Irrigation Automation – Controlling the flow

# Scoring

Complexity (2 out of 3)

Price (2 out of 3)

Scale (2 out of 3)

Water management is key to sustainability, especially on a dry continent like Australia. From crop genetics to efficient flow systems, we are constantly striving to find new ways of saving water.

Irrigation is an absolute necessity for growing and cropping regions with low rainfall. However, if we aren’t careful, irrigation systems can be a major cause of water wastage, potentially damaging long-term sustainability on farm. Irrigation automation is one way that we can address this issue.

# How

There are many different types of irrigation automation, from simple timer-based pneumatic lock systems, through to supervisory control and data acquisition (SCADA) protocols.

Weatherproof sensors are installed at certain areas of your irrigation system. Usually these are set up on pumps, water pipes, dams or even a soil moisture monitor.

These sensors relay information back to a field device, a data transfer hub. This device then transfers information back to a digital service hub, which is usually housed in the operations centre of the farm, and is connected to the internet.

This information is then uploaded to the control software for the automated irrigation system.

Using control software, you can remotely monitor everything that is happening on your farm – and you can also relay information or tasks back to your irrigation equipment. You can easily turn a pump on or off from your PC or phone with the press of a button.

With irrigation automation, you can remotely control any aspect of irrigation including pivots, sprinklers and drip, flood and also controlling diesel and electric motors and more.

# Why

Irrigation in Australia is a vital part of farming and to adapt to issues of climate change and extreme water shortage, farmers are looking for continued ways to not only save water but also save money.

It is absolutely imperative that Australian farmers look after their most precious natural resource – water. Even slight inefficiencies in irrigation can turn into thousands of litres of wasted water.

Automation takes the guesswork out of irrigation. It ensures that your crops get the water they

need, when they need it, without human error or intervention.

It reduces labour and the need to physically be on location to observe irrigation cycles. It can also reduce water runoff, making sure that nutrients which are meant for your plants do not end up washed away.

Automation complements the fine level of control possible with modern irrigation systems by saving time and energy this helps you to achieve maximum productivity from the water you apply. Combined with monitoring, irrigation automation contributes to the profitability and sustainability of any farming operation.

# Benefits

## Reduced labour

* Workers don’t need to manually look after irrigation cycles.

## Accuracy

* Automation removes human error from the equation.

## Cost effective

* Saves money in the long term by reducing water waste.

# Getting started

1. Obtain irrigation automation technology and software from reputable suppliers.
2. Install the sensors as directed.
3. Set up digital software and monitor as needed.

# More Info

For more information on how you can deploy this technology on farm, give us a call on 136 186 or visit agriculture.vic.gov.au.

Last updated: December 2022