# Differential growth patterns of artificially spawned pre-juvenile *Heterobranchus longifilis* VALENCIENNES, 1840 F1

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## Abstract

*The differential growth patterns of artificially induced Heterobranchus longifilis in northern Nigeria were investigated. Growth is a cardinal point of every successful production system. Oocyte maturation was induced with ovaprim® at 0.5ml/kg of broodfish. Exogenous feeding commenced by three-day old larvae of H. longifilis on live Artemia nauplii (shell free) which were later weaned to an artificial dry diet of 45% crude protein from Durante Superior Fish Concentrate (0.5 mm pellet size) catfish feed. The pellet size was adjusted from 0.7, 1.0 to 1.8 mm, to suit the diameter of the fish's buccal cavity as the fingerlings grew into juveniles. Larval biometry; wet weight to an accuracy of 0.01 mg using a digital Acculab 300-electronic balance, total length, along with the length of the yolk sac were taken under the binocular Olympus microscope. The survival rate from each mating combination was monitored within the first 8 weeks of growth within the hatchery and nursery. Mean values of increase in standard length, weight gain and survival rate were 10.9 mm, 13.9 mg and 77.40 + 1.55(%), respectively. Generally, survival rate was observed to increase with increase in the biometrics of pre-juvenile H. longifilis Fl. The "runs" accounted for 19.67% of the total surviving juveniles (4,871), with a mean total length of 11.5cm, while the shooters were 21.04% with a mean total length of 16.8cm. Heterobranchus longifilis has significantly high survival and growth potentials exhibiting a 'normal' pre-juvenile growth pattern with a ratio of 1:3:1 (runs: averages: shooters) with three distinct growth classes.*