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Surveillance for the prevention and control of diseases in Cuban aquaculture

Raquel Silveira Coffigny, Pozo E M, Prats L F, Pérez B A, Hernandez M D and Medel G M
Fisheries Research Center, Cuba

The animal aquatic health surveillance programs have become a requirement for the effective management of sustainable aquaculture. In 2005 was implemented in Cuba, a program based on Monitoring for pathogen and disease detection, as well as the implementation of biosecurity principles, systematic preparation of stakeholders, implementation of modern diagnostic techniques, prevention and control, use and application of effective medicines, environmentally safe. In freshwater fish (tilapia, carp and catfish) surveillance was established for detection of bacterial hemorrhagic septicemia and protozoa and Helminth parasites. In marine fishes *Lutjanus analis*, *Centropomus undecimalis* and *Rachycentrum canadum* surveillance was established for detection Viral Encephalopathy and Retinopathy (VER), *Vibrio* and other pathogenic bacteria in cobia and protozoa and Helminth parasites. Shrimp surveillance was established for listed OIE virus. Sampling was random and the sample size was calculated for 95% confidence in detecting a single infection with 5% prevalence. The diagnosis was made by conventional and molecular biology techniques. No detected none of the viral diseases OIE listed for *L. vannamei*. New pathogens were detected, three viruses in shrimp *Litopenaeus schmitti*, one bacterial disease in *L. vannamei*, were identified 23 new parasites and 5 new pathogenic bacteria in fishes. Drugs and antibiotics were tested as safe for use in the aquaculture; more than 15 natural medicines for the prevention and control of ectoparasites and bacteria were applied. The program has been effective and early detection of pathogens, has allowed the design of health management systems to reduce economic losses from disease outbreaks.

Biography

Raquel Silveira Coffigny has completed her PhD in Biological Research Center from Baja California Sur, Mexico. She conducted research in linking variations blood parameters with pathologies and environmental changes; diagnosis of viral, bacterial and parasitic diseases, interest in aquaculture farming and the use of plant extracts for the control of diseases. She has been heading projects such as implementation of national aquatic health system, management of invasive aquatic species for commercial exploitation. She is the Deputy Director of Fisheries Research Center of Cuba for Sea-Food Safety and Aquaculture Health. She is Member of the Editorial Committee of the *Cuban Journal Fisheries Research*. She has published more than 30 papers in indexed journals.

rasil55@yahoo.es

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