

International Conference on

AQUACULTURE & MARINE BIOLOGY

June 25-27, 2018 | Rome, Italy

In-pond raceway production system application for tilapia production in Egypt - Case study

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The in-pond raceway systems IPRS technology was selected for testing in Egypt as a means to address the increasing demand for aquaculture products in the face of mounting economic and environmental constraints to the growth of Egyptian aquaculture production. The first IPRS system developed at WorldFish facility at Abbassa composed of two production cells (12x3x1.5 m) that installed in one feddan (4200m²) pond. The cells were used as the fish containment units, while the remaining open area of the pond was used as the waste treatment area. All cells were equipped with the white water units for continuous water movement at speed 7-10cm/second and aeration during the entire production season. The earthen pond was subdivided by dikes to allow full circulation of the water through the raceways and around the entire pond before re-entering the raceway cells. The IPRS cells were stocked with fast growing tilapia strain (G9, Abbassa) in July 2017. Fish demonstrated high growth rate and average weight increased from 30 to 370g and from 90 to 550g within 16 weeks. The result indicates that the production system increase productivity, contributing to food security

and produce high quality fish. Partial economic analysis indicated that the system in first operational season covered operational cost. The study concluded that tilapia demonstrate high growth performance when cultured in IPRS. Further, the production system maximizes water use efficiency in fish farming to meet the increasing pressure on water availability in Egypt.



Biography

Ahmed Nasr-Allah holds the degrees of MSc in aquaculture management and planning and PhD in the aquaculture. He has over 25 year of professional experience in aquaculture and commercial settings of various aquaculture activities. He has more than ten peer reviewed publications in in reputed journals and more than ten technical reports and attended many national and international conference and workshops. He also works as scientist in WorldFish (Egypt) in partnership with private sector and national organization to create sustainable development in aquaculture sector.

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