UTILIZATION OF MORPHOMETRIC AND MERISTIC CHARACTERS TO IDENTIFY CULTURED TILAPIAS (*Oreochromis spp.*)

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ABSTRACT

Meristic characters (DSC, DFRC, AFRC, CFBC and GRC) and morphometric characters (SL, HL, BD, OD and IOW) were utilized to identify five small-sized, with standard lengths ranging from 55-100 mm., and five big-sized tilapia populations, with standard lengths ranging from 110-195 mm., of forty samples each. Dorsal spine count (DSC) is the least variable while the caudal fin bar count (CFBC) is the most variable meristic character in the tilapia species studied. Analysis of variance (ANOVA) showed that all meristic characters have highly significant differences ($p<0.01$) among the big-sized tilapias; while in the small-sized tilapias all have highly significant differences ($p<0.01$) except in caudal fin bar count which was not significantly different ($p>0.05$). Data on morphometric characters were log-transformed and the four other characters (HL, BD, OD and IOW) were divided by the standard length (SL) to eliminate the effect of size. ANOVA showed that all morphometric characters have highly significant differences ($p<0.01$) in the big-sized group. Likewise, in the small-sized tilapia species, all morphometric characters have highly significant differences ($p<0.01$) except in OD/SL which was only significantly different ($p<0.05$) and IOW/SL which was not significantly different ($p>0.05$). The study also confirmed that tilapia species studied are morphometrically and meristicallv distinct.