Highly Pathogenic Avian Influenza (HPAI) and Trade Considerations

Samantha Padilla, with contributions from Matthew MacLachlan

USDA Economic Research Service
Research Agricultural Economist

Agricultural Outlook Forum
February 24, 2023

The findings and conclusions in this presentation are those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy.
Overview

1. Distribution of HPAI cases (geographic and by operation type)
2. Changes in exports relative to 2021:
   a. For poultry meat and egg products
   b. To major importers of U.S. poultry meat and products
3. 2015 and 2022 trade restrictions
4. Type of restrictions
5. Egg and poultry prices
6. Comparison to 2015 outbreak
HPAI cases concentrated in the Midwest, with 27 percent of cases in Iowa and 11 percent in Nebraska

- As of February 24, 23 58.49 million birds affected across 47 States.
- Iowa has had the most birds affected at 15.9 million, followed by Nebraska with 6.78 million.

Source: APHIS Confirmed Detections of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks 2022/2023
76% of total birds affected have been in table egg operations

- HPAI infections among table egg layers slowed in May 2022 and increased from Sept 2022–Jan 2023.
U.S. egg and egg product exports are lower compared to 2021

- U.S. shell egg exports were 47% lower in 2022 than in 2021, a decline of 120 million dozen eggs.

- Egg product exports in 2022 were also lower than in 2021→33% decline on a shell egg equivalent basis.

Source: ERS Livestock and Meat International Trade Data
U.S. turkey and broiler meat exports had a mixed response to HPAI

- The U.S. exported 1.05 percent less broiler meat in 2022 than in 2021.
- Turkey exports in 2022 were 25.6 percent lower than in 2021.

Source: ERS Livestock and Meat International Trade Data
U.S. turkey and egg total use in 2022 declined relative to 2021

<table>
<thead>
<tr>
<th></th>
<th>Total supply (Beginning stocks + production + imports)</th>
<th>Total use (Total supply - exports - ending stocks)</th>
<th>Difference in total use (2022 vs. 2021)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2022</td>
<td>2021</td>
</tr>
<tr>
<td>Broiler (million pounds)</td>
<td>45,403</td>
<td>46,588</td>
<td>37,343</td>
</tr>
<tr>
<td>Turkey (million pounds)</td>
<td>5,804</td>
<td>5,473</td>
<td>5,090</td>
</tr>
<tr>
<td>Eggs (million dozen)</td>
<td>9,280.5</td>
<td>9,054.1</td>
<td>7,765.3</td>
</tr>
</tbody>
</table>

Source: February 2023 WASDE Report
International response to HPAI: Export restrictions on U.S. poultry

- During the 2015 HPAI outbreak, more trading partners relied on national- and State-level restrictions:
  - At the height of the 2015 outbreak, 18 countries had national-level restrictions, 26 had state-level restrictions, and only 11 had restrictions at county-level.
  - As a result of negotiations, between the 2015 and 2022 outbreaks more countries adopted policies of only banning imports for localized “zones” or counties.
Example: localized restriction

- Example of two localized restrictions Canada has in New Castle County, DE.

- Each circle represents a 10 km radius restricted zone.

Source: FSIS Import & Export Library
Poultry slaughter plants in the U.S. and counties that have had a restriction imposed by a trading partner in 2022

- Counties with restrictions imposed by a trading partner tend to have confirmed HPAI cases

Sources: FSIS Import & Export Library and FSIS Meat, Poultry and Egg Product Inspection Directory
2022 export restrictions on U.S. poultry meat and products

• Start/restart dates among importing countries tend to be very similar, while end dates tend to vary much more by country.

• Some countries have exempted heat-treated poultry and cooked poultry products from restrictions.

• Many countries have separate restrictions for egg and egg products.

Source: FSIS Import & Export Library
Trade restrictions on U.S. poultry meat and product exports as of February 5, 2023

- More than half of U.S. trading partners (over 70 countries) have restrictions on poultry, of which the majority are county-level.

- No top 20 trading partner has a national-level restriction on U.S. poultry

Source: FSIS Import & Export Library

Current as of Feb 5, 2023
Percentage of total U.S. poultry meat and product exports increased for the majority of top trading partners

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>State</td>
<td>County/State</td>
<td>Yes</td>
<td>23.0</td>
<td>20.0</td>
<td>-3.02</td>
</tr>
<tr>
<td>China</td>
<td>National</td>
<td>State</td>
<td>Yes</td>
<td>11.9</td>
<td>15.6</td>
<td>3.73</td>
</tr>
<tr>
<td>Cuba</td>
<td>State</td>
<td>County/State</td>
<td>No</td>
<td>8.1</td>
<td>7.0</td>
<td>-1.04</td>
</tr>
<tr>
<td>Taiwan</td>
<td>State</td>
<td>State</td>
<td>No</td>
<td>4.3</td>
<td>6.0</td>
<td>1.71</td>
</tr>
<tr>
<td>Canada</td>
<td>County (Zone)</td>
<td>County (Zone)</td>
<td>Yes</td>
<td>4.1</td>
<td>4.3</td>
<td>0.79</td>
</tr>
<tr>
<td>Philippines</td>
<td>State</td>
<td>State</td>
<td>Yes</td>
<td>4.0</td>
<td>4.8</td>
<td>0.85</td>
</tr>
<tr>
<td>Angola</td>
<td>None</td>
<td>None</td>
<td>No</td>
<td>3.7</td>
<td>4.5</td>
<td>0.20</td>
</tr>
<tr>
<td>Guatemala</td>
<td>County/State</td>
<td>County</td>
<td>Yes</td>
<td>3.7</td>
<td>3.3</td>
<td>-0.30</td>
</tr>
<tr>
<td>Vietnam</td>
<td>State</td>
<td>County</td>
<td>No</td>
<td>2.6</td>
<td>3.0</td>
<td>0.44</td>
</tr>
</tbody>
</table>

*Note: Poultry meat and product is an aggregation of the Foreign Agricultural Trade of the United States (FATUS) product sub-categories “poultry meat” and “poultry, misc”, which include chicken paws/feet.

Source: FAS GATS & FSIS Import & Export Library
U.S. wholesale poultry prices increased in 2022

- The Producer Price Index for U.S. processed poultry increased by 17.6 percent in 2022.
- Recent declines in both month-to-month and year-over-year.
- According to USDA, ERS Food Price Outlook expects declines in U.S. wholesale prices in 2023 compared to 2022.

U.S. wholesale egg prices increased in 2022, impacted by HPAI

- BLS measures of wholesale price changes indicate rapid increases in egg prices.
- Prices have increased more rapidly than in the 2014–15 HPAI outbreak.
- Year-over-year increases remain high through January 2023.
- Similar pattern but smaller increases at the retail level—eggs CPI increased by 32.2% in 2022.

Changes in exports of poultry and eggs (relative to the 5-year average) were different in 2022 than in 2015.
Takeaway

• Bird losses are higher for the 2022 outbreak and more geographically spread compared to 2015.

• Restrictions on U.S. poultry meat and products exports tend to be more localized, and many include exemptions on heat-treated poultry.

• Lower supplies of eggs and turkeys have contributed to higher U.S. prices, and higher U.S. prices have likely contributed to a reduction in exports.

• The future trade environment for poultry and egg products will depend on HPAI detections and success in reducing or eliminating current trade restrictions, among other factors.
Thank you!

Samantha Padilla
Animal Products and Cost of Production Branch, MTED
USDA, Economic Research Service
samantha.padilla@usda.gov
CHARTS of NOTE

Get the latest charts from USDA ERS.

Available now on your mobile device!