Application of Computer Information Technology in Food Safety Control

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Abstract. With the continuous improvement of modern living standards, people pay more and more attention to food safety issues. It is undoubtedly cumbersome and prone to omissions to ensure food safety only by human resources. Food safety constantly threatens people's health, and frequent food safety problems also bring new difficulties and challenges to China's food supervision. The application of computer information technology has effectively improved the actual effect of food safety control, but there are also some problems. Therefore, we must strive to find an effective way to apply computer information technology in food safety control, so as to play a real control role. This paper introduces the importance of computer information technology in food safety management of food enterprises, analyzes the application methods of computer information technology in food safety management of food enterprises, and puts forward effective measures for the application of computer information technology in food safety management of food enterprises under the background of big data.

Keywords: Computer Information Technology, Food Safety Management, Big Data

1. Introduction

In recent years, vicious incidents about food safety have occurred frequently and appeared in newspapers. Therefore, the state specially formulated food safety law to severely punish criminal acts about food safety and hygiene, and encouraged food production enterprises to adopt advanced
management experience and innovative technology to ensure the realization of food safety and hygiene [1]. In order to ensure food safety, food safety departments should mobilize all forces to control food safety work. As China enters the stage of scientific and technological Internet, computer information technology is also widely used in the field of food safety control [2]. In today's era, food safety has become a hot topic. In the supervision of food safety, the role of computer information technology can not be underestimated, and it has made the greatest security in food safety supervision [3]. Moreover, computer technology is also the most efficient in food safety supervision. Food safety constantly threatens people's health, and frequent food safety problems also bring new difficulties and challenges to China's food supervision [4]. Many food quality and safety inspection agencies provide the most advanced technical information on food quality and safety through computer information technology, which is conducive to improving the supervision of food quality and safety issues by national government departments and providing a good environment for people's food quality and safety [5].

The food safety incidents that broke out frequently in recent years are all posing new challenges to China's food safety supervision system. Computer information technology is of great significance for integrating all aspects of enterprise information resources and strengthening enterprise information construction [6]. Because there are many risk factors in the food production process, the amount of information that needs to be recorded is huge, and it is difficult to complete food quality safety and inspection work with high quality and efficiency by relying solely on inspection personnel. The application of computer information technology has effectively improved the actual effect of food safety control, but there are also certain problems. Therefore, we must strive to find effective ways to apply computer information technology in food safety control in order to play a real control role. In order to better control these influencing factors, technical testing personnel need to record and analyze a large amount of information on these influencing factors [7]. Computer information technology is very important for the construction of food safety and sanitation system and the healthy development of the modern food industry due to its high intelligence and the properties that can be tracked and traced in time [8]. This article introduces the importance of computer information technology in food safety management of food enterprises, analyzes the application methods of computer information technology in food safety management of food enterprises, and proposes the application of computer information technology in food safety management of food enterprises under the background of big data Effective measures.

2. The importance of computer information technology in the field of food safety

With the vigorous development of China's economy, the competition in the food industry is becoming increasingly fierce. Enterprises need to constantly improve their competitiveness in order to seek better development. The application of computer technology in this system mainly includes execution software and planning software, in which planning software is responsible for controlling key points of production and analyzing food safety hazards, and constantly improving controllable factors according to food processing and production. The application of computer information technology can effectively improve the actual effect of food safety control. Computer information technology can deal with huge data, which can control food safety more effectively. Image analysis is to use computer programs to effectively analyze images, and then carry out measurement and monitoring work for software to process images. Image processing mainly uses computer software to process images at a
low level. The application of computer technology in food production research, and then the construction of simulation capacity model, can effectively monitor the potential risks in production, and make timely and effective adjustments according to the actual production problems, which is of positive significance to promote the healthy development of food enterprises.

From an objective point of view, the traditional food quality and safety inspection still has many defects. Therefore, the introduction of computer information technology in the process of food quality and safety inspection can not only effectively help enterprises to make overall planning of output and quality, but also continuously optimize the packaging or taste of food production, which is conducive to improving the economic benefits of enterprises. In many food enterprises, managers and employees do not accurately recognize the important role of computer information technology in food safety management, ignoring the effectiveness of food safety management [9]. Under the background of big data and the era of information explosion, the scientific application of computer information technology can efficiently solve the problems existing in food safety management in food enterprises. China's food safety is at an important turning point, from long-term food shortage to structural food relative surplus, from mainly solving the problem of total food supply and demand safety to mainly solving the problem of food quality and safety. Food enterprise managers are backward in food safety management, and lack of relevant regulations, and have not introduced the latest computer information technology from abroad. Under the background of big data, it is easy for food enterprise managers to be unable to fully understand the information [10]. Through computer information technology simulation, we can accurately provide food production enterprises with production data information, including data model construction, data collection, model transformation, model operation, final result analysis and so on. By analyzing the above data, we can get a food production plan which is beneficial to the development of enterprises.

At present, among the top 500 enterprises in China, the proportion of food enterprises is less than 5%, which is extremely disproportionate to the huge scale of Chinese food enterprises. Many managers and ordinary employees of food enterprises even think that using computers to work is to realize the information management of food safety. Many employees of food enterprises are not highly educated and generally lack relevant professional knowledge and professional quality. This makes it increasingly difficult to popularize and apply computer information technology in the field of food safety in China. Establishing simulation through computer technology can provide production data for enterprises according to various factors of market and enterprise production. The implementation steps of the simulation system include building models, collecting data, transforming models, confirming and verifying, running models and analyzing results. With the help of computer information system, the management organization of food enterprises can record the usual work arrangement in detail, and can also master the credit and product certification of enterprises [11]. Food production has to go through many procedures, and only by layer upon layer can there be no problems in the quality of food safety and ensure the safety of food. The application of computer information technology can check every link of food, such as installing computer monitoring equipment in the production plant, which can better understand the production process and avoid some human factors causing damage to food safety. Scientific application of computer information management technology in every data management can establish a perfect food safety risk evaluation and analysis model, and then provide a powerful guarantee for enterprises to make correct decisions.
3. Application of computer information technology in food safety control

3.1. Provide technical support for food enterprises

The informationization development level of China's food industry is quite different and uneven. Especially some small and medium-sized enterprises have no concept of product safety informationization at all, which requires our government to provide a good industry development atmosphere and guide the food industry from the direction of policy and public opinion. In order to better popularize computer information technology in food safety control, we should pay more attention to advanced science and technology, pay more attention to the use of computer information technology in food safety supervision and control, and increase manpower and capital investment, so as to better serve food safety control. At present, China's food safety inspection technology is relatively backward and food production enterprises are relatively scattered, which has brought certain obstacles to the popularization and application of computing technology. It is impractical to restrict food production enterprises only by virtue. In order to fully restrain illegal activities of illegal traders and ensure food safety in China, it is necessary to improve relevant laws and regulations, and relevant departments should strengthen supervision and law enforcement, so that law enforcement must be strict and violators must be prosecuted [12]. Software design institutions must develop software with shared attributes and information collection ability according to the technological process and production and operation characteristics of food enterprises. When designing the software, the relevant technicians can give full consideration to the production, operation and construction process of the production enterprises, and introduce some relatively advanced computer information technologies from abroad, so as to further promote the progress and development of China's food quality and safety inspection industry.

3.2. Strengthen social propaganda

In China, the regulations on the application of computer information technology in food safety control were issued late, and all of them require enterprises to record and keep food safety information in the production process from a macro perspective. The application of computer information technology in food production management and food safety control becomes very difficult. From the actual application situation of enterprises, the current situation of informationization of food enterprises is not optimistic, and most enterprises still stay in the stage of replacing manual operation with informationization tools, which belongs to the informationization stage of basic management. At present, many large food enterprises in China can reasonably use computer information technology under the background of big data in the process of food safety and quality management, but small and medium-sized food enterprises cannot effectively use computer information technology under the background of big data due to various factors. At present, in China's food industry, the scale and capability of production enterprises are uneven, especially in the aspect of informationization. Some large-scale production enterprises pay more attention to the application of high and new technology, while some small and medium-sized production enterprises are backward in management mode, outdated in ideas and low in informationization. In the safety inspection process of food production chain system, computer information technology can effectively follow up the food sales, storage, transportation and other processes, and when food safety problems occur, it can also be found in time and dealt with accordingly.
The application of computer information technology in the field of food safety in China is still in its initial stage. Compared with other countries, the developed technology is still immature, the application of computer information technology is still in its initial stage, and some more advanced functions and technologies have not been effectively developed. The government supervision departments should require the supervised enterprises to provide them with traceability information of their own products, and strengthen their awareness and concept of food safety informationization [13]. Enterprises must pay attention to the rational use of computer information technology by managers. Only in this way can we achieve the goal of upward and downward effect and ensure the stable development of food enterprises. Establishing a good information exchange platform on food quality and safety issues can also help people to effectively control and grasp the quality of food production chain, and achieve stable improvement of food quality and safety.

3.3. Improve relevant laws

Because of the high cost of computer information technology in food safety control, some mass food manufacturers have the ability to introduce computer information technology, but for some small manufacturers, not only the cost is not allowed, but also the importance of using computer information technology for safety inspection is seriously insufficient. The application of computer technology in tracing food production chain system can complete the follow-up of food sales, transportation, storage and processing, and trace back in time and effectively after quality problems occur. The government needs to formulate and improve relevant laws, regulations, administrative norms or implementation guidelines in the field of food safety informationization, so as to provide a strong technical basis for supervising administrative personnel. Strengthening the supervision and management of food enterprises is an effective means to improve the safety awareness of Chinese food enterprises.

At present, China's food regulatory authorities lack mandatory requirements for technology application of production enterprises, and producers and consumers lack awareness of food safety. Although new food laws have been promulgated one after another, food quality problems continue to emerge. Because the food industry has certain particularity, it is necessary to ensure food quality and safety, so as to ensure that consumers can eat with confidence. For China's food regulatory authorities, food quality and safety has always been a mandatory requirement. Because it is not only related to people's health, but also has a very important impact and significance on the development of China's food production industry. In the modern society, where people are pursuing economic interests and materialistic desires, it is unrealistic to restrict food production enterprises only by virtue. Therefore, our government should strengthen the law making and law enforcement, formulate and improve relevant laws and regulations on food safety, and provide strong legal guarantee for relevant administrative supervision and law enforcement personnel. The government must further improve the relevant laws and regulations, and require the food industry to apply computer information technology in food safety management to ensure that all aspects of food safety are controllable.

4. Conclusion

Under the background of big data, Chinese food enterprises need to pay attention to the application of computer information technology in order to ensure that food safety management is more scientific and reasonable. The application of computer information technology in the field of food safety is an innovative approach with epoch-making significance. The application of computer information
technology in the field of food safety control is an irreversible trend of the times. As a food production enterprise, it should move at the right time in order to get a longer-term development. In the new era when food problems are constantly exposed, how to accurately and quickly trace the problems in food production and then effectively control the food quality is an important problem faced by relevant departments and food production enterprises in China. At present, China's food quality and safety problems still occur from time to time. Therefore, China needs to constantly strengthen the detection of food quality and safety problems in food production enterprises, and carry out strict detection of food safety problems through computer information technology. In order to solve some problems in the application of computer information technology in the field of food safety, efforts must be made to improve it. Only by strengthening the attention, determining relevant legal protection measures, and strengthening the research and development of technology can we give full play to its positive role.

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