

Emerging virus threatens tilapia farms in Asian-Pacific region

The Network of Aquaculture Centres in Asia-Pacific (NACA) warns that tilapia lake virus (TiLV), a virus identified as Orthomyxo-like (RNA), has become a threat for farmed tilapia producers in the Asian-Pacific region.

NACA recalls that tilapia farming sector in Israel and Ecuador started to experience mass die-offs of the farmed fish in 2009, and that TiLV virus was identified as the cause of the deaths.

As of 2016, the countries affected by this emerging disease have included Israel, Ecuador, Colombia and Egypt but recently, disease outbreaks among cultured tilapias have occurred in Thailand, wherein high cumulative mortalities of 20-90 per cent were observed and recorded.

Thirty-two outbreaks were investigated during 2015-2016 involving large number of deaths of unknown cause among farmed tilapia (*Oreochromis niloticus*) and red hybrid tilapia (*Oreochromis* spp.).

Histopathology of the liver showing similar signs to SHT, transmission electron microscopy, in-situ hybridization and high nucleotide sequence identity to TiLV from Israel confirmed that these outbreaks were caused by this virus.

Gross signs of the disease include multifocal to coalescing dermal erosions and ulcers, ocular alterations including opacity of the lens and shrinkage of the eyes. Diseased fish also exhibit loss of appetite, pale color, gathering in the bottom, slow movement, and stopped schooling prior to death.

Histopathological lesions of the brain included edema, focal hemorrhages in the leptomeninges, and capillary congestion in both the white and gray matter. For the liver, histopathological changes include swollen and dissociated hepatocytes.

The detection of the virus in infected tissues of tilapia is highly important in the confirmation of infection or the presence of the virus.

The top 10 tilapia producing-countries include China, Egypt, Philippines, Thailand, Indonesia, Lao PDR, Costa Rica, Ecuador, Colombia and Honduras.

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