

## Autonomous tractor 12 months on

The 2015 Tulloona Conservation Farming Group Field Day included a working demonstration of Australia's first driverless Tractor. At this year's field day growers discussed how the tractor had performed over the last 12 months.

Glenn Coughran, manager at Beefwood farms explained that they were really happy with their experiences over the last year. The tractor has been used to spray over 5,000ha with a 24m weed seeker and covered a further 5,000ha with the TPOS FlaTrac tram track renovation.

The intention is to use the tractor for the more tedious tasks that require little operator input. As some of the runs are up to 5km staff at Beefwood were more than happy to let the autonomous tractor take care of the tram track renovating and fallow spraying using the weed seeker. Reducing the labour requirements for these tasks has increased the efficiency of the staff and improved the timeliness of operations, something which is critical in the effective management of problem weeds.

Glenn has noticed that the autonomous tractor is smoother and that there is less movement in the boom. This is largely because the tractor is programmed to maintain a steady speed and to corner smoothly at approximately 6km/hr.

When using the autonomous tractor, it is only necessary to enter the field data once for each implement, and set the acceleration and deceleration most suitable to the specific operation. The acceleration with the tram track renovator is much faster than set for the weed seeker.

There have been no incidents where the tractor hit anything, which isn't surprising given that it is fitted with a front mounted radar. However, if for example a kangaroo was to jump in front of the boom, and not the tractor, it could be hit. Probotiq are working on an alternate system which utilises a laser rather than a radar system. This is likely to be more flexible and potentially remove the probability of the boom hitting anything in the field that has not been mapped on the inner contour. Glenn is looking forward to seeing this new technology in action.

There have been a number of adjustments to the software over the last 12 months, and now it is possible to purchase an updated system which plugs directly into a Fendt tractor. The team at Probotiq and Beefwood are working together to enhance the system for Australian needs. In the not too distant future the technology will be available for a number of different tractor brands with a number of additional features.

### What is the future of the driverless tractor at Beefwood?

Glenn Coughran is happy with the outcomes to date and expects to see more investment in this technology in the near future.

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