

Application of Standard Database in Safety Monitoring of Agricultural Products

Shuo Wang, Yanping Zhu, Di Mu

Henan University of Animal Husbandry and Economy, Zhengzhou, China

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Abstract: Standard database is an important content to ensure the safety of agricultural products. Based on the working condition of agricultural product safety monitoring at the present stage, the application characteristics of standard databases are combined in recent years, the requirements for the development of agricultural products in the new era are clarified, the database platform of agricultural products in different regions of China are understood, this paper analyzes how to demonstrate the advantages of a standard database in agricultural product safety monitoring to achieve the desired development goals.

1. Introduction

Under the background of continuous development of social economy and continuous innovation of science and technology, people's lifestyle has changed from subsistence in the traditional sense to well-off society; consumers' demand for the quality of agricultural products is also getting higher and higher, The main problems of agricultural development have gradually evolved from the previous resource constraints to the common constraints of resources and market demand. It can be seen that the establishment of regional food and agricultural product standard database platform is an important basis for the effective implementation of the Food Safety Law and the Agricultural Product Quality Safety Law. Among them, the agricultural product quality safety standards put forward that "quality safety standards of agricultural product are mandatory technical specifications", therefore, all regions in our country must build a database platform for agricultural products, in order to provide an effective platform for the public to find and browse quality safety standards of agricultural product for free. The following is a deep exploration of the use of standard databases in the safety monitoring of agricultural products.

2. Raise Problem

At present, with the emergence of SARS, avian influenza and other problems caused by agricultural products, outbreaks of widespread disease are increasing; people are paying more and more attention to the quality, health and safety condition of agricultural products, the corresponding safety standards for agricultural products have also been put forward at home and abroad. However, it can be seen from the development condition of practice that all links in the agricultural product supply chain have different control standards, and different standards have different standard systems, the imperfect or different standards are not easy for consumers to adapt in a short time, which also reduces the control effect of agricultural product quality in a certain sense. In addition, the supply chain of agricultural product does not have systematic and inherited regulatory guarantees during the operational phase, this is because the regulatory information of mobile agricultural products is not shared by different departments, which causes downstream agencies or consumers to be unable to consult information on agricultural products, and it is difficult for upstream agencies to directly track the flow direction of the product [1].

The rapid development of information and communication technology and successful cases that have been obtained abroad provide the correct direction for solving the above problems, in other words, building a sound agricultural product safety monitoring information platform. It can be seen from the practical cases that it is based on the platform's appropriate information and communication

technology as the core, integrating the production enterprises, wholesalers and retailers of agricultural products, and building a sound agricultural product standardization system, in this way, the final consumption, quality of agricultural products and information flow can be fully managed, and build the corresponding security control and early warning mechanism. In this system, the agricultural product standard database is the foundation of the overall information platform, at this time, by introducing international standards and foreign advanced standards, a relatively sound agricultural product standardization system is proposed, and relevant data is stored in the data system, which can help other subsystems in the way of database services, thereby improving the standardization of actual production, optimizing the international competitiveness of China's agricultural products, and ensuring the production safety of agricultural products [2].

3. Standard Database Analysis of Agricultural Products

When constructing the standard database of agricultural product, it is mainly divided into two aspects; on the one hand, it refers to the agricultural product standard database and functional subsystem. These two parts can be divided into the following contents in practical applications:

3.1 Database of Standard Regulations

It is mainly used to collect, organize and timely update all kinds of information related to the quality of agricultural products at home and abroad, and use the index to reserve domestic and international standards related to the safe production and monitoring of agricultural products, manufacturers can enter into the standard query subsystem and combine keyword search and combined search two ways to find information related to the standard, such as the standard name, country region and classification, and then select the information to be consulted in combination with their own needs.

3.2 Indicator Limit Library of Key Points

It belongs to the core content of the overall standard database for security monitoring. The specific work is based on the safety and health limit indicators in the safety standards of agricultural products, and these contents are stored in the indicator database to provide an effective basis for the key points of subsequent production work. The production units of agricultural products, supervisory staff, and transportation and processing departments must access the network system, store the acquired agricultural product quarantine information in the subsystem, and then pass the relevant information to the monitoring platform according to the subsystem, and finally refer to the server. In this process, the staff can compare and study the actual quarantine data and the key point index limit library in the production stage to achieve the objectives of safety monitoring and warning in the safety monitoring platform. If the value is found to exceed the standard, the platform can pass up to the corresponding subsystem, and then proposes an early warning, at this time, the terminal worker can propose a corresponding solution in combination with the warning information [3].

3.3 User Basic Information Database

It has basic information on the production, transportation and processing of agricultural product supply chain, it mainly provides assistance to the regulatory authorities in consulting and supervising agricultural production enterprises. By understanding the practical cases, the information system and monitoring platform of the supervisory unit are connected to each other, and the supervisory unit can directly access, correct and delete the relevant information of the production enterprise.

3.4 Agricultural Product Brand Information Database

Because the supervision department will actively collect information related to agricultural product brands in the market, and store them in the platform database according to the information collection subsystem, and then implement effective brand management. The specific information includes the production enterprise, production type, enterprise certification status, and production

base. So both consumers and supervision department can obtain the information they have learned on this platform. For example, after the consumer consults the terminal, the relevant information of a certain brand purchased may be clarified; the supervision department implements historical tracking management for the product of a certain brand on the data platform, and if there is a problem in the product, the production enterprise can be found in time, and then propose an effective solution.

3.5 Production Archive Database

This database is mainly used to store archive information related to agricultural production enterprises, such as enterprise registration information, market access information and health assessment, it requires the information system of the government supervision department to implement the sound management for the production enterprise's archive information. Consumers can clarify the information of the agricultural product manufacturing enterprise in the terminal inquiry, and then judge the superiority and inferiority of the product to be purchased [4].

3.6 HACCP Monitoring Database

It is mainly used to store case information of hazard analysis and critical control points, which is also called as HACCP, which can provide a basis for the consulting work of the supervision department. A large number of case information of hazard analysis and key control points at home and abroad are integrated in this database, when examining the safety quality of agricultural products, the supervision department can combine the existing cases at home and abroad for comparative analysis to propose effective solutions, provide guarantees for its own law enforcement work, promote the management concept of the HACCP system can be fully implemented, and control food safety problems to a minimum point.

3.7 Certification Information Database

Information related to the production, processing and manufacturing of agricultural products is reserved, and the government supervise department information management system, update, trim and delete the reserve information. The supervision department and consumers can find the safety and health certification condition, execution status and early warning functions of specific companies in this database. In addition, this database can be integrated with the brand information database, production archive database, etc., and then integrate the information contained in the different databases in the database according to the unique keywords, both government regulatory agency and mass consumer can understand the security monitoring information contained in the enterprise according to the keywords in the query system [5].

4. Exploration on the Application of Standard Database in the Safety Monitoring of Agricultural Products

It can be known from the practical cases that the functional subsystem is the basic guarantee for the implementation of agricultural product safety monitoring, which is mainly divided into seven aspects. In practice work, these subsystems should be integrated with the various modules of the standard database work together to achieve safe monitoring of agricultural products. The specific content is mainly divided into the following points: first, the information collection subsystem, it is mainly used to store information data related to agricultural product quality standards, production enterprises and agricultural product brands, in practice, it can cooperate with user basic data database and regulatory database in standard database. Second, standard information query sub system, it provides functions such as agricultural product quality standards at home and abroad, safety and health limit indicators and testing methods for agricultural production enterprises, certification centers and other institutions, the query conditions can be carefully divided according to standard types and types of agricultural products, the inquiry results and forms will be displayed in the form of table, static page, etc., and the database of the query is centered on the key point index limit library; third, the production control and auxiliary subsystem. When input the key point detection

data of the production stage of the agricultural product enterprise in the platform database, it is necessary to compare the index limits of the agricultural product standard, and then warn the enterprise, and these contents can also provide management basis for the certification center and the market monitoring organization, and then guarantee the production and management of agricultural products can be carried out in order[6]. It provides computer-aided management functions for agricultural products enterprises with HACCP management system, the information owned by the enterprise can be input into the platform database, the information includes the index limits, detection methods and key points in the production stage, etc., the actual value obtained is supervised, which can help enterprises to better manage the key points of risk management and document management, thus providing consumers with safer and better quality agricultural products. The HACCP monitoring database and key point indicator limit libraries are fundamental to this work; fourth, the government department monitors the subsystem, through the integration of research and analysis, it is known that the inspection data of the production stage of agricultural products enterprises, such as pesticide residues, should be compared with the standardized production work to implement macro-monitoring. The system records the actual production data, provides the basis for the government department, precipitates the certification department to carry out effective certification, and then allows the inspection department to carry out inspections, and ensure that the actual production work meets the expected requirements. Fifth, the production archive data query subsystem, in order to make consumers know more about the agricultural products they purchase, Improving the standardization level and traceability of supermarket products is one of the tasks that current staff must do. The inquiry database has a production archive database and database of agricultural product brand data. Sixth, consulting service subsystem, by communicating the standardized production technology of agricultural products in the forum, agricultural production enterprises and agricultural science and technology experts can better understand the current market development characteristics and help farmers better solve the problem of crop cultivation, so as to obtain safer and higher quality agricultural products, and then improve agricultural development speed. Seventh, system maintenance subsystem, the daily maintenance of registered user management and other system functions is also the focus of the staff's attention; and the specific operation is based on the user's basic data database [7].

5. Conclusion

To sum up, in order to ensure that the safety monitoring of agricultural products can be carried out in order, first, it is necessary to propose a standard database related to it, and then wait until the market access for agricultural products is carried out and connect with it. This will not only provide consumers with safer and better-quality agricultural products, but also optimize the working efficiency and law enforcement of government supervision department, thereby improving the responsibility sense and ethics of agricultural products and agricultural products production and sales enterprises, and provide guarantee for the harmonious and stable development of society.

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