Paweena Sungsri-in 2009: Improvement Slaughterhouse Wastewater of Suphanburi Municipal in Alternated Flooding and Drying Soil and Plant System Using Cattail Plants. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Associate Professor Wallop Arirob, Dr.Agr.Sci. 71 pages.

This slaughterhouse wastewater treatment by alternating 5 days flooding and 2 days drying soil and plant system using cattail (*Typha angustifolia* Linn.) and wastewater from oxidation pond 1 and 2 of slaughterhouse at 12 round were carried out. The results showed that quality of wastewater from oxidation pond 1 and 2 before treatment have BOD were of 199.56 and 78.29 mg/l, respectively. And COD were of 335.44 and 160.91 mg/l, respectively. The removal efficiency of BOD and COD from wastewater of oxidation pond 1 with cattail was of 73.18 and 61.92 percent, respectively. That is higher than removal efficiency of oxidation pond 2 with cattail was of 61.65 and 47.44 percent, respectively.

Cattail plot have removal efficiency higher than soil plot. Then using wastewater from oxidation pond 1 with cattail is better

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