

**Table 3.** Growth performance and Production parameters of Nile Tilapia (*O. niloticus*), Common carp (*C. carpio*) and African catfish (*C. gariepinus*) for over a 150-day growth period under varying conditions. (Mean±SE).

Treatments	Init.Ww. (g)	Final Ww. (g)	Init.length (cm)	Final length (cm)	Net Ww. Gain (g/fish)	D. W.G. (g/day)	SGR (%)	Cond. Fact.(K)	Market Prod.(Kg/pond)	T.prod. Kg/pond
<b><i>Control :</i></b>										
<b>Mix. sex Tilapia</b>	19.8 ± 0.69 <sup>a</sup>	82.1±28.51 <sup>d</sup>	10.8 ± 0.74 <sup>a</sup>	16.3 ± 19.33d	62.3 ±7.22d	0.42d	1.19	1.1	32.8d	120.7 <sup>d</sup>
<b>Common carp</b>	20.4 ± 0.66 <sup>a</sup>	362.2±19.27 <sup>d</sup>	11.5 ± 0.57 <sup>a</sup>	20.4 ±15.42d	341.8±15.24d	2.28d	1.40	1.8	72.4d	
<b>Catfish</b>	27.6 ± 0.08 <sup>a</sup>	155.3±16.84 <sup>d</sup>	12.3 ± 0.11 <sup>a</sup>	24.1 ± 16.53d	127.7±23.17c	0.85c	1.17	1.2	15.5c	
<b><i>T1 :</i></b>										
<b>Male Tilapia</b>	21.8 ± 0.57 <sup>a</sup>	205.7±15.35 <sup>a</sup>	11.9 ± 0.65 <sup>a</sup>	28.8 ± 11.17a	183.9 ±10.92a	1.30a	1.78	1.8	82.3a	348.5 <sup>a</sup>
<b>Common carp</b>	21.3 ± 0.44 <sup>a</sup>	1173.6±27.11 <sup>a</sup>	10.6 ± 0.83 <sup>a</sup>	39.8 ±14.44a	1152.3 ±24.55a	7.69a	1.95	2.9	234.7a	
<b>Catfish</b>	27.6 ± 0.08 <sup>a</sup>	315.3±16.84 <sup>b</sup>	12.3 ± 0.12 <sup>a</sup>	27.1 ± 16.53b	287.7±30.17b	1.92b	1.27	1.6	31.5b	
<b><i>T2 :</i></b>										
<b>Mix.sex Tilapia</b>	20.2 ± 0.69 <sup>a</sup>	172.6±11.76 <sup>c</sup>	10.9 ± 0.75 <sup>a</sup>	19.1 ± 16.41c	112.4±11.10c	0.75c	1.27	1.4	53.0c	208.8 <sup>c</sup>
<b>Common carp</b>	21.4 ± 0.56 <sup>a</sup>	779.0±17.22 <sup>c</sup>	11.6 ± 0.88 <sup>a</sup>	27.2 ± 18.60c	757.6 ±16.25c	5.05c	1.23	2.1	155.8c	
<b><i>T3 :</i></b>										
<b>Mix.sex Tilapia</b>	20.9 ± 0.59 <sup>a</sup>	177.4±16.56 <sup>b</sup>	10.7 ± 0.24 <sup>a</sup>	22.6 ± 23.66b	156.5 ±18.16b	1.04b	1.49	1.6	71.0b	301.1 <sup>b</sup>
<b>Common carp</b>	20.7 ± 0.39 <sup>a</sup>	942.8±17.22 <sup>b</sup>	11.2 ± 0.49 <sup>a</sup>	33.4 ±17.02b	922.1±12.28 <sup>b</sup>	6.15b	1.91	2.4	188.6b	
<b>Catfish</b>	26.9 ± 0.11 <sup>a</sup>	415.3±21.74 <sup>a</sup>	11.6 ± 0.04 <sup>a</sup>	33.5 ± 15.23a	388.5±33.62 <sup>a</sup>	2.59a	1.49	1.9	41.5a	

Means in the same column having the same letters were not significantly different ( $P \leq 0.05$ ).

**Table 4.** Mean water quality parameters measured in various treatment ponds (Mean± SE).

Parameters	Control	T1	T2	T3
Water temp.( <sup>0</sup> C)	28.1±0.11 <sup>a</sup>	28.2±0.14 <sup>a</sup>	28.9±0.91 <sup>a</sup>	28.4±0.67 <sup>a</sup>
DO (mg/l)	6.5±0.46 <sup>a</sup>	7.2±0.25 <sup>a</sup>	6.8±0.95 <sup>a</sup>	6.7±0.15 <sup>a</sup>
pH	7.8±0.67 <sup>a</sup>	8.1±1.72 <sup>a</sup>	8.2±0.98 <sup>a</sup>	8.5±1.58 <sup>a</sup>
NO <sub>2</sub> (mg N/l)	0.04±0.72 <sup>c</sup>	0.07±0.38 <sup>a</sup>	0.05±0.46 <sup>b</sup>	0.09±0.75 <sup>a</sup>
NO <sub>3</sub> (mg N/l)	0.15±1.33 <sup>b</sup>	0.17±1.41 <sup>a</sup>	0.18±1.16 <sup>a</sup>	0.19±1.46 <sup>a</sup>
NH <sub>4</sub> (mgN/l)	0.19±0.12 <sup>c</sup>	0.22±0.26 <sup>b</sup>	0.23±0.66 <sup>b</sup>	0.39±0.49 <sup>a</sup>
Total alkalinity (mgCaCO <sub>3</sub> /l)	108±7.51 <sup>c</sup>	244±4.19 <sup>b</sup>	237±5.15 <sup>c</sup>	262±6.99 <sup>a</sup>
Chlorophyll a (µg/l)	23.7±7.29 <sup>c</sup>	52.3±2.72 <sup>a</sup>	33.3±4.59 <sup>b</sup>	41.3±5.38 <sup>b</sup>
Phyt. stand. crops (No.x10 <sup>7</sup> org./m <sup>3</sup> )	129±359 <sup>c</sup>	471±367 <sup>a</sup>	403±366 <sup>b</sup>	338±213 <sup>ab</sup>
Zoopl. Stand. crops (No.x10 <sup>5</sup> org./m <sup>3</sup> )	49±47 <sup>c</sup>	172±68 <sup>a</sup>	115±21 <sup>ab</sup>	149±33 <sup>b</sup>
Net productivity (mg O <sub>2</sub> /m <sup>2</sup> /h)	0.05±1.21 <sup>c</sup>	0.14±2.65 <sup>a</sup>	0.12±1.43 <sup>b</sup>	0.11±0.97 <sup>b</sup>
Gross productivity (mg O <sub>2</sub> /m <sup>2</sup> /h)	0.104±0.56 <sup>c</sup>	0.403±0.98 <sup>ab</sup>	0.315±0.86 <sup>b</sup>	0.463±0.35 <sup>a</sup>

Means in the same column having the same letter were not significantly different (P≤0.05).