The right SPREAD

Words by: **Anne Lee**

Having data and information at their fingertips is enabling large-scale Canterbury dairy farming and cropping business Pye Group to drive efficiencies and improve productivity all while making compliance a lot more certain and easy to prove.

Tony Gould is the operations manager for the business owned by Leighton and Michelle Pye.

It's a significant enterprise totalling 4700 hectares in South and Mid-Canterbury that includes 10 dairy farms milking 10,000 cows, rearing 2000 replacements with cropping operations that produce 20,000 tonnes of carrots, 13,500 potatoes and 5000t of grain along with winter feed crops for cows.

Being able to accurately and efficiently get the right inputs on to the right paddocks at the right time and then record the huge range of activities that can take place on each paddock across the operation has created a step change in efficiency and made life a whole lot simpler, Tony says.

About five years ago the business took over its fertiliser applications buying the first of what soon became two fertiliser spreaders along with the GPS-based computer system capable of variable-rate application.

"We used to have each farm manager responsible for phoning up Ravensdown and making their orders, organising the transport and spreading and we found there was just a lot of unnecessary work in that as well as the potential for a lot of inefficiencies and expense.

"We had paper maps with paddocks highlighted and there were the inevitable mistakes."

Tony says it wouldn't be unusual for one truck to be picking up one farm's 2.5 tonne load when it had twice that capacity only to have to return after it was spread to pick up another two-tonne load for the next farm right next door.

"Now Leighton and the fert rep or agronomist get together and plan out the coming season and that information is loaded into HawkEye – it's done for each farm and crop.

"Once it's in there it's locked and loaded. Farm managers can access it and when they order their fert they can't go above what's already programmed in."

HawkEye is Ravensdown's map-based software that enables farmers to link and record fertiliser orders and applications with farm maps as well as other paddock information.

Now they can order the fertiliser off the plan online through HawkEye, indicating which paddocks.

"And that's the last the farm manager has to worry about it – no phoning the transport company or getting the spreader organised.

"They can get on with the business of growing grass and producing milk".

Pye Group is set up as the transport and spreader so that order automatically comes through.

Tony says the group also built its own four-bay bulk store at Rangitata and a smaller one for its four farms in Mid-Canterbury.

"The spreader turns up at the bulk store, it's loaded up to the brim because the farms are using the same fertiliser at the same time – it may just be different rates and different areas.

"So instead of the truck coming and

Left: Tony Gould - fertiliser data is easily accessible and linked to farm maps electronically.
Right: HawkEye has simplified ordering and recording making analysis for farm management easier.
Below: Spreading technology uses GPS and allows variable rate applications and eliminates mistakes.

going from the store for each farm it can just go from farm to farm.

"If it gets to a paddock and for some reason can't spread it straight away it's no problem, it could go next door and come back again later.

"We can be more reactive rather than those kinds of situations being a huge problem that end up wasting time, causing hassles or wasting fertiliser because it has to be off loaded somewhere."

The on-board freight management system ICOS records how many hectares and how many kilograms of fertiliser was spread where. The information from the fertiliser spreader's computer goes back to Ravensdown and populates HawkEye recording the application as completed.
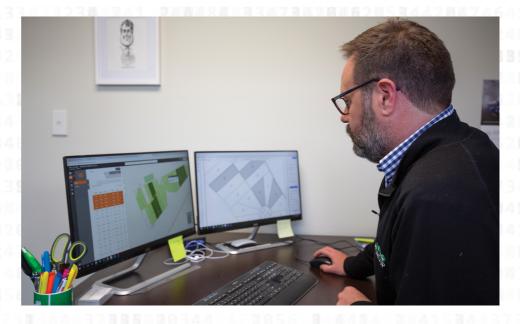
"The way we run the system now we can spread fertiliser on a daily basis through the season so for nitrogen for instance we can be right behind the cows which maximises the time the pasture has to make use of that nitrogen.

"It's also better for the environment because there's less potential for leaching."

Tony says the second spreader is mainly used for the cropping operation which includes growing winter crops for cows.

That spreader is equipped with highly

accurate spreading technology – down to 10mm accuracy.

Both computers though are able to put on variable rates of fertiliser based on the application rates programmed into the mapping software.

The spreader drives along the paddock and the rates are automatically changing as the truck reaches points pre-set on the map based on GPS technology.

It means as the truck approaches an area around a trough the spreader can be programmed to switch off.

During hot dry summers nitrogen applications can be switched off as the spreader passes through areas outside the pivot area where other forms of irrigation might not be keeping up.

"We do our own effluent spreading too and those maps and application rates can be overlaid so we're not overdoing urea or other fertilisers."

The farms also needed proof of placement for compliance and while some might see that as a drag Tony says having that information is enormously valuable to the operation.

"Having all that data recorded means we can go back and look at what's gone on to them and then what the outcomes have been.

"But like a lot of data we collect now I don't think we even know its real importance yet or just how valuable it can be.

"It will be in 10 years' time when some form of analysis we don't even know about yet comes along and we can put that data

into it. Or we'll see trends emerging.

"We don't know what we don't know yet but if we haven't got these records we won't be able to go back and get them."

One thing that's vital though is that companies collecting and using data work with each other, Tony says.

The company also uses Agworld software to record just about every activity carried out at a paddock level across all its farms.

It's ideally suited to the cropping land including the dairy support areas.

The system can be used on a smart phone, tablet and desktop and Tony says it's also created an absolute step change in efficiency and ease of management with costings, yields, chemical inputs, cultivations and fertiliser all able to be recorded at a paddock level.

The software allows accurate financial analysis of costs and returns for each paddock or crop and again helps build a record history for each paddock on the farms.

Tony, Leighton and Michelle, managers and some third parties can have access to information in a user-friendly way that also ensures easy effective communication.

"These systems – HawkEye, Agworld – they're really enabling us to save a lot of time and money and they're giving us information in such a way that we can start to make management changes based on what we're seeing with the data.

"Who knows what these kinds of programmes and the data collection will be able to do for us in the future?"