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The effects of L-Carnitine on the population growth rate and egg ratio of rotifer (*Brachionus plicatilis*) in mass culture

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In this study, L-type marine rotifer *Brachionus plicatilis* were enriched with 10 levels (0, 0.001, 0.01, 0.1, 1, 10, 100, 500, 1000 and 1500 mg L-carnitine per l) of L-carnitine supplements dissolved in marine *Chlorella* spp. culture medium in 1 L mass culture trial for 7 days. The initial rotifer density was 100 ind ml-1. The trials were conducted $1.5x10^6$ cell ml^{-1} at food density, at 25±1 °C under an axenic condition in the laboratory. L-Carnitine enrichment has shown considerable influence on the population growth, reproduction and individual growth of rotifer *Brachionus plicatilis*. The increase of population density was detected in 0.1-100 mg/l^{-1} L-carnitine-treated rotifers but the highest population density ($P<0.05$) was detected 704,50±5,50 ind ml^{-1}. L-carnitine significantly stimulated reproduction of enriched rotifers. The results suggest that L-carnitine could be a positive factor to enhance reproduction and population growth on enriched *Brachionus plicatilis*.

Biography

Sevgi Savas Murtaza Olmez has completed PhD from Egean University. Currently he is working as lecturer at Süleyman Demirel University since 1994. He is also Dean Fisheries Faculty of SDU since 2015.

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