

Automation of furrow irrigation

Information Sheet #3: Denis Pozzebon

Site details

- Location: Sheepstation Creek Road, Airville
- Water source: Lower Burdekin Water channel, bores, recycling
- Two recycling pits
- Eight irrigation sets automated, covering approximately 27 hectares

Infrastructure installed

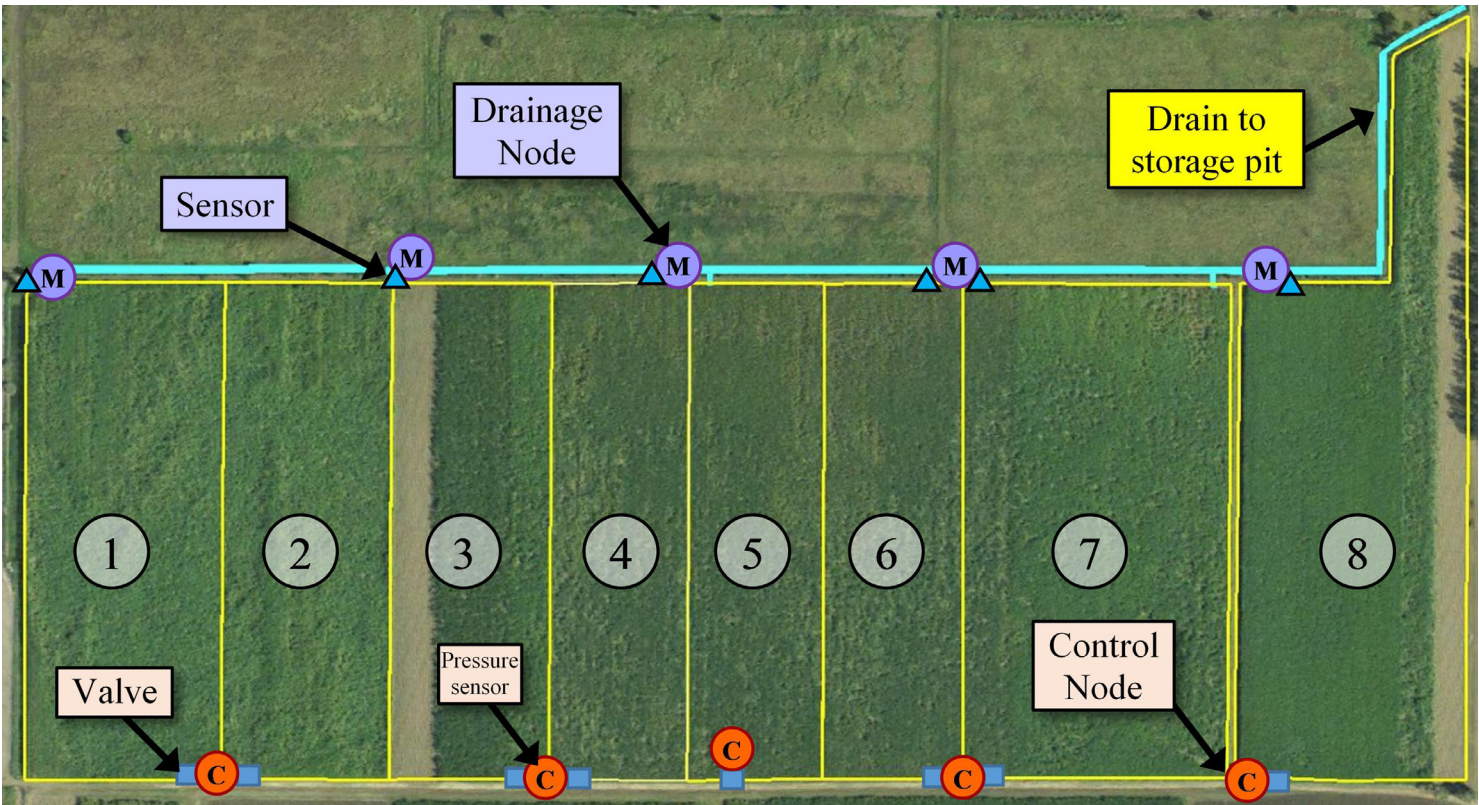
- 1 pump controller, controlling 2 pumps
- 5 actuator control radios, one per cylinder
- 8 actuators and brackets
- 1 pressure transducer
- 5 drainage detection (end of field) radios
- 6 drain sensors

System costs (approximate)

| | |
|-----------------------------------|-------------|
| Area automated | 27 hectares |
| Total cost | \$59,700 |
| Cost per hectare | \$2,211 |
| | |
| Base station, computer & software | \$7,700 |
| Pump controller & installation | \$3,500 |
| Pressure transducer | \$800 |
| Water meter ¹ | N/A |
| Actuator control radios x 5 | \$15,000 |
| Actuators x 8 | \$4,000 |
| Actuator brackets & fitting x 8 | \$3,200 |
| End of field radios x 5 | \$15,000 |
| Advance sensors x 6 | \$3,000 |
| Advance sensor installation | \$2,500 |
| System commissioning ² | \$5,000 |

(1) Water meter not required

(2) System commission costs cover installation of base station and field radios and checking that all are working correctly.



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Information Sheet #3: Denis Pozzebon (continued)

Notes

This farm is representative of a typical Delta farm. Water is supplied from a number of sources – the Lower Burdekin Water channel, bores and recycle pits. There are several pumps and the underground pipeline is completely interconnected, meaning water can be moved around the whole farm.

The whole farm area is around 118 hectares, of this approximately 27 hectares has been automated. If he wants to, Denis can continue to automate blocks in the future by adding more control nodes and actuators.

The pressure sensor located inside one of the cylinders, monitors the behaviour of the entire connected system (both automated and manual). The system can be set to SMS Denis or automatically stop the pump if the level in the cylinder rises too high.

The runoff water is captured in the recycling pits and sensors to monitor the progress of the irrigation have been installed in the drains that empty into the recycling pit. The drainage sensors monitor the water level in the drain and Denis has adjusted the position of this sensor after observing the response of the sensor to the first irrigation. Denis knows that when the water reaches a certain level on the sensor, it means most of the rows are through and the set can be changed over.

Denis is still gaining confidence with the system and currently prefers to change sets over himself, rather than let the automation automatically switch from one set to the next. However, the system is still saving him time by letting him remotely monitor how the irrigation is progressing (via the drain sensors) and by allowing him to remotely change the sets over.



For more information

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