Growth performance, survival, feed utilization and nutrient utilization of African catfish (Clarias gariepinus) larvae co-fed Artemia and a micro-diet containing freshwater atyid shrimp (Caridina nilotica) during weaning

Chepkirui-Boit, V.1, Ngugi, C.C.1, Bowman, J.2, Oyoo-Okoth, E.1,3, Rasowo, J.4, Mugo-Bundi, J.1 and Cherop, L.1

1Department of Fisheries and Aquatic Sciences, Moi University, Eldoret, Kenya
2Department of Wildlife, Oregon State University, Corvallis, OR, USA
3Department of Aquatic Ecology and Ecotoxicology, Amsterdam, The Netherlands
4Department of Biological Sciences, Moi University, Eldoret, Kenya

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Problems of limited number of dry feeds as supplement or replacement of live feeds have led to poor larval nutrition in many species of fish. Therefore, the suitability of co-feeding 8-day-old African catfish (Clarias gariepinus) posthatch larvae using live feed (Artemia salina) and formulated dry diet containing freshwater atyid shrimp (Caridina nilotica) during weaning was investigated. The experiment ended after 21 days of culture and respective groups compared on the basis of growth performance, survival, feed utilization and nutrient utilization. Larvae co-fed using 50% Artemia and 50% formulated dry diet resulted in significantly (P < 0.05) better growth performance, food gain ratio (FGR), protein efficiency ratio (PER) and productive protein values (PPV) than other treatments. The lowest growth performance occurred in larvae weaned using 100% formulated and commercial dry diets. Better survival of over 90% was obtained in larvae weaned using 50% Artemia and 50% dry diet, while abrupt weaning using 100% dry diets resulted in lower survival (<75%). These results support a recommendation of co-feeding C. gariepinus larvae using a formulated dry diet containing C. nilotica and 50% live feed when weaning is performed after 8 days posthatching period.

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