

6th Global Summit on

AQUACULTURE AND FISHERIES 2017

May 25-26, 2017 Osaka, Japan

Reclamation of salt affected soils and production of microalgae biomass for commercial purposes

Sadiqul Awal

Melbourne Polytechnic, Australia

The issue of the salinization of Australia's inland ground water is a recurring and major environmental problem that is often the result of previous uses of the land for agricultural purposes and the use of certain irrigation practices. Inundation of land by saline water for long periods leads to its percolation into the surrounding soils, resulting in altered soil chemistry. Prolonged inundation inhibits the fixation of free nitrogen and halts mineralization, thus impairing soil fertility within a few years. The elevation of a water table that features increased salinity levels (sometimes approaching or even exceeding that of seawater) means that while the environmental ramifications are potentially massive (and include crop damage), it is also true that such waters are an untapped and largely unexplored aquatic resource. It is true that such inland areas present a wonderful opportunity to farm a variety of fish, molluscs and crustaceans (an opportunity that has thus far been realised on a relatively very small scale), but there is no doubt considerable scope to grow microalgae, which underpin the bottom of the food chain in aquatic systems and have an enormous number of potential uses. Microalgae are potentially ideal candidates for remediation of these salt affected soil and lands. Microalgae can be deployed for bioremediation at sites with highly variable salinities, without significant effects on end-product potential.

Biography

Sadiqul Awal has completed his PhD from Deakin University, Victoria, Australia. He is currently working as a Lecturer at Melbourne Polytechnic, Victoria, Australia. He has published more than 20 papers in reputed journals and has been serving as Reviewer in many journals. His research interest is in aquaculture in inland ground saline water, microalgae, and estuarine environmental management.

sadiqulawal@melbournepolytechnic.edu.au

Notes: