

## **AVIAN INFLUENZA Low Pathogenic H5N1 vs. Highly Pathogenic H5N1 Latest UPDATE**

There are two types of avian influenza (AI) that are identified as H5N1. A difference exists in the virus classification; one is low pathogenic (LPAI) and the other is highly pathogenic (HPAI). Pathogenicity refers to the ability of the virus to produce disease. HPAI H5N1, often referred to as the "Asian" H5N1, is the type causing worldwide concern. LPAI H5N1, often referred to as the "North American" H5N1, is of less concern. Following is an explanation of the differences between them.

### **LPAI H5N1 ("North American" H5N1)**

LPAI, or "low path" AI, commonly occurs in wild birds. In most cases, it causes minor sickness or no noticeable signs of disease. It is rarely fatal in birds. LPAI strains are not a human health concern. This includes LPAI H5N1.

Evidence of LPAI H5N1 has been found in wild birds in the United States in recent years and is not closely related to the more severe HPAI H5N1 circulating overseas.

HPAI H5N1 has not been detected in the United States. However, other strains of HPAI have been detected and eradicated three times in the United States: in 1924, 1983 and 2004. No significant human illness resulted from these outbreaks.

In 2004, USDA confirmed an HPAI H5N2 outbreak in chickens in Texas. The disease was quickly eradicated thanks to close coordination and cooperation between USDA and State, local, and industry leaders.

### **TERMINOLOGY**

**Avian influenza (AI)**--the bird flu--is a virus that infects wild birds (such as ducks, gulls, and shorebirds) and domestic poultry (such as chickens, turkeys, ducks, and geese). There is flu for birds just as there is for humans and, as with people, some forms of the flu in birds are worse than others.

**Pathogenicity:** the ability of the virus to produce disease. AI strains also are divided into two groups based upon the ability of the virus to produce disease: low pathogenic (LP) and highly pathogenic (HP).

**Low Pathogenic or "low path" avian influenza (LPAI):** LPAI occurs naturally in wild birds and can spread to domestic birds. In most cases it causes no signs of infection or only minor symptoms in birds. These strains of the disease pose little significant threat to human health. These strains are common in the U.S. and around the world.

**Highly Pathogenic or "high path" avian influenza (HPAI):** HPAI is often fatal in chickens and turkeys. HPAI spreads rapidly and has a high death rate in birds than LPAI. HPAI has been detected and eradicated three times in

U.S. domestic poultry. HPAI H5N1 is the subtype rapidly spreading in some parts of the world.

The U.S. Departments of Agriculture and Interior announced that routine surveillance has indicated the presence of H5 and N1 avian influenza subtypes in samples from two wild mute swans in Michigan, but testing has ruled out the possibility of this being the highly pathogenic H5N1 strain that has spread through birds in Asia, Europe and Africa. Test results thus far indicate this is low pathogenicity avian influenza, which poses no threat to human health.

The swans were sampled as part of the expanded avian influenza surveillance program. They were showing no signs of sickness. The swans were sampled August 8 at the Mouillee state game area located on the coast of Lake Erie in Monroe County, Michigan.