**Update on Highly Pathogenic H5 Avian Influenza Viruses**

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Since December of 2014, highly pathogenic H5 avian influenza (HP H5 AI) viruses have been detected in British Columbia, Canada and Washington, Oregon, California, Utah, Idaho, and most recently Nevada within the Pacific Migratory Bird Flyway in the United States. The spread of these viruses continues to be very worrisome with additional states reporting infections every week or two. Migratory wild birds appear to be playing a prominent role in the spread of these HP H5 AI viruses. In addition to migratory birds, these viruses have been recovered from sick captive birds, backyard poultry, and from one commercial poultry flock in Canada and one commercial poultry flock in the United States.

Three different strains of influenza viruses have been detected and include: H5N1, H5N2, and H5N8. In spite of being three different virus strains the viruses appear to have similar origins related the Eurasian H5N8 influenza virus that has circulated in Asia and Europe throughout 2014. Both of the newly detected H5N2 and H5N1 viruses emerged as a mixture, having some gene segments from the Eurasian HPAI H5N8 and some gene segments from the domestic low pathogenic North American influenza viruses.

As mentioned before, migratory birds are predicted to play an important role in the spread of these viruses in the Pacific Migratory Bird Flyway. All of the Midwestern states, including the state of Ohio, are located in the Central and Mississippi migratory flyways and none of these HP H5 AIVs have been detected in any of the Midwestern states. However, many samples collected from wild birds during the recent hunting season have not yet been analyzed for the presence of AI viruses, and with hunting seasons finished, very few additional samples from wild birds will be available until next summer when live trapping is initiated at various locations (unless additional surveillance strategies are initiated). While there is no evidence that these viruses are currently circulating in the Midwest, in reality, there is little evidence at this time to indicate they do not exist in the Midwest; therefore, out of precautionary measures, we propose current **BIOSECURITY PROGRAMS BE REVIEWED FOR COMPLIANCE AND ALL NECESSARY MEASURES ARE TAKEN TO PREVENT ANY CONTACT BETWEEN DOMESTIC POULTRY/CAPTIVE BIRDS AND WILD BIRDS.**

This group of HP H5 AI viruses are highly pathogenic in poultry and apparently raptors, causing severe clinical illness inducing high mortality. This should allow for early detection and reporting of any infected poultry. Ducks are an exception in that regard; they show much milder, if any, clinical signs. Many Asian countries are having difficulty controlling HP H5N8 AIVs because clinical signs in domestic and wild duck populations are not easily observed or very mild allowing the infections to go undetected. This means that special attention should be paid to duck populations including wild, backyard, and commercial. Also, this is why mixed species backyard flocks, including ducks, require very careful monitoring and increased biosecurity programs. The practice of mixing poultry species is highly discouraged. On the other hand, and from all that is currently known and understood about this group of HP H5 AI viruses, they **DO NOT REPRESENT HUMAN HEALTH CONCERNS.** These strains have never been reported to infect humans, not in North America, not in Europe, nor in Asia. Therefore, **PROPERLY PREPARED POULTRY AND POULTRY PRODUCTS ARE SAFE TO CONSUME.**

While surveillance efforts are essential in planning prevention, control, and eradication strategies, they are rarely, if ever, in real time! Detection of the viruses in new geographic areas is frequently after the horse is out of the barn (in this case after the virus has been present in the area for varying lengths of time). With the possibility that these viruses could persist as HPAI viruses in wild birds and/or backyard flocks and continue to spread in North America, preventing infections in the commercial poultry, backyard poultry, and specialty birds will be dependent upon: 1) targeted active education programs, 2) instituting biosecurity protocols appropriate to address the new threat, and, 3) in the worst case scenario, have established up-to-date eradication and operating plans in the event these HP viruses gain access to commercial poultry. Also, assuring consumers that poultry products are safe to eat will also require attention.

The link below provides additional information about the current avian influenza outbreak in the US and its H5N8 Eurasian counterpart. It also offers recommendations and additional resources regarding safe handling of wild birds.: