To limit bird flu spread, keep wild birds away from poultry, livestock

Waterfowl Alert Network data help assess the risk of avian influenza H5N1.

by Pam Kan-Rice

Every winter, millions of migratory birds fly south to warmer locales, passing over California Central Valley dairies and poultry farms. Many of these wild waterfowl are carrying the virus that causes avian influenza, based on the U.S. Department of Agriculture's (USDA) wild-bird surveillance, says Maurice Pitesky, University of California Cooperative Extension poultry specialist in the School of Veterinary Medicine at UC Davis.

Bird flu has killed millions of birds and disrupted milk and poultry production. In California, highly pathogenic avian influenza H5N1 has been detected in commercial and backyard flocks of poultry and dairy cows and, more recently, poultry and dairy workers have become infected.

"This is the largest animal disease outbreak we've ever had whether you look at geography — we've had six or seven continents affected — or whether you're looking at species," Pitesky noted. "From a public health perspective, it's important for us to sound the alarm before this becomes a bigger problem."

To contain the disease, USDA is testing milk for the avian influenza H5N1 virus and farmers are supplying poultry and dairy workers with personal protective equipment.

Lesser snow geese flying and landing at the Gray Lodge Wildlife Area in the Sacramento Valley, Butte County, California. *Photo*: Gerald Corsi, iStock.

To avert future outbreaks of avian influenza from infecting livestock, Pitesky recommends reducing the overlap of waterfowl habitat with farms that raise animals. This would help prevent birds from mingling with the domestic animals and passing the virus to cows, pigs and poultry.

Knowing where waterfowl roost can help farmers and other stakeholders make informed decisions about protecting their flocks and herds.

Based on their research, Pitesky and his colleagues have developed the Waterfowl Alert Network to provide data about locations of waterfowl roosting and feeding. The network uses data from satellites, weather radar and land-based environmental sensors. Farmers and agricultural agency personnel can use it to assess the risk wild birds pose to farms. This information can be used to identify risky habitat in close proximity to farms with the goal of shifting habitat away from farms. This might entail, for example, flooding fields that would provide waterfowl habitat in an area at a greater distance from farm animals.

"One thing we need to consider in the medium- to long-term is the concept of waterfowl habitat shifting away from food animal production," Pitesky said. "We know how to do this. This approach would allow us to optimize food security for our livestock and poultry while also providing habitat for waterfowl, which are vital to our ecosystem." CA

Bird flu has killed millions of birds and disrupted milk and poultry production. *Photo*: Danielle Lee.