

Research Directions

Office of Research Services

Water's Magnetic Personality

Associate Professor Basant Maheshwari, Mr Bruce Simmons and Dr Harsharn Grewal from the School of Natural Sciences are exploring the potential water saving benefits of using magnetically treated water to irrigate vegetable crops.



'Australia is the world's driest continent and water has been recognised as one of its scarcest resources' says Associate Professor Maheshwari. 'Frequent and continuous droughts have become a common feature of the Australian environment. Irrigated agriculture is the dominant water user in the Australian economy, and the horticultural industry consumes a significant proportion of water. The horticultural industry often competes with urban, industrial, environmental and other agricultural users of water. Concern is therefore growing among community groups, researchers and policy makers to use water more efficiently and effectively and examine the potential of new technologies and practices for improving water productivity.

This project will look at an innovative water treatment developed and marketed by the team's research partner Omni Environment Group Pty Ltd. They promote the use of water which has been conditioned by running it through a focussed magnetic field to magnetise it. The magnetically treated water is believed to increase crop yield and decrease water usage when used to irrigate plants. It is expected that magnetic treatment of water allows plants to take up nutrients more effectively, which leads to faster ripening and better quality fruit, vegetables and cereals.

Using soil tests, glasshouse experiments and chemical analysis, the research team will test these claims by: examining changes in the magnetic properties of soil and water due to magnetically treated water usage; measuring changes in plant growth, yield and quality, and; determining just how much water might be saved when magnetically treated water is used on specific vegetable crops.

The results will not only provide the industry partner with independent evidence of the efficacy of magnetically treated water, but has the potential to reduce the water use in the agricultural and horticultural industries, thus ensuring long-term viability for the industry and preserving and protecting Australia's water resources.

Project Title: Irrigation and Water Saving Potential of Magnetic Treated Water in Vegetable Crops

Funding has been set at: \$55,650

July 2007

Contact Details:

b.maheshwari@uws.edu.au

<http://www.uws.edu.au/school/naturalsciences>