

IRRIGATION IN NEW ZEALAND – AN EVOLVING INDUSTRY

Andrew Curtis

Water Strategies Ltd, Christchurch

Email: andrew@waterstrategies.co.nz

Technology has been the biggest and most exciting change in the irrigation sector. Real-time monitoring is now a given for all water takes. While this provides information to the regulator for compliance, its main benefit has been for improved irrigation performance. An array of sensor data can be telemetered alongside the water meter data in real-time.

Recent programmes in Canterbury and Hawke’s Bay have shown irrigation decision-making technology uptake is now over 70%. However, there is the growing issue of technology rejection - too many are selling sensors as opposed to providing irrigators with the right option and on-going support.

Within 5 years technology will take over the human decision-making. Variable rate irrigation systems for precision application are now commonplace, and autonomous irrigation systems informed by artificial intelligence and remote sensing are not far away. The rapid pace of technology change means regulation needs to focus on robust decision-making not compelling the type of monitoring system to be used.

There has been over \$2 billion invested in upgrading to modern spray and drip systems in the last decade. Despite this New Zealand’s norwesterly weather pattern can significantly impact on efficiency - spray applications are blown off target changing the intended distribution pattern. The use of fertigation in New Zealand is still limited. We have made mistakes over the past decade with its operation and the lack of a bulk liquid fertiliser supplier has also created challenges. The potential nitrogen loss reductions from fertigation look to be significant and its use needs to be better understood.

There has been massive change with scheme infrastructure over the last decade with over \$1 billion spent in modernisation. Scheme amalgamation is the next step. A handful of super schemes will soon manage over 50% of New Zealand’s irrigation.

The introduction of audited Farm Environment Plans for the adoption of Good Farming Practice are starting to make a difference. While this is a step in the right direction it will not be enough in some catchments. Catchment solutions such as land retirement or infrastructure will be needed. However, we need to work through how we fund such solutions so that everyone who benefits contributes. It has been an uphill battle getting the good word out there about the significant changes and the world-leading nature of the New Zealand irrigation sector. More farmers need to ‘put their head above the parapet’ and tell their story of change. Industry organisations can only do so much as it is authenticity that is required with the wider public.

Editor’s Note: An extended manuscript has not been submitted for this presentation.