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Study of Enhancing pollution removal rate of three-stage wastewater treatment system by aquatic plants-Myriophyllum verticillatum

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In Taiwan, three-stage wastewater treatment system is widely used in farm management to purify livestock wastewater before discharged into the rivers. However, discharged water usually do not fit the standard of Taiwan pollution policy implemented recently, which is caused by improper operation of treatment system, antique equipment or environment change.

For protecting environment and avoiding punishment, planting aquatic plants in three-stage wastewater treatment system to remove excessive nutrients is an inexpensive method which could make up for the shortage of the treatment system and improve the environment.

In this study, Myriophyllum verticillatum was taken as a research subject because it not only grows rapidly but also owns high purify ability and the tolerance of polluted water.The experiments were conducted to study the purify ability of Myriophyllum verticillatum. Various nutrients' concentrations of water were poured into plastic containers with Myriophyllum verticillatum. Recorded the variations of nutrients' concentrations regularly to estimate the purify ability.To get more efficiency of wastewater treatment, physical method would be applied in the experiments to raise the raising the survival rate of Myriophyllum verticillatum in highly polluted water.According to the result, Myriophyllum verticillatum would be planted at appropriate tanks of three-stage wastewater treatment system to reduce the load of treatment system and improve the quality of discharged water.

By these experiments, the pollution removal rate of three-stage wastewater treatment system is expected to enhance.