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GROWTH, SURVIVAL AND NET YIELD OF MILKFISH *Chanos chanos*, FORSKAL (1775) REARED IN FLOATING NET CAGES AT DIFFERENT STOCKING DENSITIES

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ABSTRACT

HUMILDE, PRIMO M. University of the Philippines in the Visayas. (2000) "Growth, Survival and Net Yield of Milkfish (*Chanos chanos*, Forskal 1775) Reared in Floating Net Cages at Different Stocking Densities".

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This study determined growth, survival and production of milkfish (*Chanos chanos*) reared in floating net cages for 120 days at stocking densities of 12.5, 25, 50 and 100 individuals per cubic meter. Growth was inversely proportional with stocking density but differences were not significant among treatments. Survival on the other hand was almost similar in all the densities tested (99.33-99.83%). Production however, markedly increased with increasing density ($P<0.01$). Although incremental changes in production progressively increased with increasing density, it started declining beyond $50/m^3$ corresponding to the observed marked decrease in growth of fish reared at this density.

The use of sinking pellets while theoretically should allow individuals at the bottom to have access to food because of vertical feed dispersion, seemed to favour only individuals that could manage to stay at the surface during feeding. A combination of floating and sinking pellets could perhaps increase food access and thus improve growth of populations reared at higher densities. Also, the practice of hand feeding may limit feed distribution and it is not very effective especially when it is raining, during hot days or when the sea condition is not good. However, this problem might be addressed by using mechanized feed spreader.

Results indicated that stocking density of milkfish could be further increased to the level when profitability starts to diminish with the declining growth of fish at higher population densities.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PLATES

APPENDICES

CHAPTER 1

INTRODUCTION

Interest in finfish mariculture started only in recent years when the prawn industry collapsed due to disease outbreak and low market price of prawns (Juario, 1991). The growing interest is further influenced by the ban on the conversion of mangrove areas to aquaculture. The availability of artificial feeds provided also the added impetus particularly in high density culture where dependence on allocthonous feed sources is tremendous.

Finfish mariculture has several advantages over pond culture. It can be applied in marine coastal waters, protected coves and bays. Cage farming for instance has the obvious advantage in terms of convenience in site relocation hence, the usual problems encountered in pond culture such as floods, typhoons, water and soil acidity and pollution to name a few, are minimized if not totally precluded. Production in cage farming is also comparatively higher than in pond culture.

In the Philippines, the culture of fish in pens and cages have a long history. The culture of milkfish in floating net cages however is only recent and the practice is not well documented. It has a great potential in increasing total milkfish production with lesser inputs and more importantly, lesser environmental impact when properly regulated. The shift to milkfish cage culture becomes even more significant considering the intensification of milkfish pond culture which apparently curbed further conversion of mangrove areas to aquaculture, but may lead to the pitfalls of the prawn industry which suffered environmental backlash due to unregulated intensification.