

Avian Influenza and Food Safety



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November 3, 2004

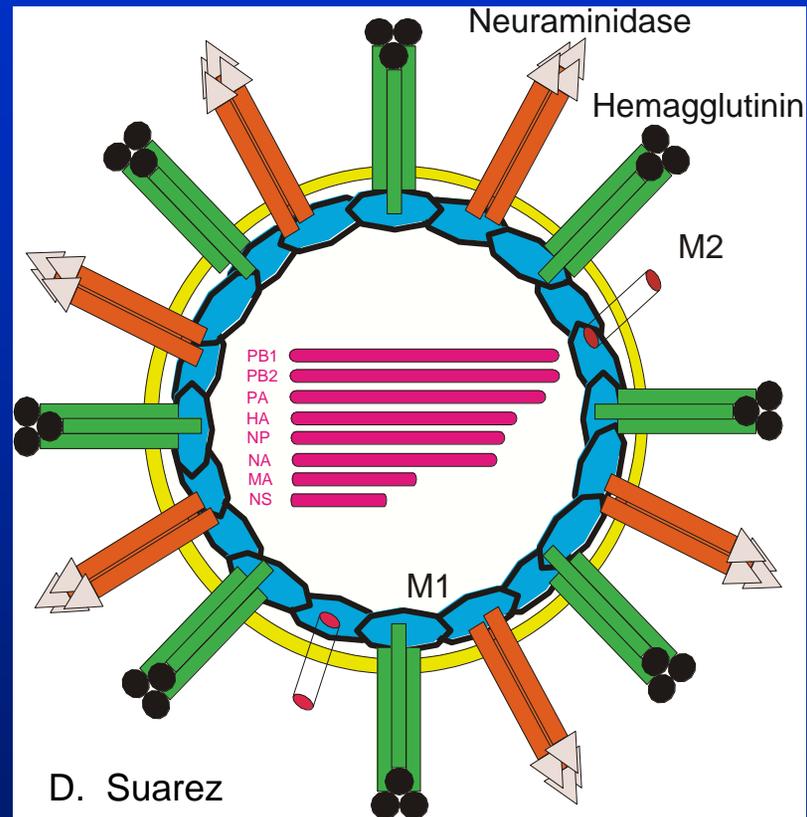
The current word on AI and food safety...

“There is no evidence that any human cases of avian influenza have been acquired by eating poultry products.” CDC, February 24, 2004

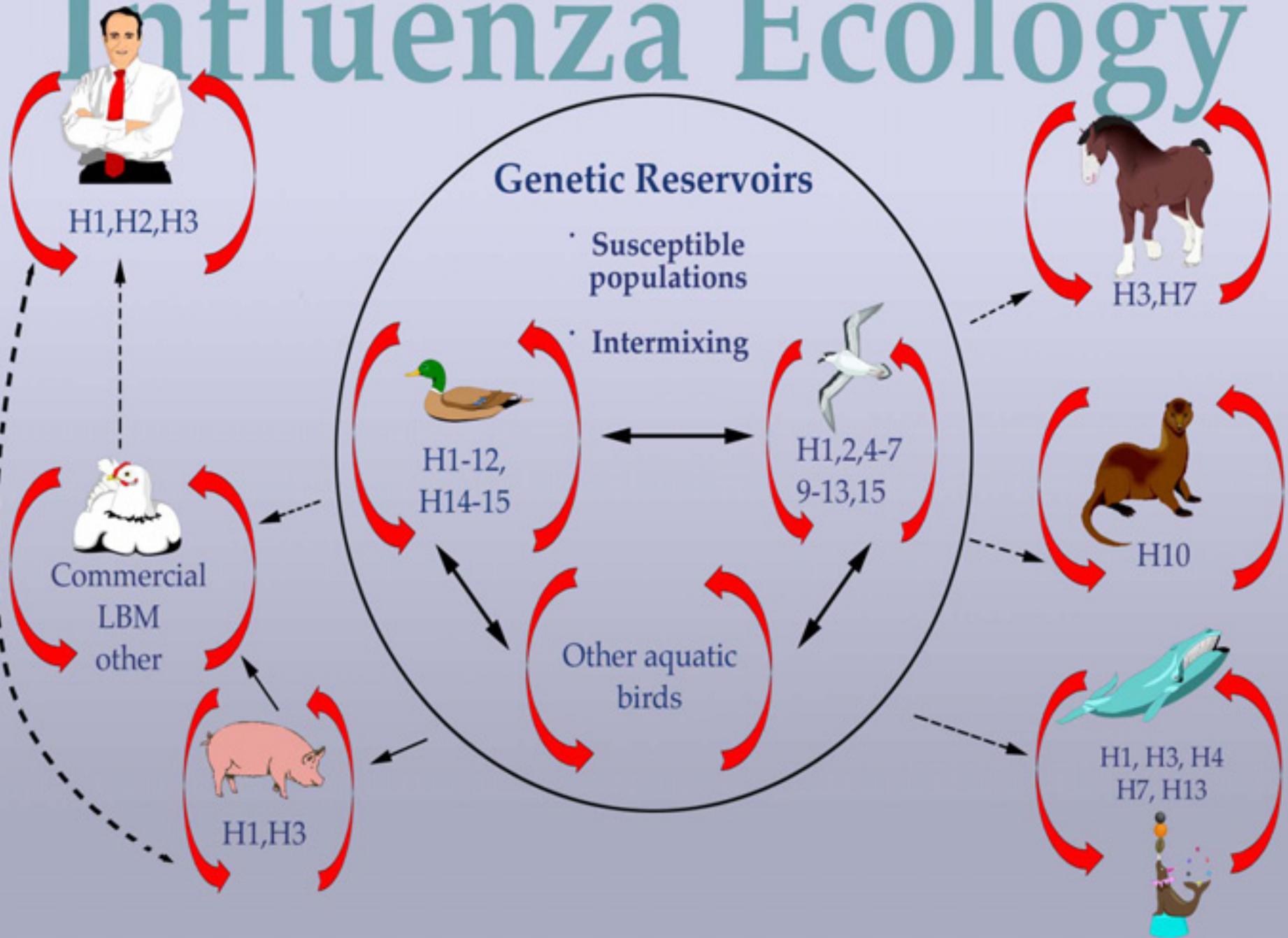
“To date there is no epidemiological information to suggest that the disease can be transmitted through contaminated food or that products shipped from affected areas have been the source of infection in humans.” WHO, January 24, 2004

Influenza A viruses

- Type A orthomyxoviruses
- Endemic and cause infection and disease in humans, horses, pigs, and various avian species
- Outbreaks/experimental infections – mink, marine mammals, rodents, carnivores, etc.



Influenza Ecology



Influenza A viruses that infect birds are referred to as avian influenza viruses.

Low pathogenicity avian influenza (LPAI) virus

- Clinical syndrome: low mortality; subclinical or respiratory syndrome
- Virus isolation: respiratory tissue and intestinal tract
- H 1 - 15 and N 1 - 9

High pathogenicity avian influenza (HPAI) virus

- Clinical syndrome: severe illness and death
- Virus isolation: ~ all tissues
- H5, H7

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- Virus isolation:

High pathogenicity avian influenza (HPAI) virus

- Clinical syndrome: severe illness and death
- Virus isolation:

“The virulence of H5 and H7 viruses in chickens does not correlate with their ability to infect and cause disease in humans.”

Swayne et. al. JAVMA 2003

Live birds in the U.S.

- Commercial poultry
- Backyard flocks
- Wild birds
- Game birds
- Pet birds
- Research birds
- Imported birds



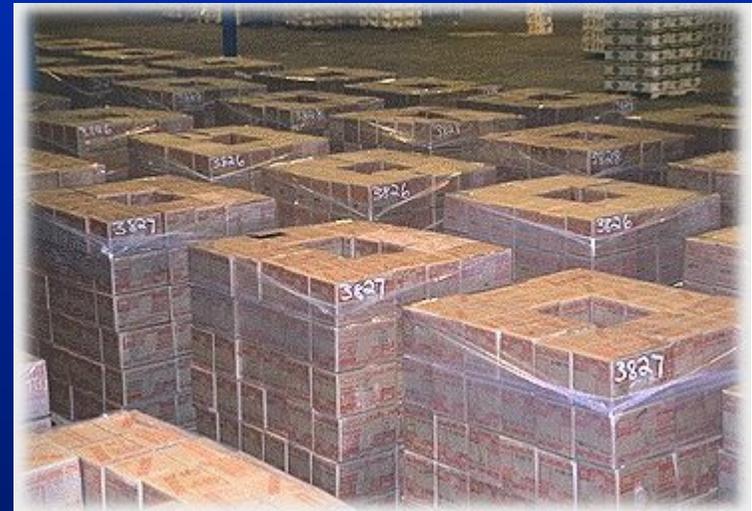
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Why focus on avian influenza?

- Protect the health of the Nation's poultry flocks
- Support an environment conducive to trade
- Protect public health



- Reportable AI: HPAI and LPAI H5 and H7
- Early detection

Live bird/egg processing

Commercial

- Poultry slaughter plants
- Red meat slaughter plants
- Eggs – table eggs/“breakers”



Non-commercial

- Home/farm harvest
- Field-dressed game birds

Live bird markets (LBMs)



Commercial processing operations

Inedible products

- Feathers
- Offal: head, feet, trachea, lungs, crop, intestines, spleen
- Condemned carcasses and parts
- Rejected eggs
- Egg shells

Products for human consumption

- Bird whole carcass or parts – raw or further processing
- Liver, hearts, gizzards
- Shell eggs – pasteurized +/-
- Pasteurized egg products

Barriers to AI in food manufacture

Farm

- HPAI - visible illness; flocks destroyed
- LPAI - focus on H5, H7
 - destroyed
 - controlled marketed

Processing plant

- AM/PM inspection
- Zero tolerance for feces
- Discard - head, trachea, lungs, intestines
- Antimicrobial carcass wash
- Refrigeration/freezing – little effect
- Cooking – ready-to-eat products



Barriers to human infection during meal preparation and consumption

- The presence of live AI virus in or on food in the U.S. is an uncommon event.
- WHO website, "...good hygiene practices during handling of raw poultry meat and usual recommended cooking practices for poultry products would lower any potential risk to insignificant levels."
- Hong Kong case-control study – 1997 H5N1

FIGHT BAC!

CLEAN
Wash hands
and surfaces
often.



SEPARATE
Don't cross-
contaminate.



CHILL
Refrigerate
promptly.



COOK
Cook to proper
temperatures.



Keep Food Safe From Bacteria

TM



FSIS

Food Safety and Inspection Service
U.S. Department of Agriculture
www.fsis.usda.gov
E-mail: mp hotline.fsis@usda.gov

Temperature Rules!

— for cooking foods at home.

- 145 °F Beef, lamb & veal steaks & roasts, medium rare (medium—160 °F)
- 160 °F Ground beef, pork, veal & lamb
Pork chops, ribs & roasts
Egg dishes
- 165 °F Ground turkey & chicken
Stuffing & casseroles
Leftovers
- 170 °F Chicken & turkey breasts
- 180 °F Chicken & turkey
whole bird, legs, thighs & wings

USDA Meat and Poultry Hotline
1-888-MPHotline (1-888-674-6854)
TTY: 1-800-256-7072

In conclusion...

- There is no evidence suggesting that humans have acquired avian influenza by eating poultry products.
- In the U.S. barriers to human infection lie in food manufacture and in proper food handling and cooking.
- There is a low incidence of AI in integrated poultry operations in the U.S.

Acknowledgements

- David Suarez – USDA, ARS, SEPRL
- Robert Brewer – USDA, FSIS, OPHS
- Thomas Gomez – USDA, APHIS, VS
- David Swayne – USDA, ARS, SEPRL
- Kevin Elfering – MN Dept. of Agriculture

The End

