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## RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

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**Title:** Diseases of Tilapia

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**Abstract:** Tilapias originated in Africa. They have a rapid growth rate and relatively few diseases, probably because of the nature of the environment within which they have evolved, with its regular droughts and other stresses. They have become one of the most economically important group of cultured species. Tilapia farms are widespread in the tropics and subtropics. The fish reared in ponds, cages, or pens, and they grow well in freshwater and brackishwater environments. The high fecundity of the fish, its rapid growth rate, its few disease problems, and the ready availability of tilapia fry have resulted in intensification of production. Papers of diseases of tilapia were first published early this century.

Under the original extensive or semi-intensive culture systems, tilapias were more resistant to disease than many other fish species (Roberts and Sommerville, 1982). However, the intensification of culture systems and resultant deterioration in the environment have been associated with an increase in parasitic and infectious disease problems.

Formerly, parasitic diseases appeared to be more significant than other forms of infection, but the incidence of nonparasitic infections appears to be increasing. Consequently, although the literature on infectious diseases of tilapia is increasing rapidly, there has only been a slight increase in the reports of parasitic problems (Vega, 1988).

This chapter reviews the work on diseases of both wild and cultured tilapias.

This abstract is excerpted from the book chapter, which was published in H.S. Egna and C.E. Boyd (Editors), Dynamics of Pond Aquaculture. CRC Press, Boca Raton, FL, pp. 263-287

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<http://pdacrsp.oregonstate.edu/>>.

Tilapia tilapinevirus, or tilapia lake virus (TiLV), is a highly contagious virus found in tilapia and its hybrid species that has been reported worldwide, including in Asia, the Americas, and Africa. In this study, we experimentally challenged Mozambique tilapia (*Oreochromis mossambicus*) with a virulent TiLV strain, VETKU-TV01, at both low ( $1 \times 10^3$  TCID<sub>50</sub>/mL) and high ( $1 \times 10^5$  TCID<sub>50</sub>/mL) concentration. Most important tilapia infectious diseases (bacterial and viral) in hatchery phase till offer to the market. (grow out phase). M.E.Jalil Zorriehzahra<sup>1\*</sup>, M.R. Mehrabi<sup>1</sup>, S.T. Delshad<sup>2</sup>, M. Adel<sup>1</sup>. <sup>1</sup> Iranian Fisheries Science Research Institute (IFSRI), Tehran, I.R. Iran. <sup>2</sup> 17th EAFP International Conference on Diseases of Fish and Shellfish. Las Palmas de Gran Canaria, September 7-10th, 2015. Tilapia (*Oreochromis niloticus*). Tilapia are raised in: Small earthen ponds. Tilapia in culture are affected by bacterial, viral and parasitic pathogens. Disease impacts vary depending on both environmental and biological factors. <sup>1</sup> News features and technical articles about the evolution of aquaculture, one of the world's fastest growing industries. Health & Welfare. Disease management in tilapia. Saturday, 1 March 2008 Cedric Komar, DVM. Nature of parasite varies on farming systems, regions. Bacterial Diseases of Tilapia. Ha Thanh Dong. Faculty of Science and Technology, Suan Sunandha Rajabhat University Fish Health Platform, CENTEX Shrimp, BIOTEC/Mahidol University. <sup>2</sup> Dr. Marian McLoughlin. 2. Bacterial Diseases in Farmed Tilapia. v Streptococcosis v Columnaris v Francisellosis v Edwardsiellosis v Hemorrhagic septicemia caused by motile aeromonads v Hahellosis (red egg disease) v Epitheliocystis v Miscellaneous disease. 3. Streptococcosis.