

## **The investigation of the seaweed integrated aquaculture in summer**

### **I . Ammonium uptake kinetics of *Codium fragile***

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Seaweeds are reconsidered as the biofilter and production component in the sustainable seaweed integrated aquaculture system (SSIAS) to reduce the environmental impact of nutrient rich effluents in the coastal ecosystem. To make up the system, the selecting of suitable seaweed species is crucial. The major drawback is that all not many species growing in summer. The sustainable aquaculture system has been introduced for solution of the coastal mariculture in high water temperature season. As summer seaweed eradicated, *Codium fragile* has been applied to SSIAS. The ammonium uptake of *Codium fragile* under various levels of available nutrients, light intensity, and temperature was investigated. The maximum ammonium uptake rate of *Codium fragile* was  $0.32 \pm 0.01$  and  $0.50 \pm 0.01$  at 20?. The ammonium uptake rate was significantly higher at 20? as high irradiance than those of other conditions. Therefore, *Codium fragile* could be a suitable candidate of summer SSIAS.

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