

Original Article

A SURVEY OF PRODUCTION PLACES OF PRE-PACKAGED PROCESSED FOODS BEFORE EVALUATION FOLLOWS THE PRIMARY GOOD MANUFACTURING PRACTICE (PRIMARY GMP) STANDARD: A CASE STUDY OF NAKHON RATCHASIMA PROVINCE

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ABSTRACT

Objective: The aim of this study was to survey the 103 non-permitted production place of pre-packaged, processed foods follow the Primary GMP standard for evaluating the probability to apply the Primary GMP evaluation.

Methods: The population was 103 entrepreneurs of pre-packaged processed foods in Nakhon Ratchasima province with non-permitted status of Primary GMP that surveyed in 2013. Three types of pre-packaged processed foods and types of food entrepreneurs were collected and identified. Pre-evaluation of food production places follow the Primary GMP standard was evaluated and reasons of food entrepreneurs that non-apply for the Primary GMP evaluations were collected.

Results: From the survey data, three types of pre-packaged processed foods that produced in Nakhon Ratchasima province were identified and reported. Almost of pre-packaged processed foods were general processed foods, 51(48.57%) production places as well as ready-to-eat foods. The food entrepreneurs had different types including alone, housewife group, community enterprise, and the company. There were 62 (60.19%), 23 (22.33%), 12 (11.65%), and 6 (5.83%) production places, respectively. The evaluation of food production places by provincial and district food team before apply the Primary GMP evaluation. For category 1, approximately 84% of food entrepreneurs were lack of production building. Category 2, 3, and 4, the food entrepreneurs had production equipment, processing control, and sanitation, respectively, but these categories failed the criteria nearly 100%. There were five reasons made food entrepreneur does not apply for the Primary GMP evaluation, lack of budget was the most important reason, 79.61%.

Conclusions: The survey results showed that generally processed foods and ready-to-eat foods were mostly produced. The food entrepreneurs usually worked by oneself and almost food production places failed the Primary GMP standard. Lack of budget was the most important reason that made food entrepreneur does not apply for the Primary GMP evaluation.

Keywords: Primary GMP, Pre-packaged processed foods, Nakhon Ratchasima province.

INTRODUCTION

Nakhon Ratchasima is a one big province in Thailand. This province had a lot of food souvenirs, many food enterprises are rapidly grown to supply the demand of consumers. These rapidly grown may cause poor food manufacturing practice. In 2012, there are 104 food entrepreneurs that produced pre-packaged processed foods; only 4 of 104 food entrepreneurs passed the food production place quality. Food production regulation are very important to ensure the food quality and food safety. Thai government had policy about food; quality of food that consumed in Thailand should be same as export food products. In 2015, Members of Southeast Asia will be assembled to the ASEAN Economic Community (AEC). Thus, Thailand should be prepared for the food export competition with other country.

In addition, the food production regulation of AEC will be regulated using Good Manufacturing Practice (GMP) but a few food entrepreneurs passed the food production quality. The General GMP is an appropriately practice for food production. However, the General GMP not presently appropriate for pre-packaged processed foods in Thailand because it may be affect the food entrepreneur that unprepared their production place for General GMP.

Thai Food and Drug Administration notify the Notification of Ministry of Public Health no. 342 (2012): Manufacturing Procedures, Production Equipment and Appliance, and Food Storage of Pre-package Processed Foods [1], use as guideline for improve the production place into Primary GMP standard. The Primary GMP standards contain six categories including location and building, production equipment and appliance, processing control, sanitation,

maintenance and cleaning, and personnel and sanitary operation [2]. The aim of this study was to survey the non-permitted production place of pre-packaged processed foods follow the Primary GMP standard for evaluate the probability to apply the Primary GMP evaluation.

MATERIALS AND METHODS

The population was 103 entrepreneurs of pre-packaged processed foods in Nakhon Ratchasima province, Thailand with non-permitted status of Primary GMP that surveyed in 2013. There are two steps of work. Initially, the provincial and district food standard team set up and met to explain the project of pre-packaged processed foods standard improvement in three topics; type of pre-packaged processed foods, evaluation criteria of pre-packaged processed foods, and deliberate about pre-packaged processed foods standard improvement.

After that, district food standard team surveyed the non-permitted food production places in responsive area follow the Primary GMP standard. Three types of pre-packaged processed foods were identified; general processed foods, ready-to-cook foods, and ready-to-eat foods. The general processed foods were identified into five subtypes; meat and meat products, plant and plant products, flour and flour products, seasoning, and sugar. Types of food entrepreneurs were identified; alone, housewife group, community enterprise, and company. Pre-evaluation of food production places follow the Primary GMP standard was evaluated and reasons of food entrepreneurs that non-apply for the Primary GMP evaluations were collected. Number of places was collected and percentage was calculated.

RESULTS AND DISCUSSION

From the survey data, three types of pre-packaged processed foods that produced in Nakhon Ratchasima province were identified and reported. Almost of pre-packaged processed foods were general processed foods, 51(48.57%) production places as well as ready-to-eat foods. The general processed foods could be identified into five subtypes; meat and meat products, flour and flour products, sugar, plant and plant products, and seasoning had production places of 17 (33.33%), 17 (33.33%), 9 (17.65%), 5 (9.80%), and 3 (5.88%), respectively (Table 1). The food entrepreneurs had different types including alone, housewife group, community enterprise, and the company. There were 62 (60.19%), 23 (22.33%), 12 (11.65%), and 6 (5.83%) production places, respectively (Table 2).

Table 1: Types of pre-packaged processed foods

Type of pre-packaged processed foods	Number of places (percentage)*
General processed foods	51 (48.57%)
Meat and meat products	17 (33.33%)
Plant and plant products	5 (9.80%)
Flour and flour products	17 (33.33%)
Seasoning	3 (5.88%)
Sugar	9 (17.65%)
Ready-to-cook foods	3 (2.86%)
Ready-to-eat foods	51 (48.57%)

* One production place may be produced more than one type of processed foods

Table 2: Types of food entrepreneurs

Types of food entrepreneurs	Number of places (percentage)
Alone	62 (60.19%)
Housewife group	23 (22.33%)
Community enterprise	12 (11.65%)
Company	6 (5.83%)

Table 3: Pre-evaluation of food production places follows the Primary GMP standard

The Primary GMP categories	Number of places (percentage)
Category 1: location and building	
- Lack of building	87 (84.47%)
- Were building, but failed the criteria	16(15.53%)
Category 2: production equipment and appliance	
- Had production equipment and appliance, but failed the criteria	102(99.03%)
- Had production equipment and appliance and passed the criteria	1(0.97%)
Category 3: processing control	
- Had processing control, but failed the criteria	100(97.09%)
- Had processing control and passed the criteria	3(2.91%)
Category 4: sanitation	
- Had sanitation, but failed the criteria	95(92.23%)
- Had sanitation and passed the criteria	8(7.77%)

The evaluation of food production places by provincial and district food team before apply the Primary GMP showed that category 1, approximately 84% of food entrepreneurs were lack of production building; however, 15% of food entrepreneurs had production building but failed the Primary GMP criteria.

Category 2, 3, and 4, the food entrepreneurs had production equipment, processing control, and sanitation, but these categories failed the criteria nearly 100% (Table 3). There are five reasons that made food entrepreneur does not apply for the Primary GMP evaluation.

Lack of budget was the most important reason, 79.61%. The next four reasons were lack of personnel, lack of knowledge about the Primary GMP, lack of consultation, and lack of awareness about the usefulness of the Primary GMP with 64.08, 14.56, 9.71, and 2.91%, respectively (Table 4).

Table 4: Reasons of food entrepreneurs that non-apply for the Primary GMP evaluation

Reasons	Number of places (percentage)*
Lack of budget	82 (79.61%)
Lack of personnel	66 (64.08%)
Lack of knowledge about the Primary GMP	15 (14.56%)
Lack of consultant	10 (9.71%)
Lack of awareness about the usefulness of the Primary GMP	3 (2.91%)

* One production place may be having more than one reason

These results revealed that the activation of food entrepreneurs to apply for the Primary GMP evaluation was necessary. Our project will develop the project to enhance the number of applied food entrepreneurs by the set up the district Primary GMP clinic for control, monitor, and counsel to food entrepreneurs to improve the food production quality further.

CONCLUSIONS

The survey results showed that generally processed foods and ready-to-eat foods were mostly produced. The food entrepreneurs usually work by oneself and almost food production places were failed the Primary GMP standard. Lack of budget was the most important reason that made food entrepreneur does not apply for the Primary GMP evaluation.

CONFLICT OF INTERESTS

Declared None

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