MASS PRODUCTION OF COPEPOD, Microcyclops varicans Sars AT DIFFERENT STOCKING DENSITY

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ABSTRACT

Microcyclops varicans Sars is one of the Cyclopoida copepod. Experimentation on rearing of M. varicans with different stocking density of it broodstock (bds) were carried on at Chanthaburi Coastal Fisheries Research and Development Center during November 2542 – December 2543. The first experiment was set with 3 level of densities including 30, 60 and 120 bds/L using 3 m³ concrete tanks and fed with Tetrasesmis and rotifer. The results showed that after rearing for 14 days, the average of nauplius production were 146 ± 70.00, 187 ± 40.31 and 146 ± 21.21 indv./L, respectively which no significantly different in statistic (P>0.05). While the average of copepodite - mature stages production were 117 ± 4.95, 210 ± 33.23 and 127 ± 16.97 indv./L with average wet weight of 27 ± 4.24, 39 ± 4.24 and 29 ± 12.73 g./m³, respectively with significantly different in statistic (P<0.05). The result revealed that the density at 60 bds/L gave the highest production of nauplius, copepodite - mature stages and total wet weight. The second experiment was done with 80, 160 and 200 bds/L. After rearing for 14 days, the average of nauplius, copepodite - mature stages and wet weight productions were 116 ± 28.51, 161 ± 31.75 and 233 ± 86.86 indv./L ; 460 ± 63.81, 347 ± 21.70 and 442 ± 164.88 indv./L ; 57 ± 32.33, 51 ± 13.08 and 56 ± 10.15 g./m³ respectively. All parameters have no significantly different in statistic (P>0.05). However, in the experiment of 200 bds/L showed the highest production of nauplius stage. While copepodite – mature stages and total wet weight of production from all treatments were almost the same. Results of both experiments indicate that the optimum density of M. varicans broodstock for mass production in concrete tank should start with at least 80 bds/L. Experiments should be carried on using higher density of the broodstock in order to obtain higher production per area since the water quality in all tanks were found in good condition and suitable for nursing larval fishes.

Keywords: Density, Copepod (Microcyclops varicans Sars), Plankton

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