

Aquaculture 2025

Innovation Through Technology

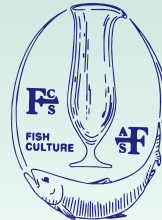
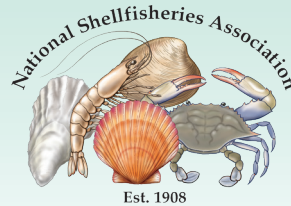


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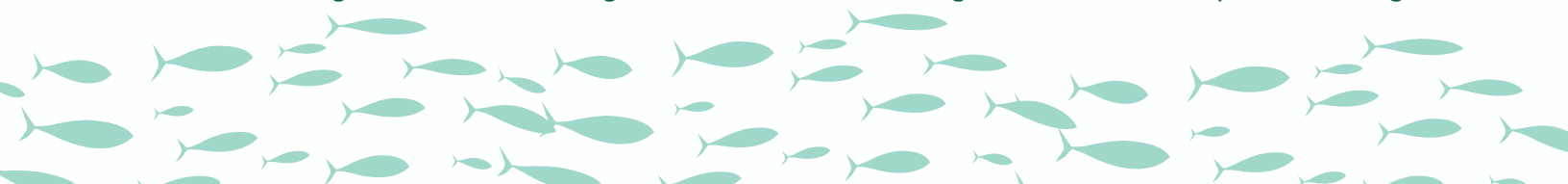


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LACTOCOCCOSIS: A SINGLE DISEASE FOR MULTIPLE *Lactococcus* SPECIES

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Lactococcosis is a severe bacterial disease affecting both freshwater and marine fish, characterised by rapid onset and high mortality rates. Symptoms manifest early and include anorexia, melanosis, exophthalmia, and swim bladder ataxia. The bacterial species involved are *Lactococcus garvieae*, *L. petauri*, and *L. formosensis*, each display similar symptoms but variabilities in their genetic makeup and virulence have been detected. *L. garvieae* is the most common in Europe, while *L. petauri* is becoming more prevalent in Spain; *L. formosensis* has only been isolated in Southeast Asia.

In Italy, the situation is different, with *L. garvieae* still predominant in salmonid farms. In recent years, cases of lactococcosis have been reported in various species, including sea bass and gilt-head bream, and the disease shows high mortality rates (>50%), influenced by water temperature. Treatment is complex due to the rapid onset of symptoms and difficulties with antibiotics, which often lead to relapses, thereby complicating disease control efforts.

Effective disease management requires a robust prophylaxis strategy, including stringent biosecurity measures, optimised hygiene practices, and scheduled vaccinations. Although vaccination does not provide a definitive solution, it can be a valuable support in preventing lactococcosis, provided it is well planned and managed. Continuous monitoring of the pathogen prevalence and virulence, combined with the implementation of improved aquaculture practices, can enhance the resilience of fish populations against this emerging disease.