## A survey of nitrogen of wastewater from pig farm in Taiwan

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The purpose of this study was to survey the total nitrogen (TN) concentration of wastewater from pig farm in Taiwan to establish data on farmland irrigated by wastewater. The wastewater sample from six pig farms located in northern, central, and southern Taiwan was surveyed during hot and cool season. The pig farms was divided into three scales according to the raising number, i.e, big scale (> 10,000 heads), middle scale (5,000-10,000 heads) and small scale (< 1,000 heads). The wastewater sample collected from preliminary sedimentation tank (PST), activated sludge tank (AST)and final sedimentation tank (FET)of three-step wastewater treatment system in pig farms for the analysis of total nitrogen (TN). Results revealed that the TN was not significant difference in PST, AST and FET amongst different scale of pig farms. The TN concentration of FET (822  $\pm$  346 mg/L) had43.0  $\pm$  17.0% reduction compared to that in the PST (1439  $\pm$  720 mg/L). The TN concentration of the FET in the southern region was significantly lower than that in the northern and central regions by 18.7%. The TN concentration of PST in the cool season was significant high than hot season by 41.7%. The TN concentration in pig wastewater is an important nutrient for plants. This survey data can provide reference data for the reuse of pig wastewater in fertilization plans.

Key words: Nitrogen, Pig wastewater, Taiwan