Fighting cocks: risk for the Caribbean regarding avian influenza and Newcastle disease

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Cockfighting is an important tradition in many Caribbean countries and territories, with the legal status of cockfights varying by country. Uncontrolled movement of poultry may represent an important route for pathogen introduction and spread. The Caribbean Animal Health Network (CaribVET) conducted a survey in order to assess the risk of circulation of Avian Influenza (AI) and Newcastle disease (ND) through movement of fighting cocks. Potential risk pathways were identified by the CaribVET Avian Influenza and Newcastle Disease Working Group. A questionnaire was designed and sent to the 32 Chief Veterinary Officers of the Caribbean while additional information was collected through interviews with bird owners, breeders and fighting pit owners in five countries. Data analysis aims to: (1) improve the knowledge on gamecocks and understand activities carried out in the Caribbean, especially: the legal status of cockfighting, disease surveillance and control within the fighting cock population, as well as biosecurity measures; (2) assess the likelihood of contact between fighting cocks and commercial poultry in the countries/territories; (3) assess countries/territories' risk profiles based on the above-mentioned results. The movement patterns of fighting cocks were studied in order to identify pivotal countries/territories where increased surveillance for AI and ND may be warranted. Preliminary results show that almost all Caribbean countries/territories, as well as the American continent and Europe, are connected, either directly or indirectly. These results are being used for the development of adapted awareness campaigns for basic bird health and management and avian disease prevention and surveillance, in participating Caribbean countries/territories.

Determinants of vaccination coverage and consequences for rabies control in Bali, Indonesia

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Maintaining high vaccination coverage is key to successful rabies control, but mass vaccination of dogs is difficult and population turnover erodes coverage. Incidence decline following successive island-wide vaccination campaigns in Bali suggest good prospects for rabies eradication. To find gaps in coverage we used household surveys of owned dogs (n=12,234) and 23 transects of free-roaming dogs (n=1,079). Coverage was 10% higher in confined than in unconfined owned dogs, with more confinement in urban (77.3%) than rural areas (7.4%). Coverage was higher in adults (90%) than juveniles (<1 yr, 51%) due to births and insufficient targeting of pups. Fecundity studies suggest owners do not report pups which may be an obstacle for vaccinators. Villages with recent culling (4/27) in response to rabies reports had marginally lower coverage and higher proportion of juveniles than villages with no culling, suggesting replacement of culled dogs with unvaccinated pups. Coverage estimates from transects were much lower (39.9%) than household surveys (83.4%), possibly due to loss of vaccination collars, but also because free-roaming dogs include unowned or difficult to vaccinate dogs. Future campaigns should put more effort in vaccinating free-roaming dogs particularly in rural areas, with advertising to ensure owners vaccinate pups. Culling appears counterproductive to coverage, but sterilization could stabilize it by reducing births. Long-lasting collars would help identify vaccinated animals and reassure communities that campaigns are successful.