

ICAF 2024

Guidelines for preparation of Extended Abstract

- **Title of paper:** The abstract title is printed in Title Case Capitalization (with major words capitalized and minor words in lower case), with the exception of scientific names which should be upper/lower case and italicized (see example). Scientific names should not be preceded or followed by commas or parentheses or other markings.
- **Author(s):** Use * after the presenting author's name. Type names in upper/lower case.
- **Address and Email:** Type only the presenting author's institution, address and email. Type in regular upper/lower case.
- **Maximum length:** One page
- **Page size:** Standard A4 paper (210mm x 297mm = 8.27" x 11.69") (portrait)
- **Margins:** 2.5 cm margin throughout(left/right/top/bottom)
- **Spacing:** Single spaced
- **Paragraphs:** Paragraphs should be separated by a blank line and should not be indented.
- **Fonts:** New times Roman, 11 pt.
- **Photo, Figures, Tables:** Photo, figures and tables are highly recommended, but not more than two. They should be reduced to the appropriate size for a one page abstract and should be clearly readable at the reduced size. The reduced figures and tables should be included in the abstract

See the Sample in Next Page

Evaluation of Growth and Sex Proportions in Three Strains of Nile tilapia *Oreochromis niloticus* Produced by Two Methods of Sex Control

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Tilapia are one of the most important groups of food fishes and a globally traded commodity. Nile Tilapia (NT) is the most cultured species among tilapias due to its commercially valuable traits. NT contributes to nearly 9% of total inland aquaculture production worldwide. The growing intensification of NT has led to the need for genetic improvement and sex control. Large-scale selective breeding programs such as Genetically Improved Farmed Tilapia (GIFT) have enhanced growth performance. Sex control methods include genetic improvement (YY males), and the use of synthetic hormones (sex reversal). Kentucky State University (KSU) addresses hormone use in NT culture and YY male technology as an alternative by evaluating intraspecific crosses of commercial strains. This study assessed the productivity traits of three genetically enhanced strains of all-male NT produced by two methods of sex control. Objectives included: (1) production of genetically male NT (GMT), (2) growth evaluation of each strain for a 90-day production trial, and (3) assessment of sex proportion amongst strains.

Experimental fish were reared in recirculating aquaculture systems at KSU's Aquaculture Research Center, Frankfort, KY. GMT were produced through intraspecific hybridization of YY males (Fishgen Ltd) and XX females (GIFT, Louisiana Specialty Aquaculture LLC). Two additional strains of sex-reversed tilapia (SRT) produced by a commercial hatchery were obtained. All three strains (SRT-1, SRT2, and GMT) were fed three times per day to satiation during the growth period (Figure 1). Total weight gain (WG), total feed input (TFI), feed conversion ratio (FCR), condition factor (K), and sex proportion were analyzed. Preliminary data obtained during the first six weeks revealed differences in growth rates between SRT-1, SRT-2, and GMT (Figure 2). Total feed input corresponds with growth trends illustrated in Figure 2. FCR results for SRT-1, SRT-2, and GMT were 0.917, 0.948, and 0.92. Condition factor was similar between SRT-1 ($K = 2.374$) and SRT-2 ($K = 2.352$), but lower for GMT (2.099). Sex proportion has not yet been identified. Preliminary results suggest that SRT-1 and SRT-2 may have traits of greater commercial value.



Figure 1. Representative images of three NT strains.

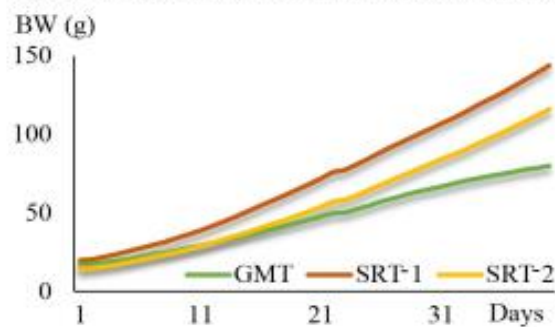


Figure 2. Growth performance is based on collected data (1 – 23 d) and predicted values (24 – 41 d).