The use of the common periwinkle, *Littorina littorea*, to control biofouling in suspended oyster aquaculture

The growth of biofouling organism in suspended oyster aquaculture is an impediment to aquaculture operations. This study looked at the effectiveness of *Littorina littorea*, the common periwinkle, in controlling biofouling and increasing growth rate of oysters in suspended oyster aquaculture on the Damariscotta River located in Lincoln County, Maine, USA. A control and three periwinkle density treatments, 25 (low), 50 (medium), and 100 (high) were evaluated. Oyster bags were suspended for approximately three months from June to September 2016. High periwinkle density was found to increase daily growth rate of oysters by 25%. Biofouling on oysters within the bags appeared to be strongly influenced by periwinkle density treatments. Biofouling on the bags was not strongly influenced by periwinkles. High periwinkle density treatment and flipping of oyster bags resulted in the greatest and most consistent growth rates of oysters. By flipping bags and adding periwinkles, oyster companies could control biofouling while also increasing their profit.

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