52

Perceptions and Potential Reuse of the Effluent from Anaerobic Wastewater Treatment Plant (WWTP) Treated Tofu Wastewater

Melany UNTARI[1], Erliza NOOR[1], Widyarani[2], Neni SINTAWARDANI[2], Umi HAMIDAH[2]*

[1] Natural Resources and Environmental Management Study Program, IPB University, Indonesia

[2] Research Unit for Clean Technology, Indonesian Institute of Sciences, Indonesia

Keywords: perception of farmers, potential reuse, anaerobic wastewater treatment plant (WWTP), WWTP effluent

An anaerobic Wastewater Treatment Plant (WWTP) in Giriharja Hamlet, Indonesia processes approximately up to 40 m^3/day of tofu whey from nine tofu industries. The effluent or treated water from WWTP could be used as an alternative water source for agriculture in the area, particularly during the dry season. However, the acceptance of farmers and the willingness to use WWTP effluent are important considerations. Farmer perceptions and the factors that influence them were obtained through interviews and the data analyzed with Likert scale and ordinal logistic regression models. Analysis of physicochemical properties shows that the parameters pH, TDS and DO of WWTP effluent met the criteria for irrigation water according to Indonesian Government Regulation Number 82 of 2001 concerning Water Quality Management and Water Pollution Control. Water quality Class IV can be used to irrigate crops and/or for other uses that require the same water quality for that purpose. Most of the respondents strongly agreed that the treated water still slightly smelled, but they also agreed that it was no longer harmful to the environment. Based on the survey of the potential reuse of WWTP effluent, only 36% farmers as respondents tend to doubt that it contains fertilizer for plants but still 44% of farmers could justify that effluent is reusable for crop irrigation. The analysis shows that younger farmers were more high acceptance to re-use the effluent then the older farmers.

* Correspondence
✉ umi.hamidah1980@gmail.com

Sanitation Value Chain Vol. 5 (1) p.052, 2021
Published by Research Institute for Humanity and Nature
https://doi.org/10.34416/svc.00055