Waterfowl Fattening Operations as Potential Reintroduction and Amplification Environments for Highly Pathogenic Avian Influenza

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Abstract

Highly pathogenic avian influenza (HPAI) continues to expand globally, affecting wild birds, livestock, terrestrial and marine mammals, and humans. The emergence of mammalian infections and viral adaptation have elevated concerns regarding pandemic potential. This perspective examines available surveillance records, epidemiologic reports, and policy case studies to evaluate potential sources of HPAI reintroduction and amplification within agricultural systems. Available evidence indicates that outbreaks are disproportionately concentrated in regions of France and Hungary where waterfowl fattening operations are heavily established. Poultry outbreak notifications reported through the European Commission Animal Disease Information System and summarized in European Food Safety Authority surveillance reports show that France and Hungary reported substantially more poultry HPAI outbreaks than the remaining European Union member states combined during 2020–2024. These regions are connected to major migratory bird flyways capable of facilitating long-distance viral dissemination. The observed patterns indicate that concentrated waterfowl fattening systems represent a preventable source of HPAI amplification and support policies aimed at phasing out these production practices to reduce future outbreak risk.