Testimony of

Jeff Cooper
Program Manager

Science and Technology Directorate
U.S. Department of Homeland Security

BEFORE

House Committee on Homeland Security
Subcommittee on Emergency Management and Technology
U.S. House of Representatives

ON

"Surveying the Threat of Agroterrorism: Surveying the Threat of Agroterrorism, Part II: Assessing Federal Government Efforts"

February 11, 2026
Washington, D.C.

Chairman Strong, Ranking Member Kennedy, and Members of the Subcommittee. Thank you for the opportunity to testify before you today on behalf of the U.S. Department of Homeland Security's (DHS) Science and Technology Directorate (S&T).

The risks to the food and agriculture sector and supply chain are varied and serious. The Nation's food and agriculture systems are designated critical infrastructure, and their disruption, whether intentional, accidental, or naturally occurring, can result in cascading impacts to public health, economic stability, and confidence in government. As global supply chains grow more interconnected and biological threats become easier to exploit, understanding and managing these risks is more important than ever.

DHS has the federal authority to assess and manage threats to critical infrastructure, serving as coordinator of a whole of government effort that includes all levels of government and industry owners and operators. Within DHS, the Science and Technology Directorate supports that mission by providing technical threat analysis, risk assessment, and decision support to inform preparedness and response efforts across the Homeland Security Enterprise.

DHS's Role in Addressing Risks to the Nation's Food and Agriculture Sector

Under National Security Memorandum-16, DHS was tasked with conducting risk assessments related to threats against the food and agriculture sector. Working in coordination with the Secretary of Agriculture and the Secretary of Health and Human Services, and others, DHS's role is to ensure that leaders at the federal, state, and local levels have a clear, science-based understanding of the threats they face, the potential consequences of those threats, and the tradeoffs associated with different preparedness and response options.

S&T's Contribution to Risk-Informed Decision Making

S&T contributes to DHS's risk assessment mission by delivering technically defensible analysis and tools that help decision-makers prioritize actions and resources.

One way S&T executes this mission is through the Probabilistic Analysis of National Threats, Hazards, and Risks (PANTHR) program. PANTHR provides analytical capabilities that integrate threat information, hazard data, and consequence modeling to support risk-informed decision making across chemical, biological, radiological, nuclear, and explosive threat areas.

These capabilities are designed to inform policy and operations, not to set or execute them. Rather, they help answer fundamental questions decision-makers face: which threats pose the greatest risk, where vulnerabilities exist, and where investments can most effectively reduce risk.

Risk and Computational Analytics for Food and Agriculture

The risks to food and agriculture systems are complex. Threats vary by agent, commodity, geography, and response capacity, and the consequences of disruption can extend well beyond the agricultural sector.

Through PANTHR, S&T develops and applies risk and computational analytics that support strategic, operational, and tactical planning. These efforts help decision-makers compare risks across scenarios and assess how different interventions may reduce the likelihood or consequences of an event.

Tools such as the Tools for Integrated Evaluation of Risk (TIGER) support this work by enabling modeling and analysis tailored to the food and agriculture sector. Recent improvements have focused on increasing efficiency and timeliness through modernized data management and cloud-based capabilities, allowing analysts to provide more responsive support to DHS Components and interagency partners.

Agricultural Threat Characterization

Risk assessment depends on reliable data. For many agricultural threat agents, including emerging and re-emerging diseases, critical empirical data are limited or incomplete.

To address this gap, S&T conducts Agricultural Threat Characterization research that examines the properties and impacts of biological threats relevant to agriculture, such as Highly Pathogenic Avian Influenza and African Swine Fever. This research produces science-based knowledge products that inform hazard awareness, analytical modeling, and preparedness planning.

These products are shared with DHS Components and interagency partners, including USDA and FDA, to support coordinated preparedness and response efforts, while respecting the distinct authorities and responsibilities of each department.

Supporting Detection, Screening, and Response Readiness

In addition to analysis and characterization, S&T supports applied research and development to inform future capabilities that enhance agricultural biosecurity.

This includes work to improve:

- Screening and sensing technologies to help identify prohibited agricultural products at ports of entry
- Methodologies and decision support tools for depopulation, disposal and decontamination that facilitate rapid response and prevent disease spread while minimizing waste, environmental impact and negative public perception.

These efforts are designed to inform capability development and transition to operational partners.

Decision Support and Interagency Collaboration

S&T works closely with DHS Components and interagency partners, including the Department of Agriculture, who leads the food and agriculture sector, to ensure analytical capabilities

address real-world needs. Through tailored analysis, reach back support, and scenario development, S&T provides decision support for planning, exercises, and preparedness activities.

This includes development of targeted analytical products, scenarios, and injects that help leaders test assumptions, identify gaps, and strengthen coordination before an incident occurs. These efforts support whole-of-government preparedness and complement USDA-led policy and programmatic initiatives.

Relationship to the USDA National Farm Security Action Plan

S&T supports the USDA National Farm Security Action Plan by providing the technical risk assessment foundation needed to inform sound policy and operational decisions. In this way, S&T's contributions are aligned with DHS's responsibilities under National Security Memorandum-16 (NSM-16) and complement USDA's leadership on agricultural policy, compliance, and enforcement.

The risks to the food and agriculture sector are complex and evolving and require disciplined coordination across federal, state, and local partners. With continued support from Congress, S&T will continue to play a critical role in helping the Nation understand and manage agroterrorism risks by providing rigorous, science-based analysis and decision support that protect the American people, our food supply, and our economy.

Conclusion

Chairman Strong, Ranking Member Kennedy, and Members of the Subcommittee, it is a privilege to testify before you today.

I thank you for your support of S&T and look forward to your questions.