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The cultivation of red seaweed (Rhodophytes, *Kappaphycus* species) in raceway culture system

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Little is known on the performance of seaweed cultivated in land-based facilities. The present study was conducted to determine the performance of *Kappaphycus sp*. cultivated in customized raceway culture system. Two red seaweed species (*K. alvarezii* variety *Brown Tambalang*, *BT* and *K. striatum variety Green Flower*, *GF*) were selected and cultivated using suspended method of seaweed cultivation. Three 40-days trials were conducted in September until December 2014. The raceway tank was equipped with continuous high water flow with the inlet flow-rate of 625 mLs^{-1} and outlet flow-rate of 383 mLs^{-1}, and optimum water parameters comprised of salinity, temperature, dissolved oxygen (DO) level, pH and light intensity ranged from 30.17±0.09ppt to 31.40±0.31ppt, 30.20±0.14° C to 31.49±0.29° C, 5.43±0.09 to 5.46±0.12, 7.80±0.05 to 8.00±0.07 and 5941.72±20.54 lux to 6073.22±10.89 lux, respectively. Based on the findings, red seaweed grew in the customized raceway tank with the average daily growth rate of 2.13±0.17 % day-1 for *K. striatum var*. *GF* and 2.67±0.37 % day-1 for *K. alvarezii var*. *BT*. No fertilizers or enrichments were added during the cultivation period. In conclusion, raceway tank can be successfully used in cultivating *Kappaphycus* sp. These findings are significant to provide a baseline data and facilitate the land-based seaweed farming in the future.

Biography

Wahidatul Husna Zuldin has completed her BSc Molecular Bioscience and Biotechnology from Rochester Institute of Technology, NY, USA at the age of 22 and Masters in Aquaculture from Universiti Malaysia Sabah at the age of 25. She has presented her research in International Conference on Marine Science and Aquaculture in 2013 and 2014. She is also the member of Asian Society of Ichthyologists after presented a paper on seahorses during Asian Fish Biodiversity Conference 2014. Indeed, she is an energetic young researcher who has keen interests in further exploring the world of aquaculture.

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