

A COMPARATIVE STUDY OF THE EFFECTS OF  
SUPPLEMENTARY FEEDING AND ARTIFICIAL SUBSTRATE  
ON THE PRODUCTION OF MILKFISH FINGERLINGS  
IN BRACKISHWATER PONDS

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## ABSTRACT

The growth and survival of milkfish fry in response to supplementary feeding and artificial substrate were evaluated at stocking densities of 75 and 100 fry/m<sup>2</sup> for a period of 56 days from August 21 to October 15, 1982. The study was conducted in eighteen 40m<sup>2</sup> experimental nursery ponds of the University of the Philippines Brackishwater Aquaculture Centre, Leganes, Iloilo. A 3 x 2 factorial experiment in completely randomized design was used and six treatment combinations between level of inputs (no inputs, supplementary feeding or artificial substrate) and stocking density (75 or 100 fry/m<sup>2</sup>) were investigated with three replicates per treatment.

The best fish growth was obtained in Treatment VI (100 fry/m<sup>2</sup> with substrate) with mean final weight and length of 1.59 gm. and 5.36 cm. respectively while Treatment IV (100 fry/m<sup>2</sup> without feeding or substrate) gave the poorest fish growth with mean final weight and length of 0.83 gm. and 4.60 cm. respectively. Differences in mean weight and length among treatments were however, not statistically significant.

Mean percentage survival was significantly higher at a stocking density of 75 fry/m<sup>2</sup> (82.8%) than at 100 fry/m<sup>2</sup> (64.1%) but supplementary feeding or artificial substrate

did not show any statistically significant effect on survival. At either 75 or 100 fry/m<sup>2</sup> stocking density, supplementary feeding gave a numerically higher percentage survival than artificial substrate.

Economic analysis revealed that a stocking density of 75 fry/m<sup>2</sup> without supplementary feeding or artificial substrate was the most profitable treatment with a return on investment of 39.2%. At a stocking density of 100 fry/m<sup>2</sup>, supplementary feeding with rice bran was more profitable than the use of artificial substrate with returns on investment of 22.6% and 9.1% respectively.