

**Performance indicators of the active surveillance system for avian influenza in Cuba**

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The sensitivity of the active surveillance system for avian influenza was assessed by a stochastic model quantifying the probability of revealing by the system at least one infected animal within a farm. The diagnostic sensitivity of the haemoagglutination inhibition assay and different levels of within flock prevalence (5%, 10% and 30%) were considered, under five different samples size scenarios: testing 20, 30, 40, 50 or 60 animals in each flock. Similarly the probability of revealing at least one infected farm at a between flock prevalence of 5% were assessed, as well the timing right investigations according to risk period constitutes by waterfowl migrations. The results of the simulation model demonstrated that 30 tested birds for each flock can likely detect the infection when the within prevalence of infection is around 30%. In this case, in fact, the probability of having at least one positive result is more than 99%. When lower levels of within flock prevalence are considered, the probability of failing to detect the infection with 30 tested birds raises up to 7.5% and 19.8% with, respectively, 10% and 5.7% within flock prevalence.