Stocking Density for Nursery Production of Redclaw Crayfish, Cherax quadricarinatus, in a Recirculating System

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Redclaw crayfish, Cherax quadricarinatus, early juveniles were reared at different stocking densities in a closed recirculation system using 12-L plastic containers as rearing tanks. Initial stocking densities were 1.0, 1.5, 2.0, 2.5, and 3.0 per liter (66, 89, 111, 133, and 156 crayfish/m², respectively). Rearing period was 42 days. Each density was tested with five replicates. Shelter (0.112 m²) was added to double the surface area of rearing tanks. Animals were fed ad libitum twice a day with a commercial diet containing 35% crude protein. There were no significant differences (P < 0.05) in length and specific growth rate (SGR) among stocking densities. Final weight and daily weight gain, however, were significantly higher at the density of 66 per m² (1.0 per liter). Total biomass at harvest increased with density. Survival was affected by stocking density from day 28 onward, decreasing with density from 62.7 ± 7.6% obtained at 66 crayfish/m² to 44.85 ± 8.18% at 156 crayfish/m².

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