

IDENTIFICATION AND CONTROL OF FOOD-BORNE ILLNESSES UNDER THE FOOD ACT B.E. 2522*

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ABSTRACT

As commonly known that food is one of the basic bodily needs, consumers have the right to expect that food they purchase and consume will be safe and of high quality. The government agencies, in turn, should take measure to ensure that all food, whether locally produced or imported, freely sold on markets, is safe and consistent with national food safety standard.

For domestic consumption, Food and Drug Administration (FDA) has been authorized by the Food Act B.E. 2522 to protect and prevent consumers from food hazards. However, the Act has failed to serve the Thai FDA officers with appropriate tool to detect and control of the food hazards in every part of Thailand. Detecting and controlling food safety problems largely depend upon whether it can follow a food product's movement through the food supply chain. In this case, the Act should have adequate tool to access all relevant information about food production and distribution to support identification and control of food-borne illnesses. Notwithstanding, Section 43 of the Act does not allow the Thai FDA officers to acquire those information held by the food operators. At the same time, the Act lacks of record-keeping requirement to identify a food product's movement across the food supply chain.

After studying the principles of modern food control system and all relevant laws in both the UK and the US, the problems of identification and control of food hazards under the Food Act B.E. 2522 should be solved by expanding the competent officer's control powers covered most areas of the Thai FDA's operations. The inspectional authority under Section 43 of the Act, thus, must be expanded to include the ability to request the food-related information from food business operators. At the same time, by the virtue of Section 5 and Section 6(7) of the Act, the Act should set the provision to establish a new food business operators' responsibility for maintaining information that can identify food product's movement throughout the food supply chain. And hence, food-borne diseases will be fully detected and controlled.

Keywords: Food Safety, Food Law, the Food Act B.E. 2522, Identification and Control of Food Hazards, Modern Food Safety System

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บทคัดย่อ

อาหารเป็นปัจจัยพื้นฐานอย่างหนึ่งที่ร่างกายต้องการ ผู้บริโภคมีสิทธิที่เลือกบริโภคอาหารที่คาดว่าจะปลอดภัยและมีคุณภาพสูง ซึ่งภาครัฐควรมีมาตรการที่จะทำให้อาหารที่ขายอยู่ในท้องตลาดไม่ว่าจะเป็นอาหารที่ผลิตภายในประเทศก็ดี หรือนำเข้าจากต่างประเทศก็ดี มีความปลอดภัยและสอดคล้องกับมาตรฐานด้านอาหารภายในประเทศ

สำหรับการบริโภคภายในประเทศไทย คณะกรรมการอาหารและยาเป็นองค์กรที่มีอำนาจภายใต้พระราชบัญญัติอาหาร พ.ศ. 2522 เพื่อป้องกันและคุ้มครองผู้บริโภคจากอันตรายที่เกิดขึ้นจากอาหาร อย่างไรก็ตามพระราชบัญญัตินี้กลับไม่สามารถจัดหากลไกที่เหมาะสมสำหรับพนักงานเจ้าหน้าที่ในการระบุและควบคุมอันตรายอันเกิดจากอาหารในทุกๆ ส่วนของประเทศได้ ซึ่งโดยหลักแล้ว การระบุและควบคุมอันตรายอันเกิดจากอาหารนั้นขึ้นอยู่กับว่าพนักงานเจ้าหน้าที่สามารถติดตามเส้นทางของอาหารภายในอุปทานห่วงโซ่อาหาร (Food Supply Chain) ได้หรือไม่ การเข้าถึงข้อมูลต่างๆ ที่สำคัญเกี่ยวกับอาหารจึงเป็นหัวใจสำคัญที่จะสนับสนุนภารกิจของพนักงานเจ้าหน้าที่คณะกรรมการอาหารและยาในการระบุและควบคุมอันตรายอันเกิดจากอาหารดังกล่าวได้ ซึ่งตามมาตรา 43 แห่งพระราชบัญญัติฉบับนี้อำนาจในการปฏิบัติงานของพนักงานเจ้าหน้าที่มิได้ครอบคลุมถึงอำนาจในการเรียกข้อมูลที่เกี่ยวข้องกับอาหารซึ่งส่วนใหญ่อยู่ในมือของผู้ประกอบการ ทั้งยังไม่มีข้อกำหนดเกี่ยวกับการจัดเก็บบันทึกข้อมูลที่จะทำให้พนักงานเจ้าหน้าที่สามารถติดตามเส้นทางของอาหารภายในอุปทานห่วงโซ่อาหาร

หลังจากที่ผู้เขียนได้ศึกษาหลักการเกี่ยวกับระบบควบคุมอาหารในปัจจุบัน และกฎหมายที่เกี่ยวข้องทั้งในประเทศไทย และประเทศสหรัฐอเมริกา ปัญหาการระบุและควบคุมอันตรายอันเกิดจากอาหารภายใต้พระราชบัญญัติอาหาร พ.ศ. 2522 นั้นควรจะต้องแก้ไขด้วยการเพิ่มเติมอำนาจของพนักงานเจ้าหน้าที่ให้ครอบคลุมถึงการปฏิบัติงานเกี่ยวกับการระบุและควบคุมอันตรายอันเกิดจากอาหาร กล่าวคือภายใต้มาตรา 43 ของพระราชบัญญัตินี้ ควรขยายอำนาจไปถึงการเรียกข้อมูลต่างๆ ที่เกี่ยวกับอาหารจากผู้ประกอบการด้านธุรกิจอาหารได้ ในขณะเดียวกัน ด้วยอำนาจตามมาตรา 5 และมาตรา 6 อนุ 7 ของพระราชบัญญัติฉบับนี้ ควรกำหนดให้คณะกรรมการอาหารและยาออกประกาศเพื่อกำหนดหน้าที่ของผู้ประกอบการให้จัดเก็บบันทึกข้อมูลเกี่ยวกับอาหารอันจะส่งผลให้พนักงานเจ้าหน้าที่สามารถติดตามเส้นทางของอาหารตลอดอุปทานห่วงโซ่ และควบคุมอันตรายจากอาหารได้อย่างเหมาะสม

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Introduction

As a basic human right, food must be nutritious, safe, and culturally appropriate enough to provide health and longevity. However, due to several global changes in the 21st century including population growth, poverty, international trade in food etc., the food itself is likely to become the main route of transmission of microbial agents and chemical contaminants causing health problems. The consequences of food-borne diseases, due to microbial pathogens, biotoxins, and chemical contaminants in food, represent serious threats to the health of thousands of millions of people.¹ In Thailand, food is considered as a main

¹ FAO, *Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems*, in FAO Food and Nutrition Paper 76 at 26 (Food and Agriculture Organization of the United Nation 1977).

route of transmission of microorganisms causing diarrheal diseases.² According to the report of Bureau of Epidemiology, there are approximately a million cases of acute diarrhea reported each year.³ Only in 2010, there were 65 deaths from the diseases thereof.⁴ In term of major food incidents, the ongoing outbreaks of highly pathogenic H5N1 avian influenza in poultry have also raised concerns about the source of infection and the risk to humans from various exposures throughout Thailand. As a result, these increased numbers of food-borne illnesses raise the question to our national food control system in detecting and controlling the contaminations and the diseases caused by food.

For domestic consumption, the Thai FDA has authorized by the Food Act B.E. 2522 to protect and prevent consumers from food hazards. Yet, only a small proportion of the control powers, upon the Food Act B.E. 2522, have been provided to support the purpose of identification and control of food-borne illnesses. Nowadays, the officers too often find difficulty tracing suspected food backwards through its distribution and product channels to its place of origin. One of the reasons is that many food products available on the market are unbranded. When food products from many suppliers are mixed in many stages of food supply chain, the competent officers are unable to know who supplies a particular food. This problem becomes even worse than ever in case where food incidents or outbreaks occurred. Because the rapid movement of food contamination can have widespread throughout the entire stages of food chain in short period of time, delayed identification of food hazards can cause a serious and uncontrolled food-borne risk to public health. As a consequence, this inability to detect and control food hazards can have important consequences for protecting public health.

1. Modern food safety principles in support of identification and control of food hazards

The national food control system can be achieved most effectively by several modern food safety principles. As part of food identification and control, the science-based approaches integrated in the principle of risk analysis can be used as reasonable option to minimize the occurrence of food-borne hazards.⁵ A risk analysis framework provides a

² FAO&WHO Regional Conference on Food Safety for Asia and the Pacific, Malaysia, May 24-27, 2004, *Foodborne Diseases: Situation of Diarrheal Diseases in Thailand*, U.N. Doc. A/CONF.9/10, available at <http://www.fao.org/docrep/meeting/006/ad703e/ad703e00.htm>(last visited Mar. 21, 2013).

³ Id.

⁴ คณะกรรมการอาหารแห่งชาติ, กรอบยุทธศาสตร์ การจัดการด้านอาหารของประเทศไทย 43- 44 (สำนักงานกองทุนสนับสนุนการสร้างเสริมสุขภาพ, 2554). (The National Food Commission, Strategies of Food Management program 47-49 (Thai Health Promotion Foundation 2011).)

⁵ FAO & WHO, Food Safety Risk Analysis: PART I: An Overview and Framework Manual 3-7, (Provisional ed., FAO 2005).

process to systematically and transparently collect, analyze and evaluate relevant scientific and non-scientific information about a chemical, biological or physical hazard possibly associated with food in order to select the best option to manage that risk based on the various alternatives identified.⁶

Apart from the risk-based approaches, traceability concept plays the vital role to better detect and control food-borne disease or food hazards in the present day. One of the reasons is that food production and distribution systems are becoming more interdependent, integrated, and globalized. At the same time, escalating and heavily publicized outbreaks of food-borne diseases have raised awareness of the need to ensure food quality and safety. This need drives much of the system to trace food consistently and efficiently from the point of origin to the point of consumption. “Traceability” is a concept developed in industrial engineering and was originally seen as a tool to ensure the quality of production and products. Economic literature from supply-chain management defines traceability as the information system necessary to provide the history of a product or a process from origin to point of final sale. In context of food sector, traceability systems allow supply chain operators and regulatory authorities to identify the source of a food safety or quality problem and initiate procedures to remedy it. Specific standards for food traceability have been mandated internationally; by law in the European Union (EU), Japan, and more recently the United States; and by private firms and associations.⁷

2. Legal Basis for Food Identification and Control in Foreign Countries

The profile of traceability has been raised widely at an EU level since food control system faced the difficulties in tracing where dioxin-contaminated animal feed had been used and the complex interactions and implications within the food chain of such contamination. The European Commission’s White Paper on Food Safety recommended that a successful food policy demands the traceability of feed and food and their ingredients. Adequate procedures to facilitate such traceability must be introduced. As a result, the EU General Food Law Regulation (178/2002) contains clear requirements for traceability, stating at Article 18.⁸ Because this Article is the general principle directly applicable in all member states and all areas of food law, all food business operators in EU countries are subjected to

⁶ Id. at 8-11

⁷ World Bank, *Module 12: Global Markets, Global Challenges; Improving Food Safety and Traceability While Empowering Smallholders through ICT*, in *Information and Communications for Development 2012: Maximizing Mobile* (2012), available at http://www.ictinagriculture.org/sites/ictinagriculture.org/files/final_Module12.pdf (last visited Jul. 9, 2013).

⁸ FSA, *Traceability in the Food Chain: A preliminary study 11-12* (Mar. 2002), available at <http://multimedia.food.gov.uk/multimedia/pdfs/traceabilityinthefoodchain.pdf> (last visited Jan. 14, 2013).

this Article and have the responsibility for maintaining necessary information that can identify from whom and to whom a product has been supplied (one step back and one step forward). As a member state, the UK's General Food Regulations 2004 has been launched to create offences and provide enforcement powers in respect of obligations applying from 1 January 2005 under Regulation (EC) 178/2002.

In the United States (US), the Food Safety Modernization Act (FSMA) provides measure to improve traceability within food supply chain since outbreaks of food-borne illness prompted a number of high-profile food recalls during the past several years. Section 204 of the FMSA requires the United States Food and Drug Administration (USFDA) to designate High-Risk Foods (HRFs) for which additional record-keeping requirements are appropriate and necessary and to establish record-keeping requirements for these foods. The additional requirement is designed to enable foods to be more rapidly and effectively tracked and traced during a food-borne illness outbreak or other event.⁹ Primarily, it means that if food operators process or use any of the foods on the high-risk list, they will have to adhere to increased record-keeping requirements (which are yet to be defined) for these foods. Moreover, in case where food operator processes or uses both high-risk and non-high-risk foods, the operator will need to either maintain two separate sets of records, or simply follow the high-risk recordkeeping rules for all food products in order to avoid confusion.

As mentioned earlier that information gathering and risk-based analysis are particular important for identification and control of potential food hazards, EU member states are required under the Regulation (EC) No 882/2004 to create a more comprehensive, integrated, risk-based, EU wide, farm to fork approach to official controls. The Regulation also requires that member states should have legal efforts in place for ensuring that the competent authorities have access to premises of and documentation kept by feed and food business operators so as to be able to accomplish their tasks properly.¹⁰ In the United Kingdom (UK), food laws and regulations about monitoring and enforcement arrangements were generally already consistent with most of the provisions of Regulation (EC) 882/2004. In support of information gathering and analysis, UK Food Standard Agency (FSA) has a self-sufficient of obtaining, compiling and keeping under review information about matters connected with food safety and other interests of consumers in relation to food.¹¹ Under the Food Standards Act 1999, the FSA and its staff have the power to carry out observations with a view to

⁹ USFDA, FDA's Draft Approach for Designating High-Risk Foods as Required by § 204 of FSMA Feb. 2014 at 1, *available at* <http://www.fda.gov/downloads/Food/GuidanceRegulation/FSMA/UCM380212.pdf> (last visited Mar. 14, 2014).

¹⁰ The Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on Official Controls Performed to Ensure the Verification of Compliance with Feed and Food Law, Animal Health and Animal Welfare Rule, Art. 8.

¹¹ The Food Standards Act 1999, § 8 (1999).

obtain information about any aspect of the production or supply of food or food sources.¹² The FSA may also require any person carrying on such a business to provide him with such facilities, such records or information and such other assistance, if it appears to him necessary to do so for the purpose of carrying out the observations.¹³

In the same way, the USFDA has issued a final rule expanding its record access authority. The amendments to the Federal Food, Drug, and Cosmetic Act (FD&C Act) made by FSMA allow USFDA access to records beyond those relating to specific suspect food articles, if the officer reasonably believes that other food articles are likely to be affected in a similar manner.¹⁴ In addition, the FSMA amendments permit USFDA to access records relating to articles of food for which there is a reasonable probability that the use of, or exposure to, the article of food will cause serious adverse health consequences or death to humans or animals. This expanded records access authority is designed to improve USFDA's ability to respond to and contain safety problems with the food supply for humans and animals in the US.¹⁵

3. Legal Basis for Food Identification and Control in Thailand

Unlike the UK and US, the Thai FDA's competent officers perform their duties to investigate food hazards in reliance on inspectional authority under Section 43 of the Food Act B.E. 2522. Based on traditional inspection approach, the officers must conduct an inspection for the purpose of ensuring regulatory compliance and gathering evidence necessary to sustain legal action against food operator. Thus, the authorities herewith are largely comprised of basic elements, namely the right to entry, the authority to inspect, and the authority to take sample. The Act pays less attention to the ability to access the records which become more important when the officer needs to trace back food distribution until the source of the food hazard is identified. Although the officer has the right to seize or attach any aspects of foods including documents connected with the food that is found during an inspection, however, the officer must conduct this power only for gathering all the evidences against violations of the provisions of the Act. When compared to the purpose of identification and control, the need of information is to find the common source of the problem and control it properly. Under this circumstance, the food-related information, for examples manufacturing records, raw materials records, receipt records, product distribution records, or product inventory records, goes far beyond the intention of the inspectional

¹² The Food Standards Act 1999, § 10 (1999).

¹³ The Food Standards Act 1999, § 11 (1999).

¹⁴ Federal Food, Drug, and Cosmetic Act of 1938 § 414, 21 U.S.C. § 350(c) (2010).

¹⁵ USFDA, Guidance for Industry: FDA Records Access Authority under Sections 414 and 704 of the Federal Food, Drug, & Cosmetic Act, *available at* <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm257978.htm#new> (last visited Mar. 14, 2014).

authority under Section 43 of the Thai Food Act. This drawback food law, actually, provides inappropriate tool for identification and control of food-borne illnesses which are among the most widespread public health problems.

4. Legal problems and solutions relating to identification and control of food hazards in Thailand

The Food Act B.E. 2522 has been used as the primary tool in support of the Thai FDA's operations for almost 35 years. Without any improvement, the old concept of food inspection and control is far from enough to ensure food safety in Thailand.

5.1 Inappropriate control powers to access food-related information

Because detecting and controlling the source of the food safety problems largely depend upon whether they can follow a food product's movement through food supply chain, appropriate tool to access all relevant information in relation to food should be implemented for the Thai FDA's officers to identify and to reduce potentially serious consequences of food-borne illness in a timely manner. In this case, enough information should be available for the competent officer in order to trace back food distribution until the source of the food contamination is identified. The relevant information include, but not limited to, manufacturing records, raw materials (ingredients and packaging), receipt records, product distribution records, product inventory records, test records, or customer distribution lists. Unfortunately, the Food Act B.E. 2522 does not provide legal basis of how to acquire food-related information which mostly exists in the possession of food business operators. As mentioned previously, acquiring such information is relying on inspectional powers under Section 43. Instead of providing appropriate power to have access to the records or information kept by food operators, Section 43 contrarily does not allow the officer to request any information from food business operators when it is outside the time of inspection. If that so, once the food incident or outbreak occurred, the officer must enter and inspect food premise in every time when information is needed to magnitude the problems. With this inappropriate record access power, identification and control of food hazards would be time and resource consuming, especially in food-borne outbreak that requires large number of competent authorities in order to carry out their incident investigation. As compared to rapidly increasing number of food operators, serious consequences of food-borne outbreaks cannot be identified and controlled in the timely manner.

Moreover, inspectional authority under Section 43 is also inadequate to serve the purpose of a new approach launched by the Thai FDA itself. Based on the principle of risk analysis, Food Alert System of Thailand (FAST) has been established to provide an effective information exchange among relevant agencies under the Ministry of Public Health. It also renders the best option to investigate and control food hazards in short period of time. In this case, inappropriate record access authority under Section 43 can obstruct a process of risk analysis that systematically collects, analyzes and evaluates information about a chemical, biological or physical hazard possibly associated with food.

Due to the influence of the EU General Food Law, the law in the UK is required to develop information gathering systems into a risk-based analysis. The developments include to having legal procedures in place to ensure that the competent authorities have access to premises of and documentation kept by feed and food business operators so as to be able to accomplish their tasks properly. To serve this goal, the Food Standards Act 1999 stipulates that the competent officers may carry out observations with a view to obtain information about any aspect of the production or supply of food or food sources. The competent officer also has the right to require any person carrying on such a business to provide him with such facilities, such records or information and such other assistance as he may reasonably request. Based on the same legal basic, the US's food officers can have access to the records kept by food operators through authority stipulated in Section 414(a) and (b) of the FD&C Act. Hence, to facilitate preventive approach based on risk analysis as well as to better detect and control the source of food hazards in Thailand, the Food Act B.E. 2522 should provide an appropriate tool for the Thai FDA's officers to have access to the information kept by food business operators properly. Other than traditional inspection approach under Section 43, the Food Act B.E. 2522 should be revised by expanding the inspectional powers to include the authority to request records or information from any person carrying on food business, like in the UK's Food Standard Act 1999 and the US's FD&C Act. However, all relevant matters concerning how to prevent the officers from abusing their authority, how to protect sensitive information, or how to deal with the non-compliance should also be considered as well.

5.2 Lack of mandatory requiring food business operators to keep record related to the movement of the food

The need to identify the origin of contamination brings another set of legal basis for food identification and control under the Food Act B.E. 2522. Apart from those inappropriate control powers mentioned above, lacking a mandatory of record-keeping can obstruct a complete and accurate identification of the food safety problem in a timely manner as well.

In case where necessary information to trace the food hazards has not even been kept by the food operators, the officers will face a great challenge to fulfill their duty in finding the source of the contamination and helping to remove unsafe food products from the food chain. Considering to the Food Act B.E. 2522, there is no a direct support for food tracing that involves documenting the production and distribution chain of products. Thus, it is hard to the Thai FDA and its officers to trace back to a common source or forward through distribution channels. As seen in the report released by the bureau of Food Safety Extension and Support, it is found that the officers find it difficult to trace back and forward through the food production and distribution chain, especially in case of identifying the pesticide residues in food crops because the information/record about food distribution have not yet been kept by the wholesalers. In fact, most of wholesalers cannot even remember the suppliers' name who has supplied them.

To solve this problem, traceability concept has been widely recognized. It facilitates identification of the source of the food safety problem, and also helps food operators as well as government authorities to identify, trace and effectively and rapidly remove unsafe foods

at any stage of the food production and distribution chain. In legislation, traceability is known as legal requirement for food business operators to have, as a minimum, a documented one-step-back and one step forward traceability approach.¹⁶ Throughout UK, food business operators have to comply with the record-keeping requirement under the Article 18 of Regulation (EC) No 178/2002. While, traceability legislation in the US has been set by Section 1.361 under title 21 of the Code of Federal Regulations (21 CFR 1.361) as part of its implementation of the amendments to the Federal Food, Drug, and Cosmetic Act made by the USFDA Food Safety Modernization Act as well as the Bioterrorism Act of 2002. The effect of these compulsory requirements of record-keeping creates a new general obligation for food business operators at all stage of the food chain. The obligation includes a legal requirement to keep necessary information for identifying from whom and to whom a product has been supplied, and also the requirement to have system and procedures in place that allow for this information to be made available to the competent authorities upon their request.

In Thailand, capacity to control the safety of food supply is limited by several factors. Other than extensive costs related to have a recordkeeping system, compelling all food business operators to maintain record-keeping of suppliers might bring the difficulties to food business operators. For those food operators who have sufficient funds available in their account, establishing traceability requirement may not beyond their capability that much. They have already enough appropriate knowledge and expertise in dealing with the application of modern traceability requirement. But for those small food business operators, which account for a large proportion of the total food operators in Thailand, mandatory of traceability requirement may put too much of a burden on them. Apart from food operators' capability, legal basis for food licensing and registration under the Food Act B.E. 2522 itself cannot serve the purpose of an accurate and far-reaching traceability system. By means of Section 14, food business operators in general are not required to obtain food manufacturing license. Unless for those food operators who employ more than 7 workers or use equipment with more than 5 horsepower, their premises have to be approved before an operation begins. With this incomprehensive licensing function as well as capability of food operators, it is impractical to initiate a board traceability system that requires all the food business operators to be responsible for record-keeping requirement, or whether enables tracking of a large variety of food hazards throughout food supply chain at once. Instead, the Act should begin to facilitating traceability with a limited form of record-keeping requirement applicable for only certain food business operators.

The idea underlying “Additional Recordkeeping Requirements for High Risk Foods” in the US food legislation can probably point out the possible approach to implement traceability in Thailand. Based on different sets of record-keeping requirement, the Act may start to initiate traceability requirement with a limited form of record-keeping procedure only for High Risk Foods. On the other hands, for those foods are not listed as the High Risk

¹⁶ FAO/WHO, *Principles for Traceability/Product Tracing as a Tool within a Food Inspection and Certification System (CAC/GL 60-2006)*, **Joint FAO/WHO Food Standards Programme**, FAO, (2006).

Foods, the operators should have time to improve and change their current practices in order to meet traceability requirement. Timeframe for establishing record-keeping procedure may be provided before such requirement become fully effective. During that time, traceability requirement will be applied as voluntary standard for the Non-High Risk Foods.

Conclusion

The Food Act B.E. 2522 is outdated and poorly designed to overcome the current food hazards in Thailand, especially in case of food-borne pathogens that leads to incident of diarrheal diseases. Lacking a well-established legal basis for food identification and control defines the inability to trace the source of food-borne hazards and indicates the Thai FDA's failure in conducting their duty to protect consumers' health. Therefore, the Act should be revised and amended, so that ability to trace the source of food-borne hazards can be improved effectively. The officers' control powers must be expanded to include the authority to access all relevant information kept by any person carrying on food business. At the same time, the notification concerning on record-keeping requirement should be promulgated to obligate a new food business operators' responsibility for maintaining necessary information that can identify the movement of the food from raw material through final products.

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