

**REPRODUCTIVE CYCLE AND BIOCHEMICAL COMPOSITION  
CHANGES OF PACIFIC OYSTER, *CRASSOSTREA GIGAS*  
(THUNBERG) FROM SUSPENDED CULTURE IN GOSEONG BAY,  
KOREA**

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Pacific oyster, *Crassostrea gigas* is an important cultured bivalve species in Korea especially in Goseong Bay. The important role of natural spat collection has been emphasized for the oyster culture development. Understanding oyster spawning pattern would be valuable not only for biological research but also for commercial purpose. Oysters were collected monthly from the suspended rope culture in Goseong Bay from January to December 2000. Samples were transported to the laboratory for morphology, histology and biochemistry analysis. Shell length was measured and wet tissue weight was determined. Forty-five individuals were used for histological examination. For determining proximate composition of oyster tissues, a known quantity of dry tissues was homogenized in PBS using a ultrasonifier. Protein was estimated with BCA Protein Assay. Carbohydrates were quantified by phenol-sulphuric acid method modified by Taylor (1995). Lipid was analyzed following the method of Marsh and Weinstein (1966).

The results showed that water temperature fluctuated from 4.2oC in February to 30.4oC in July. Shell length of oysters ranged 46.9-166.2 mm with mean value was 83.8 12.4 mm. The ratio of dry weight to wet weight tissues varied from 11.9 to 27.1% with mean value was 18.94.0%. The gametogenesis of oysters started in December and spawning activities was observed from late May to late August with two marked peaks. Temperature was to be a major effect to determine gonad development in oysters from this area. Average percent weight of protein from oyster tissues were 12.5- 41.3%, total lipid ranged between 14.9-35.1% and carbohydrate were 11.0-50.0%. Changes of those biochemical compositions were observed to relate to reproduction cycle of oysters.