Imagine 25,000 acres (10,117 ha) of carrots, onions and potatoes wilting in scorching 113-degree (45 C) heat. Mark Pye, managing director, Parilla Premium Potatoes, doesn’t take that risk at his operation in Mallee, Australia.

He’s found that Zimmatic’s high-speed motor is the best way to irrigate his carrot crop because the first six weeks of germination is critical. A seven-tower pivot with a 43 RPM motor can complete a circle in under 13 hours, compared to more than 16 hours for a competitive system with a 34 RPM motor, which equals a 27 percent savings.

Pye is using an 86 RPM motor running at 50 hertz which gives the motor a 71 RPM speed for even greater savings.

The high rate of speed helps resist the effects of sizzling temperatures and wind drift. “Center pivot irrigation offers a better distribution reliability, a clear harvesting path and is not affected by wind. Quality and yield are excellent compared to other irrigation methods,” Pye said.

Because of the sandy soil in his area, Pye uses barley as a cover crop to protect the carrots from wind drift. The barley seed is planted on the carrot beds before the carrots are planted. After the carrots are up and the barley is 2-3 inches (51-76 mm) high, the cover crop is sprayed out.

It typically takes four hours per half pivot with a VFD (variable frequency drive) pump over 65 acres (26 ha). One hundred and twenty acres (49 ha) are covered in 16 hours on a 95-degree (35 C) day.

VFDs are important in the extreme weather conditions in midsummer, and take the wear and tear out of the driveline by ramping up and down and allowing higher hertz to be used.

“I haven’t lost any crops due to pivot downtime, and I’d tell other growers thinking about irrigating carrots with pivots to give it a go.”

– Mark Pye
The soil type in this area is sand over clay and limestone, with an average annual rainfall of 12 inches (30.5 cm). Temperatures can reach up to 113 degrees (45 C) in summer with low humidity. Evapotranspiration rates can get as high as .55-.62 inches (14-16 mm) per day.
Pye moved from New Zealand in 1990 to grow potatoes for processing. While in New Zealand, he worked on his “market gardening technique” during holidays from school, and at age 18 he leased 30 acres (12 ha) of land from his family to grow Japanese pumpkins for export to Japan. This gave him the capital to buy into dairy cattle, which he sold to fund Parilla Premium Potatoes.
Pye utilizes Online Control, easy-to-use computer software from Zimmatic, to manage 62 pivots that reduce labor costs and vehicle breakdowns, and help identify system failures to lessen the risk of crop damage in extreme weather conditions.

“Center pivot irrigation offers a better distribution reliability, a clear harvesting path and is not affected by wind. Quality and yield are excellent compared to other irrigation methods.”
– Mark Pye

For more information about Zimmatic and Lindsay irrigation solutions, visit www.zimmatic.com or talk to your Lindsay dealer.

SOURCE: Mark Pye and Lindsay.
©2011 Lindsay. All rights reserved. Zimmatic, GrowSmart, Greenfield and Watertronics are trademarks or registered trademarks of the Lindsay Corporation. All product names are trademarks or registered trademarks of their respective companies.

For more information, call toll-free 1-800-829-5300 or visit www.zimmatic.com