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Food Safety and Inspection Service's Public Health Information System

The United States Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) is the public health regulatory agency responsible for ensuring that domestic and imported meat, poultry and processed egg products are safe, wholesome and correctly labeled and packaged.

FSIS is launching a dynamic data analytics system called the Public Health Information System (PHIS), developed as part of our effort to collect, consolidate and analyze data. PHIS is a user-friendly, web-based application that will replace many of FSIS' existing systems, such as the Performance Based Inspection System (PBIS) and the Automated Import Information System (AIIS). It will integrate and automate our paper-based business processes—often found to be inefficient, time-consuming and limiting—into one comprehensive and fully automated data-driven inspection system. PHIS will significantly improve the way FSIS detects and responds to foodborne hazards. Individuals using PHIS will not need highly advanced computer skills—only basics of web browsing. If you have ever "surfed" the Internet, then you already have the computer skills you will need.

PHIS has four components: domestic inspection, import activities, export activities and predictive analytics.

This public health-based approach is in line with the core food safety principles of the President's Food Safety Working Group to guide the development of a modern, coordinated food safety system by preventing harm to consumers, using good data and analysis for effective food safety inspections and enforcements and identifying and quickly stopping outbreaks of foodborne illness.

New Approach to Public Health

PHIS will empower FSIS with the tools to stay ahead of food safety threats by more rapidly and accurately identifying emerging trends, patterns and anomalies in data. This powerful decision-making tool will enable FSIS to protect public health more efficiently, effectively and rapidly than under previous data systems.

This easy-to-use, web-based system will integrate our data sources to support a comprehensive, timely and reliable data-driven approach to FSIS inspection, auditing and scheduling. Through improved data quality, more consistent reporting, enhanced management controls and efficient, effective use of FSIS data, PHIS will enable FSIS to respond more quickly when threats are realized.

This will make FSIS and its employees more accountable and will make better use of inspection personnel's time while in FSIS-regulated establishments every day. The system will allow FSIS to coordinate effectively within FSIS and with our stakeholders and other agencies, improving investigations and contaminant tracing. As the system is further developed, it will facilitate sharing of data among inspection personnel, their managers and headquarters on a daily basis, giving FSIS decisionmakers a better picture of what is happening across the country, as it is happening. It will remove the time lag for this kind of communication that previously occurred

over days or even weeks. Along with the training FSIS personnel will receive, PHIS will better equip them with the necessary information to identify deficiencies in an establishment's process controls and to anticipate developing problems—preventing adulterated products from entering commerce. The system also is a learning tool that will provide inspection personnel with helpful links to relevant guidance materials such as regulations, notices and directives.

Functions and Benefits

PHIS will transform our ability to utilize data to inform all aspects of domestic inspection, import activities and export activities. It will allow FSIS to collect and analyze information about domestic and international food safety systems producing FSIS-regulated products, so that FSIS can identify food safety risks before they result in outbreaks or recalls, detecting problems before they reach consumers.

Using multiple FSIS data sources, PHIS will allow analysts to identify trends that will automatically adjust domestic and import inspections and sampling, such as the relationship between *Salmonella* test results and inspection findings, notifying field and headquarters personnel about potential public health threats.

PHIS will support automated decision criteria for consistent scheduling of inspection and sampling activities. Through the system, FSIS will provide inspection personnel the frequencies with which to perform verification tasks and the relative priorities of those tasks. However, the system will allow inspection personnel to manage their own inspection calendars based on their knowledge of establishments' operations and their own workloads. FSIS will be able to monitor establishment data on a daily basis and to send built-in alerts when anomalies in the data are detected. For example, PHIS will send alerts when a large number of incomplete inspection activities or high rates of noncompliance are observed in an establishment. PHIS also will prompt inspection personnel when a routine verification of an establishment's hazard analysis and supporting documentation is necessary.

PHIS will streamline the export program by converting what is now solely a paper-based system to an automated one. The automated system covers all functions of the system, including establishment applications for approval for export, applications for export certificates and the issuance of export certificates. The system will enable an automated edit-check capability to ensure that certificates properly reflect a foreign country's import requirements.

The new system will allow FSIS to systematically verify the effectiveness of foreign food safety systems. It will also enable the advance receipt and verification of electronic foreign health certificates associated with arriving foreign shipments certified by a foreign government. Processes for auditing inspection programs of foreign countries exporting meat, poultry and processed egg products to the United States will also be automated.

To enable greater exchange of information between FSIS and other federal agencies involved in tracking cross-border movement of import and export shipments of meat, poultry and processed egg products, PHIS will establish an electronic interface with U.S. Customs and Border Protection's (CBP) Automated Commercial Environment (ACE), once ACE is compatible.

Improving Operations

With PHIS, inspection personnel will be able to perform inspection personnel directed procedures based on their findings and PHIS data as well as perform system-directed (i.e., unscheduled) procedures prompted by a trigger event, such as a positive pathogen result. In contrast, PBIS is unable to schedule procedures in response

to ongoing results or findings.

Establishment profiles, which were limited in the old system, are expanded under PHIS. It will provide the ability for compliance and non-compliance of verification activities to be documented.

PHIS will track the completion of tasks and results, alert supervisors and automatically prompt inspection personnel to perform follow-up procedures when applicable. Under the old system, in-plant personnel must remember to perform follow-up procedures and there has been no effective way for supervisors to ensure completion of follow-up tasks. PHIS also provides for multiple layers for reviewing plant data by field personnel and other affected offices.

The inspection personnel will record the compliance findings and regulations verified, whether or not the establishment is in compliance. Under the old system, inspection personnel only have documented specifics on noncompliance.

Impact on Inspection in Establishments

PHIS does not create new requirements or regulations for establishments regarding domestic inspection. What it will do is enable inspection personnel to better identify shortcomings in the food safety systems of establishments and anticipate problems before they result in adulterated products entering commerce. The new system will guide in-plant inspection personnel to focus their attention on the specific aspects of an establishment's food safety systems and supporting documentation that have the most significant impact on public health.

System for the Future

PHIS is not only the future of FSIS—improving our operations and infrastructure—but is aligned with the Food Safety Working Group's public-health focused approach to food safety. The system is state-of-the-art with checks and balances that will allow us to see what is working, as well as any gaps. It is designed for the purpose of reducing the number of foodborne illnesses. It is also designed to ensure transparency and accountability to the people we serve.

For More Information

To find out more about PHIS, visit the FSIS website at *http://www.fsis.usda.gov/phis* or contact the FSIS Congressional and Public Affairs Office at (202) 720-9113.