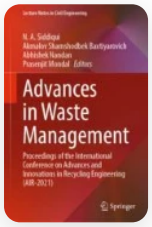
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The Weed *Plantago* Major is an Effective Bioagent in Achieving Rapid Treatment of Sewage in SHEFROL® Bioreactor

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Abstract

The potential of the weedy terrestrial herb *Plantago major* which is variously called "great plantain", "white man's footprint", "way bread", and "broad leaf plantain", has been explored in serving as a bioagent in the treatment of sewage in the recently patented and trademarked Sheet-flow Root Level (SHEFROL®) bioreactors. It was seen that despite being used without the support of soil or gravel, *P. major* was as effective in sewage treatment as several aquatic weeds that have been explored earlier. It was able to remove suspended solids (SS), 5-day biological oxygen demand (BOD_5), chemical oxygen demand

(COD), total Kjeldahl nitrogen (TKN), phosphorus (P), and total dissolved solids (TDS) to the extents of 97.1, 79.5, 74.9, 40.5, 26.7, and 3.1%, respectively. The weed was not only able to survive in SHEFROL® but seemed to thrive, remaining green and vigorous throughout the experiment lasting two months.

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