By BRITTANY PICKETT

For Neil Gardyne, investing in drones is paying off on his Southland hill country sheep, beef and cropping farm.

The 466ha Otama Valley farm has been using drones to fly over sheep stocks. Neil and Philipa Gardyne's son Mark, then 11, started researching them online before the family decided to buy a Chinese-made Hexocopter from the United States.

Chinese-man-the United States. In 2013, they received funding In 2013, they received funding In 2013, they received funding

Zealand to investigate drone applications for farming.

Neil Gardyne presented some of the applications the farm is using, and hopes to use in the future, with AbacusBio consultant Nadia Mclean at the Deer Industry Focused Farming Project Deer Technology Expo in

Gore.

Mark, now 16, couldn't be at the expo because of school, but his

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Southland farmer Neil Gardyne and AbacusBio consultant Nadia Mclean discuss drones at the Deer Technology Expo in Gore.

dad was on-hand to describe what had been happening on the farm since they began using

drones.
At first, the Gardynes were using the drone to monitor stock in difficult terrain, such as chec-

king for cast sheep during lambing, Neil said.
The drone flies a pre-

The drone flies a predetermined flight plan, following pre-programmed waypoints, feeding back pictures to a laptop computer.

The applications on-farm were already proving to be beneficial, with only seven of 1200 hoggets needing assistance during lambing, meaning the paddocks could be checked less regularly in perin per-

son, he said. "There's re

"There's really been an advantage to having eyes in the sky, it's a bit of peace of mind knowing that everything is fine."

It cost \$4 a kilometre to use a four-wheel motorbike and they could travel up to 11,000km a year, meaning checking the paddocks less in person was saving them on fuel and maintenance costs, he said.

They had reduced their motorbibe motorbibe made and reduced their

They I motorbike

motorbike usage by 20 per cent since adopting drone technology, but Gardyne hoped they could bump that up to 50 per cent. "There's potentially a \$3 billion improvement to sheep, beef and deer [farming]."

As well as monitoring stock, the drone could be used to map drains,

the air.
Abacı count stock, monitor weeds, and monitor trough levels. Gardyne hoped to eventually be able to measure dry matter from

AbacusBio began working with AbacusBio began working with the Gardynes in 2013, as well as Mandeville farmers Russell and Pam Welsh, to help them find the applications of drone use in agri-

reduced e by 20 p Two pilot farms, Telford and Lonestar Farms, would buy drones and be followed for 12 months to see whether they used the technology and how they were Mclean said AbacusBio would be working with Callaghan Inno-vation to find out why there had not been a huge uptake in drone use by farmers.

Two pilot farms, Telford and

using it.

"We're hoping that this will help us, and the wider sector, understand how we can use this technology and hopefully we can develop some other applications along the way," Mclean said.

rone shifts cows

It's a case of "let your fingers do the walking" for Waimate sharemilker Troy Yaxley, who has taken to using his new drone to assist with farming duties on the 230ha property near Oamaru where he works.

For Yaxley, who flies large model helicopters for a hobby, his new Phantom 4 was bought as more of an expensive but fun gimmick. However, he's increasingly realised it's a great time-saving device around the farm. Even for just over a cool \$2500, his drone has been proving its worth.

"I can send it out to check on the cows and buzz around the farm to check the likes of water troughs and irrigation ponds and systems," Yaxley said.

He uses remote controls linked to his iPad to fly the drone, which has a camera attached to it. When the drone is flying over the farm and the cows, the images from the camera are relayed back to Yaxley's iPad which allows him to see what is happening.

"I can even buzz it right out to the end of the farm to check on the farm and the cows, the images from the camera are relayed back to Yaxley's iPad which allows him to see what is happening.

"I can even buzz it right out to By SUE FEA amaru farm by the house and send the drone to drive them through. I open the gate out

grab th hop on out the He's beefies. That takes five minutes, instead of the half hour it takes to grab the ute, head to the farm, hop on the motorbike and head out there."

TROY YAXLEY
Waimate sharemilker

grab the tree, head to the farm, hop on the motorbike and head out there."

He's even used it to herd the cows to a different paddock. "I open the gate out by the house and send the drone to drive them through. The buzzing noise is all new to them and they're a bit scared so they just walk away from it," he said.

The cows better not take too long though. His drone battery lasts just 28 minutes before needing a one-hour recharge. "I send it out for 25 minutes to get it home in time, but you can have spare batteries on hand."

The drone flies up to 5km away and as high as 500 metres in the air, making for some fantastic

aerial filming, which has become Yaxley's other new hobby.

Boundary points can be programmed into it and Yaxley said he believes drones will soon be adapted to do farm pasture walks to measure grass, which can

already be carried out using lasers attached to farm bikes. "Technology is so awesome," he

said."

My boss thinks it's great and came over straight away when I got it, wanting to have a go."

Sharemilker Troy Yaxley says his Phantom 4 drone is a great time-saver around the farm.