

# Avian Influenza Surveillance in Domestic Animals

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# Avian Influenza Surveillance

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- Dead or Sick Birds
  - Commercial Flocks
  - Other
- National Poultry Improvement Plan
- Other Animals

## Dead or Sick Birds

2006 -- 105 Birds Sampled

Tested at either UC Davis Lab  
or Hawaii Department of  
Health (rRT-PCR)

# NATIONAL POULTRY IMPROVEMENT PLAN



## *U.S. Avian Influenza Clean*

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A national program for the prevention and control of avian influenza by routine serological surveillance of participating flocks.

# NPIP - Participating flocks

- *Exhibition Poultry* - domesticated fowl which are bred for the combined purposes of meat or egg production and competitive showing;
- *Game Birds* - domesticated fowl such as pheasants, partridge, quail, and grouse, but not doves and pigeons; and
- *Waterfowl* - domesticated fowl that normally swim, such as ducks and geese

# Basic Program

- Poultry must be more than 4 months of age when blood tested;
- Blood samples are drawn by an Authorized Agent or State Inspector and tested by an authorized laboratory (proficiency testing);
- Minimum number tested is 30 birds/house, with at least one bird taken various points within a house;

## Basic Program (continued)

- The ratio of male to female birds in representative samples must be the same as the ratio of male to female birds in the flock;
- In houses containing fewer than 30 birds, all birds in the house must be tested; and
- Testing intervals are variable depending on the situation (90 days, 180 days)

# Laboratory Testing

The official blood tests for avian influenza are the agar gel immunodiffusion (AGID) test and the enzyme-linked immunosorbent assay (ELISA)

# AGID

The AGID test is used to detect circulating antibodies to Type A influenza group-specific antigens (ribonucleoprotein and matrix proteins).

The basis for the AGID test is the migration of antigen and antibodies toward each other through an agar gel matrix. When the antigen and specific antibodies come in contact, they combine to form a precipitate that is trapped in the gel matrix and produces a visible line.

# Laboratory Testing

An AGID test must be conducted on all ELISA-positive samples.

Positive tests require additional sample collection.

Further diagnostic testing is performed at a Federally approved laboratory (PCR, virus isolation).

# Laboratory Testing

Tests must be conducted using antigens or test kits approved by USDA and performed in accordance with the recommendations of the producer or manufacturer

Either 3 or 4 samples can be tested per plate (may be labor intensive)

# NPIP Participation



# Other Animals

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Cats

Pigs

Dogs

Seals

Other carnivores

Etc...

# Contact information:

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