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## Investigation into the potential use of inland saline groundwater for the production of live feeds for commercial aquaculture purposes

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Traditional agricultural methods and practices have rendered over 100 million hectares of land throughout the world, and over 5.7 million hectares in Australia, unsuitable for most forms of agriculture due to elevated salinity levels. Inland saline aquaculture is an adaptive approach to this environmental problem, and represents a potentially lucrative use for salt-affected land, with many economic, social and environmental benefits possible. Perhaps surprisingly, to date there has been relatively very little research conducted into the suitability (or otherwise) of inland saline aquaculture for the production of various species of microalgae and live feeds, which represent a crucial segment of the aquaculture industry. In this study, these potentials were examined. Initially nine different species of marine micro algae from three different divisions, namely Chlorophyta, Bascillariophyta and Chrysophyta, were cultivated using batch culture techniques to examine their growth performance in inland saline ground water (ISGW) with f/2 algae culture media. This study expanded on the live feed species being tested to include *Artemia* (*Artemia salina*), rotifers (*Brachionus plicatilis*) and copepods (*Cyclop ssp.*). While there were significant differences in the performance of all the tested live feed species, two groups of microalgae showed better growth rates than those observed for natural seawater. It is hoped that these results can be used proactively by farmers seeking to diversify their crops to include the aquaculture of finfish in salt-affected areas of Australia and elsewhere.

### 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.

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