

AVIAN INFLUENZA (AI) UPDATE

Highlights of the webinar presented by National Pasteurized Eggs | 9.17.15

> DECEMBER 2014–2015 US OUTBREAK

THE 2014-15 HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI) OUTBREAK WAS THE LARGEST TO DATE.

It was part of a global outbreak affecting 75 countries. In the US:

+ 48 MILLION BIRDS AFFECTED

- 11% of the laying population of US poultry
- 223 site detections
- Losses of \$1.6 billion for producers
- Government cost of \$500 million
- Ban on exports of US products in 30 countries
- Egg suppliers declaring force majeure (contract clause releasing parties from their obligations)

> A QUICK HISTORY

- 75 epizootics since 1959, but most of them limited
- **1983:** 25 H5N2 cases in Pennsylvania; clustered and low mortality, then became HPAI
- **1997:** 1st confirmed human cases of HPAI H5N1 in Hong Kong
- **2003 & beyond:** HPAI H5N1 endemic in Southeast Asia; 700 human infections since; 200 million birds dead/destroyed
- **2012:** 13 outbreaks HPAI H7N3 in Jalisco, Mexico costing \$504 million

> TWO TYPES OF H5N1 VIRUS

Low Path AI (LPAI): low pathogenicity; rarely fatal

High Path AI (HPAI) or "Asian" H5N1:

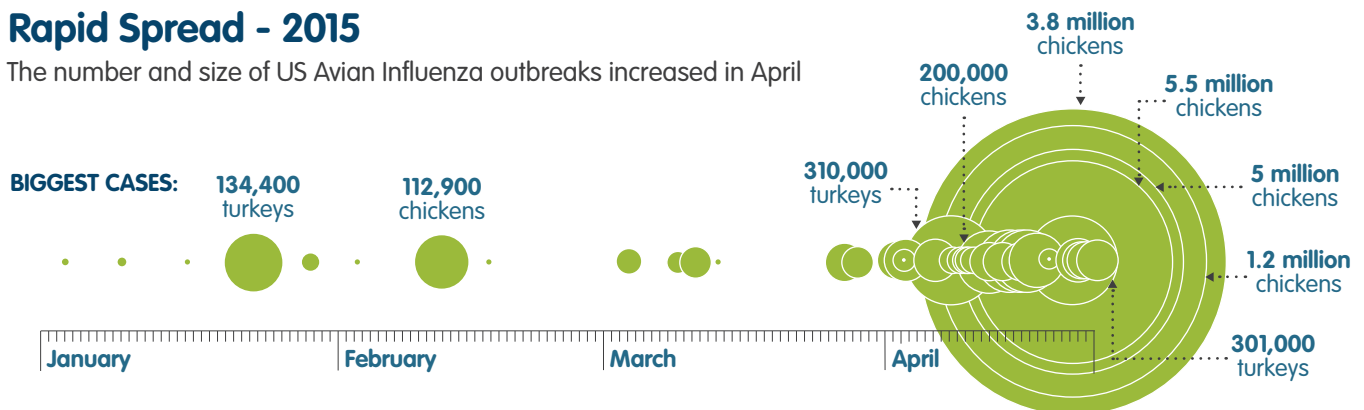
highly pathogenic; spreads rapidly; fatal to chickens and turkeys



➔ DID YOU KNOW? Often, birds show no symptoms until death. Turkeys are the most susceptible species.

Rapid Spread - 2015

The number and size of US Avian Influenza outbreaks increased in April



Note: Data through April 22

Sources: U.S. Department of Agriculture, The Wall Street Journal



The Hot Zone

AI is spread by migratory birds. It is constantly mutating. In the US, the outbreak was heavily concentrated along the Mississippi flyway, most heavily affecting the midwest and devastating flocks.

MAP KEY: Pacific Central Mississippi Atlantic



> BACKYARD BIRDS

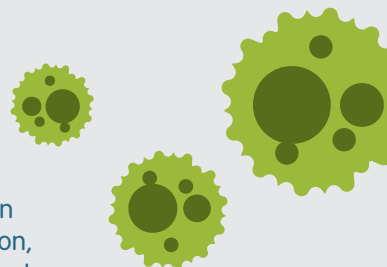
Backyard flocks are not exempt from AI. However, the numbers haven't been well documented.

HOW AI IS SPREAD

1. Airborne
2. Spread by migratory birds; perhaps through their droppings as they fly
3. Transfer and movement of infected birds
4. Humans—moving feedstuff, farm equipment, etc.
5. Most likely NOT through eggshells and eggs
6. A contaminated surface that spreads the virus is called a fomite

WHY DID AI STOP?

1. Heat and drier conditions
2. Migratory fowl moved on
3. Biosecurity measures
4. The Animal and Plant Health Inspection Service (APHIS) intervened with detection, testing, quarantines, diversion of products, and restriction of movement



The Urner Barry is a market news reporting service that tracks market conditions and egg prices.

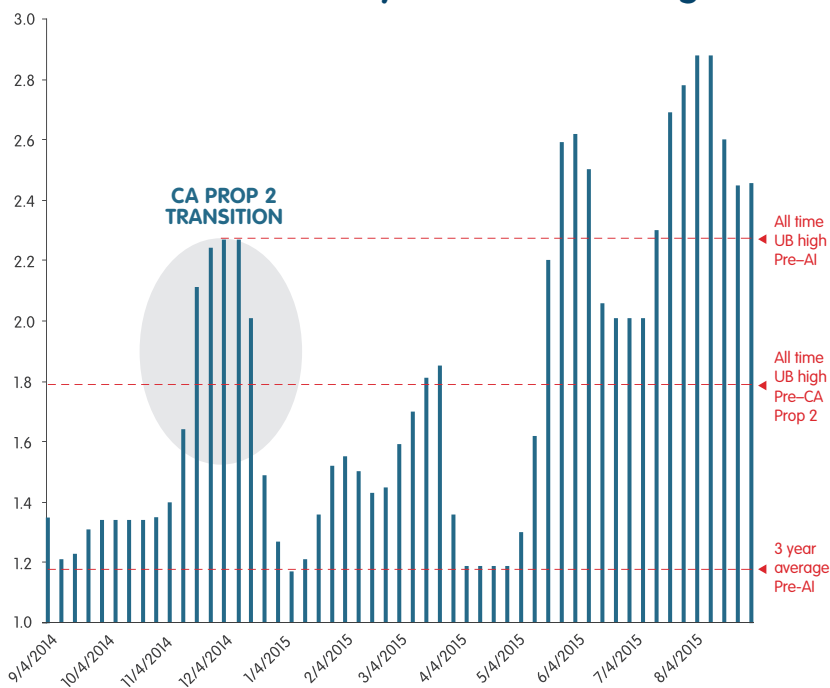
> REPERCUSSIONS FOR THE MARKET

- Short term: higher prices
- 12-18 months to completely replace supply
- Higher biosecurity costs will be permanent

> RESTOCKING THE SUPPLY CHAIN

- Waiting period of 21 days after approval by APHIS
- Pullet testing
- Pullet shortages
- Lag time for productivity
- Imports

Midwest Urner Barry USDA Grade A Large



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