

Other people are on social media - I'm on FieldNET™

At one of Australia's largest potato-growing operations, variable rate irrigation has been a game-changer.



Jaco Pauer, Farm Operations Manager

Parilla Premium Potatoes, in the Mallee region, near Adelaide, produces around 100,000 tonnes of fresh spuds each year, plus another 70,000 tonnes of processed potatoes, and perhaps 50 tonnes each of carrot and onions. All that - plus the 20,000 sheep and the 15,000 hectares of dryland cropping - is enabled by precise, careful use of water.

"Water is a valuable resource," says Jaco Pauer, Farm Operations Manager. "We have a fixed water license and the allocation is full. We can't buy more water in our area. Water isn't something we muck around with."

ZIMMATIC™

Water savings of up to 35%

For the past 12 years, Parilla has been replacing its old pivot irrigators with Zimmatic™ Precision VRI irrigators and the results have been impressive. Pauer says Precision VRI generates water savings of 28% to 35%, depending on the exact crop and location. This, he adds, effectively means the business can grow around 30% more produce on its site using the same fixed water allocation.

"About 90% of our pivots are now converted now to variable rate," says Pauer. "We do an EM38 mapping of the soil and combine that with elevation data to create an irrigation map. We classify soil into six types from sandiest to heaviest. We adjust our irrigation based on drone technology and NDVI to spot any stressed plants."

By bringing all that data together, the Parilla team sets the Precision VRI irrigators to deliver precisely the right amount of water to each spot along the pivot. The farm not only uses less water, but also less diesel and fertiliser.

"The variable rate irrigation has been a gamechanger."



"The variable rate irrigation has been a gamechanger. Not only can we manage the different soil types, but we can manage different varieties," Pauer says. "That allows us to plant three or four varieties on any pivot with different applications of water for each one."

The first pivot paid for itself after a single crop

Parilla's flagship potato is the low-carbohydrate Spud Lite. When Spud Lite potatoes have the best-quality skin finish, they sell for a premium price to the supermarkets. To achieve that perfect skin, the potato must get exactly the right amount of water.

Traditional pivots deliver water uniformly across their length, which meant spuds growing in dips would receive too much water, resulting in a section of lower-value product. With Zimmatic Precision VRI, hollows can be accounted for with lower water delivery, resulting in a higher rate of blemish-free potatoes – and higher prices for the perfect skin finish.

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"We saw the benefits from the very first variable rate irrigator," Pauer says. "It wasn't cheap, and we budgeted on a five-year payback. But the Precision VRI paid for itself with the first crop. We now have around 70 Precision VRI pivots, and we can look at FieldNET and see a summary of pivots, with pressure for each one. This lets us quickly work out if the pressure isn't right on a pivot and send someone out to take a look."



Embracing technology has led to massive growth for Parilla

FieldNET lets Pauer check on Precision VRI pivots, and start them, anytime and from anywhere. He takes full advantage of that flexibility to keep an eye on operations even when he's supposed to be taking some time off.

"Other people are on social media - I'm on FieldNET. I'm scrolling through my pivots, seeing which ones aren't working and keeping an eye on them," he says. "The guys will say, 'Stop calling us, you're on holiday!'"

Pauer adds that Parilla is already trialling the Lindsay weather stations, and he's hopeful that FieldNET will soon give him even more information at a glance: "It's my dream to have everything in one dashboard, including weather information and predictions, soil moisture probe data and an advisor that will give you advice on what to do the next day. You'll always need to get your boots muddy and be in the crops, but I really enjoy the techy side of irrigation."

Although Pauer is passionate about irrigation, he says the biggest credit for the farm's success goes to Mark Pye, of Pye Group, which owns Parilla Premium Potatoes. The Pye family gave Pauer a chance when he arrived from South Africa 14 years ago, "and I'm still here, so that tells you something!"



At that time, Parilla had just 16 traditional pivots, and now it has a total of around 90, which shows how dramatically the operation has grown. It's also home to a 1.5 hectare packing facility, the biggest in the Southern Hemisphere, which uses water recycling to make the most of every precious drop. That kind of innovation has helped Pye Group succeed even in a hard-to-farm location like the Mallee.

"Mark Pye is always willing to take on new technology if he can see the numbers are right," Pauer adds. "When it comes to innovation, if you fall behind it's a lot of money to catch up. But if you're leading, it doesn't take much to stay at the forefront."



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Mark Pye, Pye Group