Heartwater surveillance network in Guadeloupe: a model for the Caribbean

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Heartwater, a tick-borne disease of ruminants transmitted by Amblyomma ticks is present in 3 Caribbean islands: Guadeloupe, Marie-Galante and Antigua, representing a threat for neighboring islands and North America. Despite the availability of efficient acaricides, no significant improvement has been seen in vector and disease control. The Ticks and tick borne disease working group of the Caribbean animal health network (CaribVET) recommended Guadeloupe the conduct of (1) a sociologic study to understand farmers' reluctance to adopt efficient treatment; and (2) heartwater surveillance. A passive surveillance network monitoring ruminant neurological syndromes, RESPANG, was set up in July 2010. RESPANG objectives are to assess the burden of heartwater and sensitize farmers. Private veterinarians collect blood and ticks after farmer reporting of clinical suspicion. Diagnostic for heartwater, babesiosis and anaplasmosis is performed at CIRAD. An online database displays results on interactive maps allowing the identification of areas where communication campaigns by farmer association can be focused. Leaflets and key messages were developed, based on the recommendations of the sociological survey. Out of 238 suspicions, 30.5% were positive for heartwater all along the year. Analysis of the factors associated with heartwater is currently ongoing. RESPANG shows excellent partner involvement and interaction. Surveillance performance indicators will improve network operation and coordination. Long-term data set will enable to assess the impact of communication campaign and possibly to detect introduction of diseases with similar clinical signs. In parallel, pathogen and vector genetic characterization is being developed using RESPANG samples. This shows the tight link between surveillance network and research activities. CaribVET supports the establishment of similar networks for other diseases in other Caribbean islands.

Enhancing laboratory capacities in the Caribbean for better animal health regional surveillance

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The Caribbean Animal Health Network (CaribVET) is a collaboration network of veterinary services, laboratories, research institutes and regional/international organizations in the Caribbean. Its goal is to improve animal and veterinary public health in the 32 Caribbean countries and territories. In the past, CaribVET had evaluated 34 CARICOM diagnostic laboratories and organized several workshops on IATA regulations and on diagnostic techniques. CaribVET coordinated simulation exercises on Avian Influenza samples' shipment and inter-laboratory assays on Classical Swine Fever diagnostic. The 'Laboratory Quality Assurance and Diagnosis Working Group ' (WG), created in 2011, gathers main actors involved in diagnostic and laboratory activities and meets every 3-4 months physically or virtually. The WG (1) regularly updates diagnostic capabilities and capacities in the region; (2) identifies training needs, promotes and strengthens links with reference labs; (3) provides guidance for the development of a regional network of laboratories while promoting the exchange of data, protocols, materials, and human resources; (4) promotes the implementation of quality assurance in veterinary diagnostic laboratories; and (5) supports the logistics of inter-laboratory assays. Recent achievements include (1) the development of an online database of laboratories in the Americas (CaribVET, CIRAD Guadeloupe, OIE collaboration); (2) signature of a letter of understanding between OIE and CaribVET to develop joint activities in accordance to both structures' recommendations; and (3) organization of a workshop on diagnostics of swine influenza and quality assurance in Guadeloupe within the FAO technical cooperation project on swine influenza surveillance. These coordinated activities reinforce diagnostic capacities and capabilities in the Caribbean which are essential for efficient surveillance of animal health.