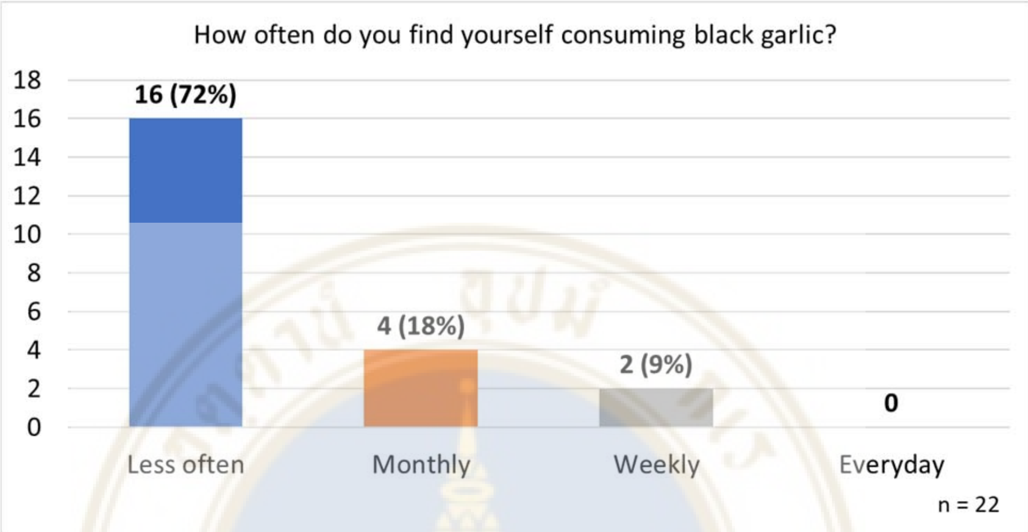


Figure 4.13 Frequency of black garlic consumption

From above chart, as much as 72.7% of the respondents answered that they consume black garlic less than once a month. 18.2% of the respondents consume black garlic once a month. And only 9.1% consume it once a week. Thus, majority of black garlic consumers do not consume it as supplement on routine. Instead, they consider it as a food and consume it whenever they want to.

Table 4.14 Rating on the reasons to consume black garlic

Please rate the reasons that brought you to consume black garlic	Mean score*		No. of samples	Strongly disagree (%)	Disagree (%)	Slightly disagree (%)	Slightly agree (%)	Agree (%)	Strongly agree (%)	Total
For cholesterol reduction	4.2	Slightly agree	22	9%	18%	0%	18%	27%	27%	100%
For its antioxidant benefit	4.2	Slightly agree	22	9%	9%	18%	9%	27%	27%	100%
Just want to eat healthy	4.2	Slightly agree	22	9%	0%	27%	9%	36%	18%	100%
To try different food	3.6	Slightly agree	22	0%	18%	36%	18%	18%	9%	100%
To enjoy its taste	3.4	Slightly disagree	22	18%	9%	36%	9%	9%	18%	100%

** Mean score: 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Slightly agree, 5 = Agree, 6 = Strongly agree*

Among respondents who consumed black garlic before, reasons that they strongly agree that brought them to consume black garlic are for cholesterol reduction and for antioxidant benefit. Most respondents agree that they consume black garlic for the reason of wanting to eat healthy. Up to 36% of respondents slightly disagree that black garlic taste and their desire to try different foods are the reasons that they consume black garlic. So, although consumers do not have planned schedule for black garlic consumption like with most food supplements, the motivation for consumption is still for health benefits rather than just enjoyment.

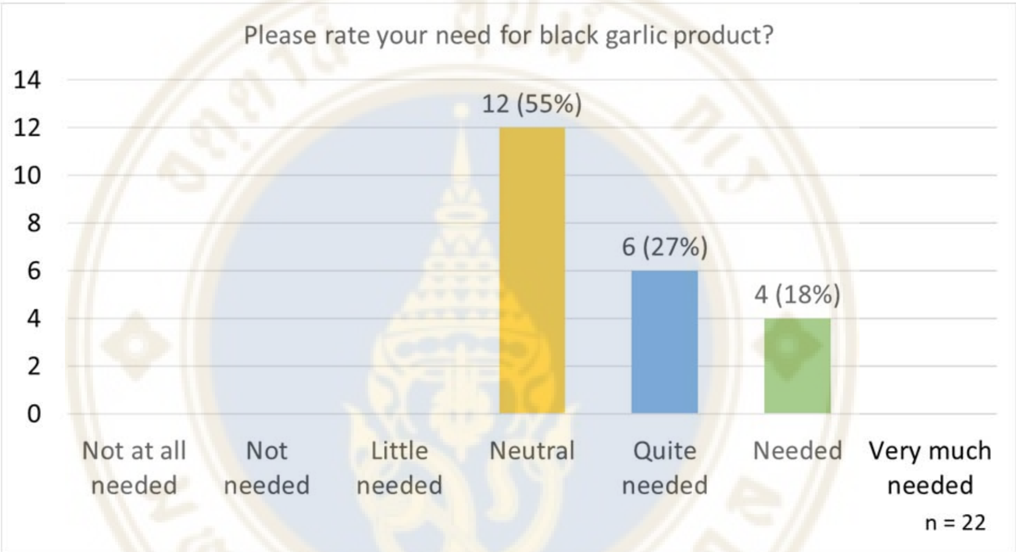


Figure 4.14 Rating on respondents' need for black garlic

From the chart above, 55% of the respondents is neutral to the need of black garlic consumption. 27% answered that they quite need the product and 18% need the product. None of the respondents answered that black garlic is very much needed for them. So, although consumers know that black garlic is good for their health, but they do not consider it as necessary.

The respondents who have never consumed black garlic were asked to read the description about appearance, taste and texture of black garlic. Then, they were surveyed on their perceptions towards the product. The results are presented in the following tables.

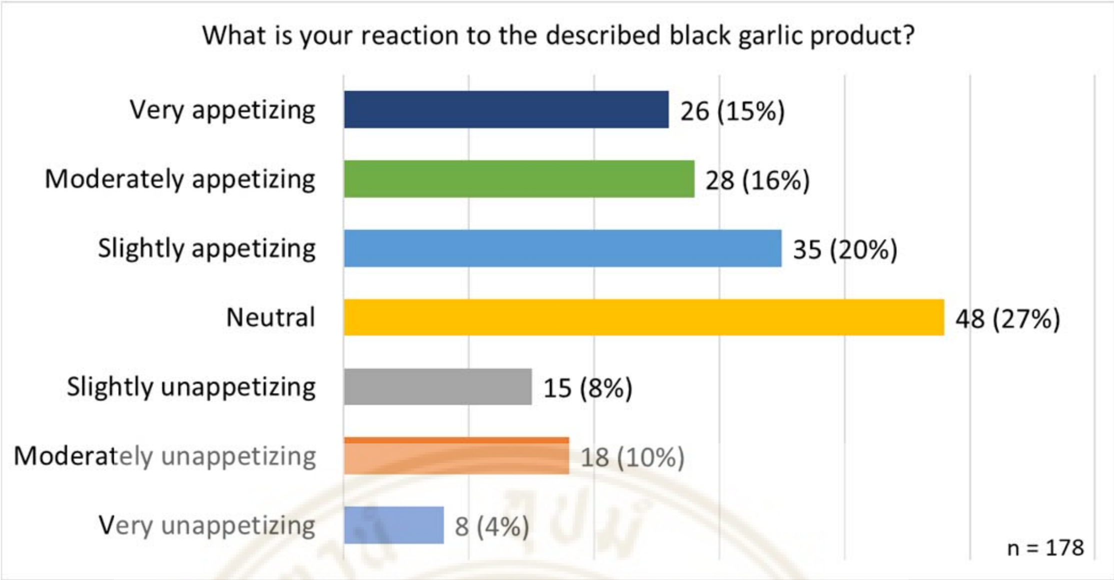


Figure 4.15 Respondents' reaction towards black garlic

Highest percentage of 27% of respondents answered that their reaction towards black garlic is neutral. 20% answered that the product is slightly appetizing. 16% of respondents feel moderately appetizing and 15% finds it very appetizing. Interestingly, only 4% feel very unappetizing, 10% feel moderately unappetizing and 8% feel slightly unappetizing. So, respondents mostly are positive on trying black garlic.

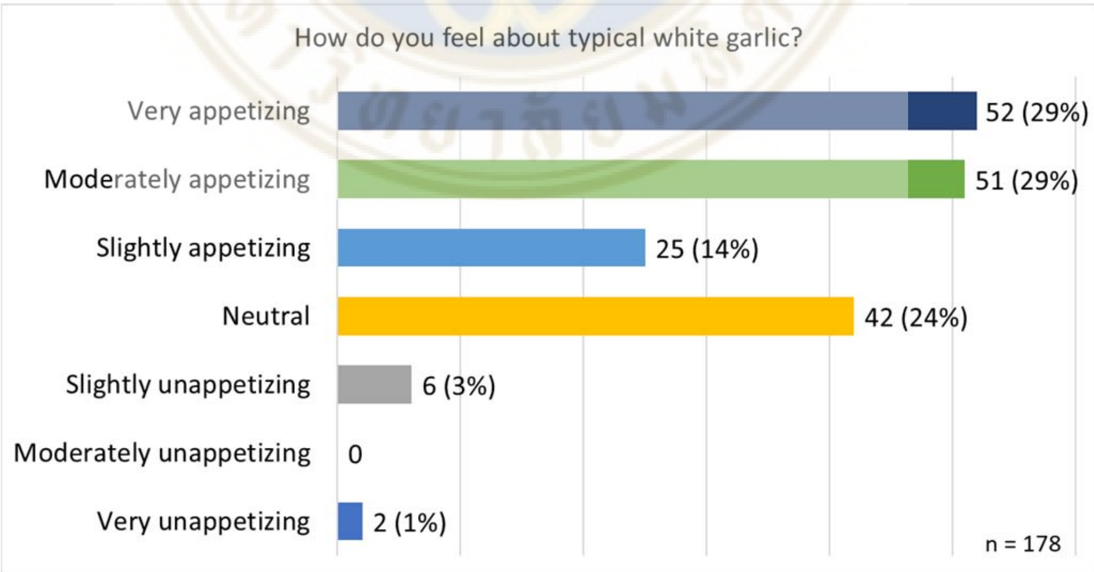


Figure 4.16 Respondents' reaction towards white garlic

The chart above shows that most of the respondents accept typical white garlic. 29% feel very appetizing, 29% feel moderately appetizing, 24% feel neutral and 14% feel slightly appetizing. Very few respondents find white garlic unappetizing, which 3% feel slightly unappetizing and 1% feel very unappetizing. By comparing respondents' reaction towards black versus white garlic, it can be observed that white garlic got more answers saying that it's appetizing than that of black garlic. White garlic also received less answers saying that it is unappealing. So it can be assumed that consumers tends to accept what is familiar to them easier – typical white garlic.

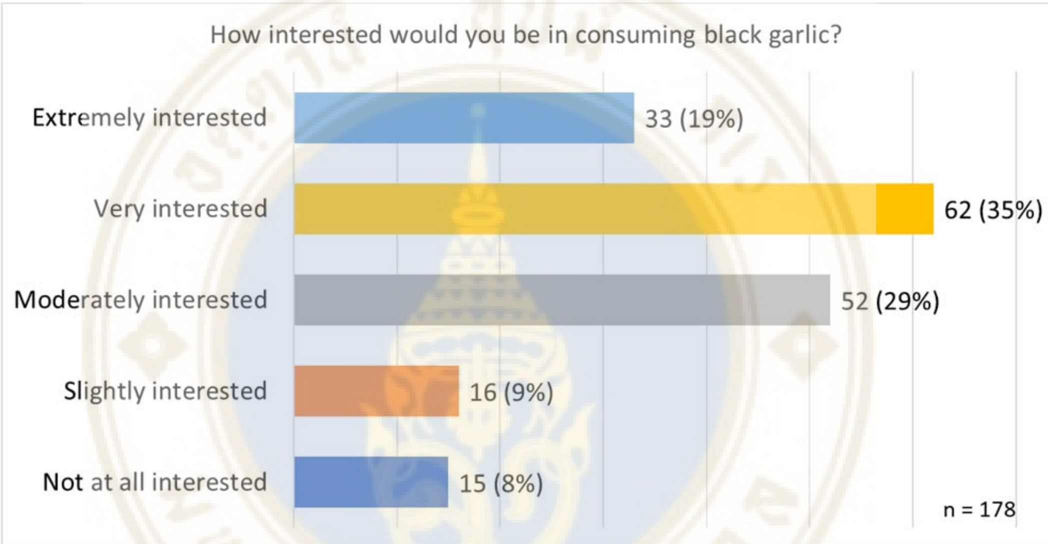


Figure 4.17 Respondents' interest in consuming black garlic

The results from chart above shows that most of the respondents are positive about trying black garlic as there are higher percentage answering that they are interested in consuming the product. 35% are very interested, 29% are moderately interested and 19% are extremely interested in consuming black garlic. Only 9% are slightly interested and 8% totally rejected the product. So, although respondents' reaction towards black garlic is neutral, they have positive perception towards the product and are very interested to try it.

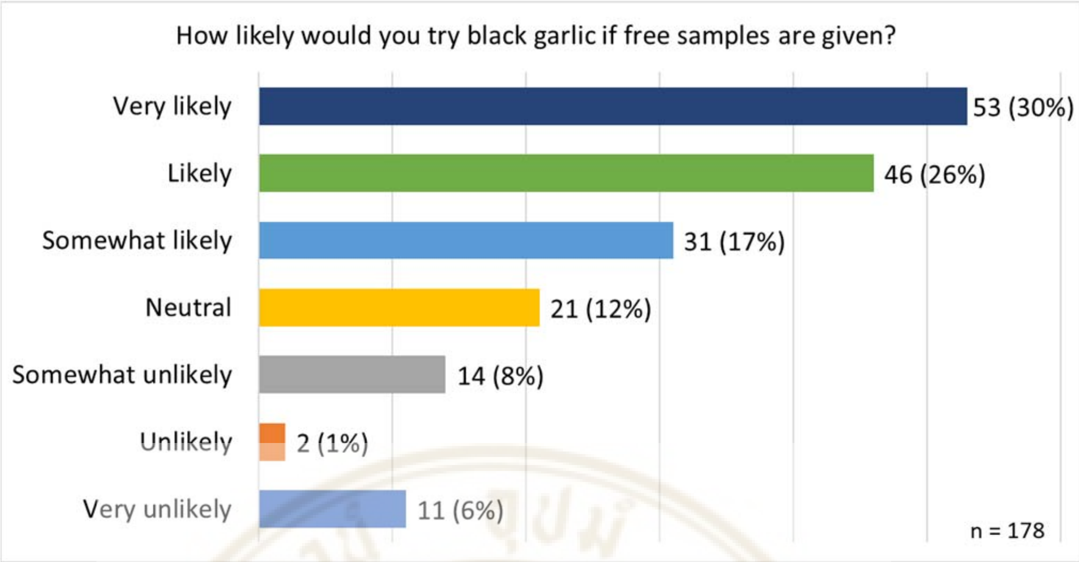


Figure 4.18 Respondents' likelihood of trying black garlic if free samples are given

When respondents were asked if free samples are offered, the answer towards positive side improved and the answer towards negative side lessen. 30% are very likely, 26% are likely, 17% are somewhat likely and 12% are neutral to try black garlic if samples are offered. Only 1% are unlikely and 6% are very unlikely to try even if samples are given for free. So, free sampling at point of sale could be a useful strategy to create awareness for the product.

Table 4.15 Rating on the reasons respondents would purchase black garlic

Please rate the reasons that you would purchase black garlic	Mean score*		No. of samples	Strongly disagree (%)	Disagree (%)	Slightly disagree (%)	Slightly agree (%)	Agree (%)	Strongly agree (%)	Total
Just want to eat healthy	4.8	Agree	**178**	1%	3%	19%	13%	24%	40%	**100%**
For its antioxidant benefit	4.7	Agree	**178**	2%	6%	15%	17%	19%	42%	**100%**
For cholesterol reduction	4.5	Agree	**178**	2%	8%	16%	16%	24%	34%	**100%**
To try different food	3.9	Slightly agree	**178**	10%	16%	14%	21%	16%	23%	**100%**
To enjoy its taste	3.7	Slightly agree	**178**	13%	16%	12%	25%	16%	17%	**100%**

** Mean score: 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Slightly agree, 5 = Agree, 6 = Strongly agree*

From the table above, reasons that respondents would be more agreeable to purchase black garlics are eating healthy, antioxidant benefit and cholesterol reduction. Lesser respondents agree to purchase black garlic for reasons as, to enjoy its taste and to try different food. So consumers would perceive black garlic as product to satisfy their utilitarian needs and health, antioxidant and cholesterol reduction benefits can be used as stimulus.

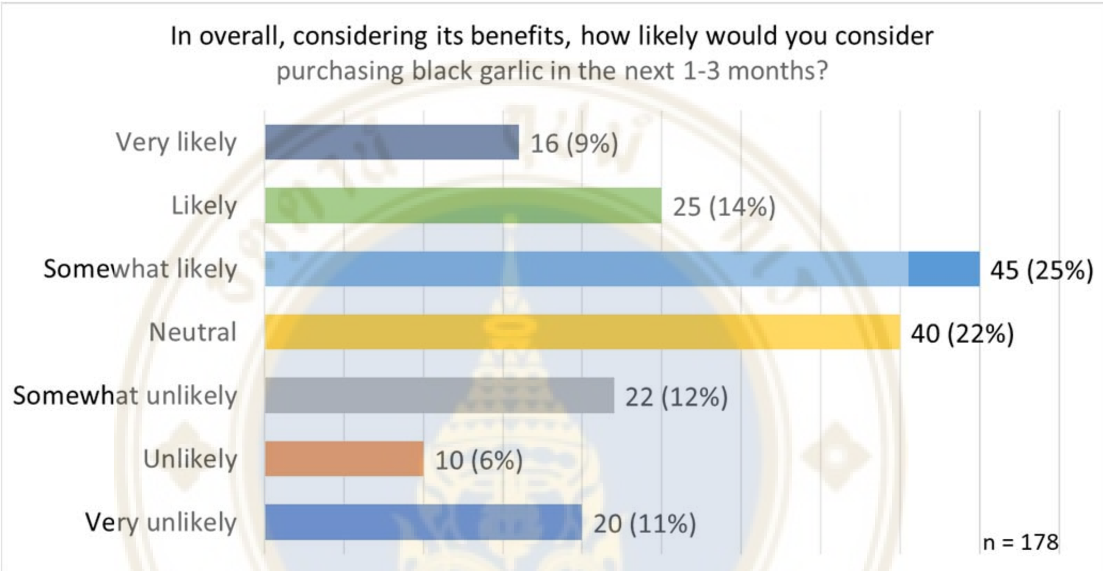


Figure 4.19 Respondents' likelihood to purchase black garlic in the next 1-3 months

When asked about purchasing within next one to three months, less respondents are very likely to purchase and more respondents are unlikely to purchase. But when carefully observe, more respondents answered somewhat likely to purchase in the next one to three months. As from previous finding, free sampling together with communication on functional benefits can be used to draw consumers to purchase the product.

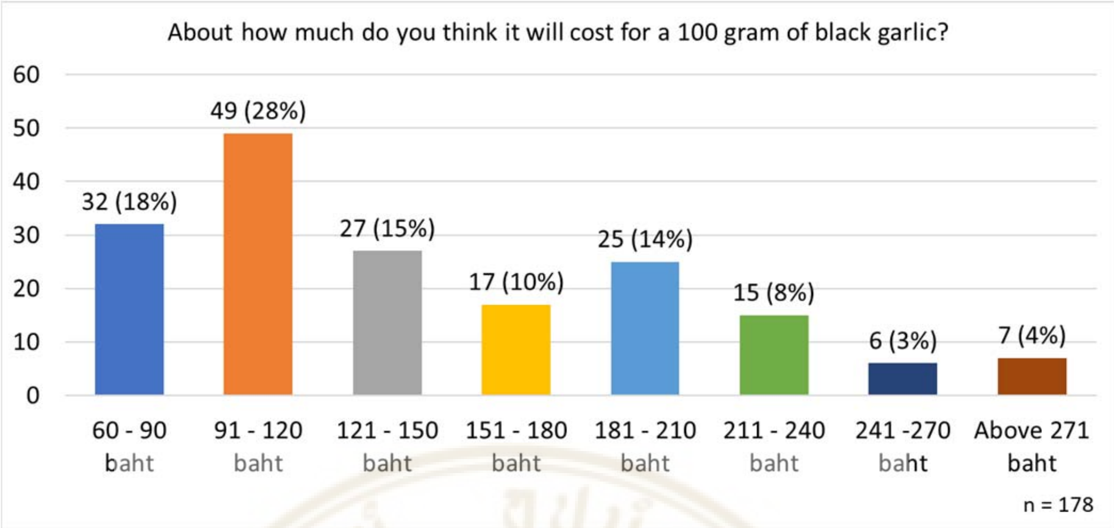


Figure 4.20 Respondents' perception on price range of 100 gram of black garlic

From chart above, more than half of the respondents will accept the price of no more than 150 baht per 100 gram of black garlic. The most accepted(28%) price range is 91-120 baht per 100 gram. From previous finding of how much consumers are typically purchase supplementary foods for and results in average of 16 baht per serving, the cost per serving of black garlic in this question is 18 to 24 baht. So by considering the cost, it is possible to sell black garlic at acceptable price for Thai consumers.

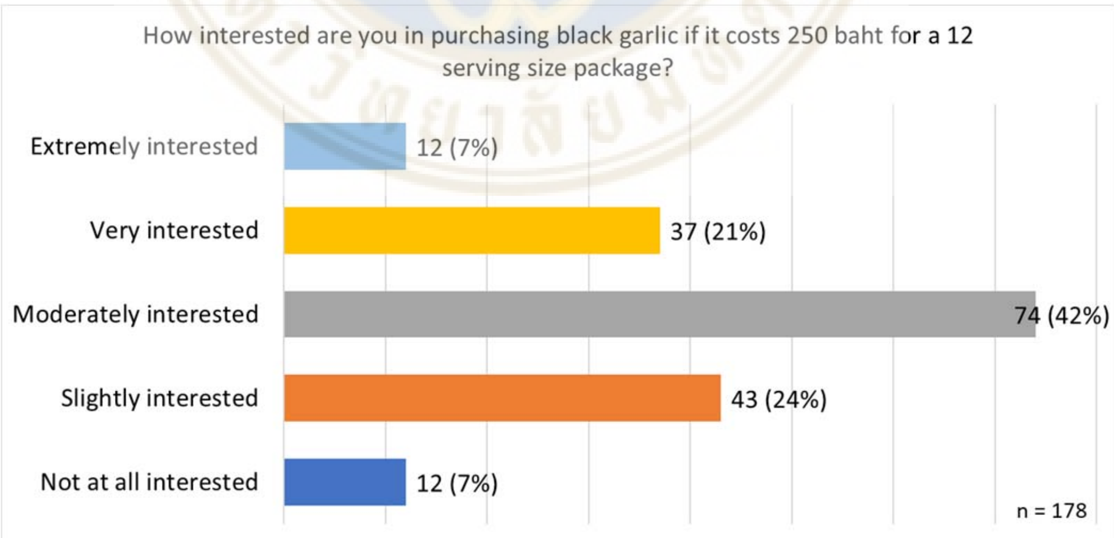
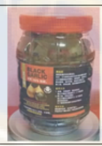


Figure 4.21 Respondents' perception on price of 250 baht for 12 serving size black garlic package

To find out more on the acceptable price consumers are willing to pay, researcher asked respondents' interest in purchasing given 250 baht for a 12 serving size. Most respondents answered that they are only moderately interested in purchasing the product. As 12 serving size is equal to 250 gram of black garlic, it can be suggested that the package size for the standard SKU should be reduced to between 100 to 200 gram, since consumers consume the product not often. And if the price is to be marked up, the maximum price should be no more than 250 baht, based on the average selling price from competitors.

Looking at table 4.16, it can be observed that Blagar Thailand sells black garlic at the highest price among its competitors. Whereas when look at B-Garlic's, with product packaging which also looks premium, the average price is lower than that charge by Blagar Thailand. On the other hand, King Black Garlic's packaging can be assumed to target at lower priced market.

Table 4.16 Black Garlic Competitors Analysis

Brand	King Black Garlic			Blagar Thailand			
Product	Black Garlic (with shell)	Black Garlic (with shell)	Black Garlic (peeled)	Honey Black Garlic (peeled)	Black Garlic (peeled)	Black Garlic (peeled)	Black Garlic (with shell)
Picture							
Weight (g.)	500	500	600	20	100	300	250
Price (Baht)	600	650	800	185	590	1650	490
Price per gram	1.20	1.30	1.33	9.25	5.90	5.50	1.96
Packaging	Zip lock	Box	Screw Plastic Jar	Box	Screw Glass Jar	Screw Glass Jar	Plastic Jar

Brand	B-Garlic					
Product	Black Garlic (with shell)	Black Garlic (with shell)	Black Garlic (peeled)	Black Garlic (with shell)	Black Garlic (with shell)	Black Garlic (with shell)
Picture						
Weight (g.)	1000	20	60	100	250	500
Price (Baht)	1200	50	90	150	350	650
Price per gram	1.20	2.50	1.50	1.50	1.40	1.30
Packaging	Box	Box	Screw Glass Jar	Box	Box	Box

Sources: King Black Garlic, B-Garlic, Arom, Blagar

Table 4.17 Respondents' perception towards white garlic and their interest in consuming black garlic crosstabulation

How interested would you be in consuming black garlic? * How do you feel about typical white garlic? Crosstabulation

			How do you feel about typical white garlic?						Total
			Very unappetizing	Slightly unappetizing	Neutral	Slightly appetizing	Moderately appetizing	Very appetizing	
How interested would you be in consuming black garlic?	Not at all interested	Count	0	0	5	2	0	8	15
		% within How interested would you be in consuming black garlic?	.0%	.0%	33.3%	13.3%	.0%	53.3%	100.0%
		% within How do you feel about typical white garlic?	.0%	.0%	11.9%	8.0%	.0%	15.4%	8.4%
		% of Total	.0%	.0%	2.8%	1.1%	.0%	4.5%	8.4%
	Slightly interested	Count	0	4	0	6	4	2	16
		% within How interested would you be in consuming black garlic?	.0%	25.0%	.0%	37.5%	25.0%	12.5%	100.0%
		% within How do you feel about typical white garlic?	.0%	66.7%	.0%	24.0%	7.8%	3.8%	9.0%
		% of Total	.0%	2.2%	.0%	3.4%	2.2%	1.1%	9.0%
	Moderately interested	Count	2	2	16	4	20	8	52
		% within How interested would you be in consuming black garlic?	3.8%	3.8%	30.8%	7.7%	38.5%	15.4%	100.0%
		% within How do you feel about typical white garlic?	100.0%	33.3%	38.1%	16.0%	39.2%	15.4%	29.2%
		% of Total	1.1%	1.1%	9.0%	2.2%	11.2%	4.5%	29.2%
	Very interested	Count	0	0	16	11	23	12	62
		% within How interested would you be in consuming black garlic?	.0%	.0%	25.8%	17.7%	37.1%	19.4%	100.0%
		% within How do you feel about typical white garlic?	.0%	.0%	38.1%	44.0%	45.1%	23.1%	34.8%
		% of Total	.0%	.0%	9.0%	6.2%	12.9%	6.7%	34.8%
	Extremely interested	Count	0	0	5	2	4	22	33
		% within How interested would you be in consuming black garlic?	.0%	.0%	15.2%	6.1%	12.1%	66.7%	100.0%
		% within How do you feel about typical white garlic?	.0%	.0%	11.9%	8.0%	7.8%	42.3%	18.5%
		% of Total	.0%	.0%	2.8%	1.1%	2.2%	12.4%	18.5%
Total		Count	2	6	42	25	51	52	178
		% within How interested would you be in consuming black garlic?	1.1%	3.4%	23.6%	14.0%	28.7%	29.2%	100.0%
		% within How do you feel about typical white garlic?	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	1.1%	3.4%	23.6%	14.0%	28.7%	29.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	83.939[a]	20	.000
Likelihood Ratio	78.491	20	.000
Linear-by-Linear Association	6.723	1	.010
N of Valid Cases	178		

a. 19 cells (63.3%) have expected count less than 5. The minimum expected count is .17.

From the crosstabulation above, it is observed that the more appetite respondents have for white garlic, the more interest they have for consuming black garlic. Among respondents who feel very appetizing in consuming white garlic, 42% are extremely interested in consuming black garlic. Among those who feel moderately appetizing in consuming white garlic, 45.1% are very interested in consuming black garlic. Those who are slightly appetizing in consuming white garlic, 44% are very interested in consuming black garlic. The interest in consuming black garlic goes along with respondents' appetite for white garlic.

Table 4.18 Respondents' interest in consuming black garlic and likelihood of consuming black garlic if free samples are offered

How likely would you try black garlic if free samples are given? * How interested would you be in consuming black garlic? Crosstabulation

			How interested would you be in consuming black garlic?					Total
			Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested	
How likely would you try black garlic if free samples are given?	Very unlikely	Count	11	0	0	0	0	11
		% within How likely would you try black garlic if free samples are given?	100.0%	.0%	.0%	.0%	.0%	100.0%
		% within How interested would you be in consuming black garlic?	73.3%	.0%	.0%	.0%	.0%	6.2%
		% of Total	6.2%	.0%	.0%	.0%	.0%	6.2%
	Unlikely	Count	2	0	0	0	0	2
		% within How likely would you try black garlic if free samples are given?	100.0%	.0%	.0%	.0%	.0%	100.0%
		% within How interested would you be in consuming black garlic?	13.3%	.0%	.0%	.0%	.0%	1.1%
		% of Total	1.1%	.0%	.0%	.0%	.0%	1.1%
	Somewhat unlikely	Count	0	8	6	0	0	14
		% within How likely would you try black garlic if free samples are given?	.0%	57.1%	42.9%	.0%	.0%	100.0%
		% within How interested would you be in consuming black garlic?	.0%	50.0%	11.5%	.0%	.0%	7.9%
		% of Total	.0%	4.5%	3.4%	.0%	.0%	7.9%
	Neutral	Count	0	4	13	4	0	21
		% within How likely would you try black garlic if free samples are given?	.0%	19.0%	61.9%	19.0%	.0%	100.0%
		% within How interested would you be in consuming black garlic?	.0%	25.0%	25.0%	6.5%	.0%	11.8%
		% of Total	.0%	2.2%	7.3%	2.2%	.0%	11.8%
	Somewhat likely	Count	0	2	21	8	0	31
		% within How likely would you try black garlic if free samples are given?	.0%	6.5%	67.7%	25.8%	.0%	100.0%
		% within How interested would you be in consuming black garlic?	.0%	12.5%	40.4%	12.9%	.0%	17.4%
		% of Total	.0%	1.1%	11.8%	4.5%	.0%	17.4%
	Likely	Count	2	2	10	29	3	46
		% within How likely would you try black garlic if free samples are given?	4.3%	4.3%	21.7%	63.0%	6.5%	100.0%
		% within How interested would you be in consuming black garlic?	13.3%	12.5%	19.2%	46.8%	9.1%	25.8%
		% of Total	1.1%	1.1%	5.6%	16.3%	1.7%	25.8%
	Very likely	Count	0	0	2	21	30	53
		% within How likely would you try black garlic if free samples are given?	.0%	.0%	3.8%	39.6%	56.6%	100.0%
		% within How interested would you be in consuming black garlic?	.0%	.0%	3.8%	33.9%	90.9%	29.8%
		% of Total	.0%	.0%	1.1%	11.8%	16.9%	29.8%
Total		Count	15	16	52	62	33	178
		% within How likely would you try black garlic if free samples are given?	8.4%	9.0%	29.2%	34.8%	18.5%	100.0%
		% within How interested would you be in consuming black garlic?	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	8.4%	9.0%	29.2%	34.8%	18.5%	100.0%

Table 4.18 Respondents' interest in consuming black garlic and likelihood of consuming black garlic if free samples are offered (cont.)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	308.923[a]	24	.000
Likelihood Ratio	229.292	24	.000
Linear-by-Linear Association	118.593	1	.000
N of Valid Cases	178		

a. 24 cells (68.6%) have expected count less than 5. The minimum expected count is .17.

From the crosstabulation above, it can be concluded if marketers want to do free sampling for black garlic, it will only be effective to those consumers who have neutral to positive perception towards black garlic. As the non-interested niche answered that they are unlikely to try black garlic although free samples are offered. For examples, among respondents who are not at all interested in consuming black garlic only 13.3% are likely and 73.3% are very unlikely to try the samples. Among those who are slightly interested in consuming black garlic, 50% are somewhat likely to try the free samples.

CHAPTER V
CONCLUSION AND DISCUSSION

This chapter contains three main sections: summary of the study, discussion of the major findings, and recommendations from the research.

Summary of the study

This study was conducted with 200 randomly selected samples who have been purchasing supplementary foods during the last one year. The purpose of this study is to understand consumers' perception towards black garlic and to define the motivations toward black garlic purchasing decision. The data collected from the questionnaire were analyzed to understand three research topics as follows:

1. 4P's factors towards purchasing supplementary food
2. Motivations towards purchasing supplementary food
3. Perceptions towards black garlic

5.1 Findings and Discussions

The findings of this study reveals that education, occupation and monthly income are the three significant factors which affect the purchase of supplementary foods. From the data gathered, most of the consumers who have purchased supplementary foods within last one year are Master and Bachelor graduates. Majority of consumers who purchased supplementary foods within last one year is also private firm employees, those who earn 20,000 to 40,000 baht per month and above 100,000 baht per month. This could possibly be stated that consumers of supplementary foods can be divided into two groups as; first jobbers who conceivably spend most of their time for work and self-development and senior level employees who have entered their mid-life, both count on supplementary foods for their health and wellbeing.

The followings are the major findings addressing the research topics posed in the study.

5.1.1 Topic 1: 4P's factors towards purchasing supplementary food

From the study, it can be concluded that consumers normally acquire information about supplementary food from family, friends and online search. The places that consumers purchase supplementary foods are drug store, supermarket and online channels. The frequency that consumers purchase supplementary foods is every three months with the transaction of 801 – 2,000 baht, and majority of them consume supplementary foods daily.

When crosstabulate consumers' purchase frequency with their source of information, however, it is found that those who purchase every month do online search to get the information, and those who purchase every three months ask family and friends to get the information. By crosstabulate consumers' spending level per purchase with their source of information, it is also found that consumers who spend 801 baht or more per purchase will get information from family, friends and online search. But once the spending per purchase is lower than 801 baht, the main source of information becomes advertising medias.

Observing between consumers' spending per purchase and place they purchase supplementary foods, it can be suggested that the higher the spending level, the more drug store is chosen as the most preferred location. On the other hand, the lower the spending level, the more supermarket is chosen as the most preferred location.

To sum up, supplementary foods product owners should focus on promoting their products through referrals and online marketing. The places that product owners must make sure to have the products available are drug store, supermarket and online channels.

5.1.2 Topic 2: Motivations towards purchasing supplementary food

The study reveals that majority of the consumers take supplementary foods to promote healthy skin, brain function and immune system, whereas good body shape is not at all important for them.

On the other hand, problem that got highest rating on likelihood of health problems that could lead to purchasing decision are stress, skin problem, high cholesterol, high blood pressure and obese.

Regarding the variables that consumers consider before purchasing supplementary foods, FDA certified, well known brand, natural ingredients, convenience usage, variety of benefits, reasonable price and availability in store are the variables that consumers considered as very important. The variables that consumers gave moderate to low importance are imported product, package size variety and have advertisement. So, this can be concluded that, for supplementary foods, consumers rather focus on functional benefits instead of credibility of the products.

5.1.3 Topic 3: Perceptions towards black garlic

From screening if the respondents consume black garlic before, the result showed that only 11% of the respondents have tried it before.

For consumers who have already consumed black garlic before, it is found that they do not have consumption schedule, but rather consume it whenever they want to and consume it less than once a month. The respondents agree that they consume black garlic for cholesterol reduction, antioxidant benefit and eating healthy purposes. To enjoy the good taste and to try different foods are not the reasons for their consumption. To conclude, although consumers know that black garlics are good for their health for many reasons, they do not consider the product as necessary.

For consumers who have never consumed black garlic before, majority of the respondents found black garlic is neutral to very appetizing. Moreover, majority of them are interested to try the product. Very few answered that the product is unappetizing or not interested to try. But for those few respondents that feel unappetizing and unlikely to try black garlic, even if the samples are offered for free, they would still decide not to try the product. From this finding, it could be learned that free samples can only stimulate purchasing decision to consumers who originally has positive perceptions towards the product. And the product features used to market black garlic should include cholesterol reduction, antioxidant benefit and healthy food, as these are the features that consumers agree that would persuade them to purchase black garlic. As for the price of black garlic, analyzing from average competitors' price and what respondents willing to pay for black garlic, it is suggested to price no more than 250 baht. And as research data suggests that consumers consume black garlic less often, it is reasonable that the ideal package size should be between 100 to 200 gram (5 to 10 servings) and, for this package size, the ideal price should not exceed consumers' perceived price of cheaper than 250 baht.

5.2 Recommendations

Despite popularity and growing demand of white garlic, black garlic as an alternative product is still not known among many Thai consumers. But from the evidence from consumer trends in Thailand 4.0 research conducted by EIC, more and more Thai people in working age worry about their health but choose to take supplements instead of doing regular exercise. Also, from the evidence that the current Thai consumer spending trend is growing towards internal care, there is room for black garlic, which serves as alternative medicine made from natural ingredient, to play in this market.

Regarding consumers' personal factor, education, occupation and income have influence towards supplementary food consumption. As for the social factor, reference group, opinion leader and family serve as important factor in influencing the healthy food consumption behavior. For psychological factor, use health problems as high cholesterol, high blood pressure and obese, and other product benefits as FDA certified, natural ingredients, convenience usage in the message to market black garlic product.

To sum up, marketers should market the product by using reference person that the target would trust, get opinion from or admire to be presenter of product. As consumers would purchase the product for the health problems stated earlier, avoidance approach should be used to tackle consumers' belief that the product can regulate consumers away from those potential health threats. Also the target that marketers should focus on are private firm employees who earn 20,000 – 40,000 baht per month and are university graduates.

Marketers should also use repetition in advertisement message in different touchpoints to help the target consumers remember the brand and digest the message. As consumers tend be bombarded with a lot of advertisements and they often naturally select which message to be exposed and give attention to. The message used should be distinctive to messages use by competitors to avoid consumers perceiving the brand as commodities sharing same product attributes.

The product benefits claimed in the message should aim at only for high cholesterol, high blood pressure and obese so it does not exceed what it can offer as, if it does, the post consumption evaluation could result in negative disconfirmation of expectation. Brand owners want consumers to repurchase, and it can only be achieved if the product performance exceeds or matches with consumers' expectation. Free samples should also be used to ensure consumers get to learn about the product before making buying decision.

5.3 Benefits of the Research

This research is conducted to explore on how black garlic should be marketed and its potential to success in Thailand. From the findings resulted from the research, it can be concluded that the product has high potential in Thai market by using effective communication on its functional benefits and free samplings as strategies to create awareness and stimulate desires for the product. From the Figure 4.40, Thailand has already entered aging society and will be entering aged society in the future. And from previous research on Thai consumers mentioned in chapter one, it is found that the older people get, the more they worry about their health, and the more they choose to consumer supplementary foods. So this can be potential for black garlic to be marketed in Thailand.

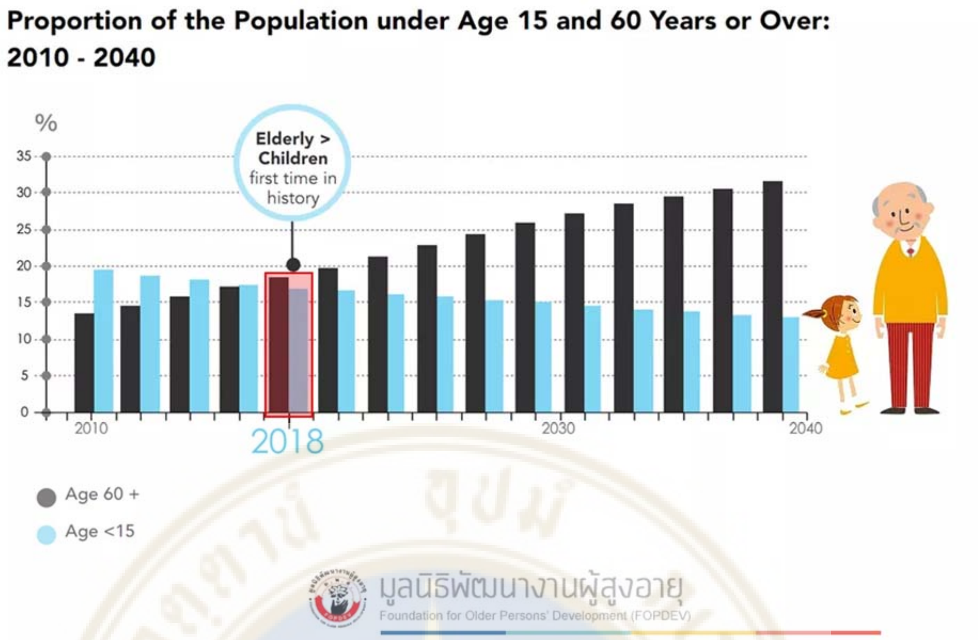


Figure 5.1 Thailand's aging society

Source: Foundation for Older Persons' Development (2017)

5.4 Recommendations for Future Research

Since black garlic is less well known in Thailand when comparing to countries such as, Korea, Japan and China, and there is only 11% of the total respondents who are the consumers of black garlic, further studies focusing only on consumers of black garlic can be used. Qualitative research tools such as in-depth interview and open ended questionnaire can be used to reveal each consumers' attitude towards the product more deeply. Topics such as factors on buying decision towards black garlic, forms of black garlic products that Thai consumers would prefer (i.e. capsule, paste, liquid or dissolving powder), and the effective platforms to create word of mouth marketing for black garlic (i.e. Twitter, Pantip.com, Facebook or influencers) can also further explore about black garlic.

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APPENDICES

Appendix A: Questionnaire English Version

This questionnaire is a part of College of Management Mahidol University Master in Marketing and Management program's Independent Study project entitled "Thai Consumer's Perception Towards Black Garlic". The aims of this project is to understand Thai consumer's perception towards black garlic and to define the motivation toward black garlic purchasing decision. This questionnaire is intended for research purpose only. Do not worry if you do not know what black garlic is or never tried it, as explanations of the product will be included in part 3 of the survey. Your personal information will be kept confidential. Please fill out the following questionnaire according to your belief.

You will begin with a screening question, then proceed with the questionnaire which divided into 4 parts:

Part 1: 4P's factors towards purchasing supplementary food

Part 2: Motivations towards purchasing supplementary food

Part 3: Perceptions towards black garlic

Part 4: General information

Your assistance in completing the information required will be very useful for the study. Thank you very much for your cooperations.

Screening question:

Have you purchased any supplementary food during the last 1 year?

**supplementary food can be vitamins, minerals, herbs or foods consume together with or in addition to normal meals which claims to promote health. Examples: Vitamin C pills, Zinc pills, Lingzhi extract, Ginseng root, Bird nest, Goji berries, Chicken essence.*

☐ Yes ☐ No [end of survey]

Part 1: 4P's factors towards purchasing supplementary food

1.1) Do you purchase supplementary food for your own consumption or for other people [choose only 1]?

□ For myself □ For others □ Both

1.2) Where do you usually get information about the benefits of supplementary food? [multiple answers]

□ Family and friends □ Store salesperson

□ Advertising medias □ Online search

1.3) Where do you go when you want to purchase supplementary food? [multiple answers]

□ Organic food store □ Chinese herbs store □ Restaurant

□ Online □ Modern trade store □ Drug store

1.4) How often do you purchase supplementary food? [choose only 1]

□ Once a week □ Once a month □ Every 3 months

□ Every 6 months □ Once a year

1.5) How often do you take supplementary food? [choose only 1]

□ Everyday □ Every 2-3 days

□ Once a week □ Less than once a week

1.6) How much do you usually spend per one purchase for supplementary food? [choose only 1]

□ 200 baht or less □ 201 - 400 baht □ 401 - 600 baht

□ 601 - 800 baht □ 801 - 1,000 baht □ 1,001 - 2,000 baht

□ More than 2,000 baht

Part 2: Motivations towards purchasing supplementary food

2.1) Please rate the importance of the benefits you look for when you purchase food supplements.

	Not Important						Important
	1	2	3	4	5	6	7
Promote healthy skin	☐	☐	☐	☐	☐	☐	☐
Promote good body shape	☐	☐	☐	☐	☐	☐	☐
Promote brain function	☐	☐	☐	☐	☐	☐	☐
Promote immune system	☐	☐	☐	☐	☐	☐	☐
Promote healthy organs	☐	☐	☐	☐	☐	☐	☐
Reduce cholesterol	☐	☐	☐	☐	☐	☐	☐
Prevent cancer	☐	☐	☐	☐	☐	☐	☐
Prevent heart disease	☐	☐	☐	☐	☐	☐	☐

2.2) Please rate the likelihood of the problems you experienced with or think you might experience in the future that would motivate you to purchase supplementary food.

	Unlikely to cause me to purchase						Likely to cause me to purchase
	1	2	3	4	5	6	7
High cholesterol	☐	☐	☐	☐	☐	☐	☐
Asthma	☐	☐	☐	☐	☐	☐	☐
Headache	☐	☐	☐	☐	☐	☐	☐
Alzheimer	☐	☐	☐	☐	☐	☐	☐
Diabetes	☐	☐	☐	☐	☐	☐	☐
Heart disease	☐	☐	☐	☐	☐	☐	☐
Stress	☐	☐	☐	☐	☐	☐	☐
Hormonal related issues	☐	☐	☐	☐	☐	☐	☐
Skin problems	☐	☐	☐	☐	☐	☐	☐
High blood pressure	☐	☐	☐	☐	☐	☐	☐
Obese	☐	☐	☐	☐	☐	☐	☐

2.3) Please rate the importance of each variable when purchase for supplementary food.

	Not Important 1	2	3	4	5	6	Important 7
Certified by FDA	☐	☐	☐	☐	☐	☐	☐
Well known brand	☐	☐	☐	☐	☐	☐	☐
Package size variety	☐	☐	☐	☐	☐	☐	☐
Imported product	☐	☐	☐	☐	☐	☐	☐
Natural ingredients	☐	☐	☐	☐	☐	☐	☐
Convenience usage: tablet, odorless	☐	☐	☐	☐	☐	☐	☐
Variety of benefits: weight loss vitamins, reduce cholesterol, prevent cancer	☐	☐	☐	☐	☐	☐	☐
prevent cancer	☐	☐	☐	☐	☐	☐	☐
Reasonable price	☐	☐	☐	☐	☐	☐	☐
Availability in stores	☐	☐	☐	☐	☐	☐	☐
Have advertisements	☐	☐	☐	☐	☐	☐	☐

Part 3: Perceptions towards black garlic

** Black garlic is the typical white garlic which have gone through ageing process. Which results in black color with soft-chewy texture, balsamic vinegar and prune-liked taste and increased antioxidant and cholesterol reduction benefits. It has no garlicky smell and taste. It can be eaten alone or use as food ingredients. Some producers sell the product in forms of paste, pill, or even mix as flavor to other foods such as sea salt, dressing oil, ice cream or honey.*

3) Before doing this questionnaire, do you know what is black garlic?

□ Yes [proceed with question 3.1.1 - 3.1.4]

□ No [skip to question 3.2.1 - 3.2.8]

3.1.1) For how long have you been consuming black garlic?

_____ years

3.1.2) How often do you find yourself consuming black garlic?

□ Less often □ Monthly □ Weekly □ Everyday

3.1.3) Please rate the reasons that brought you to consume black garlic?

	Strongly Disagree					Strongly Agree
	1	2	3	4	5	6
For cholesterol reduction	□	□	□	□	□	□
For its antioxidant benefit	□	□	□	□	□	□
Just want to eat healthy	□	□	□	□	□	□
To enjoy its taste	□	□	□	□	□	□
To try different food	□	□	□	□	□	□

3.1.4) Please rate your need for black garlic product?

Not at all needed						Very much needed
1	2	3	4	5	6	7
□	□	□	□	□	□	□

3.2.1) What is your reaction to the described black garlic product?

Unappetizing						Appetizing
1	2	3	4	5	6	7
□	□	□	□	□	□	□

3.2.2) How do you feel about typical white garlic?

Unappetizing							Appetizing
	1	2	3	4	5	6	7
	☐	☐	☐	☐	☐	☐	☐

3.2.3) How interested would you be in consuming black garlic?

Not at all interested						Very much interested
	1	2	3	4	5	
	☐	☐	☐	☐	☐	

3.2.4) How likely would you try black garlic if free samples are given?

Very unlikely							Very likely
	1	2	3	4	5	6	7
	☐	☐	☐	☐	☐	☐	☐

3.2.5) Please rate the reasons that you would purchase black garlic.

	Strongly Disagree					Strongly Agree
	1	2	3	4	5	6
For cholesterol reduction	☐	☐	☐	☐	☐	☐
For its antioxidant benefit	☐	☐	☐	☐	☐	☐
Just want to eat healthy	☐	☐	☐	☐	☐	☐
To enjoy its taste	☐	☐	☐	☐	☐	☐
To try different food	☐	☐	☐	☐	☐	☐

3.2.6) In overall, considering its benefits, how likely would you consider purchasing black garlic in the next 1-3 months?

Very unlikely						Very likely
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

3.2.7) About how much do you think it will cost for a 100 gram of black garlic?

☐ 60-90 Baht ☐ 91-120 Baht ☐ 121-150 Baht
☐ 151-180 Baht ☐ 181-210 Baht ☐ 211-240 Baht
☐ 241-270 Baht ☐ Above 271 Baht

3.2.8) How interested are you in purchasing black garlic if it costs 250 baht for a 12 serving size package?

Not at all interested				Very much interested
1	2	3	4	5
☐	☐	☐	☐	☐

Part 4: General information

4.1) Please tell me your gender

☐ Male ☐ Female

4.2) Please tell me your age

☐ Below 20 years old ☐ 20 - 30 years old ☐ 31 - 40 years old
☐ 41 - 50 years old ☐ Above 50 years old

4.3) Please tell me your status

☐ Single ☐ Married ☐ Divorced

4.4) Please tell me your highest education

☐ Below Bachelor degree ☐ Bachelor degree
☐ Master degree ☐ Doctoral degree

4.5) Please tell me your occupation

- Student Governmental firm employee
- Private firm employee Business owner/Freelancer

4.6) Please tell me your monthly income

- Below 20,000 baht 20,000 - 40,000 baht
- 40,001 - 60,000 baht 60,001 - 80,000 baht
- 80,001 - 100,000 baht Above 100,000 baht

Thank you for contributing your valuable time and your honest information to complete this survey. We truly value the information you have provided. Your responses will be contributed to our research analyses.

Appendix B: Questionnaire Thai Version

แบบสอบถามชุดนี้เป็นส่วนหนึ่งของโครงการการค้นคว้าอิสระหัวข้อ ทัศนคติที่ผู้บริโภคไทยมีต่อผลิตภัณฑ์กระเทียมดำ ตามหลักสูตรปริญญาโท สาขาการตลาด วิทยาลัยการจัดการ มหาวิทยาลัยมหิดล แบบสอบถามฉบับนี้มีวัตถุประสงค์เพื่อใช้ในการศึกษาถึงทัศนคติของผู้บริโภคไทยต่อผลิตภัณฑ์กระเทียมดำ และเพื่อศึกษาถึงแรงจูงใจที่ผู้บริโภคจะตัดสินใจซื้อผลิตภัณฑ์กระเทียมดำ สำหรับผู้ตอบแบบสอบถามที่ไม่รู้จักผลิตภัณฑ์กระเทียมดำ ในแบบสอบถามจะมีการอธิบายถึงลักษณะของสินค้านี้

แบบสอบถามจะเริ่มจากคำถามคัดกรอง จากนั้นแบบสอบถามจะแบ่งคำถามเป็น 4 ส่วน

ส่วนที่ 1 ปัจจัยทางด้านส่วนประสมทางการตลาดที่มีผลต่อพฤติกรรมการตัดสินใจซื้อผลิตภัณฑ์อาหารเสริม

ส่วนที่ 2 แรงจูงใจที่มีผลต่อพฤติกรรมการตัดสินใจซื้อผลิตภัณฑ์อาหารเสริม

ส่วนที 3 ทัศนคติที่ผู้บริโภคมีต่อผลิตภัณฑ์กระเทียมดำ

ส่วนที่ 4 ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

โดยข้อมูลของท่านจะไม่ได้รับการเปิดเผยหรือนำไปใช้ประโยชน์อื่นใดนอกจากเพื่อการศึกษาเท่านั้น สุดท้ายนี้ผู้วิจัยต้องขอขอบพระคุณท่านอย่างสูงในการเสียสละเวลาช่วยตอบแบบสอบถามมา ณ ที่นี้ด้วย

คำถามคัดกรอง:

ท่านเคยซื้ออาหารเสริมในช่วงหนึ่งปีที่ผ่านมาหรือไม่

** อาหารเสริม ณ ที่นี้สามารถรวมถึง วิตามินเสริม สารอาหารเสริม สมุนไพร หรืออาหารอื่นๆ ที่สามารถทานพร้อมกับมื้ออาหารทั่วไป หรือทานเสริมแยกจากมื้ออาหารทั่วไป เช่น ยาเม็ดวิตามินซี ยาเม็ดซิงค์ เห็ดหลินจือสกัด รากโสม รังนก เมล็ดเก๋ากี้ หรือซุปไก่สกัดเข้มข้น*

☐ เคย ☐ ไม่เคย [จบแบบสอบถาม]

ส่วนที่ 1: ปัจจัยทางด้านส่วนประสมทางการตลาดที่มีผลต่อพฤติกรรมการตัดสินใจซื้อผลิตภัณฑ์อาหารเสริม

1.1) โดยปกติแล้ว ท่านซื้ออาหารเสริมเพื่อรับประทานเอง หรือซื้อให้ผู้อื่นรับประทาน [เลือก 1 คำตอบ]?

☐ ซื้อเพื่อรับประทานเอง ☐ ซื้อให้ผู้อื่นรับประทาน ☐ ซื้อเพื่อทั้งตนเองและผู้อื่น

1.2) โดยปกติแล้ว ท่านมักจะได้รับข้อมูลเกี่ยวกับประโยชน์ของผลิตภัณฑ์อาหารเสริมจากแหล่งใด [เลือกได้หลายคำตอบ]

☐ เพื่อนและครอบครัว ☐ พนักงานขายในร้าน

☐ สื่อโฆษณา ☐ การค้นหาทางออนไลน์

1.3) โดยปกติแล้ว ท่านมักจะซื้อผลิตภัณฑ์อาหารเสริมจากที่ไหน [เลือกได้หลายคำตอบ]

☐ ร้านจำหน่ายอาหารออร์แกนิค ☐ ร้านจำหน่ายยาจีน

☐ ร้านอาหาร ☐ ร้านค้าออนไลน์

☐ ซุปเปอร์มาร์เก็ต ☐ ร้านขายยา

1.4) ท่านมักจะซื้อผลิตภัณฑ์อาหารเสริมบ่อยแค่ไหน [เลือก 1 คำตอบ]

☐ อาทิตย์ละครั้ง ☐ เดือนละครั้ง ☐ ทุก 3 เดือน

☐ ทุก 6 เดือน ☐ ปีละครั้ง

1.5) ท่านมักจะรับประทานอาหารเสริมบ่อยแค่ไหน [เลือก 1 คำตอบ]

☐ ทุกวัน ☐ ทุก 2-3 วัน

☐ อาทิตย์ละครั้ง ☐ น้อยกว่าอาทิตย์ละครั้ง

1.6) โดยปกติแล้ว ท่านมีค่าใช้จ่ายในการซื้อผลิตภัณฑ์อาหารเสริมต่อครั้งเท่าไหร่ [เลือก 1 คำตอบ]

☐ 200 บาท หรือน้อยกว่า ☐ 201 - 400 บาท ☐ 401 - 600 บาท

☐ 601 - 800 บาท ☐ 801 - 1,000 บาท ☐ 1,001 - 2,000 บาท

☐ มากกว่า 2,000 บาท

ส่วนที่ 2: แรงจูงใจที่มีผลต่อพฤติกรรมการตัดสินใจซื้อผลิตภัณฑ์อาหารเสริม

2.1) กรุณาให้คะแนนความสำคัญต่อประโยชน์ต่างๆที่ท่านใช้พิจารณาในการเลือกซื้ออาหารเสริม

	ไม่สำคัญ 1	2	3	4	5	6	สำคัญ 7
เพื่อดูแลผิวพรรณ	☐	☐	☐	☐	☐	☐	☐
เพื่อดูแลหุ่น	☐	☐	☐	☐	☐	☐	☐
เพื่อช่วยในการทำงานของสมอง	☐	☐	☐	☐	☐	☐	☐
เพื่อช่วยให้ร่างการมีภูมิต้านทาน	☐	☐	☐	☐	☐	☐	☐
เพื่อดูแลรักษาอวัยวะภายใน	☐	☐	☐	☐	☐	☐	☐
เพื่อลดระดับคอเลสเตอรอล	☐	☐	☐	☐	☐	☐	☐
เพื่อป้องกันโรคมะเร็ง	☐	☐	☐	☐	☐	☐	☐
เพื่อป้องกันโรคเกี่ยวกับหัวใจ	☐	☐	☐	☐	☐	☐	☐

2.2) จากปัญหาสุขภาพที่ท่านประสบอยู่ และคาดว่าอาจจะประสบในอนาคต กรุณาให้คะแนนความเป็นไปได้ที่ความเสี่ยงที่จะเกิดปัญหาสุขภาพเหล่านี้ จะเป็นแรงจูงใจให้ท่านซื้อผลิตภัณฑ์เพื่อสุขภาพ

	ไม่สามารถเป็นแรงจูงใจให้ซื้อ 1	2	3	4	5	6	สามารถเป็นแรงจูงใจให้ซื้อ 7
ระดับคอเลสเตอรอลสูง	☐	☐	☐	☐	☐	☐	☐
อาการภูมิแพ้	☐	☐	☐	☐	☐	☐	☐
อาการปวดหัว	☐	☐	☐	☐	☐	☐	☐
โรคอัลไซเมอร์	☐	☐	☐	☐	☐	☐	☐
โรคเบาหวาน	☐	☐	☐	☐	☐	☐	☐
โรคเกี่ยวกับหัวใจ	☐	☐	☐	☐	☐	☐	☐
โรคเครียด	☐	☐	☐	☐	☐	☐	☐
โรคที่เกิดจากการฮอร์โมน	☐	☐	☐	☐	☐	☐	☐
โรคเกี่ยวกับผิวหนัง	☐	☐	☐	☐	☐	☐	☐

โรคความดันสูง	□	□	□	□	□	□	□
โรคอ้วน	□	□	□	□	□	□	□

2.3) กรุณาให้คะแนนความสำคัญของคุณสมบัติต่างๆที่ท่านใช้พิจารณาในการเลือกซื้ออาหารเสริม

	ไม่สำคัญ						สำคัญ
	1	2	3	4	5	6	7
ได้รับการรับรองจาก อ.ย.	□	□	□	□	□	□	□
เป็นยี่ห้อที่รู้จักกันแพรหลาย	□	□	□	□	□	□	□
มีขนาดบรรจุภัณฑ์ที่หลากหลาย	□	□	□	□	□	□	□
เป็นสินค้านำเข้า	□	□	□	□	□	□	□
ผลิตจากส่วนผสมที่มาจากธรรมชาติ	□	□	□	□	□	□	□
บริโภคได้ง่าย เป็นเป็นแคปซูล	□	□	□	□	□	□	□
สามารถรวมหลายประโยชน์ เช่น ช่วยลดน้ำหนัก เป็นวิตามิน ลดคอเลสเตอร์รอล ป้องกันมะเร็ง	□	□	□	□	□	□	□
ราคาสมเหตุผล	□	□	□	□	□	□	□
หาซื้อได้ง่ายในร้าน							
มีการทำโฆษณา							

ส่วนที่ 3: ทัศนคติที่ผู้บริโภคมีต่อผลิตภัณฑ์กระเทียมดำ

** กระเทียมดำ คือสินค้าที่เกิดจากการนำกระเทียมที่ผู้บริโภคใช้บริโภคทั่วไปมาผ่านกระบวนการบ่มในอุณหภูมิที่เหมาะสม จนเกิดการเปลี่ยนแปลงของสีจนเป็นสีดำ เนื้อของกระเทียมดำจะมีลักษณะนุ่มและหนึบเล็กน้อย มีรสชาติหวานอมเปรี้ยว กระเทียมดำจะมีปริมาณสารต้านอนุมูลอิสระและสามารถช่วยลดคอเลสเตอรอลได้มากกว่ากระเทียมที่ใช้บริโภคทั่วไปหลายเท่า ในต่างประเทศ กระเทียมดำนิยมนำมารับประทานเป็นลูกเปล่าๆ หรือใช้เป็นส่วนประสมในการทำอาหารทั้งเมนูคาวและหวาน ผู้ผลิตส่วนใหญ่จะจำหน่ายกระเทียมดำในรูปแบบเม็ดกระเทียม สเปรด แคปซูลสกัด ไปจนถึงการผสมเข้ากับอาหารอื่นๆเพื่อให้เกิดกลิ่นและรสชาติของกระเทียมดำ เช่น ผสมกับ เกลือทะเล น้ำสลัด น้ำผึ้ง หรือ น้ำสลัด ทั้งนี้ กระเทียมดำจะไม่มีกลิ่นเผ็ดหรือเหม็นฉุนเหมือนกระเทียมที่บริโภคทั่วไป แต่จะมีรสชาติหวานอมเปรี้ยว และมีกลิ่นออกจะคล้ายกับลูกพรุนอบแห้ง*

3) ก่อนทำแบบสอบถามนี้ ท่านเคยได้รู้จักกระเทียมดำหรือไม่

☐ รู้จัก [ต่อไปที่คำถาม 3.1.1 - 3.1.4] ☐ ไม่รู้จัก [ข้ามไปคำถามที่ 3.2.1 - 3.2.8]

3.1.1) ท่านเคยได้บริโภคผลิตภัณฑ์กระเทียมดำมาแล้วกี่ปี

____ ปี

3.1.2) ท่านบริโภคกระเทียมดำบ่อยแค่ไหน

☐ นานๆ ครั้ง ☐ เดือนละครั้ง

☐ อาทิตย์ละครั้ง ☐ ทุกวัน

3.1.3) กรุณาให้คะแนนต่อเหตุผลที่จูงใจให้ท่านเริ่มบริโภคผลิตภัณฑ์กระเทียมดำ

	ไม่เห็นด้วยอย่างมาก					เห็นด้วยอย่างมาก
	1	2	3	4	5	6
เพื่อลดระดับคอเลสเตอรอล	☐	☐	☐	☐	☐	☐
เพื่อประโยชน์ด้านสารต้านอนุมูลอิสระ	☐	☐	☐	☐	☐	☐
ต้องการรับประทานอาหารที่ดีต่อสุขภาพ	☐	☐	☐	☐	☐	☐
ชอบรสชาติของผลิตภัณฑ์กระเทียมดำ	☐	☐	☐	☐	☐	☐
ต้องการลองอาหารหลากหลาย	☐	☐	☐	☐	☐	☐

3.1.4) กรุณาให้คะแนนความต้องการบริโภคของท่านต่อผลิตภัณฑ์กระเทียมดำ

ไม่ต้องการเลย						ต้องการมาก
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

3.2.1) จากที่ได้อธิบายถึงคุณลักษณะของผลิตภัณฑ์กระเทียมดำข้างต้น ท่านมีปฏิกิริยาอย่างไรต่อผลิตภัณฑ์กระเทียมดำ

ไม่น่ารับประทาน						น่ารับประทาน
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

3.2.2) ท่านมีความรู้สึกอย่างไรกับกระเทียมขาวที่ใช้บริโภคกันทั่วไป

ไม่น่ารับประทาน						น่ารับประทาน
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

3.2.3) ท่านมีความสนใจที่จะลองรับประทานผลิตภัณฑ์กระเทียมดำมากแค่ไหน

ไม่มีความสนใจเลย				ความสนใจมาก
1	2	3	4	5
☐	☐	☐	☐	☐

3.2.4) หากมีการแจกผลิตภัณฑ์กระเทียมดำให้ชิมฟรี มีความเป็นไปได้แค่ไหนที่ท่านจะลองรับประทานผลิตภัณฑ์กระเทียมดำ

ไม่มีความเป็นไปได้เลย						มีความเป็นไปได้สูง
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

3.2.5) กรุณาให้คะแนนความสำคัญต่อเหตุผลที่ท่านจะซื้อผลิตภัณฑ์กระเทียมดำ

	ไม่เห็นด้วยอย่างมาก					เห็นด้วยอย่างมาก
	1	2	3	4	5	6
เพื่อลดระดับคอเลสเตอรอล	☐	☐	☐	☐	☐	☐
เพื่อประโยชน์ด้านสารต้านอนุมูลอิสระ	☐	☐	☐	☐	☐	☐
ต้องการรับประทานอาหารที่ดีต่อสุขภาพ	☐	☐	☐	☐	☐	☐
ชอบรสชาติของผลิตภัณฑ์กระเทียมดำ	☐	☐	☐	☐	☐	☐
ต้องการลองอาหารหลากหลาย	☐	☐	☐	☐	☐	☐

3.2.6) โดยรวมแล้ว จากคุณประโยชน์ของผลิตภัณฑ์กระเทียมดำ มีความเป็นไปได้แค่ไหนที่ท่านจะซื้อผลิตภัณฑ์กระเทียมดำภายในอีก 1-3 เดือน

ไม่มีความเป็นไปได้เลย มีความเป็นไปได้สูง

1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

3.2.7) ท่านคิดว่าผลิตภัณฑ์กระเทียมดำจำนวน 100 กรัม จะจำหน่ายในราคาเท่าไหร่

☐ 60-90 บาท ☐ 91-120 บาท ☐ 121-150 บาท

☐ 151-180 บาท ☐ 181-210 บาท ☐ 211-240 บาท

☐ 241-270 บาท ☐ มากกว่า 271 บาท

3.2.8) หากผลิตภัณฑ์กระเทียมดำขนาด 12 หน่วยบริโภค จำหน่ายในราคา 250 บาท ท่านจะมีความสนใจที่จะซื้อมากแค่ไหน

ไม่มีความสนใจเลย ความสนใจมาก

1	2	3	4	5
☐	☐	☐	☐	☐

ส่วนที่ 4: ข้อมูลทั่วไป

4.1) กรุณาระบุเพศของท่าน

☐ ชาย ☐ หญิง

4.2) กรุณาระบุอายุของท่าน

☐ ต่ำกว่า 20 ปี ☐ 20 - 30 ปี ☐ 31 - 40 ปี

☐ 41 - 50 ปี ☐ มากกว่า 50 ปี

4.3) กรุณาระบุสถานภาพของท่าน

☐ โสด ☐ แต่งงาน ☐ หย่า

4.4) กรุณาระบุระดับการศึกษาสูงสุดของท่าน

☐ ต่ำกว่าปริญญาตรี ☐ ปริญญาตรี

☐ ปริญญาโท ☐ ปริญญาเอก

4.5) กรุณาระบุอาชีพของท่าน

☐ นักศึกษา ☐ พนักงานราชการ

☐ พนักงานบริษัทเอกชน ☐ เจ้าของธุรกิจ/ฟรีแลนซ์

4.6) กรุณาระบุรายได้ต่อเดือนของท่าน

☐ ต่ำกว่า 20,000 บาท ☐ 20,000 - 40,000 บาท ☐ 40,001 - 60,000 บาท

☐ 60,001 - 80,000 บาท ☐ 80,001 - 100,000 บาท ☐ มากกว่า 100,000 บาท

ขอบพระคุณท่านอย่างสูงในการเสียสละเวลาอันมีคุณค่าในการร่วมมือตอบแบบสอบถาม
มา ณ ที่นี้ด้วย