



ADVANTAGE

YOUR QUARTERLY FARMAX NEWSLETTER
SUMMER 2016 - 2017

TAKING STOCK

Welcome to the final edition of the *Farmax Advantage* newsletter for 2016.

It has been another big year for Farmax in terms of staff members coming and going, major development, lots of events, and 2017 is set to be even bigger with the advent of our national conference. Find out how to register for the conference on page 4 – it is open to everyone so make sure to secure your space!

Our feature case study is about Vicki and Leveson Gower and the huge changes they have made on their 1,417ha Waikato farm with the help of man-power, know-how and technology.

There is also a spotlight on some of our previous scholarship winners and the interesting work that they have been doing for their tertiary research.

Enjoy the sunshine and all the fun that the silly season brings!

HAPPY HOLIDAYS

The Farmax Team



FARMAX RESEARCH SCHOLARSHIPS

Applications for the 2017 Farmax Scholarships are now open.

Farmax created the Lincoln Scholarship in 2012, and the Massey Scholarship in 2014, to encourage up and coming agricultural students to undertake research that will benefit New Zealand farms and agriculture.

Manager of Farmax, Gavin McEwen, says Farmax is passionate about encouraging the next generation of agricultural scientists and rural professionals to maintain a high quality and breadth of research for the sector.

“There is a new generation of agricultural minds who have the potential to create and discover new tools and resources that will help the lives of everyday farmers and further New Zealand’s agricultural reputation and progress as well. As usual, we are excited to see what proposals our

applicants come up with.”

Previous award winners have studied the integration of crops on New Zealand dairy farms for supplementary feed during lactation; the ability to predict the amount of metabolisable energy in pasture; and profitability and break even points of developing marginal hill country land.

Scholarships are open until 10th March 2017.

To apply for the Farmax Massey University Scholarship or to find out more head to www.massey.co.nz.

To apply for the Farmax Lincoln University Scholarship or to find out more head to www.lincoln.co.nz.

Read on to hear about the progress and findings of two previous scholarship winners’ research.

REDUCING NITROGEN LEACHING WITH ONCE-A-DAY MILKING

Martin Correa Luna was awarded the 2016 Farmax Massey University Scholarship. He is currently completing his PhD where he is exploring the economic and environmental implications of once-a-day (OAD) milking for a full season in direct relation with stocking rate (SR) and genetic merit of the cow for farm profit.

The research is being completed on Massey University farm Dairy Farm No 1 where many different variables are being measured including feed intake, nutrient flow, milk production and diverse productive efficiencies.

Stocking rate has long been considered one of the main factors in nitrogen leaching on pastoral systems, but also a factor in farm productivity and production. Martin hopes his research will generate information on how to reduce nitrogen leaching whilst



Martin Correa Luna

increasing farm product and profit levels.

Data collection began in July of this year and will continue on in this season: “For this

current season, the idea is to continue with these monthly herd tests and to include feed sampling in addition to previous tests, aiming to have certain estimations of Nitrogen Utilization Efficiency: from crude protein measured on feed offered to

“...some farmers using once-a-day milking were tempted to increase stocking rate in order to advance productivity...”

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protein synthesis in milk,” Martin said.

Martin noticed that some farmers using once-a-day milking were tempted to increase stocking rate in order to advance productivity at the risk of also increasing nitrogen leaching.

He acknowledged that identifying and addressing these negative consequences was of utmost importance, and there were solutions to the problems: “Current research shows that after some years

of culling cows unsuitable for OAD and using bulls selected on an OAD selection index, herds are achieving similar or higher milksolids per cow and per hectare as when they were with twice-a-day milking.”

Further into the study an analysis of the effect of alternative crops on financial and environmental parameters will be explored, achieved largely within FARMAX Professional.

Martin explained, “since the start of my link with this project, FARMAX has been playing a main role, as a platform where all productive parameters, both agronomic and animal, have been included. Later on, FARMAX will be greatly beneficial for financial analysis.”

If you have any questions about Martin’s research, which is due to be completed in 2018, feel free to email him at M.L.CorreaLuna@massey.ac.nz.

EXPLORING THE FACTORS WHICH CONTRIBUTE TO FEASIBLE DEVELOPMENT OF HILL COUNTRY LAND

David Ingham was the recipient of the Farmax Lincoln University Scholarship in 2016. He put the funds towards his honours project – which he recently completed – where he investigated the profitability and break even points of developing marginal hill country land.

The study was based on farm case study data used to produce theoretical farms in both FARMAX and Excel. This allowed for comparison on an even playing field between the current farm system (undeveloped) and different development scenarios.

Two different topography ranges were considered: flat to rolling where agricultural work could be applied from the ground, and steep where agricultural work had to be applied aerially.

Additionally, two development options were factored in:

‘intensively cropped pasture’ of Plantain/ Red Clover requiring high annual input and resowing every 5 years, and ‘developed permanent pasture’ consisting of a perennial grass and clover, requiring less input and resowing every 15 years.

The results confirmed that it is not the initial capital development cost which is the key determinant of the feasibility of land development, but instead the annual maintenance cost of the developed land coupled with the increased returns, as a result of development.

David explained, “As the feasibility of development is predominantly determined by the combination of annual maintenance cost per hectare and resultant production per hectare, the decision making process should

be focused on the long term potential returns and benefits as opposed to short term gains.”

It was also interesting to note that personal traits and mind-sets of the farmer tending the land impacted the feasibility of land development: “Land development and capital investment result in an increased level of production and often a shift in production system type, in this case a shift from store stock to prime production.”

“Such a change in the farm system requires a change in farmer/manager mind-set to succeed...without adaption of the farm system to maximise the potential of development, the original system would not have sufficient production to service the annual maintenance cost.

“Thus, decisions to develop should not only focus on productivity and profitability but also consider age, stage and goals of the farmer.”

Additionally, David looked at the concept of ‘selective development’ to show a land development strategy that is practically applicable in hill and high country farming systems.

“The key of the selective development strategy is to achieve an energy supply which is equal to that of the desired energy demand. The focus of this development is around best utilizing the resident undeveloped pasture, with areas of development designed not to supersede this production but boost energy supply when production from the native pasture is in a deficit,” David said.



David Ingham

Essentially, this means that only one third of the land needed to be developed in order to achieve the desired objectives, meaning less pressure on the whole farm system and reduced financial risk.

Using FARMAX throughout the project was incredibly helpful, said David, who valued the ability to compare reports and analyse data: “One of the key KPIs between scenarios was financial performance, measured as profit per hectare. The compared profit and loss statements produced in FARMAX Professional gave great clarity and allowed easy analysis between variances in expenses and returns between scenarios.”

The results of this research will help provide useful guidelines for investigating potential development and how to determine where to focus development efforts. We congratulate David on his great work and wish him all the best for his future endeavours!

If you would like to contact David about any of his research he welcomes queries to inghamdr@hotmail.co.uk.

“...such a change in the farm system requires a change in farmer/manager mind-set to succeed...”

GOODBYE ACCESS VIOLATIONS!

In an effort to strive for continuous improvement of our products, our 7.1 releases have introduced a new method of error logging. FARMAX is a complex tool with a multitude of intricate coded equations and unfortunately we know this means bugs can pop up. Our new method of error diagnostics gives us much more powerful insight into where the

issues occur and are immensely helpful in helping us solve these. The new error messages seen here allow the user to send an error diagnostic message to the Farmax HelpDesk. We would like to say a big THANK YOU to all users who have taken the time to send these if they have seen them pop up; every one helps us improve the tool for our customers.



BEGINNING WITH THE END IN MIND

Vicki and Leveson Gower run a 1,417ha sheep and beef farm at Wharepuhunga, south-east of Te Awamutu. It lies on the northern edge of Pureora Forest Park.

Some 800ha of farmland is used for grazing by the farm's 750 head of cattle and 1,000 sheep, as well as approximately 930 dairy grazers.

Stockland Farm has been in Leveson's family for two generations – he moved there as a three-year-old. Now 60, Leveson works the farm with the assistance of a young shepherd. His wife Vicki, a chartered accountant, is also heavily involved with the business operations.

For most of its recent history, Stockland Farm has been run as a traditional sheep and beef farm, but in August last year the Gowers came to the conclusion they needed to make some changes.

"We wanted the farm to be able to be more independent from our day-to-day, full-time involvement," says Vicki.

FARMAX was a key part of the process, giving the Gowers the knowledge and confidence to make changes on the farm.

CALLING IN THE EXPERTS

The Gowers are part of the Red Meat Profit Partnership (RMPP) through their processor, Greenlea Premier Meats. Greenlea livestock buyer Greg Clark recommended Stockland Farm for the RMPP extension programme.

The programme helps sheep and beef farmers to increase profitability, and use benchmarking tools and technology to better understand and improve their businesses.

Greg suggested the Gowers engage with a farm consultant to help them look at new ways of farming to increase efficiencies and profit.

The Gowers met with AgFirst farm consultant Bob Thomson who analysed their farm business and looked at its strengths, weaknesses, opportunities and threats. It was Bob who introduced them to FARMAX.

"The big challenge in sheep and beef farming is to utilize the pasture you grow and turn that into money," says Bob, who has more than 40 years' experience in the sheep and beef industry.

"FARMAX is a seriously important part of my consulting – it enables you to describe the biology of the farm and better match feed supply with feed demand. FARMAX gives you context – you can understand how much pasture is growing on the farm, and how to utilize that to improve production and performance."

INTRODUCING CELL-BLOCK GRAZING

As part of his report on Stockland Farm, Bob did some FARMAX modelling which suggested that the farm's pasture production was around 6,200kgDM/annum. He believed there was "considerable scope to improve pasture production through more effective grazing management with a focus on 'grass grows grass'".

He recommended moving to an intensive beef grazing system on part of the farm and said that "with good subdivision and soil fertility at optimum levels for a dry stock farm, pasture production should increase to around 9,000kgDM/ha".

On Bob's advice the Gowers decided to move to cell-block grazing for their bulls. Their larger paddocks were fenced up into 6 to 7ha paddocks with permanent fencing. Each of these were further divided into 15 smaller cell blocks using the Techno electric fence system, with an average paddock size of 0.4 to 0.5ha.

For the winter months each of the cells were split in half again to create 30 paddocks for each mob of stock. Bulls would graze in a cell for one to three days before rotating to another cell block, benefiting pasture growth and quality, as well as stock growth and weight.

In total, 140ha of pasture was put into cell block grazing – half at the northern end of the farm, and half at the southern end.

CHANGING SYSTEMS AND STOCKING POLICY

Vicki set herself the challenge of creating a business development model for Stockland Farm, part of the extension plan with the RMPP programme.

"First, you have got to look at your systems," says Vicki. "If you do not have good systems in place to measure and monitor what's happening on the farm, then you don't know where you are and you can't track where you are going."

"FARMAX helped us understand what class of stock would make the most money and meet both our business and personal goals," says Vicki.

"Dairy grazers ended up being in line with our Friesian bulls for profitability. A lot of sheep and beef farmers don't like dairy grazers because they don't own the stock, but if it makes money then it's a no brainer."

The Gowers are hoping that the new grazing system and better pasture management will help increase the stocking numbers and get stock "finished faster" to supply meat to Greenlea early in the season, when prices are good – a win-win for both Greenlea and Stockland Farm.

"...The benefit of FARMAX is that you can begin with the end in mind..."



Vicki, Leveson, their son Angus, and dog Quinny

IN BRIEF

HOLIDAY CLOSURE

Farmax will be closing for a short period over the holiday season. The HelpDesk will close at 5pm on Thursday 22nd December 2016 and will reopen at 7:30am on Monday 9th January 2017. If you have any emergencies over this period, please contact Victoria Hamlin on 027 318 4879.

TRAINING COURSES

Soon we will be releasing new training dates for 2017 throughout the country. To see if there is a training near you please go to our website, click on the Training & Advice tab, and look at our event calendar. If you would like to attend a training and can't see a date that has been set on the calendar in your area, please register your interest by e-mailing the FARMAX HelpDesk at support@farmax.co.nz.

FAREWELL TO ANDREA!

The Farmax office has been busy as we say goodbye to our valuable team member Andrea Browne. Andrea is moving to the sunny Hawkes Bay for a new adventure. We have enjoyed working alongside Andrea, and wish her all the best for her future endeavours.

**A full version of the case study is available on the Farmax website*

DID YOU KNOW?

There are two animals which are biologically immortal; the immortal jellyfish (*Turritopsis dohrnii*) and lobsters. The immortal jellyfish is only 5mm in size but able to indefinitely replenish its cells, meaning that it can theoretically live forever. Lobsters retain a special enzyme (telomerase) through adult life which protects from DNA degradation. This means that they do not slow down, weaken or lose fertility with age – but will only die from exhaustion when their shell becomes too big and they don't have enough energy during moulting.

2017 FARMAX CONFERENCE

We are pleased to announce that the 2017 Farmax Conference will be held on the 11th and 12th of May at Mac's Function Centre in Wellington.

Our conference will be even bigger and better than 2015's with the same content-filled structure, but with a few important changes.

There will be six streams this year – introduction, intermediate and advanced – each with dairy or sheep, beef and deer options.

Four notable guest speakers will feature again – Steve Carden, CEO of Landcorp, and Matt Blyth, UK farmer have been confirmed so far – and there will be Farmax information sessions as well, tailored to FARMAX for farmers, FARMAXfor consultants and FARMAX for businesses.

On the first night we will also host a conference dinner providing an invaluable

opportunity for networking.

REGISTRATIONS WILL OPEN IN JANUARY NEXT YEAR WITH PRICES AS FOLLOWS:

Full registration: \$380

Includes training sessions, information talks, keynote speakers, all morning teas, lunches, and afternoon teas, and day one drinks, plus attendance at the Conference Dinner

Two day registration: \$295

Includes training sessions, information talks, keynote speakers, all morning teas, lunches and afternoon teas and day one drinks

One day registration: \$150

Includes training sessions, information talks, keynote speakers, morning tea, lunch and afternoon tea on one day (plus day one drinks if applicable)

Please feel free to contact the Farmax HelpDesk if you have any questions.



WELCOME TOM AND SHEREE!

TOM BOTICA

Tom is the newest member of our team, fresh out of Lincoln University where he studied a Bachelor of Agricultural Science. He will be involved with many aspects of Farmax, largely assisting customers on the HelpDesk and running training sessions around the country. Additionally, he will help with the Farmax conference and software development. Tom was born and raised in Matamata, before moving to Wellsford and Christchurch, and is now back in Horotiu on the family dairy farm. He has worked on numerous dairy, and sheep and beef farms throughout the country. Outside of work he loves cricket, squash and powerlifting, the latter for which he is nationally ranked.



SHEREE SMALL

A recent addition to the team, Sheree is responsible for the administration and accounting functions for Farmax. She is also involved in other projects including policy development and internal systems reviews. Sheree has spent the last 12 years working in the farming industry, firstly with the finance team at AgResearch, followed by working for effluent management companies around the Waikato. Sheree has a Bachelor of Management Studies from the University of Waikato. A born and bred Hamiltonian, she spends her spare time with family and friends chilling out at the beach.

