Reproductive biology of female Nile tilapia, Oreochromis niloticus (Linnaeus) reared under monoculture and polyculture with sharptooth catfish (Clarias gariepinus, Burchell).

Author A P Shoko,S M Limbu,H D J Mrosso, Y D Mgaya

Abstract

This study was conducted to assess the reproductive biology and early breeding behaviour of female Oreochromis niloticus reared in monoculture and polyculture with Clarias gariepinus in earthen ponds for 8 months. Results revealed no significant difference in length at first maturity (L50) between females reared in monoculture and polyculture systems. Similarly, no significant differences were detected in absolute fecundity, relative fecundity, gonado-somatic index and condition factor between the two culture systems. The absolute fecundity was more strongly correlated with total length and body weight than with ovary weight. The study concluded that early breeding of O. niloticus in captivity is not affected by the culture systems used. Therefore, O. niloticus production in either system can be improved only through proper pond management techniques.

Key Word Early maturation, Prolific breeding, Tilapia culture systems, Grow-out ponds, Fecundity, Ovary weight