Pertumbuhan eceng gondok eichhornia crassipes (mart.) solms. di perairan Situ Agathis, Universitas Indonesia = Growth parameters of water hyacinth eichhornia crassipes (mart.) solms. during 14 days planting in Situ Agathis, Universitas Indonesia

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Abstrak

Situ Agathis merupakan situ yang berada di Universitas Indonesia, Depok. Situ Agathis memiliki tingkat eutrofikasi yang tinggi disebabkan adanya material terlarut seperti nitrogen, fosfor, dan logam berat yang terbawa dari aliran air sistem daerah aliran sungai (DAS) Ciliwung Cisadane. Eceng gondok merupakan tanaman air yang memiliki kemampuan dalam menyerap logam berat dari perairan dan digunakan dalam teknik fitoremediasi. Tujuan dari penelitian ini ialah untuk mengetahui parameter pertumbuhan eceng gondok setelah diletakkan selama 14 hari di Situ Agathis. Penelitian ini menggunakan eceng gondok ukuran besar, sedang, dan kecil masing-masing sebanyak 5 individu. Penelitian dilakukan di Situ Agathis, Universitas Indonesia selama 14 hari. Setelah 14 hari, parameter pertumbuhan eceng gondok dari ketiga ukuran diamati dan dianalisis. Hasil menunjukkan bahwa eceng gondok ukuran besar dan sedang mengalami pertumbuhan terlihat dari hasil laju pertumbuhan relatif sebesar 4,18% dan 2,64%. Pertumbuhan tergambarkan melalui pertambahan berat basah, jumlah daun, panjang daun dan lebar daun. Pertambahan rata-rata jumlah daun pada eceng gondok ukuran besar dan sedang merupakan pertambahan tertinggi dibandingkan parameter lainnya, yaitu pertambahan rata-rata sebesar 29,6 dan 18,4. Sementara, eceng gondok ukuran kecil memiliki hasil laju pertumbuhan relatif negatif yaitu -4,88% karena eceng gondok tidak mengalami pertambahan berat basah, jumlah daun, lebar daun, dan panjang akar.
.....Agathis lake is located at the University of Indonesia, Depok. Agathis Lake has a high level of eutrophication caused by presence of dissolved materials such as nitrogen, phosporous, and heavy metals which carried from the Ciliwung Cisadane watershed system. Water hyacinth is aquatic plant that has the ability to absorb heavy metals from water and is used in phytoremediation techniques. The purpose of this study was to determine the growth parameters of water hyacinth after 14 days planting in Agathis Lake. This study used 5 individuals of large, medium, and small water hyacinth. The research was conducted at Agathis Lake, Universitas Indonesia for 14 days. After 14 days, the growth parameters of water hyacinth of all three size were observed and analyzed. The results show that water hyacinth experienced growth as seen from the results of the relative growth rate, namely 4.18% and 2.64%. Growth is represented by the increase in the average of wet weight, number of leaves, leaf length, and leaf width in large and medium water hyacinth. The increase in the average number of leaves in large and medium water hyacinths was the highest increase compared to other parameters, namely the average increase of 29.6 and 18.4. Meanwhile, small water hyacinth had a relatively negative growth rate, namely -4.88%, because water hyacinth did not increase in wet weight, leaf number, leaf width, and root length.