Yoav Bashan, J Microb Biochem Technol 2016, 8:2(Suppl)
http://dx.doi.org/10.4172/1948-5948.C1.015

International Conference and Expo on

Water Microbiology & Novel Technologies

July 18-19, 2016 Chicago, USA

Yoav Bashan

The Bashan Institute of Science, USA

Synthetic mutualism between microalgae and plant growth promoting bacteria for tertiary waste water treatment

An unusual combination of microalgae and bacteria was developed and tested for waste water treatment, using agricultural plant growth-promoting bacteria to enhance the growth and nutrient-removing capacity of microalgae. The underlying hypothesis assumes that, by creating an artificial stable association inside polymeric spheres, the bacteria enhance the performance of unicellular microalgae to absorb more contaminants from the waste water. This presentation focuses on our current studies of removing nitrogen and phosphorus from contaminated water. This includes performance of the synthetic mutualism system that combines microalgae with bacteria to clean contaminated water in medium-scale autotrophic and heterotrophic bioreactors, mechanical and physiological interactions between water-treating agents (microalgae and bacteria), natural microbial populations of contaminated water and effect of additives to further enhance the removal of pollutants, all without creating secondary pollution by the treatment.

Biography

Yoav Bashan is the President of The Bashan Institute of Science, Alabama, USA, The Bashan Foundation, Oregon, USA and a Distinguished Professor at CIBNOR in Mexico. He has received his PhD from The Hebrew University of Jerusalem, Israel. He has published 371 scientific works, of which 216 were published in peer-review journals with high impact factors. He serves as an Editor and Editorial Board Member of 15 scientific journals, ad hoc Reviewer of an additional 235 scientific journals in 42 countries and 28 funding agencies. His studies were cited over 15,700 times and his H-index is 66.

bashan@bashanfoundation.org
ybb0001@auburn.edu

Notes: