

**GROWTH RESPONSES OF RED TILAPIA HYBRID
(*Oreochromis mossambicus* x *Oreochromis niloticus*)**

FRY TO FOUR LIVE FEEDS

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1988/89

CPM 381

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Growth responses of red tilapia hybrid (Oreochromis mossambicus x Oreochromis niloticus) fry to four live feeds / Muniandy Mariappen.



7 OCT. 1996

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ACKNOWLEDGEMENT

GROWTH RESPONSES OF RED TILAPIA HYBRID
and (Oreochromis mossambicus x Oreochromis niloticus)
FRY TO FOUR LIVE FEEDS
throughout the entire course of this project. Special
appreciation is also extended to the staff of the Faculty of
Fisheries and Marine Science, Universiti Pertanian Malaysia
and use of facilities; Mr. Perumal a/l Kuppen, Mr. Zakaria
Md. Sah and Mr. Rosli Aslim for their rendered services and
assistance. The research was partly supported by "Penyelidikan
Teras Akuakultur", Fakulti Perikanan dan Sains Samudra,
IRDA (MPK SB).

A Project Report in a partial fulfilment of the
requirements for the Bachelor of Science (Fisheries)

FACULTY OF FISHERIES AND MARINE SCIENCE

UNIVERSITI PERTANIAN MALAYSIA

1988/89

1000382959

ACKNOWLEDGEMENT

The author wishes to express his sincere appreciation and gratitude to his supervisor Dr. Phillip Arumugam for his supervision, gratitude, suggestions and constructive criticisms throughout the entire course of this project. Special appreciation is also extended to the staff of the Faculty of Fisheries and Marine Science, Universiti Pertanian Malaysia and use of facilities: Mr. Perumal a/l Kuppan, Mr. Zakaria Md. Sah and Mr. Rosli Aslim for their rendered services and assistance. The research was partly supported by "Penyelidikan Teras Akuakultura", Fakulti Perikanan dan Sains Samudra, IRDA (MPK SN).

... dan kemudian dikultur dalam tangki terbuka. Kedua-dua Lemna perpusilla dan Spirogyra sp. dihancurkan setiap hari sebagai makanan. Bagi setiap sais, lima replikasi telah dilakukan untuk setiap rawatan (makanan) dan diatur secara blok rawak. Daripada pemerhatian, benih yang diberi makan dengan Artemia salina menunjukkan tumbesaran yang tertinggi berbanding dengan tiga jenis makanan yang lain. Kadar tumbesaran spesifik bagi Artemia salina, Moina micrura, Lemna perpusilla dan Spirogyra sp. adalah 11% - 35%, 11% - 30%, 14 - 26% dan kurang daripada 0% - 25%. Walaupun Artemia salina menunjukkan keputusan tertinggi tetapi Moina micrura adalah dianggap sesuai pada peringkat awal panjang piawai (SL) antara 8 mm hingga 18 mm dan kemudian bercampur dengan Lemna perpusilla pada peringkat akhir supaya mengeluarkan benih yang sihat, kadar kemendirian yang tinggi dan menghasilkan pengeluaran benih yang ekonomik.

ABSTRAK

Pengajian makmal bagi tabiat pemakanan dan kesesuaian makanan untuk rega dan benih boleh menjadikan sebagai maklumat asas ke arah menjayakan pengurusan semaian yang baik. Pengajian ini dikendalikan menggunakan sistem aliran yang berterusan. Tiga saiz ikan iaitu dengan kepanjangan piawai 8 mm, 17-18 mm dan 22-25 mm tilapia merah hybrid (Oreochromis mossambicus x Oreochromis niloticus) digunakan. Empat jenis makanan hidup yang digunakan adalah Artemia salina, Moina micrura, Lemna perpusilla dan Spirogyra sp. Kedua-dua Artemia salina dan Moina micrura dikultur di fakulti manakala Lemna perpusilla dan Spirogyra sp. dikutip dari kolam ikan dan kemudian dikultur dalam tangki terbuka. Kedua-dua Lemna perpusilla dan Spirogyra sp. dihancurkan setiap hari sebagai makanan. Bagi setiap saiz, lima replikasi telah dilakukan untuk setiap rawatan (makanan) dan diatur secara blok rawak. Daripada pemerhatian, benih yang diberi makan dengan Artemia salina menunjukkan tumbesaran yang tertinggi berbanding dengan tiga jenis makanan yang lain. Kadar tumbesaran spesifik bagi Artemia salina, Moina micrura, Lemna perpusilla dan Spirogyra sp. adalah 11% - 35%, 11% - 30%, 1% - 26% dan kurang daripada 0% - 25%. Walaupun Artemia salina menunjukkan keputusan tertinggi tetapi Moina micrura adalah dianggap sesuai pada peringkat awal panjang piawai (SL) antara 8 mm hingga 18 mm dan kemudian bercampur dengan Lemna perpusilla pada peringkat akhir supaya mengeluarkan benih yang sihat, kadar kemandirian yang tinggi dan menghasilkan pengeluaran benih yang ekonomik.

ABSTRACT

Laboratory studies on feeding behavior and diet suitability in larvae and fry can provide fundamental information towards the establishment of proper nursery management. This experiment was carried out in a continuous flow chamber. Three standard length sizes of 8 mm, 17-18 mm and 22-25 mm of red tilapia (Oreochromis mossambicus x Oreochromis niloticus) were used. Four live feeds used were freshly hatched nauplii of Artemia salina, Moina micrura, Lemna perpusilla and Spirogyra sp. Both the Artemia salina nauplii and Moina micrura were cultured in the faculty whereas the Lemna perpusilla and Spirogyra sp. were collected from fish ponds and cultured in the open air tanks. Both of the Lemna perpusilla dan Spirogyra sp. were freshly grounded for daily feedings. For each length size, five replicates for each treatment (feed) were arranged in a randomized block design. From the observation it was found that fry fed with Artemia salina indicated the highest growth response compared to the other three feeds. The specific growth rate ranges for the Artemia salina, Moina micrura, Lemna perpusilla dan Spirogyra sp. were (11% - 35%, 11% - 30%, 1% - 26%, 0% - 25%) respectively. Though Artemia salina registered the highest encouraging result, Moina micrura can be recommended for the 8 mm to 18 mm SL sizes and a combination of Moina micrura plus Lemna perpusilla for the larger sizes. This diet would make fry production of red tilapia hybrid economically viable.