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Title: Production of *Oreochromis niloticus* fry for hormonal sex reversal in relation to water temperature.

Author(s): B.W. Green and D.R. Teichert-Coddington
Department of Fisheries and Allied Aquacultures
Alabama Agricultural Experiment Station
Auburn University, Alabama 36849-5419, USA

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Abstract: Recently hatched tilapia fry 9 to 11 mm total length (TL) are preferred for hormonal sex reversal because they are most likely to be sexually undifferentiated. Thirty-three trials were conducted in Honduras between September 1988 and March 1990 to quantify the effect of water temperature on *Oreochromis niloticus* fry production in earthen ponds for hormonal sex reversal. Two 0.05-ha ponds were simultaneously stocked with brood fish in each trial; generally, one pond was harvested after 17 days, the other after 20 days (range 16 to 21 days). Fry production was evaluated in relation to degree-days from the threshold temperature of 15°C. Harvests averaged 86,000 fry/0.05 ha. A total of 4,897,000 fry were produced, of which 4,363,000 fry were of appropriate size for hormone treatment. No fry production occurred at less than 140 degree-days; fry production increased significantly with increased degree-days above this level. Above 195 degree-days percent of the population retained by a 3.2-mm vexar-mesh grader (too large for androgen treatment) increased significantly with increased degree-days. Fry retained by the grader averaged 14.2-mm TL, while fry not retained averaged 9.5 mm TL. No significant linear relationship between degree-days and number of fry not retained by the grader was observed between 140 to 280 degree-days. However, production appeared to peak at about 210 degree-days.

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