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## Effects of water temperature and LED lights on the behavior of rock bream (Oplegnathus fasciatus)

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The water temperature is an important variable in the growth of fish and rapid changes of the water temperature can have a significant impact on the growth and physiological homeostasis of the fish. The study on the use of LED light sources was conducted in many fields of study including fishery. The experiments were conducted for analyzing the behavior of fish on the different temperatures and searching a good LED lights on the growth of fish. The experiment was conducted two times: In the first experiment, one red light (wave length: 622 nm; light power: 811 mW), one green light (wave length: 518 nm; light power: 648 mW) and control were used. Water temperatures from 5 degree to 30 degree were changed. In the second experiment, one green light and one red light and control were used for 1 day. For the experiment, CCTV cameras were used and the fish (target) in the recorded images was tracked by software. For the behavior analysis of the fish, AMD (average moving distance for 1 min) was used for indicator. The mean AMD were respectively 5.3 m, 7.3 m and 3.0 m in the red LED light, green LED light and control condition. The mean AMD for 24 hours were respectively 3.1 m, 3.1 m and 3.3 m in the red LED light, green LED light and control condition respectively.

## Biography

Gyeom Heo has completed her Master's degree from Pukyong National University. She is majoring Fisheries Physics at Pukyong National University.

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