

CHAIRPERSON'S INTRODUCTION

S.C. Battaglione

NSW Fisheries

Brackish Water Fish Culture Research Station

Salamander Bay NSW 2301

In extensive aquaculture systems, larvae are stocked at relatively low densities in earthen ponds and feeding is based mainly on the natural food in the pond (Figure 1). Extensive culture of fish, particularly freshwater fish like carp, dates back to the Romans. Extensive culture today is still practised at a semi-subsistence level in underdeveloped countries using methods developed thousands of years ago. John Lake pioneered the practice of extensive culture in Australia, with golden perch and silver perch, at the Inland Fisheries Research Station at Narrandera in the 1960's and 70's.

Extensive culture has been recently adopted for marine larvae in Israel (eg mullet, tilapia, milk fish) the USA (eg striped bass, red drum) and Australia (eg barramundi and Australian bass). Significantly, studies in Australia have shown that species such as barramundi and bass, traditionally reared in intensive systems, can be more productively and economically produced in extensive systems.

During this session we will restrict ourselves to the extensive rearing of 'marine type' larvae, ie those small poorly developed larvae with small yolk and oil reserves. There will be examples of larvae reared in saltwater, brackish water and freshwater. We will look specifically at the factors which determine larval survival and growth in ponds, namely: food reserves, water quality, predation and diseases.

References

- Rimmer, M. and W. Rutledge (1991). Extensive rearing of barramundi larvae. Queensland Department of Primary Industries information series Q191012. 6pp.

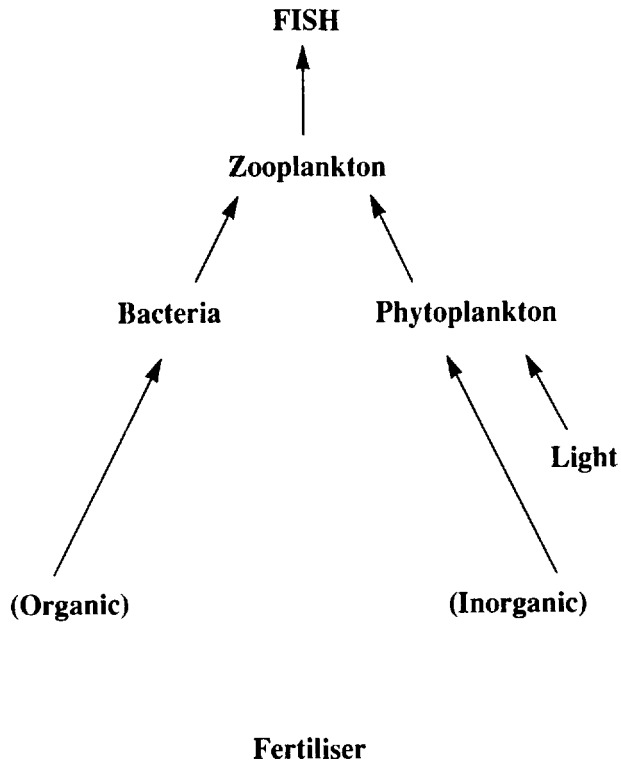


Figure 1. The aim of extensive rearing is to produce planktonic food organisms by fertilising water in a closed system (a pond) to produce blooms of unicellular algae and bacteria which provide food sources for zooplankton, which in turn are food for the fish larvae (from Rimmer and Rutledge 1991).