



News release

Water worries bury the benefits of soil



Soil science is being overlooked in the rush to save Australia's dwindling water reserves, says a leading group of researchers.

Some of the most promising ways to boost water use efficiency lie at our feet, claims Professor Emeritus Robert E White, former chair of the Australian Society of Soil Science Inc (ASSSI).

"Soil science offers technologies for more efficient irrigation. Australian researchers are uniquely placed to optimise

understandings into the soil-water link," he said.

"For example, irrigation efficiency is greatly improved if it is designed to take account of a soil's capacity to store available water for plants, and its ability to drain excess water.

"Efficiency is also improved if water application is matched to crop demand, which changes with the weather and a crop's growth stage."

Agriculture is Australia's biggest consumer of water, accounting for about 65% of the total water use. Most of this water is used for irrigation.

Prof White explained: "More efficient irrigation enables profitable agriculture to be maintained while making more water available for the environment, and soil science offers useful water-saving boosters."

Using techniques and tools such as Global Positioning Systems, in-ground soil sensors and computer-based Geographic Information Systems, irrigators can make precise maps of changes in soil properties as they occur in a single paddock, orchard block, or over a whole farm.

"Soil surveys and high-resolution soil sensing underpin precision agriculture in Australia's irrigation areas, which account for more than 40% of agricultural production," said Prof White.

Sensors are also being developed to detect when a water front has reached the end of a flood irrigation bay.

"A wireless signal sent to a computer-controlled operating system triggers the opening or closing a gate that controls water flow into the bay," said Prof White. In this way, water application is timed to more closely match crop demand than is possible manually.

“To ensure that essential supplies for irrigation are maintained and the rivers regain their health, water must be managed more efficiently”, he said. “Soil science is a fundamental tool to achieve this.”

The Australian Society of Soil Science Inc works toward the advancement of soil science in the professional, academic and technical fields.

ENDS

Pic caption: Professor Emeritus Robert E White: Soil is part of the water cycle.

Media contact: Mark Imhof, Chairman, Australian Society of Soil Science Inc
Research Scientist - Project Leader (Soil and Land Assessment & Victorian Resources Online)
Future Farming Systems Research Division, Department of Primary Industries
621 Sneydes Road, Werribee 3030

Phone 03 9742 8781 (mobile: 0409 024 980)
Fax 03 9742 8700
Email: mark.imhof@dpi.vic.gov.au