Singapore Stanford Partnership Programme

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Innovative Biotechnology Maintaining Aquacultural Water Quality

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Eutrophication in marine and freshwater in aquaculture is caused by supply of phosphorus and nitrogen with aquacultural feed and feces. It is accompanied with deterioration of aquacultural water quality. When this water in discharged it is polluting environment. Biofiltration is used for removal of nitrogen from aquacultural water but removal efficiency of phosphorus is low in conventional aquacultural biofilters. Aim of the project is to study the removal of nutrients from aquacultural water using innovative biofilter with iron-reducing bacteria. The research project will include biofiltration experiments with the aquariums as the models of aquacultural ponds and chemical analysis of different forms of phosphate, nitrogen, and iron in water.