MOTE AQUACULTURE RESEARCH PARK: MARINE FINFISH INFRASTRUCTURE,

RESOURCES AND PARTNERSHIP OPPORTUNITIES

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Mote Marine Laboratory’s Aquaculture Research Park is located on 100 hectares of land in Sarasota, Florida. Our research focuses on the development and evaluation of aquaculture technologies to produce fish and invertebrates for food and stock enhancement, as well as the development of land-based recirculating aquaculture systems. Mote has designed and evaluated the performance of recirculating aquaculture systems for breeding and rearing marine fish from egg to market size. Our facility is zero-discharge and tank-side filtration systems are linked to full-strength or brackish wastewater treatment systems to process solid waste and filter seawater for reuse. Recirculating systems are equipped with solids filtration, biofiltration, denitrification, ultraviolet light and/or ozone sterilization, and temperature control. Systems are available to support marine finfish broodstock (ranging from 25 m3 to 44.5 m3 in volume), replicated experimental, pilot- and commercial-scale larval, fingerling (ranging from 100 L to 8.9 m3) and ongrowing systems (ranging from 8.9 to 71 m3). Live food production facilities for rotifers and *Artemia* are also available. These systems have been used to culture economically important Gulf of Mexico and Caribbean species (snook, pompano, red drum, almaco jack, greater amberjack, flounder, red snapper). Stationary and hand-held instruments are used for analysis of conventional water chemistry and water quality parameters. Our science laboratories house advanced instrumentation and equipment including a UV visible spectrophotometer, freezers, incubators, and other specialized laboratory apparatuses appropriate for analysis and characterization of samples.

Current marine finfish research is focusing on common snook, red drum, almaco jack and Florida pompano. Applied research to address bottlenecks in aquaculture and system technologies has been successful due to strong collaborations with private industry, University, Foundation, and government agency partners. Examples of these collaborations include public-partnerships to improve or produce fingerlings and our long-term partnership with the Florida Fish and Wildlife Conservation Commission (FWC) to develop common snook stock enhancement technology. Our collaborations with private industry have led to research efforts focusing on optimizing broodstock and hatchery management technologies. The collaboration with FWC has led to development of improved culture technologies for reproduction and larval rearing of common snook, as well as stock enhancement research focusing on identifying critical habitats for fingerling snook. Expanded development of collaborations with research and industry partners continues to be a fundamental element of Mote’s research program.