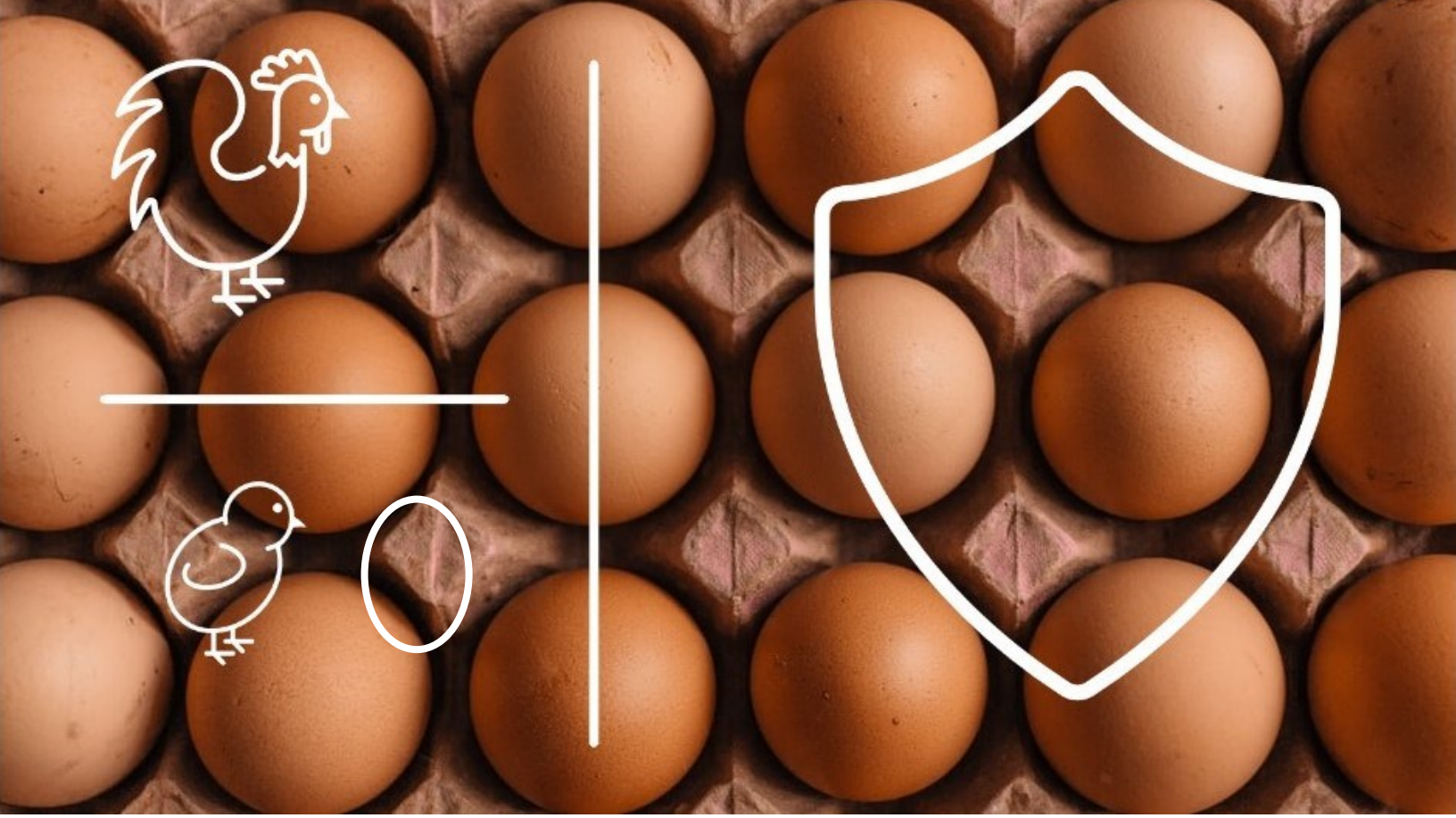

Highly Pathogenic Avian Influenza, its Market Impact, and How to Protect Your Business

This document provides an overview of Secure Food Supply Planning and considerations for maintaining continuity of business and consumer trust as HPAI continues to impact the egg and poultry industry.

Secure Food Supply planning is an important consideration for the U.S. livestock industry. U.S. producers across all states have experienced infections from Highly Pathogenic Avian Influenza (HPAI). HPAI has already impacted trade and supply chains. As state and federal responders work to manage the outbreak, producer, integrators, feed suppliers and transport, and trade groups should develop a Secure Food Supply strategy to protect flocks, business continuity, and the industry. As experience has shown, simply having an enhanced biosecurity plan is not enough, it must be vigilantly implemented during an outbreak.

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Highly Pathogenic Avian Influenza, its Market Impact, and How to Protect Your Business

What is Highly Pathogenic Avian Influenza?

Highly Pathogenic Avian Influenza (HPAI) is a highly contagious systemic disease that results in high mortality rates for birds and poultry. HPAI causes significant animal mortality that negatively impacts the economy and agricultural industry by disrupting production, consumption, and trade. In February 2022, the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) announced the reoccurrence of HPAI in the United States. This outbreak, which is still ongoing, is the first occurrence since 2014 and is the largest and longest HPAI outbreak in United States history. It is not unreasonable to think that HPAI is now an endemic disease.

Since the announcement of HPAI in the United States, more than 145 million birds across 51 states have been affected, severely impacting the poultry industry. The prices of turkey, chicken, and egg products across the country have rapidly increased and are expected to continue rising throughout 2025 (Zimmerman, Par. 3, 2025). Out of these products, the price of eggs has increased dramatically compared to turkey and chicken, unfavorably affecting the market. (Zamani, Bittman, and Ortega, Page 8, 2024). With the outbreak ongoing, it is essential to understand HPAI's market impact and how to protect your business and from the consequences of a foreign animal disease (FAD).

How does HPAI impact the poultry market?

HPAI disrupts domestic supply chains and international trade. Because of the most recent outbreak, several countries have restricted the trade of poultry products from the United States. In addition, the depopulation of infected flocks and the high mortality rates associated with HPAI have caused shortages of these kitchen-staple products. As a result, stores across the country are limiting consumer purchases in a desperate attempt to balance supply and demand. Ultimately, these supply chain shortages lead to dramatic price increases for poultry products, especially turkey, chicken, and eggs.

Conventional poultry products, once considered an affordable protein, have greatly increased in price, while premium products, such as those labeled as organic or sustainable, have had minor price reductions (Zamani, Bittman, and Ortega, Page 11, 2024). This inflation of conventional product prices leads consumers to prioritize price over quality. Consequently, consumers may look to other, more affordable sources of protein as a replacement for poultry. Additionally, fears about food safety during an HPAI outbreak make consumers think twice before buying (Zamani, Bittman, and Ortega, Page 3, 2024).

How are consumers perceiving HPAI?

Because of HPAI's spread to humans in a few cases, many consumers believe the consumption of poultry products poses a risk to their health. While HPAI can pose a risk to exposed individuals, and now dairy cows, it remains a low-risk disease to the public ("Highly Pathogenic Avian Influenza," Par. 38, 2024). Individuals most likely to become ill with HPAI are not consumers, but farm workers, butchers, hunters, poultry processors, and others with frequent exposure to infected animals or contaminated materials.

Consumer distrust can lead to the avoidance of poultry products, diminishing demand. Additionally, consumers may be less willing to pay for premium products, prioritizing price over quality. Therefore, rebuilding consumer trust during and after an HPAI outbreak is critical to protect your business and the economy.

How can you protect your business during an HPAI outbreak?

With prices at all-time highs and consumer demand dwindling, you need strategies to maintain the continuity of your business, protect production from HPAI infection, and rebuild consumer trust. There are several practices your business can implement to minimize or prevent the damaging effects of HPAI, including:

Developing a Secure Food Supply Plan Strategy

- Secure Food Supply Plans outline guidance to producers for maintaining continuity of business and helping control and eradicate a FAD by preventing the spread of infection. As a producer, having a Secure Food Supply Plan can allow your operation to continue the movement of animals and animal products during an outbreak, so developing one in advance is extremely beneficial to minimize gaps in your production and sales.
- As an integrator, you can support your suppliers with Secure Food Supply planning. A Secure Food Supply program includes supplier outreach and education to implement Secure Food Supply Plan adoption. This essential collaboration and support can help ensure the continuity of your business.
- As a trade group, your support of Secure Food Supply plans will help your members maintain operations and minimize the threat of HPAI to flocks. You can also support consumer education.

Implementing enhanced biosecurity practices

- Implementing enhanced biosecurity practices, such as increased cleaning and sanitization, sampling and testing, wearing PPE, and controlling access to animals and facilities, helps prevent an infection of HPAI at your premises and avoid devastating losses.
- With an enhanced biosecurity plan in place, you can communicate your practices to rebuild consumer trust and confidence in your products. Provide transparent messaging, showing consumers the steps you are taking to prevent disease and ensure their food is safe.
- Periodic validation of existing plans is necessary to assure they are appropriate for each premises. In addition, during an outbreak verification that growers are implementing their enhanced biosecurity plans can mitigate the risk of infection.

Educating consumers about food safety

- During FAD outbreaks, consumers often have concerns over food safety. Even though HPAI is not a food safety concern, many consumers still question the safety of poultry-based products. Address consumer fears and dispel myths by educating them on HPAI. An effective consumer education program includes information on the disease and why it is not a food safety risk, outlines your biosecurity practices, and provides clear handling and cooking instructions for at -home preparation.

Interested in developing a Secure Food Supply Program?

SES has decades of experience with FAD mitigation, prevention, and biosecurity measures for the livestock industry. We can help your organization develop Secure Food Supply Plans, supplier education and training, conduct biosecurity audits, and develop consumer education materials. Contact us at info@ses-corp.com to discuss your needs or learn more at https://ses-corp.com.

Secure Food Supply Planning

What is a Secure Food Supply (SFS) Plan?

A Secure Food Supply Plan offers guidance to producers for two goals:

- Maintain continuity of business or returning to business in the event of a foreign animal disease outbreak
- Help effectively control and eradicate a foreign animal disease, primarily by preventing the spread of infection.

A complete SFS Plan will include operating procedures for preparedness, risk assessment, enhanced biosecurity, surveillance standards, and applicable movement control and permitting guidelines.

During a foreign animal disease outbreak, states may require a permit to move any animals or products on and off farms. Having an existing SFS Plan puts a producer at the head of the line for getting permits to move animals during an outbreak.

Producers with operations located in control areas for a foreign animal disease should contact their state department of agriculture to determine requirements for moving animals and products. If the movement required crosses state borders, an operation must contact both the origin state and the receiving state authorities.

How do SFS plans, and enhanced biosecurity measures, protect production?

SFS planning takes time and resources, both of which are in short supply after an outbreak occurs. For that reason, operations should create an SFS Plan in advance of a foreign animal disease outbreak.

Planning in advance allows operations to:

- Train personnel on enhanced biosecurity measures.
- Assess risks and address current gaps in biosecurity and standard operating procedures.
- Identify sources for any required additional equipment and supplies.
- Educate your operation on how to work with local, state, and federal responders during an outbreak.
- Understand state and federal movement controls, and the permitting process.

Foreign animal disease outbreaks can move quickly and spread globally. Protecting your animals and operation can require rapid response to changing conditions. This is a challenge if you are not prepared. With an SFS Plan in place, your operation can immediately implement protective measures and reduce risk.

Secure Food Supply Planning

How does an SFS Plan support producers and farmers?

SFS Plans may help avoid lengthy interruptions in critical activities such as transport of feed and movement of animals to and from uninfected farms. SFS Plans help ensure both continuity of your business and a continuous supply of safe food to consumers. Operations that have an SFS Plan can receive priority for permitted movement, which expedites the process and helps ensure continuity of business.

Who should have an SFS Plan?

SFS Plans fit the needs of producers and farms with mid- to large-scale operations as well as related businesses such as feed mills, haulers, renderers, and processors.

In the event of a foreign animal disease outbreak, however, all owners of vulnerable livestock should take measures to prevent the spread of disease. These operations can include petting zoos, breeders and exhibitors, and small farms or animal owners. For example, HPAI has affected back yard bird owners as well as large producers.

Are SFS Plans required?

SFS Plans are voluntary, even during an active outbreak. However, states may require an operation to have an SFS Plan to receive a permit for moving animals into and out of control areas.

How can my organization develop a SFS System?

The resources below provide a good starting point for developing individual SFS plans. SES can assist producers and related businesses in the egg and poultry supply chain with developing plans. For food companies, our team can assist with an overall SFS strategy and conducting supplier outreach.

RESOURCES

Secure Food Supply, The Center for Food Security & Public Health, Iowa State University
Training Resources, Templates, and Tools for Multiple Species

Foreign Animal Disease Information, Animal Health Emergency Management, USDA Animal and Plant Health Inspection Service (APHIS)
Resources and Information on Foreign Animal Disease

SES Emergency Management and Enhanced Biosecurity Planning
Consulting Services for Enhanced Biosecurity Planning, and Preparedness Exercises and Training, Movement Control and Permitting Workshops

HPAI Information, Animal Health Emergency Management, USDA Animal and Plant Health Inspection Service (APHIS)
Information on the HPAI Outbreak

Secure Poultry Supply Program, University of Minnesota
Secure Poultry Supply Plan information operations including eggs and byproducts, live birds, and chicks

PoultryBiosecurity.org, The Center for Food Security & Public Health, Iowa State University
Biosecurity Planning Templates and Tools

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Secure Food Supply and Food Safety

As the leading private sector company with over 70 years combined experience in livestock disease response planning and exercises, SES can review and update corporate biosecurity plans and develop an auditing program to assess grower implementation and mitigate your risk from foreign animal disease. We can facilitate drills and exercises to prepare your operation to respond during a poultry disease outbreak. We have a depth of experience with supply chain resilience and developing food safety plans.

SERVICES

- Policy, procedure and strategy development for emergency preparedness
- Continuity of Operations planning (Secure Food Supply)
- Evaluation of your current emergency response and standard operating procedures
- Emergency response training and exercises
- H1N1 pandemic planning
- Emergency preparedness audit for supply chain
- National Movement Standstill protocols
- HACCP, VACCP, and TACCP food safety plans
- Supply chain resilience and supplier audits

Our Services

Secure Food Supply Planning

While FAD events are rare, the current Highly Pathogenic Avian Influenza (HPAI) outbreak has had devastating impacts on egg and poultry meat supply chains. In addition, the threats of African Swine Fever, now active in the Dominican Republic; and foot-and-mouth disease, just confirmed in Germany, have increased the threat potential of a FAD incursion into the United States. Our team provides complete solutions for Secure Food Supply:

- SES can audit suppliers and contract growers to ensure they have an implementable Secure Food Supply Plan and are prepared to rapidly implement the plan, when necessary.
- We can build SFS plans and an overall corporate SFS strategy to support continuity of business and implement your SFS strategy with suppliers.
- For organizations with an existing SFS strategy, we can monitor supplier participation and update your SFS program.
- We can build and implement exercises for growers to test and validate their SFS plans.

Learn more about our Emergency Preparedness services, including support for Continuity of Operations planning.

HACCP, VACCP, and TACCP Food Safety Plans

SES has a certified team to assist you with developing your food safety management plans, including Hazard Analysis and Critical Control Points (HACCP), Vulnerability Assessment and Critical Control Points (VACCP) vulnerability planning, and Threat Assessment and Critical Control Points (TACCP) threat assessments.

Our project work also includes supply chain vulnerability assessment, including ranking and scoring using tools such as the Food and Agriculture Sector Criticality Assessment Tool (FAS-CAT).

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Secure Food Supply and Food Safety

SERVICES

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- Emergency preparedness audit for supply chain
- National Movement Standstill protocols
- Secure Food Supply Plans

Project Experience

Technical and Administrative Support for the USDA Training and Exercise Program, USDA, APHIS, Veterinary Service (VS)

SES conducts various projects for the USDA, APHIS, VS Training and exercise program. Under this contract, SES provides technical expertise in the areas of policy and exercise development, conduct and evaluation, and training design. SES develops state plans, policies and procedures relative to implementing Secure Food Supply Programs for applicable commodities. SES supported the USDA with development of the 2022-2023 HPAI After-Action Report. We have in-depth understanding of HPAI.

Secure Food Supply Plans

West Virginia Department of Agriculture (WVDA) engaged SES to conduct an educational event on the benefits of Secure Food Supply (SFS) plans for livestock producers from the cattle, swine, sheep, and goat industries. The presentation provided a detailed explanation of the plan development process and the importance of continuity of business, and included feedback from producers with SFS plans.

Following the presentation, SES conducted site visits to work with producers on their SFS plan. In advance of the visit, SES provided producers with a list of required documentation needed to develop the plan. SES developed the SFS plans and met with producers to review their plans. As a final step, SES submitted the completed plans to WVDA.

Biosecurity Plan Generator

SES to develop the technical content for a biosecurity plan generator program for a large milk cooperative. The program addressed all aspects of biosecurity, including the protection of raw milk in transport. The technical content was incorporated into an online tool to support the dairy industry with biosecurity plan development.

Our Clients

Private Entities

SES provides services for a variety of food and agriculture operations, across the entire food supply chain.

Federal Agencies

U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Animal Plant Health Investigative Service (APHIS), Veterinary Services (VS), Agricultural Marketing Service (AMS), National Organic Program (NOP), U.S. Department of Defense (DoD), U.S. Environmental Protection Agency (EPA), U.S. Department of Homeland Security (DHS); U.S. Department of Energy (DOE)

State Agencies

Animal Health and Agriculture Agencies in: Alabama, Arizona, California, Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington State, West Virginia, and Wisconsin

Organizations

National Association of State Departments of Agriculture (NASDA), Multi-State Partnership for Security in Agriculture, Southern Animal Health Association, Border Governors' Agriculture Worktable, Western Alliance of States for Agriculture Resilience, Cultivation Corridor

Trade Associations

Dairy Farmers of America (DFA), Livestock Marketing Association (LMA), Kentucky Corn Growers Association, U.S. Soybean Board and Export Council, National Pork Board, Western Equipment Dealers Association

"I have worked with SES for more than 15 years on a variety of projects and have come to rely on their expertise in developing management systems, standards, training and auditing programs. SES has consistently delivered high-quality projects, on-time and on schedule."

– VP Environmental Engineering for a Large Livestock and Poultry Company

SES, INC.

Contact SES

10901 West 84th Terrace, Suite 175
Lenexa, KS 66214
913-307-0046
info@ses-corp.com

SES helps companies manage their triple bottom line through actionable, science-based sustainability programs that improve the resiliency of operations and supply chains.

SES is a leader in the field of greenhouse gas (GHG) offset verification, as well as verification for sustainability metrics and regulatory compliance for livestock and poultry production operations.

SES has over 50 years of combined experience managing the risks of foreign animal disease and developing emergency response programs for food and agriculture.