MARKETING MECHANISM FOR FOOD SAFETY IN PHRANAKHON SI AYUTTHAYA PROVINCE

Supakorn Limkhunthammo¹, Sasiwan Phoolsawat², Pornthep Kaewchur³, Phongsakorn Amsa-ard⁴, Adisai Watanaputi⁵, Pinyada Ruensook⁶, Kobchai Mekdee⁷
¹,²,³,⁴,⁵Faculty of Business Administration and Information Technology, Rajamangala University of Technology Suvarnabhumi, Thailand

ABSTRACT

The purposes of the research article were 1) to develop a marketing mechanism for promoting food safety and agricultural safety standards to be accepted, 2) to strengthen a strong food safety and GAP network, and 3) to use integrated marketing communications to make awareness of the difference between safe food and GAP with chemical-agriculture products. Qualitative research using action research was used for research design and data were analyzed using content analysis and analytic induction. The findings showed that 1) the researchers developed a model and establish a prototype for the agricultural safety and food safety market that can promote food safety standards and GAP Products to be more acceptable 2) we can strengthen a strong food safety and agricultural safety network by train 397 people with food sanitation certification, and 3) the customers were more aware of the difference between safe food and GAP with chemical-agriculture products.

Keywords : Marketing mechanism, Safety food, GAP, Integrated marketing communications

I. INTRODUCTION

Food is extremely important to health as it is one of the factors that sustain life, but if the food is contaminated with harmful substances or even contain substances that are allowed to be used in food but having a quantity that is more than the proper amount will cause harm to consumers and affect the quality of life. Promoting people to have good health and not getting sick is something that the government or related agencies must support, control, supervise, monitor, and protect the people. These actions must ensure that all people can access to consume safe and nutritious food thoroughly. Currently, the major problem encountered in fresh food that is, there are a lot of contaminants that cause health hazards when we eat them and it can have both short-term and long-term effects, or it can be life-threatening. Most of the stores are interested in their benefits more than consumers’ lives and this is why many contaminants are accumulated in customers’ bodies.

Nevertheless, there are many consumers who care about their health by seeking safe food but still not confident in the quality of food that it is really safe or not, as well as many producers themselves are struggling to find a market that sells agricultural and safe food products because those safe products are sold together with chemical-agriculture products, thus they are unable to add value to their products.

Therefore, this research will create a marketing mechanism for food safety for consumers, initiate from PhraNakhon Si Ayutthaya Province, and give confidence in the products that they purchase are truly safe, and manufacturers have a market where they can distribute their products in a valuable way.

II. RESEARCH OBJECTIVES

1) to develop a marketing mechanism for promoting food safety and agricultural safety standards to be accepted

2) to strengthen a strong food safety and GAP network

3) to use integrated marketing communications to make awareness of the difference between safe food and GAP with chemical-agriculture products.
III. LITERATURE REVIEW

Marketing Mechanism

In economics, the market mechanism is a mechanism by which the use of money exchanged by buyers and sellers with an open and understood system of value and time trade-offs in a market tends to optimize distribution of goods and services in at least some ways. The mechanism can exist in free markets or in captive or controlling markets seek to use supply and demand, or some other form of charging for scarcity, to choose among production possibilities. In a free market economy, all the resources are allocated by the private sector (individuals, households, and groups of individuals); in a planned economy, all the resources are owned by the public sector (local and central government); and, in a mixed economy, some resources are owned by both sectors, private and public. In reality the first two are mostly theoretical and the third is common. Resources are allocated according to the forces of supply and demand.

Government interference in the market mechanism can lead to economic inefficiency when it is applied to some private goods. Prices convey a lot of information. They not only tell producers what to produce but also inform the producers to produce what people want. The more inaccurate the information gets, the lesser will be the economic coordination which will in turn lower satisfaction of wants. Thus interference in the information conveyed by prices is destructive to economic development if misapplied or overused. However, the market mechanism often cannot optimize for public goods, owing to problems such as the tragedy of the commons. For example, modern highways have been good for economic development, but it has taken government planning and allocation to bring them into existence.

Other market mechanisms include government fiscal policy and monetary policy. Described by the Friedman rule proposed by Milton Friedman.[1] These policies will influence demand by price adjustments through taxes and charges and through adjustments to the value of money by the related supply of money.

Good Agricultural Practice (GAP)

Good Agricultural Practice is a certification system for agriculture, specifying procedures (and attendant documentation) that must be implemented to create food for consumers or further processing that is safe and wholesome, using sustainable methods. While there are numerous competing definitions of what methods constitute good agricultural practice there are several broadly accepted schemes that producers can adhere to.

In Thailand, there is a standard called “Thai Agricultural Standard: TAS 9001-2013” [2] that contains the good agricultural practices for food crop. This is the way how to ensure food safety in the up-stream supply chain, but the major problems about GAP in Thailand are too few public inspection body and too expensive cost for private inspection body.

Food Safety

Food safety refer to all measures to ensure that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use.[3]

There are three types of food contamination that make food unsafe: biological, chemical and physical. Food contamination can easily occur in a commercial kitchen.

In Thailand, For the purpose of ensuring food safety and quality, Bureau of Food has responsibilities for protecting consumer's health from hazardous and deteriorated foods.

Its functions include pre-marketing approval and post-marketing activities, e.g., licensing for manufacturing and importation of food commodities and registration of specially controlled food. The purpose is to screen for good quality and safe food only to enter into markets. These have been undertaken and regulated by Thai FDA under the provision of the Food Act B.E. 2522.[4]

Nevertheless, under the provision of Ministerial Regulation of Ministry of Public Health in Sanitation of food selling places, B.E. 2561, it also sets that food business owners and food handlers must train and qualify for food sanitation certification. This is the way how to ensure food safety in the mid-stream supply chain.
IV. RESEARCH METHODS

A. Research Design

Action research [5] were used and research tools were unstructured interview and participant observation. Data were collected from in-depth interviews, focus group discussions, and observations. Qualitative data from 10 key informants were analyzed by using content analysis and quantitative data about training from 247 trainees of food sanitation program were analyzed by using descriptive statistics and paired sample t-test.

B. Research Process

Research process of this research has developed into 7 steps consisted of to analyze concept, created research tools, conduct the experiment, and to assess experimental results. Steps were shown as follows:

1) examining the current situation of GAP producers
2) studying and establishing food safety standards and participatory certification system (Participatory Guarantee System (PGS) to manage upstream sources (Upstream) of safe food
3) building the safe agricultural network using a participatory certification system. (Participatory Guarantee System-PGS) as the main tool.
4) selecting two prototype sites for developing into a safe food market and a safe GAP market.
5) continuously improving and developing the prototype site to meet the standards.
6) developing personnel and testing units to verify the safe food products are in accordance with the standards
7) using Integrated Marketing Communication (IMC) to raise awareness and create values for safe food consumption
8) summarizing and reporting the findings.

V. RESEARCH RESULTS

Results indicated that1) the researchers developed a model as shown in Fig.1 and establish a prototype for the agricultural safety and food safety market that can promote food safety standards and GAP Products to be more acceptable 2) we can strengthen a strong food safety and agricultural safety network by train 397 people with food sanitation certification, and 3) the customers were more aware of the difference between safe food and GAP with chemical-agriculture products.

From Fig.1, the GAP market can be established if there are one or more group of GAP producers in the province (or in the area). We also consider in suitable crop types and adequate quantities. The outer GAP producers are optional. And we need the market keeper to operate the market, especially Non-profit organization, such as PracharathRakSamakkee Social Enterprise Co. Ltd.,which was established in almost every province. The Primary target customers are the health concern, so most of them use “appearance”, “price”, and “ingredients” to judge food quality[5]and they are in the middle-income class (have more purchasing power than the usual group) then the place to set up the market will be convenience, different from the local market or community market. Next, we selected 3 places as the choices to set up the market those are 1) Farmer Market, 2) Na Krung Kao, and 3) WatKet.
Farmer Market is located in Ayutthaya City Park Shopping Arcade, the modern shopping center in PhraNakhon Si Ayutthaya province, and managed by PrchararathRakSamakkee Social Enterprise (PhraNakhon Si Ayutthaya) Co. Ltd. It opens on every Friday - Sunday.

Na Krung Kao, located in Community Enterprise Centre on Thai Highway no.347, is supported by Thai small and medium enterprise council, PhraNakhon Si Ayutthaya. It is a new destination in PhraNakhon Si Ayutthaya province but it has many problems from the spread of COVID-19 then it is still unpopular.

WatKet community market, located in WatKet, opens on every Sunday. Its strength is cheap and various products.

After we consider the appropriate characteristics of these 3 places, So we choose Farmer Market to be the prototype and sell the GAP Product.

The GAP Products we selected to sell in Farmer Market come from Na Koo Ruam Jai Pattana Community Enterprise, GAP producer group in PhraNakhon Si Ayutthaya. It can produce the crop such as kale, Cantonese pakchoy, bitter melon, cucumber, coriander, etc.

We observed and interviewed the customers from December 2020 to March 2021 and the result showed that most of customers (92.4%) were satisfied in this market and repurchase the GAP Product (70.6%) and the revenue grow up 28.3% within 3 months of collaboration of GAP products.

About safe food market, we use the training program to qualify the food business owners and food handlers to produce safe food and train them how to examine the contaminants (pesticide, bleaching agent, preservative, formaldehyde, etc.) by the test kit and how to reduce pesticide residues in fruits and vegetables by using Sodium Bicarbonate.

The results are, in overall, 247 trainees are very satisfied in training program (4.28/5 point) and increase their knowledge significantly at 0.05 significant level.

### Table 1. Paired sample t-test (After - Before training)

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In addition, our network also trains more 150 trainees. These strengthen a strong food safety and GAP network.

Finally, we use Integrated Marketing Communication (IMC) to make aware of the difference between safe food and GAP with chemical-agriculture products via various tools such as Radio, News, Website, Pamphlet, Demonstration, Television, Advertisement, Social media etc. The result is the customers have more awareness from 27.8% to 44.3%.

**VI. DISCUSSIONS**

Based on research and development results in building a safe food marketing mechanism in PhraNakhon Si Ayutthaya Province, even if it achieves the desired output but there are some issues that prevent the research to
investigate smoothly as it should be. These issues are 1) the types of vegetables produced in this area are not diverse. There are still many types of vegetables that the consumers want but they can't produce in this province 2) during the testing of the prototype market, drought affects some vegetables to have no production. 3) because of the spread of COVID-19, it makes the consumers be more cautious in their purchases. 4) The number of farmers who were certified for the GAP standard was still small due to waiting in the queue for verification. This makes development have some limitations.

The suggestion to solve the GAP waiting queue problem is the farmers can use the same principles as the participatory certification system. (Participatory Guarantee System-PGS) by simply adjusting to the GAP standard, which is easier than having the agency as the examination and certification body but it may not be widely accepted because the certificate cannot be issued. It takes time to build acceptance of quality.

Another suggestion, Farmers may apply the Sufficiency Economy Philosophy in order to have immunity during unexpected events such as the Covid-19 epidemic or draught, farmers can still have agricultural products to consume. The risk of drought will be reduced because it has its own water storage area.

VII. CONCLUSION

In conclusion, the policy maker can establish the safe food and GAP Market as shown in Fig.1 and the characteristics of the safe food and GAP Market are as follows:

1) Located in a place that can easily travel or in a standard place.
2) Primary target customers (health concern, have reasonable status) can access easily.
3) Received support from relevant agencies such as PracharathRakSamakkee Social Enterprise Co. Ltd., which was established in almost every province, and its objective is to be a social enterprise, not profit-oriented.
4) Create groups of farmers and producers in the area in order to have enough products for distribution and have the variety products.
5) There is a certification body to certify the GAP standard and the seller must show the standard mark in the point of sale for consumers to see clearly.
6) Using social networks such as Youtuber, Influencer, etc., as the main channel of public relations.

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REFERENCES