

**Farmer: Matthew Parker**  
**Region: Victoria**  
**Machine: Rogator 1286**

### **Technology shift boosts farm productivity**

It was little more than a decade ago that North West Victorian farmer Matthew Parker was in a ROPS-frame tractor towing a Jetstream boom sprayer. "It's hard to think of those days now," he said, "but it reminds you of the terrible times copping the spray drift in the face, smelling like a container of 2,4 D or enduring headaches while transferring Treflan to the spray tank.

Fast forward to today where Matthew sits in an air-conditioned and chemical spray-protected cab, watching proceedings while his "automatic" self-propelled Croplands RoGator boom sprayer cruises around the paddock, day or night. Matthew and his brother Sam, who crop a 6500ha enterprise at Tutye, 85km east of Ouyen in Victoria's Mallee country, are among a growing band of farmers switching to SP sprayers and relevant precision farming technology to push productivity parameters. The combination of sprayer and technology also is a potent force in reducing inputs costs while enhancing the ability to lift crop yields. It's the reason why Croplands and Topcon are committed to supporting the Australian ag industry from the ground up.

The win-win scenario is obvious to Matthew and Sam who started on the technology road six years ago with thoughts of getting spraying programmes completed quickly, particularly during small windows of opportunity after summer rain. Out went the tractor-drawn sprayer in favour of a Hino truck with a 3000L Croplands tank on the tray, towing a Jen-Ell boom sprayer, boasting an 80 foot cable suspended boom. The brothers then progressed to a MAN truck, tweaking technology a little further with an integrated mounted 5000L tank and a 100ft boom. And, as notification of their intent to follow technology, they bought a then KEE X10 spray controller, to monitor the spraying system, complete with visual guidance. The move, according to Matthew, practically quadrupled spraying opportunities as it introduced them to night spraying and a wider spraying window. "Before the X10 we were lucky to get one tank of spray out in the morning as we juggled between high temperature and relative humidity," Matthew said. "And the rest of the day was dictated by the wind and delta T."

After 18 months, the brothers bought a used 1264 RoGator with only 300 hours on the clock and they matched that with a TopCon X15 controller with a HP signal that provided them with sub 10cm accuracy. But with two brothers and a big spraying programme, it soon became evident that two RoGators could do an ever better job on the farm, so a 1274 RoGator was added to the farm inventory complete with a TopCon X20 controller that provided auto guidance, auto boom shutoff, auto boom level, automatic rate control and the ability to interface with Topcon's MAPLINK program, which uses coloured maps to control the chemical rate. The X20 also automatically logs the application data, maps and details of each job enabling recording of the precision application of seed, fertiliser and chemicals.

Topcon also has developed a simple calculator which demonstrates the potential savings and increased revenue possibilities of using variable rate control. "We've had great support from both Croplands and Topcon who have worked closely with us to fine tune our system," Matthew said. "It certainly has been a great help to us in interfacing software and hardware with the RoGator spraying system."

Last year, the brothers traded the 1264 on Cropland's latest Rogator, the 1286C, also equipped with a Topcon X20 controller. This is the beast that regularly reminds Matthew there is life after a ROPS-frame tractor and trailed sprayer. It boasts a front-mounted 8.8L Caterpillar C9 electronically-controlled engine with 232kW engine power rising to 251kW with an eight per cent power bulge. The power bulge takes effect immediately the machine drops below rated revs, and with direct plumbing from the hydrostat to the wheel motors, power transfer is maintained without surging, leading to longer wear life of the wheel motors.

The Sampo radial piston wheel motors are directly mounted to all four corners offering full-time four-wheel drive with the Sauer Danfoss hydrostat transmission driving the wheel motors in an X pattern. This ensures that if one wheel breaks traction, at least two are still driving, which Matthew says is a great innovation on hilly country when grunt and traction are needed.

The six-speed range transmission also allows multiple on-the-go gear selection to match operating speed. "It gives us heaps of flexibility on our soil types and hilly country," Matthew said. "And because you know you've got the power to get through awkward spots, and the boom is stable and the chemical is hitting the target, it all adds to less stress. "Sometimes you forget how good this technology is, especially sitting in a comfortable cab and watching it all happen, you can sometimes take it all for granted. "The RoGators are super machines because they are very reliable, the boom is not too heavy, plumbing is simple and basically it's a no-fuss operation. "When you combine it with the Topcon controller, it's a package we know is good for our bottom line. "The RoGators, equipped with the Tocon gear, already have contributed to enough cost efficiencies to be well on the way to paying for themselves."

