

The Highly Pathogenic Avian Influenza (HPAI) Outbreak in Poultry, 2022-Present

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Avian influenza (i.e., bird flu) is a contagious viral disease of domesticated and wild birds. Depending on the viral strain, the disease can cause little to no signs of illness—referred to as “low pathogenic avian influenza”—to a range of symptoms from serious illness to death—referred to as “highly pathogenic avian influenza” (HPAI). An HPAI outbreak occurred in the United States in 2014-2015 when two HPAI strains infected 211 commercial flocks and 21 backyard flocks in 15 states. The last confirmed case of that outbreak was in a commercial flock in June 2015. HPAI was detected again in wild birds in the United States in January 2022, when the U.S. Department of Agriculture’s (USDA’s) Animal and Plant Health Inspection Service (APHIS) identified an H5N1 strain of HPAI in a wild bird in South Carolina. The present U.S. HPAI outbreak began February 2022 following confirmation of the virus in a commercial turkey operation in Indiana. Cases of HPAI have been confirmed in all 50 U.S. states and Puerto Rico.

Table-egg-laying hen flocks have been the most impacted by the ongoing 2022 outbreak, accounting for 75% of total domestic poultry loss. During each month of 2020-2021, an average of 310 million table-egg-laying hens were in the United States. In 2022-2024, the average number of table-egg-laying hens per month was 296 million, 5% lower than in the two years immediately before the outbreak. As a result, U.S. table egg supplies have been reduced, and consumer retail prices for shell eggs have increased. In March 2025, the Bureau of Labor Statistics (BLS) reported that the national average retail price for eggs reached a record \$6.23 per dozen.

USDA APHIS is responsible for protecting and improving animal health in the United States. The Animal Health Protection Act (7 U.S.C. §§8301 et seq.) provides APHIS authority to restrict animal movement, destroy animals, and take preventive controls to eradicate diseases that threaten animal and public health. From February 2022 to February 2025, APHIS committed a total of \$1.811 billion for HPAI response activities. When the scope of an animal disease outbreak appears to exceed available resources, the agency may seek other available funding sources, such as carryover balances from previous animal disease responses. USDA may also use emergency funding transferred from the Commodity Credit Corporation (CCC). CCC is authorized to fund a broad array of programs and has a permanent indefinite borrowing authority of \$30 billion from the U.S. Treasury. On February 26, 2025, Secretary of Agriculture Brooke Rollins announced a “plan to lower egg prices.” The plan, described by USDA as its “Five-Pronged Approach to Address Avian Flu,” includes investing in “gold-standard” biosecurity measures, increasing relief to producers to accelerate repopulation, exploring strategies for protecting egg-laying chickens to reduce instances of depopulation, removing “unnecessary regulatory burdens” on the chicken and egg industry, and evaluating temporary import-export options to increase the supply of shell eggs in the domestic market.

Several Members of Congress have written to Secretary of Agriculture Rollins regarding USDA’s response to the HPAI outbreak. As Congress continues to monitor the ongoing outbreak of HPAI in domestic poultry flocks, it may consider animal disease prevention and management programs, indemnity payments to producers who suffer HPAI-related losses, vaccination, the available supply of shell eggs, interstate and international trade, and competition-related matters in the poultry sector. Legislation introduced in the 119th Congress seeks to address some of these topics. The Healthy Poultry Assistance and Indemnification Act of 2025 (S. 574, and its companion bill, H.R. 1376) would expand indemnity payments to include compensation for all poultry producers located in an APHIS-determined control area, which consists of both an infected zone and a buffer zone. The Avian Flu Vaccination Strategy Act (S. 908) would require the Secretary of Agriculture, in consultation with the U.S. Trade Representative, to develop and finalize a vaccination strategy for poultry. The Lowering Egg Prices Act of 2025 (H.R. 2222) would require the Secretary of Health and Human Services to consult with the Secretary of Agriculture to issue a rule allowing the sale of surplus broiler hatching eggs. The Food Security and Farm Protection Act (S. 1326) would prohibit state and local jurisdictions from imposing certain standards or conditions on “the preharvest production of any agricultural products sold or offered for sale in interstate commerce.” A bill introduced in the 119th Congress (H.R. 2868) would add HPAI as a high-priority research and extension area under which the Secretary of Agriculture may make competitive grants available to land-grant colleges and universities for the purposes of furthering the efficacy of vaccines for poultry and enhancing biosecurity procedures for producers. The Meat and Poultry Special Investigator Act of 2025 (S. 1312, H.R. 1380) would establish an Office of the Special Investigator for Competition Matters within USDA.

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Avian influenza (i.e., bird flu) is a contagious viral disease of domesticated and wild birds. Depending on the viral strain, the disease can cause little to no signs of illness—referred to as “low pathogenic avian influenza”—or it can cause a range of symptoms from serious disease to death in birds—referred to as “highly pathogenic avian influenza” (HPAI). Avian influenza is an influenza type A virus, which may be further categorized by its two surface proteins: hemagglutinin (H) and neuraminidase (N). Hemagglutinin subtypes range from H1 to H18, and neuraminidase subtypes range from N1 to N11.¹ The most frequently identified subtypes of avian influenza viruses with human health impacts are H5, H7, and H9.² Aquatic birds (e.g., ducks, geese, swans, gulls, shorebirds) are natural carriers of avian influenza. However, all wild birds are susceptible to carrying and spreading the virus. Viral transmission in birds can occur via the respiratory or other routes.³

An HPAI outbreak occurred in the United States in 2014-2015 when two HPAI strains, H5N2 and H5N8, infected 211 commercial flocks and 21 backyard flocks in 15 states.⁴ More than 50 million birds, primarily egg-laying hens and turkeys, died directly from the disease or were euthanized to help control the spread of the disease (“depopulated”), resulting in direct economic losses reaching \$1.6 billion.⁵ The first confirmed cases were in wild birds and backyard flocks in December 2014, and the last confirmed case in that outbreak was in a commercial flock in June 2015. Following eradication of that outbreak in domestic poultry flocks, HPAI was rarely detected in wild birds in the United States until January 2022, when the U.S. Department of Agriculture’s (USDA’s) Animal and Plant Health Inspection Service (APHIS) identified an H5N1 strain of HPAI in a wild bird in South Carolina. The present outbreak of HPAI in the United States officially began in February 2022 following confirmation of the virus in a commercial turkey operation in Indiana along the Mississippi Flyway.⁶

This report provides an overview of the ongoing HPAI outbreak in domestic poultry flocks, its impact on the production of poultry eggs, past and current federal response activities, and policy options of potential interest to Congress.⁷ It does not address the outbreak’s potential effects on human health or affected non-poultry agricultural sectors, such as dairy.

¹ Centers for Disease Control and Prevention (CDC), “Types of Influenza Viruses,” September 18, 2024, <https://www.cdc.gov/flu/about/viruses-types.html>.

² CDC, “Avian Influenza Type A,” December 20, 2024, <https://www.cdc.gov/bird-flu/about/avian-influenza-type-a.html>.

³ Johanna A. Harvey et al., “The Changing Dynamics of Highly Pathogenic Avian Influenza H5N1: Next Steps for Management & Science in North America,” *Biological Conservation*, vol. 282 (2023), 110041, <https://doi.org/10.1016/j.biocon.2023.110041>.

⁴ For the purpose of reporting confirmed cases of HPAI, the U.S. Department of Agriculture’s (USDA’s) Animal and Plant Health Inspection Service (APHIS) uses *flock* as defined in 9 C.F.R. §53.10. “Commercial” flocks consist of more than 75,000 table-egg-laying hens; 100,000 broilers raised annually; 5,000 breeder poultry; 30,000 turkeys raised annually; or 50,000 gamebirds or waterfowl raised annually for meat or eggs. All other flocks are categorized as “backyard.” For more information on the 2014-2015 HPAI outbreak, see CRS Report R44114, *Update on the Highly-Pathogenic Avian Influenza Outbreak of 2014-2015*.

⁵ USDA, APHIS, *Final Report for the 2014–2015 Outbreak of Highly Pathogenic Avian Influenza (HPAI) in the United States*, public version, rev. August 11, 2016, <https://www.aphis.usda.gov/media/document/2086/file>; CRS Report R44114, *Update on the Highly-Pathogenic Avian Influenza Outbreak of 2014-2015*.

⁶ A *flyway* is a general migratory pathway that wild birds take between their breeding and winter locations. Four North American bird migration flyways vertically connect the United States: Pacific Flyway, Central Flyway, Mississippi Flyway, and Atlantic Flyway. Animal health officials monitor these flyways for their potential to spread disease from wild bird populations to domestic livestock populations.

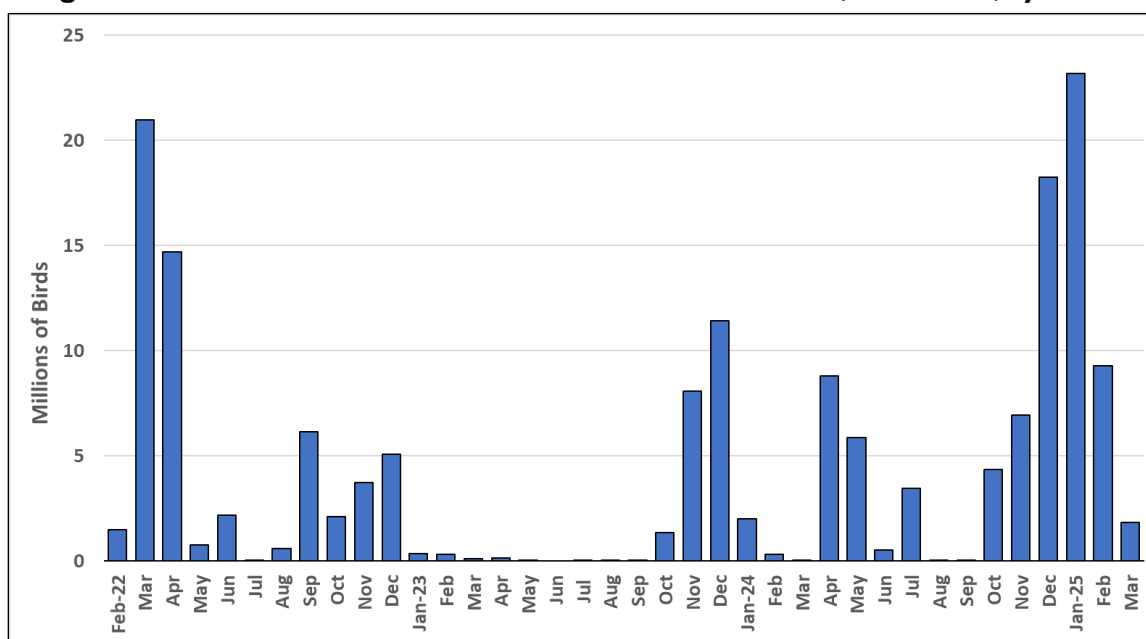
⁷ For information on the HPAI outbreak in dairy cattle, see CRS In Focus IF12837, *H5N1 HPAI Continues to Spread in Dairy Herds*. For more information on the impact of the HPAI outbreak on human health, see CRS In Focus IF12895, (continued...)

Overview of the Outbreak in Poultry

The H5N1 strain of HPAI has been affecting U.S. poultry flocks since February 2022. This H5N1 strain of avian influenza has a mortality rate in birds of nearly 100%.⁸ Infections have been confirmed in backyard flocks and commercial flocks of egg-laying hens, broilers, turkeys, and breeding birds.⁹ Since February 2022, the number of new confirmed cases has varied widely per month. The seemingly cyclical nature of the disease may correspond with the migratory travel of wild birds.

According to APHIS, as of April 23, 2025, 1,689 flocks have been confirmed as HPAI positive, affecting 168.62 million birds since 2022 (**Figure 1**).¹⁰ Cases have occurred in all 50 states and Puerto Rico.

Figure 1. Number of Birds on Confirmed Infected Premises, 2022-2025, by Month



Source: CRS, from U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), “Confirmations of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks,” updated April 9, 2025, <https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/commercial-backyard-flocks>.

H5N1 Avian Influenza: The Human Health Response. For a list of CRS experts on various aspects of the HPAI outbreak, see CRS Report R48361, *Highly Pathogenic Avian Influenza—H5N1 Virus: CRS Experts and Points of Contact*.

⁸ USDA, APHIS, “Highly Pathogenic Avian Influenza (HPAI) Response Ready Reference Guide—Overview of Etiology and Ecology,” May 2017, https://www.aphis.usda.gov/sites/default/files/rrg_hpai_ee.pdf.

⁹ *Broilers* are chickens raised for meat production.

¹⁰ USDA, APHIS, “Confirmations of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks,” accessed April 23, 2025, <https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/commercial-backyard-flocks>.

Poultry Meat Production

Chickens raised for meat, known as *broilers*, compose approximately 8% of HPAI-infected birds (**Figure 2**). The housing type and geographic location of typical broiler farms may contribute to their being less impacted by HPAI than other flock types. Broilers are generally raised in automated environments with feeders, drinkers, heaters, fans, air inlets, and cooling equipment managed by computerized control mechanisms.¹¹ Fewer interactions with humans and outside elements reduces the risk of disease transmission for the flock. Broilers also have shorter lifespans than other flock types—between six and seven weeks—which reduces the opportunity for disease to spread in a flock. Broiler flocks may also benefit from being located away from the Central and Pacific Flyways, where HPAI appears to be most prevalent in migratory birds.¹² USDA forecasts that 2025 broiler production will be 1.4% higher than in 2024 and 7.3% higher than in 2021, before the start of the outbreak.¹³

Turkey flocks compose approximately 11% of HPAI-infected birds affecting turkey production.¹⁴ USDA forecasts that 2025 turkey production will decline 2.5% from 2024 levels and be nearly 11% lower than in 2021, before the start of the outbreak.¹⁵

Egg Production and Prices¹⁶

Among all poultry flocks in the United States, table-egg-laying hens have been the most affected by the ongoing outbreak, accounting for 75% of total domestic poultry loss but composing less than 4% of the total domestic poultry population (**Figure 2**).¹⁷ One possible contributing factor is that laying hens have longer lifespans and thus higher potential to be exposed or infected with the virus. The typical life cycle for laying hens, in contrast to broilers, begins when day-old pullets (i.e., young hens) from hatcheries are placed into a rearing house for 16-17 weeks until they reach sexual maturity. The pullets are then transferred to a laying house, where they stay for the

¹¹ Dennis Brothers, “New Farmer’s Guide to the Commercial Broiler Industry: Poultry Husbandry & Biosecurity Basics,” October 20, 2022, <https://www.aces.edu/blog/topics/farm-management/new-farmers-guide-to-the-commercial-broiler-industry-poultry-husbandry-biosecurity-basics/>.

¹² Bernt Nelson, “Avian Influenza Hits Turkeys and Eggs Hardest,” *American Farm Bureau Federation*, November 14, 2024, <https://www.fb.org/market-intel/avian-influenza-hits-turkeys-and-eggs-hardest>.

¹³ USDA, Economic Research Service (ERS), *Livestock, Dairy, and Poultry Outlook: February 2025*, p. 39, https://ers.usda.gov/sites/default/files/_laserfiche/outlooks/110972/LDP-M-368.pdf?v=96508; USDA, ERS, “Meat Supply and Disappearance Tables, Recent,” in *Livestock and Meat Domestic Data*, accessed March 11, 2025, <https://www.ers.usda.gov/data-products/livestock-and-meat-domestic-data>.

¹⁴ USDA, National Agricultural Statistics Service (NASS), “Chickens, Layers – Inventory,” “Chickens, Broilers - Production, Measured in Head,” and “Turkeys - Production, Measured in Head,” 2023 survey year, *Quick Stats*, accessed March 11, 2025, <https://quickstats.nass.usda.gov/>.

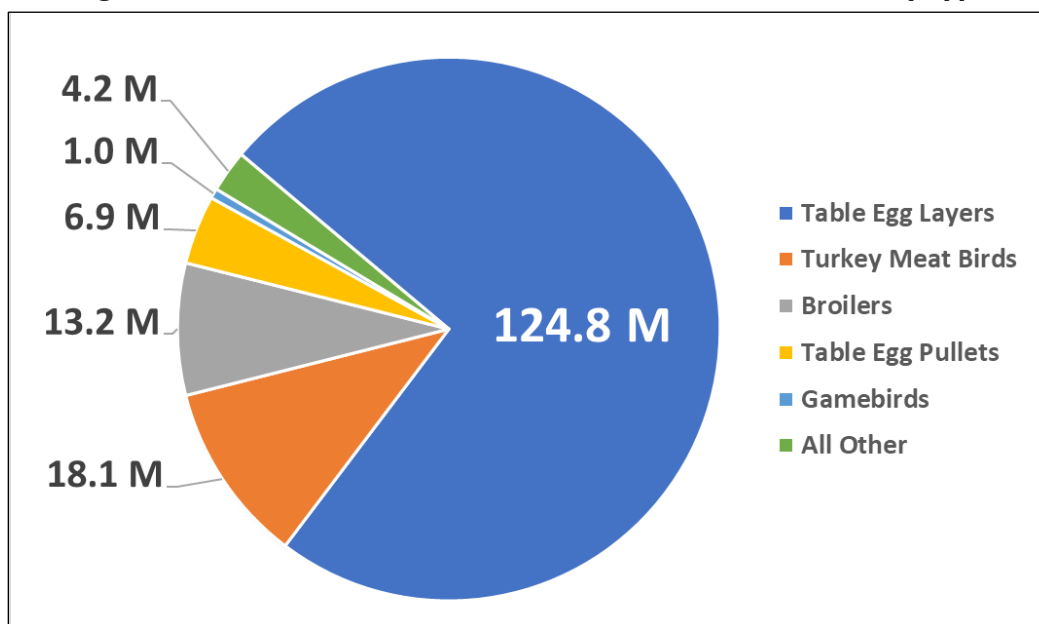
¹⁵ USDA, ERS, *Livestock, Dairy, and Poultry Outlook: February 2025*, p. 39, https://ers.usda.gov/sites/default/files/_laserfiche/outlooks/110972/LDP-M-368.pdf?v=96508; USDA, ERS, “Meat Supply and Disappearance,” in *Livestock and Meat Domestic Data*, accessed March 11, 2025, <https://www.ers.usda.gov/data-products/livestock-and-meat-domestic-data>.

¹⁶ For more information on the factors influencing egg production and prices, see CRS In Focus IF12949, *U.S. Egg Production and Retail Prices*.

¹⁷ *Table eggs* are unfertilized eggs produced for consumption. *Table egg layers* are hens that produce table eggs. Fertilized eggs, also known as hatching eggs, are used for producing chickens. According to USDA, 87% of eggs produced in the United States are unfertilized table eggs. Table eggs become shell eggs after they have been declared free from imperfections that would restrict them to the breaking supply or require their disposal.

remainder of their productive life, which begins around 20 weeks and may last up to three years.¹⁸ Thus, if an egg-laying flock becomes infected with HPAI and is depopulated to control the spread of disease, it may take up to 20 weeks for new hens to reach sexual maturity and begin producing eggs again.

Figure 2. Number of Birds on Confirmed Infected Premises, by Type



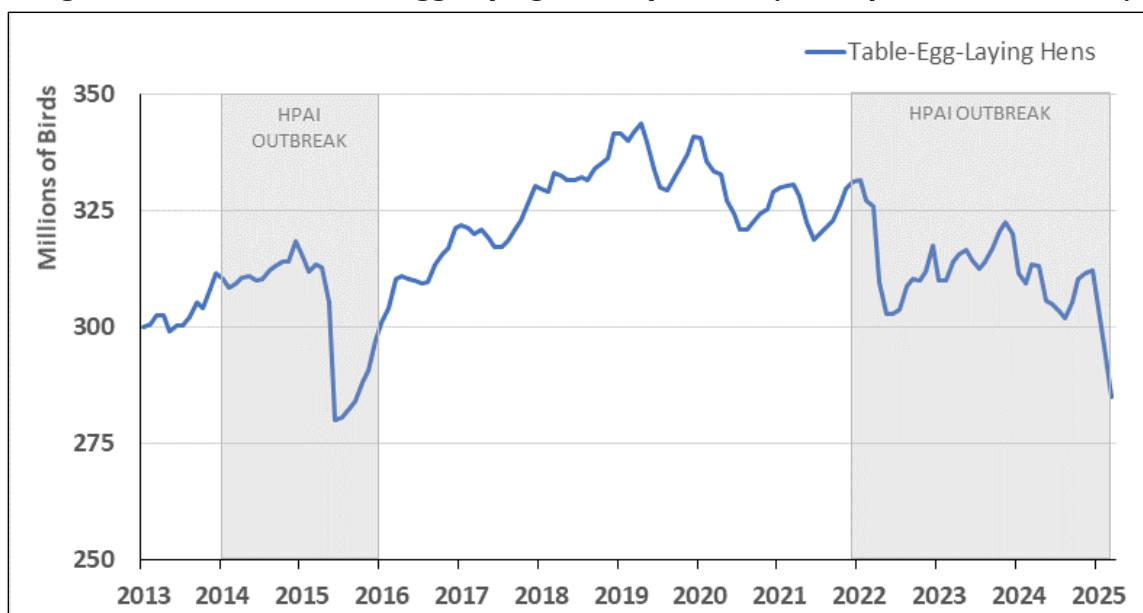
Source: CRS, from USDA, APHIS, “Confirmations of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks,” updated April 4, 2025, <https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/commercial-backyard-flocks>.

Notes: M = million. Pullets are young hens less than a year old and are not yet part of the egg-laying flock. Gamebirds include upland birds (i.e., pheasants, quails) and waterfowl (i.e., ducks, geese) that are raised for release onto hunting preserves. The “all other” category comprises commercial turkey, broiler, and egg-laying breeding flocks; ducks; and backyard flocks. Infected birds in each of the “all other” groups are under 1 million.

Table-egg-laying hens, as opposed to hens that lay eggs for breeding purposes, produce eggs for consumption. Immediately prior to the current HPAI outbreak, 2020-2021, the United States contained an average of 310 million table-egg-laying hens. In the years since the outbreak began, 2022-2024, the average number of table-egg-laying hens dropped 5% to 296 million (**Figure 3**).¹⁹ U.S. table egg supplies have been reduced, and consumer retail prices for shell eggs have reached record highs.

¹⁸ The length of the productive life of a laying hen depends on the number of egg production cycles used on the egg farm. Typically, the productive life of laying hens ends at 78-80 weeks in a one-cycle system, at 102-106 weeks in a two-cycle system, and at 140-150 weeks in a three-cycle system. Approximately 80% of laying hens in the United States are molted at least once. USDA, APHIS, *Poultry Industry Manual*, March 2013, p. 103, https://www.aphis.usda.gov/sites/default/files/poultry_ind_manual.pdf.

¹⁹ CRS averaged monthly USDA-reported populations. NASS, “Inventory Layers, Table,” *Quick Stats*, accessed February 27, 2025.

Figure 3. Number of Table-Egg-Laying Hens by Month (January 2013-March 2025)

Source: CRS, USDA, National Agricultural Statistics Service (NASS), “Inventory of Layers, Table (30,000 or More Head),” *Quick Stats*, accessed April 4, 2025, <https://quickstats.nass.usda.gov/>. Shaded areas represent outbreaks of highly pathogenic avian influenza (HPAI) in 2014-2015 and 2022-present.

In 2020 and 2021, U.S. production averaged over 96 billion eggs. U.S. table egg production in 2024 dropped to 93.1 billion, 2.6% below egg production prior to the onset of the HPAI outbreak in 2021. USDA expects table egg production to decrease 1.3% in 2025 from 2024 production levels.²⁰

Eggs are a staple food in the American diet with few substitutes.²¹ USDA estimated per capita consumption of shell eggs to be nearly 274 in 2024.²² Economists consider eggs an “inelastic” commodity because consumer demand for eggs changes relatively little in response to price changes. This also means that relatively small changes in supply can have large effects on price.²³

Egg prices are reported by the Bureau of Labor Statistics (BLS) and the USDA Agricultural Marketing Service (AMS). In March 2025, BLS reported that the national average retail price for eggs reached a record \$6.23 per dozen, surpassing the previous record highs of \$5.90 per dozen in February 2025 and \$4.82 per dozen in January 2023 (**Figure 4**). Prices range by variety and region. AMS reports wholesale egg prices for several regions in the United States.²⁴ For example, for the week ending February 21, 2025, the average wholesale price for large white eggs was \$8.39 per dozen nationally, \$8.34 per dozen in the Northeast, and \$8.30 per dozen in the

²⁰ USDA, NASS, *Chicken and Eggs 2024 Summary*, February 2025, <https://usda.library.cornell.edu/concern/publications/1v53jw96n>.

²¹ Caitlinn Hubbell, “Egg Prices: The Data Tell the Story,” Center for Food Demand Analysis & Sustainability, Purdue University, September 26, 2023, <https://ag.purdue.edu/cfdas/chew-on-this/egg-prices-the-data-tell-the-story/>.

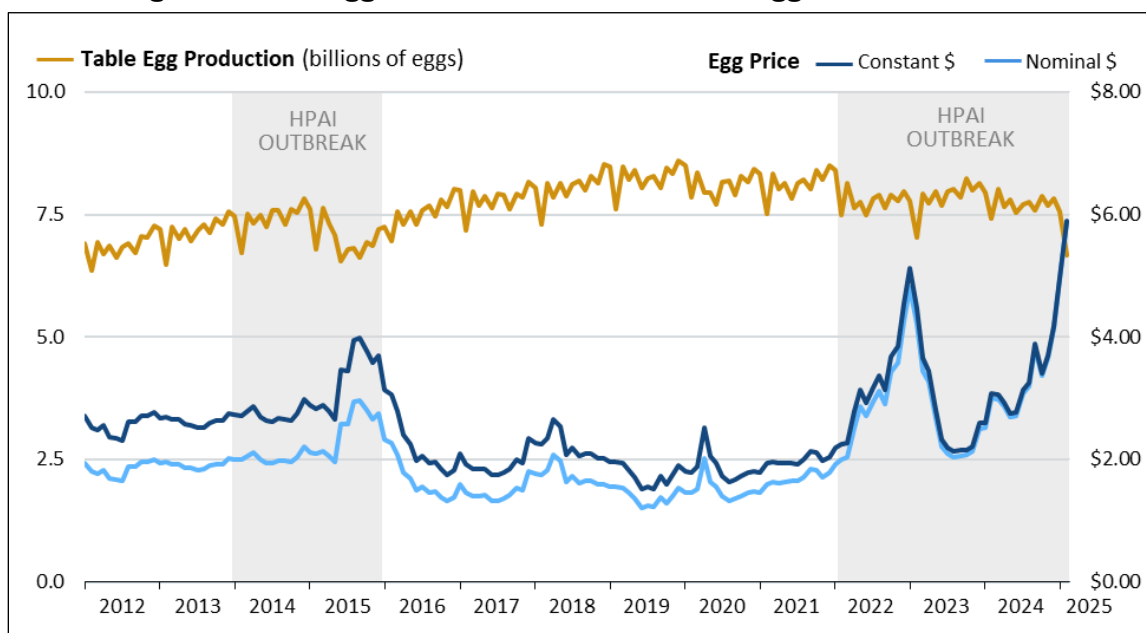
²² *Per capita consumption* is a measure of total egg production, less exports, plus imports, divided by the total population. It does not represent demand. USDA, ERS, *Livestock, Dairy, and Poultry Outlook: February 2025*, p. 39, https://ers.usda.gov/sites/default/files/_laserfiche/outlooks/110972/LDP-M-368.pdf?v=96508.

²³ USDA, ERS, “Food Consumption & Demand – Food Demand Analysis,” January 8, 2025, <https://www.ers.usda.gov/topics/food-choices-health/food-consumption-demand/food-demand-analysis>.

²⁴ *Wholesale prices* are the prices paid by the person or firm that buys products at wholesale. *Retail prices* are paid by consumers.

Midwest.²⁵ For the same period, the wholesale price in California was \$10.07 per dozen for large, white, cage-free eggs.²⁶

Figure 4. Table Egg Production and U.S. Retail Egg Prices, 2012-2025



Source: CRS, using data for January 2012 through March 2025 from USDA, National Agricultural Statistics Service (NASS), “Eggs, Table–Production,” *Quick Stats*, and Bureau of Labor Statistics (BLS) Consumer Price Index average data for dozen large eggs. Values are adjusted for inflation (2024 dollars) using BLS Consumer Price Index for All Urban Consumers. Shaded areas represent outbreaks of HPAI in 2014-2015 and 2022-present.

Federal Response to Poultry Outbreak

USDA APHIS is responsible for protecting and improving animal health in the United States. The Animal Health Protection Act (7 U.S.C. §§8301 et seq.) provides APHIS authority to restrict animal movement, destroy animals, and take preventive controls to eradicate diseases that threaten animal and public health. APHIS administers several programs at a cost of nearly \$400 million annually to carry out these authorities, including species-specific programs for aquatic, avian, cattle, equine, and swine health.²⁷

In its manual on mobilizing resources to respond to an animal disease outbreak, APHIS states that “initial response activities are often funded by” annual congressional appropriations that the agency “receives for animal and plant health surveillance and monitoring activities.”²⁸ APHIS

²⁵ See prices for “Delivered Warehouse, White, Cents per Dozen,” in USDA, Agricultural Marketing Service (AMS), *Weekly Combined Regional Shell Egg Report*, AMS_2848, February 22, 2025, <https://mymarketnews.ams.usda.gov/viewReport/2848>.

²⁶ California law requires that eggs sold in the state be cage free. USDA, AMS, *Weekly California Shell Egg Report*, AMS_2844, February 21, 2025, <https://mymarketnews.ams.usda.gov/viewReport/2844>.

²⁷ USDA, “2025 USDA Explanatory Notes–Animal and Plant Health Inspection Service,” <https://www.usda.gov/sites/default/files/documents/22-APHIS-2025-ExNotes.pdf>.

²⁸ USDA, APHIS, *APHIS 1050 Emergency Mobilization Guide*, September 14, 2018, p. 10, https://www.aphis.usda.gov/sites/default/files/aphis_1050.pdf.

may also use other available funding sources, such as carryover balances from previous animal disease responses. The Secretary of Agriculture may also transfer emergency funding from the Commodity Credit Corporation (CCC) to cover outbreak-response-related expenses.²⁹ CCC is under the direction of the Secretary of Agriculture and is authorized to carry out a broad array of programs related to U.S. agriculture with financing borrowed directly from the U.S. Treasury.³⁰

From February 2022 to February 2025, APHIS committed a total of \$1.811 billion for HPAI response activities.³¹ APHIS uses HPAI response funding for indemnity payments, disease control and eradication, and disease surveillance, among other activities. This includes \$1.195 billion for indemnity payments to producers as well as over \$353 million for depopulation, disposal, and “virus elimination activities.”³² APHIS estimated field costs and the costs for associated personnel, contractors, and cooperative agreements with states at \$263 million. APHIS estimated that \$308 million in uncommitted emergency funding for HPAI response activities remained available in February 2025.

Surveillance

In coordination with federal and state partners, APHIS surveils the populations of wild birds, domesticated poultry, and other species susceptible to HPAI infection. APHIS also routinely collects wild bird samples and tests them for avian influenza through the National Wildlife Disease Program.³³ From July 2021 to December 2024, APHIS tested nearly 130,000 samples and detected 30,000 cases of avian influenza, including more than 12,000 cases of HPAI.³⁴ Wild birds are natural reservoirs for the virus. The movement of wild migratory birds contributes to disease transmission across North America.

Biosecurity and Indemnity

In a report on the impact of the 2014-2015 HPAI outbreak in the United States, APHIS stated, “biosecurity measures must be improved on premises to not only stop HPAI transmission during an outbreak, but prevent HPAI introductions into commercial poultry flocks in the future.”³⁵ After the 2014-2015 HPAI outbreak, APHIS developed a website for producers with commercial or backyard poultry flocks to self-assess their site-specific biosecurity plans.³⁶ APHIS also offers educational materials in six languages detailing biosecurity practices that may reduce the risk of HPAI infection and transmission.³⁷

APHIS published a final rule in 2018 requiring all owners of premises that met certain size criteria and sought indemnity payments for HPAI-related losses to develop and implement a “biosecurity plan,” which is defined as “a document utilized by an owner and/or contractor

²⁹ 7 U.S.C. §8316.

³⁰ CCC’s borrowing authority is limited to \$30 billion at any one time (15 U.S.C. §714b(i)). For program information on the Commodity Credit Corporation, see CRS Report R44606, *The Commodity Credit Corporation (CCC)*.

³¹ CRS communications with USDA APHIS, February 13, 2025.

³² CRS communications with USDA APHIS, February 13, 2025.

³³ USDA, APHIS, “Wild Bird Avian Influenza Surveillance,” accessed March 4, 2025, <https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/wild-bird-surveillance-dashboard>.

³⁴ USDA, APHIS, “Wild Bird Avian Influenza Surveillance.”

³⁵ USDA, APHIS, “Final Report for the 2014–2015 Outbreak of Highly Pathogenic Avian Influenza (HPAI) in the United States,” August 11, 2016, p. 47, <https://www.aphis.usda.gov/media/document/2086/file?lv=true>.

³⁶ USDA, APHIS, “Poultry Biosecurity,” 2025, <https://poultrybiosecurity.org/>.

³⁷ USDA, APHIS, “Defend the Flock,” <https://www.aphis.usda.gov/livestock-poultry-disease/avian/defend-the-flock>.

describing the management practices and principles that are used to prevent the introduction and spread of infectious diseases of poultry at a specific facility.”³⁸ Previously, owners and contractors were not required to develop a biosecurity plan to be eligible for indemnity payments. The 2018 final rule also required an APHIS-recognized state authority to audit the biosecurity plan at least once every two years.³⁹

In December 2024, APHIS published an interim final rule stating that the 2018 final rule was “insufficient” and “the current paper-based audit process does not always illustrate how well the premises are practicing biosecurity to prevent HPAI infection or reintroduction.”⁴⁰ APHIS determined that premises must be visually inspected by a state or federal animal health official to evaluate how well the biosecurity plan is being implemented. The 2024 interim final rule requires visual evaluation of a premise’s biosecurity plan and its implementation as a condition for indemnity payments in certain instances. The visual audit may be conducted virtually or in person.

While APHIS acknowledged that “reinfections may occur with even a perfectly implemented biosecurity plan,” the agency stated that the interim final rule “will serve to reduce the risk that a producer becomes inclined to disregard biosecurity because they believe that APHIS will continue to cover the costs associated with damages related to an HPAI outbreak through indemnity payments regardless of their biosecurity status.”⁴¹ APHIS estimated that as of November 2024, it spent approximately \$296 million on indemnity payments to premises with poultry that had been infected multiple times during the ongoing outbreak and an estimated \$128 million in indemnity and response payments for premises with poultry that were infected while in a buffer zone.⁴² A total of 67 unique commercial poultry premises have been infected at least twice with HPAI during the current outbreak, 19 of which have been infected three or more times. APHIS stated that the changes instituted through the interim final rule would allow it to “restrict indemnity payments to those previously infected producers and those producers in buffer zones who have undergone biosecurity audits to verify biosecurity measures, thereby reducing the incentive to undertake that risky behavior.”⁴³

Control and Eradication

The United States’ primary control and eradication strategy for HPAI in domestic poultry is the “stamping-out policy,” a strategy defined by international standards and the World Organisation for Animal Health (WOAH) as “the killing of the animals [that] are affected and those suspected of being affected in the herd or flock and, where appropriate, those in other herds or flocks [that] have been exposed to infection by direct animal to animal contact, or by indirect contact with the

³⁸ USDA, APHIS, “Conditions for Payment of Highly Pathogenic Avian Influenza Indemnity Claims,” 83 *Federal Register* 40433, August 15, 2018, <https://www.federalregister.gov/documents/2018/08/15/2018-17554/conditions-for-payment-of-highly-pathogenic-avian-influenza-indemnity-claims>.

³⁹ The National Poultry Improvement Plan, “State Contact Representatives and Key Contacts,” April 23, 2025, <https://www.poultryimprovement.org/documents/OfficialStateAgencies.pdf>.

⁴⁰ USDA, APHIS, “Payment of Indemnity and Compensation for Highly Pathogenic Avian Influenza,” 89 *Federal Register* 106981, December 31, 2024, <https://www.federalregister.gov/documents/2024/12/31/2024-31384/payment-of-indemnity-and-compensation-for-highly-pathogenic-avian-influenza>.

⁴¹ USDA, APHIS, “Payment of Indemnity and Compensation for Highly Pathogenic Avian Influenza.”

⁴² *Control areas* consist of an infected zone and a buffer zone. The *infected zone* is the area that immediately surrounds an infected premises, up to the beginning of the buffer zone. The *buffer zone* has typically been identified as an uninfected zone 3-10 km around an infected premises.

⁴³ USDA, APHIS, “Payment of Indemnity and Compensation for Highly Pathogenic Avian Influenza.”

causal pathogenic agent.”⁴⁴ Depopulation of the herd or flock is followed by disposal of carcasses and decontamination of the areas that sick animals had come in contact with via thorough cleaning and disinfection. APHIS further defines the proper procedures for responding to an animal disease outbreak in its Foreign Animal Disease Preparedness and Response Plan, also known as the FAD PRoP or the HPAI *Red Book*.⁴⁵

USDA has neither developed nor implemented a vaccination strategy against HPAI.⁴⁶ But the HPAI *Red Book* acknowledges, “If the spread of HPAI outpaces the resources for stamping-out, or if other factors direct the response away from a stamping-out strategy alone, emergency vaccination strategies might be considered.”⁴⁷ Some stakeholders have requested that USDA support the development of an effective avian influenza vaccine and accompanying surveillance strategy against the ongoing outbreak (see “To Vaccinate or not to Vaccinate?”).⁴⁸

Trump Administration Response

Members of the Trump Administration have addressed concern over egg prices several times in comments to the media.⁴⁹ During a February 2025 Cabinet meeting, President Trump stated, “But we have to get the prices down—not the inflation down—the prices of eggs and various other things. Eggs are a disaster.”⁵⁰

On February 26, 2025, Secretary of Agriculture Brooke Rollins announced a “plan to lower egg prices.”⁵¹ The plan, described by USDA as its “Five-Pronged Approach to Address Avian Flu,” included the following points:

- “Invest in gold-standard biosecurity measures for all U.S. poultry producers”;
- “Increase relief to aid farmers and accelerate repopulation”;
- “Remove unnecessary regulatory burdens on the chicken and egg industry to further innovation and reduce consumer prices”;
- “Explore pathways toward vaccines, therapeutics, and other strategies for protecting egg laying chickens to reduce instances of depopulation”; and

⁴⁴ World Organisation for Animal Health (WOAH), “Glossary,” in *Terrestrial Animal Health Code* (2024), https://www.woah.org/fileadmin/Home/eng/Health_standards/tahc/current/en_glossaire.htm; see also WOAH, “Article 4.19.6: Selective Killing of Animals and Disposal of Dead Animals and Other Potentially Contaminated Commodities,” in *Terrestrial Animal Health Code* (2024), <https://www.woah.org/en/what-we-do/standards/codes-and-manuals/>.

⁴⁵ USDA, APHIS, *Highly Pathogenic Avian Influenza Response Plan: The Red Book*, May 2017, https://www.aphis.usda.gov/sites/default/files/hpai_response_plan.pdf.

⁴⁶ USDA, APHIS, *The Red Book*, p. 5-47.

⁴⁷ USDA, APHIS, *The Red Book*, p. 4-5.

⁴⁸ Letter from United Egg Producers et al. to Brooke Rollins, Secretary of Agriculture, February 14, 2025, https://www.agri-pulse.com/ext/resources/2025/02/16/H5NX-Vaccines_Letter-to-Secretary-Rollins_Final_2.13.25.pdf.

⁴⁹ White House, “Press Briefing by Press Secretary Karoline Leavitt,” January 29, 2025, <https://www.whitehouse.gov/briefings-statements/2025/01/press-briefing-by-press-secretary-karoline-leavitt/>; CBS News, “Full transcript of ‘Face the Nation with Margaret Brennan,’ Feb. 16, 2025,” February 16, 2025, <https://www.cbsnews.com/news/face-the-nation-full-transcript-02-16-2025/>.

⁵⁰ White House, “Remarks by President Trump Before Cabinet Meeting,” February 26, 2025, <https://www.whitehouse.gov/remarks/2025/02/remarks-by-president-trump-before-cabinet-meeting/>.

⁵¹ Brooke L. Rollins, “Agriculture Secretary Brooke Rollins: My Plan to Lower Egg Prices,” *Wall Street Journal*, February 26, 2025, <https://www.wsj.com/opinion/agriculture-secretary-brooke-rollins-my-plan-to-lower-egg-prices-6be0f881>.

- “Consider temporary import-export options to reduce costs on consumers and evaluate international best practices.”⁵²

The plan announced an additional \$500 million for biosecurity measures, \$400 million in financial relief for affected farmers, and \$100 million for vaccine research. Secretary Rollins reportedly noted that spending for the plan is made possible by “repurposed funds from other programs within USDA” and “serious savings in DOGE [the Department of Government Efficiency].”⁵³

Some of the approaches in the announced plan are established USDA animal health policies and/or programs. For example, the plan supports the 2024 interim final rule amending the criteria that producers must meet to receive indemnity payments in certain cases (see “Biosecurity and Indemnity”). Other approaches in the announced plan are novel strategies for USDA, including expanding the Wildlife Biosecurity Assessment pilot project and implementing a 75% cost share with producers to address biosecurity concerns.

However, in a March 2025 interview, Secretary Rollins reportedly said that USDA would no longer pursue vaccination in poultry or dairy as a strategy to contain the ongoing HPAI outbreak.⁵⁴ She reportedly said that, instead, “the research on [disease remedies] is going to be very important.” Secretary Rollins added, “we have a tremendous amount of work to do before we would even consider [vaccination] as a potential solution and that is at least a year or more away.”

Secretary of Health and Human Services Robert F. Kennedy, Jr., also commented on USDA’s response to the current HPAI outbreak. In a March 2025 interview, he said,

Most of our scientists are against the culling operation. They think that we should be testing therapeutics on those flocks. They should isolate them; you should let the disease go through them and identify the birds that survive which are the birds that probably have a genetic inclination for immunity and those should be the birds that we breed like the wild population.⁵⁵

Secretary Kennedy did not specify the scientists whose opinion he was citing. In response to these comments, the Ranking Member of the House Oversight Committee sent a letter to Secretary Kennedy requesting “a full and complete list of the individuals who recommended that the federal government allow avian flu to ‘run through the flock’ in an effort to build immunity.”⁵⁶ Animal and human disease scientists assert that such a strategy does not take into account the

⁵² USDA, “USDA Invests Up to \$1 Billion to Combat Avian Flu and Reduce Egg Prices,” press release, February 26, 2025, <https://www.usda.gov/about-usda/news/press-releases/2025/02/26/usda-invests-1-billion-combat-avian-flu-and-reduce-egg-prices>.

⁵³ Tyne Morgan, “USDA Secretary Brooke Rollins Provides Timing Update on \$10 Billion in Emergency Relief Payments,” *Farm Journal*, February 27, 2025, <https://www.agweb.com/news/policy/politics/exclusive-usda-secretary-brooke-rollins-provides-timing-update-10-billion-em>.

⁵⁴ Matthew Boyle, “USDA Secretary Brooke Rollins: Vaccines ‘Off the Table’ in Fight for Lower Egg Prices,” *Breitbart*, March 6, 2025, <https://www.breitbart.com/politics/2025/03/06/exclusive-usda-secretary-gives-update-on-egg-prices-all-in-on-chicken-repopulation-and-biosecurity-but-vaccines-for-chickens-off-the-table/>.

⁵⁵ Fox News, “We Will Make Sure Anyone Who Wants a Vaccine Can Get One, Says HHS Secretary,” March 11, 2025, <https://www.foxnews.com/video/6369907937112>.

⁵⁶ Letter from Rep. Gerald E. Connolly et al. to Robert F. Kennedy, Jr., Secretary of Health and Human Services, April 1, 2025, <https://oversightdemocrats.house.gov/sites/evo-subsites/democrats-oversight.house.gov/files/evo-media-document/2025-04-01-gec-krishnamoorthi-et-al-to-jfkjr-re-bird-flu.pdf>.

practicalities of the poultry sector and is more likely to result in a viral mutation, potentially leading to spread in humans.⁵⁷

Issues for Congress

Prior to the announcement of USDA's Five-Pronged Approach to Address Avian Flu, several Members of Congress wrote to Secretary Rollins regarding USDA's response to the HPAI outbreak. For example, a letter signed by 16 Senators stated "a new urgency is required from the USDA to address the evolving situation" and listed several measures supported by the signers, including "an aggressive, forward-looking strategy for vaccination."⁵⁸ A similar letter was signed and sent by 23 Representatives.⁵⁹ Conversely, a letter signed by the four coauthors of the Congressional Chicken Caucus countered, "To be clear, vaccination in any poultry sector—egg layers, turkeys, broilers, or ducks—will jeopardize the entire export market for all U.S. poultry products."⁶⁰ Other Members of Congress wrote to Secretary Rollins individually on the issue.⁶¹

As Congress continues to monitor the ongoing outbreak of HPAI in poultry flocks, issues of potential interest include animal disease prevention and management programs, vaccination, the available supply of shell eggs, international trade, and competition in the poultry sector.

Funding for Response Activities

USDA's key animal disease prevention and management programs include the National Animal Health Laboratory Network, the National Animal Disease Preparedness and Response Program, and the National Animal Vaccine and Veterinary Countermeasures Bank.⁶²

The Agriculture Improvement Act of 2018 (2018 farm bill; P.L. 115-334) provided for the following funding measures:

- Total mandatory funding of \$120 million from FY2019 to FY2022 for all three programs, of which \$20 million was reserved for the National Animal Disease Preparedness and Response Program

⁵⁷ Public comments by Dr. Kay Russo and Dr. Jennifer Nuzzo at American Enterprise Institute, "Highly Infectious and the Price of Eggs: Are There Pathways to a Solution?" YouTube video, March 31, 2025, <https://www.youtube.com/watch?v=cLBGPdwbqZc&t=3928s>.

⁵⁸ Letter from Sen. Joni Ernst et al. to Brooke Rollins, Secretary of Agriculture, February 18, 2025, https://www.ernst.senate.gov/imo/media/doc/hpai_letter.pdf.

⁵⁹ Letter from Rep. Randy Feenstra et al. to Brooke Rollins, Secretary of Agriculture, February 18, 2025, [https://feenstra.house.gov/sites/evo-subsites/feenstra.house.gov/files/evo-media-document/2.18.2025%20-%20Letter%20to%20the%20U.S.%20Department%20of%20Agriculture%20on%20High%20Path%20Avian%20Influenza%20\(HPAI\).pdf](https://feenstra.house.gov/sites/evo-subsites/feenstra.house.gov/files/evo-media-document/2.18.2025%20-%20Letter%20to%20the%20U.S.%20Department%20of%20Agriculture%20on%20High%20Path%20Avian%20Influenza%20(HPAI).pdf).

⁶⁰ Letter from Sen. Roger Wicker et al. to Brooke Rollins, Secretary of Agriculture, February 13, 2025, <https://www.nationalchickencouncil.org/wp-content/uploads/2025/02/Letter-to-USDA-Re-HPAI-Vaccine.pdf>.

⁶¹ Letter from Sen. Martin Heinrich to Brooke Rollins, Secretary of Agriculture, February 7, 2025, https://www.heinrich.senate.gov/imo/media/doc/heinrich_pushes_usda_nominee_to_address_rising_cost_of_eggs_driven_by_avian_flu_outbreak.pdf; Letter from Sen. Kirsten Gillibrand to Brooke Rollins, Secretary of Agriculture, et al., March 6, 2025, <https://www.gillibrand.senate.gov/wp-content/uploads/2025/03/Letter-to-Agencies-re-HPAI-and-Vaccines.pdf>.

⁶² For more information on the 2018 farm bill's animal disease prevention and management programs, see CRS In Focus IF12934, *Farm Bill Primer: Animal Disease Management and Prevention*.

- For FY2023 and for each subsequent fiscal year, \$30 million in mandatory funding for all three of the animal health programs, with not less than \$18 million designated for the National Animal Disease Preparedness and Response Program
- Authorization of discretionary appropriations of an additional \$30 million annually for the National Animal Health Laboratory Network from FY2019 to FY2022 and appropriations of such sums as necessary for the two other programs through FY2023

The National Animal Health Laboratory Network comprises 64 federal, state, and university animal health laboratories located in 42 states. The laboratories, whose mission is to protect U.S. animal health, U.S. public health, and the U.S. food supply, provide animal health diagnostic testing to surveil and detect biological threats. In December 2024, staff in the California state laboratory raised reduced staffing levels and increased demand for services as recurring issues.⁶³ Additionally, the director of a Wisconsin laboratory said in response to the Trump Administration's efforts to downsize the federal workforce, "The agency is still there, but there aren't people there to make it run in most cases that are directly related to animal and public health."⁶⁴

Funding for emergency animal disease response activities is also authorized through CCC. Congress may evaluate USDA's use of CCC for animal disease response and, if appropriate, alter existing authority or direct USDA to use CCC funds for specific purposes.

Legislation introduced in the 119th Congress would increase indemnity payments to producers for losses associated with animal disease outbreaks. The Healthy Poultry Assistance and Indemnification Act of 2025 (S. 574, and its companion bill, H.R. 1376) would expand indemnity payments to include compensation for all poultry producers located in an APHIS-determined control area, which consists of both an infected zone and a buffer zone. Further, the bill would establish a new compensation formula that requires payments to be based on the owner's average income from the five most recent flocks.

The United Egg Producers (UEP), an industry organization representing 90% of egg production in the United States, requested that USDA reform indemnity payment calculations for laying hens and pullets to "stabilize indemnity rates from year to year, use only data from either USDA or land-grant institutions, and cover modestly more of producers' devastating losses."⁶⁵ UEP also requested the establishment of indemnity payments that more accurately reflect the higher costs of production for cage-free, organic, or pasture-raised eggs. USDA publishes an annual indemnity table for animal agricultural commodities based on data from USDA's AMS, Economic Research Service (ERS), and National Agricultural Statistics Service (NASS).⁶⁶ Congress may consider

⁶³ Suhauna Hussain, "With Bird Flu Cases on the Rise, Staff at California Lab Say They Are Overworked and Burned Out," *Los Angeles Times*, December 1, 2024, <https://www.latimes.com/business/story/2024-12-01/lab-workers-conducting-californias-avian-flu-testing-report-mismanagement-overwork-burnout-amid-outbreak-season>.

⁶⁴ Hope Kirwan, "Federal Layoffs Affect State Resources for Bird Flu, Other Animal Health Concerns," *Wisconsin Public Radio*, April 7, 2025, <https://www.wpr.org/news/federal-layoffs-wisconsin-resources-avian-bird-flu-animal-health-concerns-usda-datcp-fda>.

⁶⁵ U.S. Congress, Senate Committee on Agriculture, Nutrition, and Forestry, *Perspectives from the Field: Farmer and Rancher Views on the Agricultural Economy, Part 2*, written testimony of Tony Wesner, 119th Cong., 1st sess., February 26, 2025, https://www.agriculture.senate.gov/imo/media/doc/6855a5d1-fbda-1496-4d0d-3526a953ebd9/Testimony_Wesner_02.26.2025.pdf.

⁶⁶ USDA, APHIS, *Veterinary Services Indemnity Table for 2024*, February 27, 2025, <https://www.aphis.usda.gov/sites/default/files/vs-indemnity-table.pdf>.

evaluating the current methods used to calculate indemnity payment rates and, if needed, direct USDA to amend its methodology.

To Vaccinate or not to Vaccinate?

Several Members of Congress and stakeholder organizations have written in support of vaccine development.⁶⁷ Developing and implementing a vaccination strategy to control HPAI raises at least three issues: vaccine research and development, the logistics of vaccine administration, and the impact of vaccination on international trade.

Vaccine Research and Development

Avian influenza viruses are susceptible to genetic mutations, resulting in new strains that may be vaccine resistant.⁶⁸ While U.S.-licensed vaccines do exist for certain HPAI virus subtypes, none match the strain associated with the current poultry outbreak. According to the American Veterinary Medical Association (AVMA), USDA estimates that the typical time frame for developing and approving any vaccine is two to three years.⁶⁹ In certain emergency cases, manufacturers may expedite development. For example, on February 12, 2025, a vaccine manufacturer announced that it had received a conditional license for a vaccine targeting the H5N2 strain of HPAI in chickens, which is different from the H5N1 strain of the ongoing outbreak.⁷⁰ This conditional license came shortly after USDA announced that it would consolidate “several steps in the vaccine review process to allow them to occur in parallel.”⁷¹

Congress may choose to monitor the USDA and Department of Health and Human Services (HHS) interagency team implementing the federal government’s HPAI research priorities and/or direct certain vaccination research objectives.⁷² For example, it may be possible to develop a diagnostic capability that differentiates between infected and vaccinated animals (known as the “Differentiating Infected from Vaccinated Animals,” or DIVA, strategy) for movement between states and in international trade. A DIVA strategy could be used to prove the “disease-free” status of immunized flocks.⁷³ A bill introduced in the 119th Congress (H.R. 2868) would add HPAI as a high-priority research and extension area under which the Secretary of Agriculture may make

⁶⁷ Matthew Boyle, “USDA Secretary Brooke Rollins: Vaccines ‘Off the Table’ in Fight for Lower Egg Prices,” *Breitbart*, March 6, 2025, <https://www.breitbart.com/politics/2025/03/06/exclusive-usda-secretary-gives-update-on-egg-prices-all-in-on-chicken-repopulation-and-biosecurity-but-vaccines-for-chickens-off-the-table/>; see also Donnelle Eller, “As Bird Flu Continues to Drive Egg Prices Higher, Lawmakers Eye Vaccination,” *Des Moines Register*, March 3, 2025, <https://www.desmoinesregister.com/story/money/agriculture/2025/03/03/usda-bird-flu-vaccines-egg-prices/79425868007/>.

⁶⁸ CDC, “How Flu Viruses Can Change: ‘Drift’ and ‘Shift,’” September 17, 2024, <https://www.cdc.gov/flu/php/viruses/change.html>.

⁶⁹ R. Scott Nolen, “USDA Starts Highly Pathogenic Avian Influenza Vaccine Trials,” *American Veterinary Medical Association*, May 1, 2023, <https://www.avma.org/news/usda-starts-highly-pathogenic-avian-influenza-vaccine-trials>.

⁷⁰ Zoetis, “Zoetis Receives Conditional License from USDA for Avian Influenza Vaccine, H5N2 Subtype, Killed Virus, for Chickens,” February 14, 2025, <https://news.zoetis.com/press-releases/press-release-details/2025/Zoetis-Receives-Conditional-License-from-USDA-for-Avian-Influenza-Vaccine-H5N2-Subtype-Killed-Virus/default.aspx>.

⁷¹ USDA, APHIS, “U.S. Department of Agriculture Announces 15 Additional States Onboard with National Milk Testing Strategy for H5N1, Shares Update on Vaccination Efforts,” January 8, 2025, <https://www.usda.gov/about-usda/news/press-releases/2025/01/08/us-department-agriculture-announces-15-additional-states-onboard-national-milk-testing-strategy-h5n1>.

⁷² USDA, Agricultural Research Service, “U.S. Highly Pathogenic Avian Influenza (H5N1) Research Priorities: October 2024,” October 4, 2024, <https://www.ars.usda.gov/research/us-highly-pathogenic-avian-influenza-h5n1-research-priorities/>.

⁷³ WOA, “Self-Declared Disease Status,” <https://www.woah.org/en/what-we-offer/self-declared-disease-status/>.

competitive grants available to land-grant colleges and universities for the purposes of furthering the efficacy of vaccines for poultry and enhancing biosecurity procedures for producers.

Logistics of Vaccine Administration

Most livestock vaccines are administered by subcutaneous injection. For poultry, modern production practices can make this form of vaccine delivery challenging. Restraining individual birds is labor intensive and can cause stress in the animal that may affect egg production or growth rate.⁷⁴ Vaccines may also require a booster injection, which would require birds to be restrained a second time, causing additional stress and potential production loss. Further, a typical layer or broiler house may contain 50,000 to 350,000 laying hens or 36,000 to 52,000 broilers, which are managed as one flock.⁷⁵ The time, labor, and expense of administering a vaccine injection to each bird in a flock are costly and likely not feasible for most producers. Vaccines effective against HPAI that can be administered to an entire flock at one time, such as through the feed or drinking water supply, are not available.

Vaccination Impact on International Trade

Vaccination may greatly reduce, but not eliminate, HPAI infection in birds. To the extent that vaccination improves the health outcomes of an infected bird, a vaccinated bird infected with the HPAI virus might still appear healthy.⁷⁶ In accordance with WOAHP international standards, the use of vaccination does not affect a country's HPAI-free status if surveillance supports the absence of infection. However, WOAHP international standards are voluntary guidelines. Individual trading partners may decide not to accept any vaccinated poultry products because of the possibility of viral shedding in healthy-looking birds. WOAHP has called these actions "unjustified trade restrictions" that can "have a huge impact."⁷⁷

The United States previously restricted trade with countries that implemented an HPAI vaccination strategy. For example, in September 2023, USDA announced that it was restricting the importation of poultry from France as a result of France's decision to vaccinate commercial meat ducks against HPAI.⁷⁸ Then, in January 2025, USDA said it was easing trade restrictions on select products after evaluating "France's HPAI vaccination plan and regulatory oversight, their ability to ensure only target birds are vaccinated, the traceability of their poultry commodities, and their post-vaccination surveillance methods."⁷⁹

⁷⁴ Søren Saxmose Nielsen et al., "Vaccination of Poultry Against Highly Pathogenic Avian Influenza – Part 1. Available Vaccines and Vaccination Strategies," *European Food Safety Authority Journal*, vol. 21, no. 10 (2023), e08271, <https://doi.org/10.2903/j.efsa.2023.8271>.

⁷⁵ USDA, APHIS, "US Poultry Industry Manual - Laying Hen Numbers and Location," January 26, 2023, <https://www.thepoultrysite.com/articles/laying-hen-numbers-and-location>; Dennis Brothers, "New Farmer's Guide to the Commercial Broiler Industry: Poultry Husbandry & Biosecurity Basics," October 20, 2022, <https://www.aces.edu/blog/topics/farm-management/new-farmers-guide-to-the-commercial-broiler-industry/>.

⁷⁶ Timm Harder et al., "Epidemiology-Driven Approaches to Surveillance in HPAI-Vaccinated Poultry Flocks Aiming to Demonstrate Freedom from Circulating HPAIV," *Biologicals*, vol. 83 (2023), 101694, <https://doi.org/10.1016/j.biologicals.2023.101694>.

⁷⁷ WOAHP, "Avian Influenza Vaccination: Why It Should not Be a Barrier to Safe Trade," December 28, 2023, <https://www.woah.org/en/avian-influenza-vaccination-why-it-should-not-be-a-barrier-to-safe-trade/>.

⁷⁸ USDA, APHIS, "USDA Protects U.S. Poultry with Restrictions on Poultry and Poultry Products from France and the European Union," September 29, 2023, <https://www.aphis.usda.gov/news/agency-announcements/usda-protects-us-poultry-restrictions-poultry-poultry-products-france>.

⁷⁹ USDA, APHIS, "USDA Reduces HPAI Restrictions on Poultry from France and the European Union," January 16, (continued...)

The National Chicken Council (NCC), the largest organization representing broiler producers in the United States, opposes vaccination as a strategy to combat HPAI.⁸⁰ NCC states “the industry least affected by HPAI [has] the most to lose with a vaccination strategy” and that they “will continue to oppose vaccination for HPAI in any species” until there are “written assurances and trade protections in place with our trading partners.”⁸¹ NCC contends that what is at stake is that “the U.S. broiler industry is the second largest exporter of chicken in the world ... valued at more than \$5 billion annually.” However, the United Egg Producers and the National Turkey Federation support the development of vaccines that are “effective against current and future strains of [HPAI] and economically feasible for farmers and operators.”⁸² They, along with dairy industry stakeholders, wrote to Secretary Rollins urging USDA to “remain dedicated to engaging with our international trading partners to ensure our trade policies reflect the new realities of a world that is constantly combating [HPAI].”⁸³

In the context of considering implementation of an HPAI vaccination strategy, Congress may consider directing the U.S. Trade Representative to preemptively negotiate agreements with major U.S. trading partners to ensure continuity of trade. The Avian Flu Vaccination Strategy Act (S. 908), introduced in the 119th Congress, would require the Secretary of Agriculture, in consultation with the U.S. Trade Representative, to develop and finalize a vaccination strategy for poultry.⁸⁴ Farm bill legislation in the 118th Congress (S. 5335, H.R. 8467) included portions of the Safe American Food Exports Act of 2023 (SAFE Act; S. 901, H.R. 3748). These provisions would have allowed USDA to preemptively negotiate regional export ban agreements for known animal disease threats that apply only to areas affected by animal disease outbreaks. This process, in which countries mutually agree to recognize the disease-free status of regions or zones within a country to enable the continuation of exports from areas not affected by an outbreak, is known as *regionalization*. WOAHP has established trade protocols for member states to follow when there are animal disease outbreaks.⁸⁵ According to WOAHP, in some cases, total export bans are not recommended or needed. Some countries, such as Argentina and Thailand, maintain import bans on all U.S. poultry products because of the presence of HPAI in the United States.⁸⁶ The provision in S. 5335 differed slightly from but retained a similar effect as the provision in H.R. 8467.

Increase Domestic Egg Supply

Increasing the domestic supply of shell eggs might eventually lower retail egg prices. One option to increase the supply of shell eggs would be to allow surplus eggs used to produce broiler chickens (“hatching eggs”) to be sold for use in processed egg-based products, which, in turn, would allow eggs currently used in processed egg-based products to be retailed. NCC petitioned

2025, <https://www.aphis.usda.gov/news/agency-announcements/usda-reduces-hpai-restrictions-poultry-france-european-union>.

⁸⁰ National Chicken Council (NCC), “NCC Reiterates Position on HPAI Vaccine,” February 21, 2025, <https://www.nccwashingtonreport.com/2025/02/21/ncc-reiterates-position-on-hpai-vaccine/>.

⁸¹ NCC, “NCC Reiterates Position on HPAI Vaccine.”

⁸² Letter from United Egg Producers et al. to Brooke Rollins, Secretary of Agriculture, February 14, 2025, https://www.agri-pulse.com/ext/resources/2025/02/16/H5NX-Vaccines_Letter-to-Secretary-Rollins_Final_2.13.25.pdf.

⁸³ Letter from United Egg Producers et al. to Brooke Rollins, Secretary of Agriculture, February 14, 2025.

⁸⁴ Sen. Mike Rounds, “Rounds Introduces Legislation to Help Combat Avian Influenza Outbreak,” press release, March 5, 2025, <https://www.rounds.senate.gov/newsroom/press-releases/rounds-introduces-legislation-to-help-combat-avian-influenza-outbreak>.

⁸⁵ WOAHP, *Terrestrial Animal Health Code* (2024), <https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/>.

⁸⁶ Office of the U.S. Trade Representative, *2024 National Trade Estimate Report on Foreign Trade Barriers*, March 1, 2024, https://ustr.gov/sites/default/files/2024%20NTE%20Report_1.pdf.

the Food and Drug Administration (FDA) in 2023, and again in 2025, to allow surplus hatching eggs produced by the broiler industry to be sold to processors for use in egg-based products.⁸⁷ NCC claims that this action would release almost 400 million eggs into the breaking-egg supply each year. *Breaking eggs* are used in processed foods, such as salad dressings, bread, cake mix, pasta, pancake mix, and mayonnaise. Surplus hatching eggs were used as “breakers” until 2009, when the FDA published a final rule requiring all shell egg producers to implement certain measures to reduce *Salmonella* contamination.⁸⁸ NCC argues that the surplus eggs could be safely sent to egg processors—even if producers have not adhered to anti-*Salmonella* regulations—because processed egg products require pasteurization, a treatment used to eliminate harmful pathogens. If Congress deemed this action desirable, it could direct FDA to grant this petition on a temporary or permanent basis. Such action might affect the shell egg market structure. The Lowering Egg Prices Act of 2025 (H.R. 2222) would require the Secretary of Health and Human Services to consult with the Secretary of Agriculture to issue a rule allowing the sale of surplus broiler hatching eggs.

Some stakeholders have suggested that imported eggs may supplement the domestic egg supply. The perishability and fragility of shell eggs, however, make them challenging to transport internationally. Further, countries may not have a surplus supply ready to ship, in contrast to storable commodities such as grain. Further, the United States imposes food safety standards—such as requirements to wash shell eggs and store them in specific temperatures throughout production—that other countries may not adhere to. Shell egg imports are regulated by FDA, and each individual non-U.S. farm that produces eggs for export must register with the agency. FDA states that there are over 105,000 total registered international food facilities, including those producing shell eggs.⁸⁹ In 2024, only Turkey exported table shell eggs to the United States.⁹⁰ In 2025, Mexico began exporting shell eggs to the United States.⁹¹ USDA’s Food Safety and Inspection Service (FSIS) approved three countries to export egg products to the United States: Canada, Lithuania, and the Netherlands.⁹² The Egg Producers Central Union in Turkey said that it planned to export 420 million eggs to the United States in 2025.⁹³ Poland’s National Chamber of Poultry and Feed Producers and the Indonesia Poultry Breeders’ Association, among other international trade groups, said they are fielding inquiries from the United States about eggs for export.⁹⁴ Congress may further explore the recruitment of additional trade partners through USDA and/or the U.S. Trade Representative.

⁸⁷ NCC, “National Chicken Council Offers Measure to Help Alleviate Egg Shortage in Wake of Bird Flu,” February 20, 2025, <https://www.nationalchickencouncil.org/national-chicken-council-offers-measure-to-help-alleviate-egg-shortage-in-wake-of-bird-flu/>.

⁸⁸ Department of Health and Human Services, Food and Drug Administration (FDA), “Prevention of Salmonella Enteritidis in Shell Eggs During Production, Storage, and Transportation,” 74 *Federal Register* 33030, July 9, 2009, <https://www.federalregister.gov/documents/2009/07/09/E9-16119/prevention-of-salmonella-enteritidis-in-shell-eggs-during-production-storage-and-transportation>.

⁸⁹ FDA, “Foreign Registered Facilities by Country as of March 1, 2025,” <https://www.fda.gov/media/185661/download?attachment>.

⁹⁰ Trade data from USDA Global Agricultural Trade System (GATS) and Foreign Agricultural Trade of the United States (FATUS) definition.

⁹¹ Trade data from USDA GATS and FATUS definition.

⁹² USDA, Food Safety and Inspection Service, “Sourcing Egg Products and Shell Eggs from Foreign Countries,” March 24, 2025, <https://www.fsis.usda.gov/inspection/import-export/import-guidance/sourcing-egg-products-and-shell-eggs-foreign-countries>.

⁹³ Vanessa Yurkevich, “To Help Solve Its Egg Price Crisis, America Is Turning to Turkey (the Country),” *CNN*, February 25, 2025, <https://www.cnn.com/2025/02/24/business/egg-prices-turkey-vaccine/index.html>.

⁹⁴ Agnieszka de Sousa et al., “America Finding Out It’s Very Difficult to Import Eggs,” *Bloomberg News*, March 7, (continued...)

On February 1, 2025, President Trump invoked the International Emergency Economic Powers Act (IEEPA; 50 U.S.C. §§1701 et seq.) to impose tariffs on imports from the People's Republic of China, Canada, and Mexico. On April 2, 2025, President Trump invoked IEEPA to impose “reciprocal tariffs” on imports from almost all U.S. trading partners.⁹⁵ These reciprocal tariffs would apply to imports of shell eggs and egg products. One bill in the 119th Congress (H.R. 407) would amend IEEPA to include an express prohibition on using the statute “to impose duties, tariff-rate quotas, or other quotas on articles entering the United States.”

Interstate Commerce of Animal Products

USDA and FDA share regulatory authority over egg safety in the United States; however, states may enact their own requirements on the intrastate production and/or sale of animal products beyond federal food safety requirements.⁹⁶

One such example is “cage-free” housing mandates, which some states have enacted for the sale of eggs intrastate.⁹⁷ In a 2018 survey, 76% of U.S. consumers said they are concerned about the welfare of animals that are raised for consumption.⁹⁸ Some consumers perceive cage-free layer housing as a means of achieving positive animal welfare outcomes. In the past decade, major U.S. companies like Walmart and McDonald's reacted to these changing consumer preferences by announcing commitments to source eggs exclusively from suppliers that maintain cage-free layer housing.⁹⁹ In turn, egg producers expanded production of cage-free eggs.¹⁰⁰ UEP estimates that nearly 40% of laying hens in the United States are now raised in cage-free housing.¹⁰¹

Some states took action to enact animal welfare requirements. A ballot initiative passed by California voters in 2018, known as Proposition 12, established minimum requirements for the confinement of egg-laying hens, veal calves, and breeding pigs. Proposition 12 also prohibited businesses in California from knowingly selling eggs (including liquid eggs) or uncooked pork or veal that comes from animals housed in ways that do not meet the measure's requirements.¹⁰² This requirement extended to products from animals raised in states other than California.

2025, <https://www.bloomberg.com/news/articles/2025-03-07/soaring-us-egg-prices-officials-search-for-global-suppliers-to-ease-shortage>.

⁹⁵ Executive Order 14257 of April 2, 2025, “Regulating Imports with a Reciprocal Tariff to Rectify Trade Practices That Contribute to Large and Persistent Annual United States Goods Trade Deficits,” 90 *Federal Register* 15041, April 7, 2025, <https://www.federalregister.gov/documents/2025/04/07/2025-06063/regulating-imports-with-a-reciprocal-tariff-to-rectify-trade-practices-that-contribute-to-large-and>.

⁹⁶ National Egg Regulatory Officials, “Egg State Laws & Regulations,” 2025, <https://nerous.org/state-laws-regulations>.

⁹⁷ The United Egg Producers defines *cage-free* as a housing system that allows hens “to roam vertically and horizontally in indoor houses.” United Egg Producers, “Egg Terms,” accessed April 16, 2025, <https://unitedegg.com/egg-terms/#:~:text=C-,Cage%2Dfree%20eggs,-Cage%2Dfree%20eggs>.

⁹⁸ Letter from Bob Meadow and Meryl O'Brien, Lake Research Partners, to Interested Parties, February 1, 2019, https://www.aspc.org/sites/default/files/aspc-2018_animal_welfare_labelling_and_consumer_concern_survey.pdf.

⁹⁹ Katie Lobosco, “Walmart Will Switch to Selling Cage-Free Eggs Only,” *CNN Business*, April 5, 2016, <https://money.cnn.com/2016/04/05/news/companies/walmart-cage-free-eggs/>; “McDonald's to Fully Transition to Cage-Free Eggs for All Restaurants in the U.S. and Canada,” press release, September 9, 2015, https://corporate.mcdonalds.com/corpmcd/our-stories/article/cage_free_eggs.html.

¹⁰⁰ Kristin Broughton, “Cal-Maine Steps Up Investment to Meet Demand for Cage-Free Eggs,” *Wall Street Journal*, April 4, 2022, <https://www.wsj.com/articles/cal-maine-steps-up-investment-to-meet-demand-for-cage-free-eggs-11649107116>.

¹⁰¹ United Egg Producers, “U.S. Egg Production and Hen Population,” accessed April 16, 2025, <https://unitedegg.com/facts-stats/>.

¹⁰² California Secretary of State, “Official Voter Information Guide: Proposition 12,” November 2018, <https://vigarchive.sos.ca.gov/2018/general/propositions/12/analysis.htm>.

Implementation of these requirements was delayed because of court filings.¹⁰³ In May 2023, the Supreme Court of the United States upheld California’s law, and it was fully implemented on January 1, 2024.¹⁰⁴

Since then, nine additional states have implemented animal housing mandates: Arizona, Colorado, Massachusetts, Michigan, Nevada, Oregon, Rhode Island, Utah, and Washington.¹⁰⁵ Some analysts attribute the tight supply of eggs in these states to multiple factors beyond HPAI, including cage-free housing mandates.¹⁰⁶ The American Egg Board, a farmer-funded organization that promotes U.S. eggs and egg products, stated,

Currently, supply disruption—and consequently, pricing volatility—may be more pronounced with certain retailers and in states that exclusively sell cage-free eggs due to impacts from HPAI on cage-free farms, which were disproportionately affected late last year. Though more than one-third of all U.S. egg laying hens are cage-free, more than 50% of the egg-laying hens impacted by HPAI late last year were cage-free birds. It’s important to know that this has nothing to do with the cage-free production environment; bird flu does not discriminate by the type of housing or the size of the farm. The disease is carried by wild birds.¹⁰⁷

Relatedly, the Five-Pronged Approach to Address Avian Flu states that “USDA will educate consumers and Congress on the need to fix the problem of geographical price differences for eggs, such as in California, where recent regulatory burdens, in addition to avian flu, have resulted in the price of eggs being 60% higher than [in] other regions of the country.”¹⁰⁸

A bill introduced in the 119th Congress, the Food Security and Farm Protection Act (S. 1326), would prohibit state and local jurisdictions from imposing certain standards or conditions on “the preharvest production of any agricultural products sold or offered for sale in interstate commerce.”¹⁰⁹ It would also allow for a private right of action to challenge state or local regulations relating to agricultural goods sold in interstate commerce.¹¹⁰

¹⁰³ Daniel A. Sumner, “Special Issue: The Implementation of California’s Proposition 12,” *Agricultural and Resource Economics Update*, vol. 27, no. 3 (2024), p. 1, <https://s.giannini.ucop.edu/uploads/pub/2024/08/12/v27n3.pdf>.

¹⁰⁴ National Pork Producers Council v. Ross, 598 U.S. ___ (2023), https://www.supremecourt.gov/opinions/22pdf/21-468_5if6.pdf.

¹⁰⁵ Meredith Dawson, “US Cage-Free Housing State Law Update,” *WATTPoultry*, April 28, 2022, <https://www.wattagnet.com/egg/hen-housing-systems/article/15535663/us-cage-free-law-update>.

¹⁰⁶ Brian Earnest, “Surging Egg Prices Are Being Driven by More than Bird Flu,” *CoBank*, February 6, 2025, <https://www.cobank.com/web/cobank/knowledge-exchange/animal-protein/surging-egg-prices-are-being-driven-by-more-than-bird-flu>.

¹⁰⁷ See statement of Emily Metz, American Egg Board, in Meredith Dawson, “Does HPAI Discriminate Between Cage-Free, Conventional?” *WATTPoultry*, January 31, 2025, <https://www.wattagnet.com/blogs/hens-and-trends/blog/15736332/does-hpai-discriminate-between-cagefree-conventional>.

¹⁰⁸ USDA, “USDA Invests Up to \$1 Billion to Combat Avian Flu and Reduce Egg Prices,” press release, February 26, 2025, <https://www.usda.gov/about-usda/news/press-releases/2025/02/26/usda-invests-1-billion-combat-avian-flu-and-reduce-egg-prices>.

¹⁰⁹ *Agricultural products* are defined in 7 U.S.C. §1626 as “agricultural, horticultural, viticultural, and dairy products, livestock and poultry, bees, forest products, fish and shellfish, and any products thereof, including processed and manufactured products, and any and all products raised or produced on farms and any processed or manufactured product thereof.”

¹¹⁰ Sen. Chuck Grassley, “Grassley, Ernst, Marshall Introduce Legislation to Preserve Interstate Ag Trade, Halt California’s Damaging Proposition 12,” press release, April 8, 2025, <https://www.grassley.senate.gov/news/news-releases/grassley-ernst-marshall-introduce-legislation-to-preserve-interstate-ag-trade-halt-californias-damaging-proposition-12>.

In 2025, Nevada passed a law allowing the state to temporarily suspend its cage-free housing mandate during periods in which supplies may be negatively impacted.¹¹¹ Under the law, the suspension must not exceed 120 days, and no more than two temporary suspensions may be ordered in one calendar year. The Nevada Department of Agriculture issued an order in February 2025 temporarily suspending the requirement that eggs for retail sale be sourced from hens in a cage-free housing system.¹¹² One agricultural economist noted that the action “could ease egg prices in Nevada very slightly.”¹¹³ Federal legislation similar to the Food Security and Farm Protection Act might help mitigate some of these effects, but it is not clear by how much given that these state laws pertain to intrastate markets.

Competition in the Egg Sector

The rise in retail egg prices from November 2024 to March 2025, including the higher rate of increase than in the 2014-2015 outbreak, raised questions among policymakers about competition and pricing in the egg sector. Some Members of Congress stated in a letter to President Trump that “[e]gg producers and grocery stores may leverage the current avian flu outbreak as an opportunity to further constrain supply or hike up egg prices to increase profits.”¹¹⁴ Similarly, a letter sent by 33 Members of Congress to leadership of Cal-Maine Foods, the largest egg producer in the United States, requested “an explanation as to why Americans ... are paying record prices for eggs while Cal-Maine Foods reported that its gross profits jumped from \$45.433 million to 186.436 million from Q1 to Q4 of last year, a 310 percent increase.”¹¹⁵

In 2023, a federal jury found that several major egg producers conspired to limit supply in an effort to raise consumer prices from 2004 to 2008.¹¹⁶ In 2025, the Department of Justice’s (DOJ’s) Antitrust Division is reportedly investigating the causes behind nationwide increases in egg prices.¹¹⁷

Congress may wish to require the examination of consolidation and/or anticompetitive behavior in the agriculture and food industries. For example, USDA has the authority, under the Packers and Stockyards Act of 1921 (7 U.S.C. §§181 et seq.), to monitor, investigate, and regulate livestock and poultry markets to promote fair competition and to guard against deceptive and

¹¹¹ Nevada Legislature, AB171, reg. sess. 83rd sess. (2025), <https://www.leg.state.nv.us/App/NELIS/REL/83rd2025/Bill/12124/Text>.

¹¹² Nevada Department of Agriculture, “Nevada Issues Temporary Order Allowing the Sale of Non-Cage-Free Eggs,” February 19, 2025, https://agri.nv.gov/News/2025/Nevada_issues_temporary_order_allowing_the_sale_of_non-cage-free_eggs/.

¹¹³ DTN Progressive Farmer, “Can Suspending Cage-Free Egg Law Solve Price Problem?” February 14, 2025, <https://www.dtnpf.com/agriculture/web/ag/news/world-policy/article/2025/02/14/can-suspending-cage-free-egg-law>.

¹¹⁴ Letter from Sen. Elizabeth Warren et al. to President Donald J. Trump, January 26, 2025, https://www.warren.senate.gov/imo/media/doc/letter_to_trump_re_egg_prices.pdf.

¹¹⁵ Letter from Rep. Rosa L. DeLauro et al. to Sherman Miller, president and chief executive officer, Cal-Maine Foods, April 14, 2025, <https://delauro.house.gov/sites/evo-subsites/delauro.house.gov/files/evo-media-document/cal-maine-egg-prices-letter-04-14-2025%29.pdf>.

¹¹⁶ Isabella Volmert, “U.S. Egg Producers Conspired to Fix Prices from 2004 to 2008, a Federal Jury Ruled,” Associated Press, November 22, 2023, <https://apnews.com/article/egg-producers-price-gouging-lawsuit-conspiracy-8cd455003a3a40bab74d0f046d0f2c9d>.

¹¹⁷ Marcia Brown, “DOJ Opens Investigation into Egg Companies for Price-Fixing,” *Politico*, March 7, 2025, <https://www.politico.com/news/2025/03/07/doj-investigation-egg-price-fixing-bird-flu-00218785>.

fraudulent trade practices. In 2023, some stakeholders called for the Federal Trade Commission to investigate the egg industry and prosecute any antitrust law violations.¹¹⁸

Legislation introduced in the 119th Congress (S. 1312, H.R. 1380) would establish an Office of the Special Investigator for Competition Matters within USDA. The head of this office, the Special Investigator for Competition Matters, would (1) be responsible for investigating and prosecuting violations of the Packers and Stockyards Act, (2) serve as a liaison with DOJ, (3) act in consultation with the Department of Homeland Security, (4) maintain a staff of attorneys and other legal professionals, and (5) possess the authority to subpoena and pursue any civil or administrative action.

Conclusion

Animal disease outbreaks can cause productivity losses, are difficult and costly to control, and can disrupt domestic supply and international trade in animals and animal products. The ongoing HPAI outbreak in the United States has prompted increased public attention on animal disease prevention, management, and response protocols because of the rising cost of some consumer goods, such as shell eggs. As the HPAI outbreak continues to affect domestic poultry flocks, Congress may consider whether the current federal efforts efficiently, effectively, and appropriately prevent, manage, and/or mitigate the risk and impact of high-consequence animal diseases.

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¹¹⁸ Letter from Basel Musharbash, Legal Counsel, Farm Action, to Lina Khan, Chair, U.S. Federal Trade Commission, January 19, 2023, <https://farmaction.us/wp-content/uploads/2023/01/Farm-Action-Letter-to-FTC-Chair-Lina-Khan.pdf>.