CaribVET, Caribbean animal health network

How can fundamental research help strengthen animal disease surveillance and control networks?

Biodiversity hotspots are often associated with the emergence of new pathogens. The Caribbean, which includes territories with highly contrasting ecological and socioeconomic situations, is one example. Research can help improve surveillance and control of such diseases by combining the most fundamental studies with the most operational applications. This integrative approach involves fundamental research, and also decision-makers, managers and surveillance staff. The CaribVET regional network is one such approach.
Expertise and technical skills

- Diagnosis and surveillance of priority animal and zoonotic diseases: avian influenza and Newcastle disease, classical swine fever, ticks (Amblyomma variegatum, Rhipicephalus [Boophilus] microplus) and tick-borne diseases [heartwater, anaplasmosis, babesiosis]; veterinary public health [rabies, salmonella and leptospirosis] and emerging diseases [porcine epidemic diarrhoea].
- Epidemiological surveillance: databases, guides and protocols, network assessment, regional surveys, etc.
- Training centres: epidemiology, laboratory diagnoses, quality assurance, simulation exercises, sample shipment, emergency preparedness, biosecurity.
- OIE reference laboratory for heartwater, OIE collaborating centre for the diagnosis, epidemiology and control of tropical animal diseases (CIRAD) and OIE collaborating centre for the reduction of zoosanitary risks following disasters (CENSA).
- DGAL approved laboratory for serological diagnosis of West Nile (WN) in equines and real-time PCR diagnosis of avian influenza, COFRAC accreditation (standard 17025) for diagnosis of heartwater, Al and WN.

Some current projects

**Building health research capacity in Guadeloupe • Epigenesis, European Commission, FP7, 2013-2016, € 3.5M**

By building capacity for research and transmission of knowledge relating to “one health” (animal and human), the project will help increase diseases prediction, surveillance and control capacity in the Caribbean. The eventual aim is to establish a Caribbean centre of excellence on vector-borne and emerging diseases.

**One Health, One Caribbean, One Love • ACP project, Science and Technology, UWI, 2014–2016, € 1M**

The aim is to promote a “One Health” approach to zoonotic and food-borne disease surveillance, diagnosis and response. Expected results are to improve intersectoral collaboration between medical, veterinary, environmental and wildlife professionals, increase capacity to identify and respond to transboundary animal and zoonotic diseases and increase laboratory capability to diagnose foreign and endemic animal and zoonotic diseases.

**Cattle tick resistance to acaricides, tick-borne disease surveillance and control • ResisT, 2013-2015, Fonds de Coopération Régionale, € 214k**

Cattle ticks (Rhipicephalus [Boophilus] microplus) are widespread throughout the tropical and inter-tropical zones. They can transmit two serious diseases to cattle [babesiosis and anaplasmosis], and are known to develop resistance to acaricides. The project has allowed itself two years to take stock of the situation as regards resistance to acaricides in the Caribbean and establish a new in vitro diagnostic test so as to identify this problem rapidly, given that it is of concern for farmers, veterinarians and researchers. The project also aims to develop strategies to improve surveillance and control of TBDs in ruminants with a view to slowing down the development of resistance.

Working together for tomorrow’s agriculture