A worldwide research update of Cobia (*Rachycentron canadum*): a promising fish for warmwater marine aquaculture.

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Abstract

Cobia (*Rachycentron canadum*), is considered to be one of the most suitable candidates for the future of warm, open-water marine fish aquaculture in the world. It represents one of the highest potential because of its most desirable traits, such as rapid growth rate (up to 10 kg in 1 year), good flesh quality, adaptation, and tolerance to variations in temperature and salinity. Throughout the years, cobia (*R. canadum*) has been researched since 1975. Currently, China is the leading country producing scientific publications in different aspects of cobia research. The first investigation on this species was reported in North Caroline were a collection of wild caught cobia eggs was conducted. Posterior researchers concluded that cobia (*R. canadum*), had a good aquaculture potential because of its rapid growth and good flesh quality. Other initial studies were conducted in USA and Taiwan (late of 1980s and early 1990s) were researchers studied several aspects: spawning, large quantities of cobia (*R. canadum*) fry production and grow-out of juveniles in near shore cage systems. Since then, cobia (*R. canadum*) research has focused its interest in different aspects: species description (taxonomy, distribution, biology and life history), fisheries (environment, capture, processing), reproduction, physiology (metabolism, toxicology, health), pathology (bacterial diseases, viral diseases, parasites, diagnosis, prevention and treatment), nutrition (nutritional requirements, feed formulations, feeding regimes, live / fresh food, additives), genetics, and aquaculture practices (cage farming, inland farming, culture management, economics). This presentation, analyses the historical progress, most recent research advances and future prospects of cobia (*R. canadum*) research worldwide.

Keywords— *Cobia, Rachycentron canadum, research, worldwide.*

Professional Biography

Rodriguez-Estrada Uriel, PhD, is a fish nutritionist graduated from Tokyo University of Marine Science and Technology. Currently he is associate consultant in animal husbandry nutrition at SAGARPA (Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food outlook of Mexico´s government) and external collaborator for The Aquaculture Case Study of the United Nations Environmental Program (UNEP). Mr. Rodriguez has research experience in Japan, China, Chile, Brazil and Mexico. His research expertise is in additives for aquafeeds and solid state fermentation of plant meals used in aquaculture formulations. He has wide research experience working with Salmonids (*Salmo salar, Oncorhynchus mykiss*, *Oncorhynchus kisutch*), tilapia (*Oreochromis niloticus*), Southern hake *(Merluccius australis*) and cobia (*Rachycentron canadum*). With the last one, he has conducted feeding tests in floating cages and recirculating aquaculture systems. He also has authored publications related to this species (an annotated bibliography and a CABI – Centre for Agric

ulture and Bioscience International – data sheet of invasive species).



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