Significant savings using variable rate irrigation: water use reduced by up to 30 per cent

New research from the Tasmanian Institute of Agriculture (TIA) has found that using variable rate irrigation (VRI) could reduce water use by as much as 30 per cent, creating significant savings for farmers.

The latest findings from the Smarter Irrigation for Profit project will be shared with participants at the Water for Profit Statewide Event at Longford on 18 May.

The project, led by TIA, has established five pivot-irrigated pasture sites on dairy farms in North and North-West Tasmania and is using sensor technology to collect data on power usage, water use, soil moisture and weather.

Research and Development Team Leader at the TIA Dairy Centre and Chief Investigator on the project, Dr James Hills, says results from the first year of the project show that VRI has the potential to significantly impact productivity.

"By installing a VRI on our trial site at Montana we saw a 29 per cent reduction in water use. On a pivot of 55Ha this could potentially save up to 70ML over the irrigation season that could be used elsewhere on the farm to increase productivity," Dr Hills said.

"For this particular site this translates to around a $5,300 saving in energy and water and some of our other sites have shown even higher potential savings of up to nearly $12,000 per year.

"Producing a map that adequately explains the variability under your irrigated area is really important and the maps used to control the variable rate need to be changed as the season progresses. Typically we have found that variability reduces as the season progresses."

The project has also shown that effective irrigation scheduling can lead to significant increases in productivity.

"Our monitoring on one farm has found that improving scheduling can increase pasture production by more than 20kg DM/ha/day, which equates to 1.8t DM/ha over the key irrigation months," Dr Hills said.

"Using this information, the farmer has now made adjustments to the irrigation schedule for this season and pasture growth rates are averaging about 60kg DM/ha/d compared with only 40kgDM/ha/d at the equivalent time last season."
“It is fantastic that we can already see our research is having a real and positive impact.”

The Smarter Irrigation for Profit project is supported by funding from the Federal Government’s Department of Agriculture and Water Resources as part of its Rural Research and Development for Profit program, Dairy Australia and TIA.

Water for Profit is a collaborative program between the Department of Primary Industries, Parks, Water and Environment (DPIPWE), the Tasmanian Institute of Agriculture (TIA), and the Tasmanian Farmers and Graziers Association (TFGA).

Dr Hills will present the latest research findings as part of the Water for Profit Statewide Event on Thursday, 18 May 2017, 8.30am-2pm at the Riverlands Centre in Longford.

This event is free and open to everyone. To register visit www.utas.edu.au/tia/water-for-profit or call (03) 6226 6385.

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