

Risk targeted surveillance for avian influenza in Cuba

Ferrer, E.¹, Alfonso, P.¹, Abeledo, M.¹, Fonseca, O.¹, Ippoliti, C.², Percedo, M.¹, Pérez, A.³, Blanco, P.⁴, Sánchez, B.⁴, Fernández, O.¹ and Calistri, P.², ¹Centro Nacional de Sanidad Agropecuaria, Cuba, ²Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise, G. Caporale, Italy, ³Instituto de Medicina Veterinaria, Cuba, ⁴Instituto de Ecología y Sistemática, Cuba; ferrer@censa.edu.cu

In order to increase the sensitivity of the active surveillance system for avian influenza (AI) a risk based model was developed to identify areas at higher risk of disease introduction, represented for Cuba by the migratory waterfowl transit in autumn and spring. A map with the risk of introduction of AI was constructed by Suitability Map with ArcGIS 9.3.1 de ESRI. This model considered distance from settlement of migratory waterfowl, densities of farms and poultry in a particular area combined by tool weighted overlay. The spatial model permitted to better focus the sampling activities, definitively improving the overall sensitivity of the AI surveillance system. The possible exposure of the population most at risk to be exposed to the infection, considering the consequences of such exposure, in terms of animal densities and the existence of the flocks with higher economical importance was also evaluated to better target the surveillance system.