Title: Agricultural Wastewater Treatment Using Coal, Coconut Fibre, Citronella And Clay As A Biofiltration

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Abstract:

River water quality has decreased due to agriculture wastewater discharge. Statistic data in 2021 showed 22.6 thousand of water pollution cases were reported in Malaysia, which is a critical issue to the aquatic plants and animals. Thus, this paper aims to measure removal efficiency of a natural and economically designed bio-filter. The bio-filter was made of coal, coconut fibre, citronella, and clay to treat agricultural wastewater and compared the water quality before and after filtering. Selected parameters (TSS, BOD, COD, and NH3-N) were assessed in the wastewater samples before and after the operation of a bio-filter on a laboratory scale. The result shows that bio-filter success to improve the agriculture wastewater quality. Consequently, we recommend that this bio-filter can be further tested on a larger scale and potentially used in the agriculture wastewater industries.

Keywords: Wastewater, Bio-filter, Agriculture, Industry, Water quality.

Reference:

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