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Reduction of diarrhetic shellfish poisoning (DSP) toxins accumulation in cultured mussels by means of rope clustering and hydrodynamic barriers

Juan Blanco¹, Helena Martín, Carmen Mariño

Centro de Investigacións Mariñas, Xunta de Galicia, Pedras de Corón s/n, Apdo 13, 36620 Vilanova de Arousa. Spain.

Keywords: DSP; diarrhetic shellfish poisoning; Mitigation; Mussel; hydrodynamic barrier; grouping; accumulation

Abstract

Accumulation of marine toxins in the organisms is one of the most important problems of the bivalve aquaculture. Mitigation methods are difficult to implement especially in species, as the mussel *Mytilus galloprovincialis*, which have a relatively low commercial value. For this species, one possible way of decreasing the toxin accumulation is to restrict the availability of toxic cells to the mussels by means of the reduction of the water flow around the perimeter of the culture ropes. We have checked the effectivity to decrease the accumulation of DSP toxins (okadaic acid) in mussels of two ways of obtaining that reduction: surrounding the ropes with a fishing net (1 cm mesh); and grouping the ropes (groups of four). During a four week period –with relatively high concentrations of particulate matter– those two ways were tested and shown to effectively

¹ Corresponding Author: Phone: +34886206364; e-mail: juan.carlos.blanco.perez@xunta.gal

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