

## Growth performance of African catfish *Clarias gariepinus* cultured in biofloc system at high stocking density

<b>Title</b>	Growth performance of African catfish <i>Clarias gariepinus</i> cultured in biofloc system at high stocking density
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<b>Abstract</b>	<p>ABSTRACT This study was aimed to analyze the growth performance of African catfish <i>Clarias gariepinus</i> cultured in the biofloc system at high stocking density. African catfish with an average weight of <math>1.85 \pm 0.09</math> g were cultured in four units of tarpaulin tank at a diameter of 1.72 m and a height of 1.05 m with a volume of <math>\pm 2,000</math> L at the different density of 1,000 fish/m<sup>3</sup>; 1,500 fish/m<sup>3</sup>; 2,000 fish/m<sup>3</sup>; 2,500 fish/m<sup>3</sup>. During rearing period, fish were given the artificial feed with protein contents of 28.75% with the frequency of twice a day, as much as 3% of the body weight. The results showed that different treatment of high stocking density in the biofloc system had a significant effect on the absolute growth rate, lipid retention and energy retention (<math>P &lt; 0.05</math>) but not significant effect on daily growth rate. The results showed that the highest lipid retention and energy retention were found in the group of fish treated at a stocking density of 2,500 fish/m<sup>3</sup> but declining protein retention and growth in fish occurred. The highest absolute growth rate and daily growth rate were shown by treatment with a stocking density of 1,500 fish/m<sup>3</sup>.</p> <p>Keywords: growth, stocking density, biofloc</p> <p>ABSTRAK Penelitian ini bertujuan untuk menganalisis performa pertumbuhan ikan lele dumbo <i>Clarias gariepinus</i> yang dipelihara pada sistem bioflok dengan padat penebaran tinggi. Ikan uji memiliki berat rata-rata <math>1,85 \pm 0,09</math> g yang dipelihara pada kolam terpolin berdiameter 1,72 m dan tinggi 1,05 m dengan volume air <math>\pm 2.000</math> L sebanyak empat unit dengan kepadatan yang berbeda yaitu 1.000 ekor/m<sup>3</sup>, 1.500 ekor/m<sup>3</sup>, 2.000 ekor/m<sup>3</sup>, 2.500 ekor/m<sup>3</sup>. Selama 40 hari masa pemeliharaan, ikan diberi pakan buatan berkadar protein 28,75% dengan frekwensi dua kali sehari, sebanyak 3% dari berat tubuh. Hasil penelitian menunjukkan bahwa perlakuan perbedaan padat penebaran tinggi pada sistem bioflok memberikan pengaruh yang nyata terhadap pertumbuhan mutlak, retensi lemak dan retensi energi (<math>P &lt; 0,05</math>) namun tidak memberikan pengaruh nyata terhadap laju pertumbuhan harian. Hasil penelitian menunjukkan bahwa semakin tinggi padat penebaran terjadinya peningkatan retensi lemak dan retensi energi yaitu pada perlakuan padat penebaran 2.500 ekor/m<sup>3</sup> tetapi terjadi penurunan nilai retensi protein dan pertumbuhan pada ikan. Nilai pertumbuhan mutlak tertinggi ditunjukkan oleh perlakuan dengan padat penebaran 1.500 ekor/m<sup>3</sup>.</p> <p>Kata kunci: pertumbuhan, padat tebar, bioflok</p>
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