The investigation of sugar cane waste water quality for rearing Vannemi Shrimp

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Abstract

This study is based on the results of previous studies and the suitable water quality of Western sugar cane wastewater for the culture of some aquatic species, including Vanemei shrimp. The pilot project was started with the support of the Moein Company and the construction of two pond culture with a total area of 1.8 and 1.5 hectares, and then these two ponds were stored with larvae of *Litopenaeus vannamei*. This study continued from January, 2016 until the end of the growing period in December, 2016 and this period, water quality at the input and two pond culture was studied using standard methods.

Based on the results, the amount of oxygen in the optimal range and the amount of BOD_5 was also suitable for aquaculture activities. Also, based on the classification of the Fast for salinity, drainage water was saline water with brackish water (between 3 and 16 g/kg). Also, the measured phosphate level was less than 0.6 ppm, which was higher than the permitted values. The range of nitrate changes recorded in the input drainage was between 5.74 to 16.35 mg/l and in the ponds were 4.86-14.58 mg/l, which was higher in some months than acceptable nitrate values. Desirable nitrite value for vanemei shrimp is less than 1 ppm. According to the results of this study, the nitrite content during the period was no longer exceeded.

Keywords: water quality, rearing, vannemi shrimp, waste water, sugar cane