Working to **secure your future**

Issue 02 2020

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LIC®
LIVESTOCK IMPROVEMENT

Environmental efficiency on dairy farms

Are you concerned about the footprint your dairy cows are leaving on the environment? LIC has been working hard to develop a modelling system that can be used to quantify emissions and excretion, the result is their HoofPrint™ index.

Tony Fransen, environment and welfare manager, explains how it works:

Enteric methane and urinary nitrogen loss from a dairy farm to the environment is inefficient. It can be damaging to water courses, contributes to greenhouse gas emissions and has a negative impact on the community and consumer perception of agriculture, wherever you farm in the world.

Enteric methane makes up around three-quarters of agricultural greenhouse gas emissions on a pastoral dairy farm. Enteric methane is directly proportional to the amount of feed consumed by the animal. This means to drive efficiency for methane we want to maximise milk production for every kilogram of feed consumed on farm.

Managing nitrogen, particularly in a high quality, high nitrogen pasture diet enjoyed by cattle in Ireland, the UK or in New Zealand for example, has challenges. There are times of the year when the high nitrogen content of pasture means that the cow's nitrogen intake significantly exceeds her physiological demands, and the excess is excreted, primarily through her urine.

Nitrogen cannot be created or destroyed by the cow, whatever she ingests must be either partitioned into productive outputs or excreted. Nitrogen enters the cow through her diet, with a lactating cow on average over a full season partitioning approximately 50% in urine, 20% in milk and 30% in her dung.

Across the year the daily level of nitrogen intake and output will change as pasture protein and cow milk production levels fluctuate. Maintaining the balance between N in and N out is important.

Increasing N use efficiency and reducing urinary nitrogen leaching is a key goal for the dairy sector, and much current research, including Dairy NZ's seven-year Low Nitrogen Livestock programme is looking at ways to help achieve this.

The main focus areas for NZ research are:

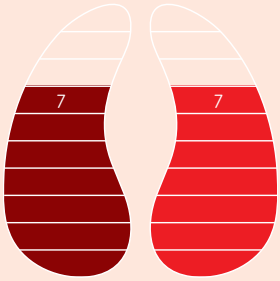
- Dietary changes to balance nitrogen intake
- Breed to partition or distribute nitrogen with lower risk to the environment
- Methods to manage the urine patch after deposition

LIC's new HoofPrint™ index will, for the first time, provide farmers with accurate insights for bulls on the relative lifetime urinary nitrogen and enteric methane efficiency of their progeny. This index will be included in the European bull catalogue for the first time this autumn and is an exciting development.

HoofPrint™

Methane Efficiency

Nitrogen Efficiency



10	Top 2 %
9	Top 7.5 %
8	Top 17.5 %
7	Top 32 %
6	Top 50 %
5	Bottom 50 %
4	Bottom 32 %
3	Bottom 17.5 %
2	Bottom 7.5 %
1	Bottom 2 %

Using genetic information and recognised agricultural greenhouse gas emissions modelling methodology, LIC can assess and rank bulls for the expected environmental impact of their progeny in this index. This will, alongside LIC's leading genetic options and management tools, help farmers to reduce their environmental impact per kg of milk solids while maintaining productivity.

It's a 10-point rating system based on the modelled lifetime production relative to lifetime emissions and excretion generated. This system models the predicted lifetime environmental footprint for all AE enrolled AI dairy bulls born since 1 January 2009. In 2020 this represents 4415 bulls.

Working across all dairy breeds, it gives accurate insights to help farmers breed cows with a lighter environmental footprint, and to produce less methane and nitrogen per kg milk solids.

Six individual breeding values are used to calculate the expected levels of production, growth, calving events, and the removal of each animal. These are liveweight, milk volume, milkfat, protein, fertility and total longevity.

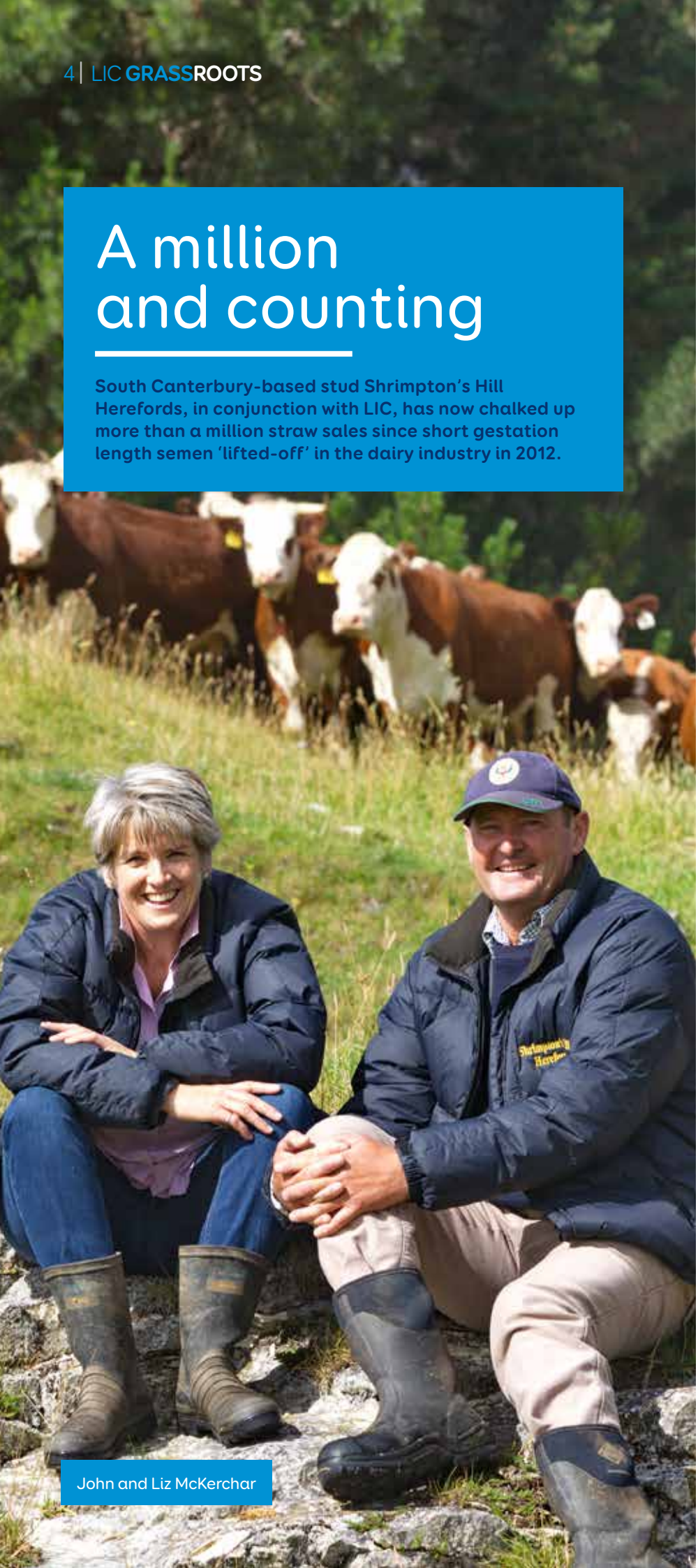
Higher genetic merit animals, on average, perform better when ranked under the HoofPrint™ index and the modelling has been based on the 'Methodology for calculation of New Zealand's agricultural greenhouse gas emissions' developed by NZ scientists in line with the Kyoto protocol requirements.

The ranking system is from 10 to 1 with 10 being the highest ranking (lowest environmental impact per kg product) and 1 being the lowest (highest environmental impact per kg product). And to ensure only the very best bulls are able to achieve a 10 point ranking, only 2% of all bulls in this elite reference population can be awarded a 10 point rating at any one time.

And it's worth pointing out that increases in BW correlate with lower methane and urinary nitrogen output per kg of milk solids produced. Genetic gain has already delivered significant environmental efficiency benefits to the sector. For example, every NZ$10BW increase gives 1.7g less urinary N/KgMS and 2.0g less methane/KgMS. Over 30 years of LIC Premier Sires has given 13% reduction in methane/KgMS and 16% reduction in urinary N/KgMS."

A million and counting

South Canterbury-based stud Shrimpton's Hill Herefords, in conjunction with LIC, has now chalked up more than a million straw sales since short gestation length semen 'lifted-off' in the dairy industry in 2012.



John and Liz McKerchar

John and Liz McKerchar are the owners of the beef farm, an impressive operation that is nowadays specifically tailored to service the dairy industry. The couple's decisive entrepreneurial flair has seen them carve-out a classic market niche within the fast-changing dairy industry.

"To top a million straw sales is incredible," John says.

"It's a huge endorsement of our breeding programme to reach such a milestone. It's also a big endorsement of a wonderful breeding partnership we have with LIC – we couldn't have done it without LIC in terms of their market share, market reach, and promotion of the product.

"So we're very grateful to have a contract, and it's a very close relationship that works well both ways."

The stars aligned

Until 2012 Shrimpton's had been ticking away as yet another supplier to what was an established, mature, beef industry.

"But it's true that about 10 years previous to that, in the early 2000s, we could see things were changing," John says.

"We wanted to grow our business, but beef cow numbers across the industry just weren't growing, and yet the dairy cow numbers were.

"When Fonterra was formed, the animal welfare accord suggested that inducing was to be phased out. It was pretty simple for us to say, 'well if you've got a shorter gestation bull you've got a greater opportunity to market it than a longer gestation bull'.

"That gave us the point of difference we were looking for. We sourced the shortest gestation bull we could find on breedplan, in the Hereford world, and started breeding from there.

"To be fair we didn't do that with our whole herd – we just added it as a sideline... and at times there, we nearly gave it away because some years you'd sell little or no semen, and then you'd get a sale to the odd company and that would encourage us to keep going.

"But inducing got forgotten about for a bit, and dairy herds were expanding that fast that everything was being kept, and a lot were being induced."

In 2012 Malcolm Ellis, at the time LIC's bull acquisition manager (nowadays LIC's GM NZ Markets), gave John and Liz McKerchar a call 'out-of-the-blue'.

"We were just ticking away here doing an AI programme, but Malcolm encouraged us to do embryo transplants and scale-up our AI, and we agreed to a contract. With the LIC supply agreement in place it really gave us the confidence to reinvest,

and it was easy for us to commit the whole herd down the SGL path."

John says their operation still sells bulls to the beef industry, and it remains an important aspect of the business: "But we knew back in 2012 there were only 950,000 beef cows in the country and only 300,000 in the South Island.

"Herefords aren't the preferred breed – Angus is, and beef cow numbers were diminishing. We saw the opening with the dairy industry with the white-face calf being so easily identified. We asked ourselves, 'what does the dairy industry really want?'"

It wanted days-in-milk.

With SGL today firmly entrenched in the dairy industry (generally put over lower breeding worth cows and later-calvers in the herd), it's estimated by LIC that more than $4 million in extra production will be collectively added to farmer milk dockets this spring, all courtesy of the shorter gestation lengths of Shimpton's Hill Herefords.

What now?

John concedes that big initial gains in gestation length are getting incrementally thinner and harder to make as time goes on.

"We go to the extremes of the bell curve when we're looking for genetics that will enhance the SGL programme, but we're mindful of a lot of the other traits that we have to keep an eye on – to run our cows on the tussock country we need them to be good-doing cattle, they need survivability, and we like to buy semen out of bulls with high scrotal so they've got good fertility – that's crucial in our environment."

But the real 'Achilles heel' is new bloodlines, John says.

"We're at the outer limits of the SGL in the Hereford world, and we have to accept lower, shorter, gestation lengths to get an outcross – there are a couple of other New Zealand-based studs concentrating on similar programmes to us, but we've basically all got the same genetics."

So Shrimpton's Hill Stud has turned to Australia to solve the threat of inbreeding.

"We've imported semen from quite a few bulls from Australia because their population is simply larger than ours and there's a lot more AI done over there – we can only purchase genetics that have been AI'd.

"So we've found a stud over there where everything is measured – they concentrate on low birth weight, high-growth rate bulls, and there's very good carcass data. Every now and again they pop out an SGL bull so we hook in to that and we're basically getting all those other traits for nothing."

Shrimpton's Hill will take two new sires a year from the Australian stud for the next five years, John says.

Other developments

Calving ease is always a factor, John says, "because it's the first thing that will wreck our product." But with a sire proving programme now in place at LIC, safeguards have just gone up another level.

"Going forward, 1000 straws from each of up to 10 bulls will be taken and evaluated throughout New Zealand, and the best of those bulls will be picked to replace the bulls at Newstead (LIC's bull farm).

Use of these young bulls early on will give farmers greater confidence in the gestation length and calving ease of these bulls as they graduate into 'proven' Herefords.

"That will help us immensely," John says, because it'll help the McKerchar's own on-farm breeding programme by identifying elite bulls for use in AI and embryo transfer - this should ensure the incremental gains keep progressing.

John says another factor was that when Herefords went over dairy cows, their rankings underwent change: "For example bulls that are only moderate for gestation length (breeding values) in the Hereford world might actually really deliver beyond expectations on the dairy scale for gestation length.

"Being able to know which bulls of these young bulls are punching at or above their weight with how they convert to days on the dairy scale will really empower breeding decisions going forward – that's when you say, 'wow, we're on to something here'."

No argument there. It's clearly evident farmers are also on to something when they pick Shrimpton's Hill Herefords as part of their mating strategy.

Go to **www.licnz.com/sire_catalogueuk.cfm** to look at the SGL collection on offer from LIC and talk to your FSM to place your order.

Dairy farmers get access to new bloodlines

LIC in Europe continues to work closely with LIC New Zealand and its bull breeding/sire proving scheme to offer British and Irish dairy farmers a full range of up-and-coming future stars. The UK offering this autumn, just announced with the launch of a new catalogue, is no different. Ireland's new catalogue is due out later this year.

One of the starting points is to check each bull's family to make sure new and fresh breeding lines are chosen, and to ensure production figures and types/traits plus health status meet international export requirements.

This year there are some great new bloodlines on offer... take a look at a small selection on these pages then go to **www.licnz.com/sire_catalogueuk.cfm** to view all the bulls.

Contact **spocock@liceurope.com** (UK) or **jtobin@liceurope.com** (Ireland) for more information.


Lancelot 2yr


Overtime 2yr


Backdrop 4yr


Bass 1yr

Holstein Friesian

A revamp of the HF team this year with a great offering of top bulls from new bloodlines. Lancelot, son of Maelstrom, excellent capacity and udder traits. Overtime, at +74kgs for solids, his daughters are slightly smaller sized so he ticks all the boxes for farmers looking to reduce size but increase solids. Backdrop, from a top cow family, a bull who will improve any herd with a massive fertility of 3.9. Bass, one for those looking to increase volume and solids through grass intake.


Explicit 4yr


Snapper 2yr


Gameplan 4yr


Critical 2yr

KiwiCross®

Again a top line-up of bulls with Explicit who combines a massive +82kg solids with excellent capacity. He will appeal to grass-based and higher-performing herds. Critical is another outcross option from Kraakmans Jaydie out of an excellent dam averaging 575kgs solids. Excellent fertility of +3.1 and his daughters are performing well on the ground. Gameplan has a BW of 297, and his daughters are some of the most efficient in NZ. He should feature in every crossbred herd's pot. Finally Snapper, a great choice when you're looking for resilient, hardy cows that produce milk from grass.


Gallivant 4yr


Coyote 2yr


Leopard 3yr


Floyd 4yr

Jersey

Gallivant is the new up-and-coming star and is the number one LIC Jersey for fat with a massive +45kg. He ticks all the boxes for production, fertility, size, capacity and udders. Floyd is a son of the famous Okura Integrity and combines positive milk kg with solids and will produce profitable, grass based, efficient cows. Leopard has a lower liveweight and milk kg volume, so is the perfect first cross bull. His daughters are averaging 6.3%fat and 4.5% protein. Then there's Coyote, bred from the extremely capacious sire Goldie. Positive for milk yield and with 49kg of solids, Coyote is a bull who will maintain milk solids in crossbred herds.

An update from our monitor farm

It's now nine months since LIC Pasture to Profit consultant Sean Chubb started working with North Shropshire College Walford Farm as the company's new monitor unit. With the main challenge being to transition an all year-round calving Holstein herd into a grass-based autumn calving herd, there was an interesting time ahead.

On November 5 last year we started to work with Walford and had our first farm visit. Now, as the college gets ready to start calving down the cows that are in the autumn block, it's timely to look back to see how the first season has gone when measured against our targets.

Our first challenge was to start the transition to a block calving system. This started with us looking at the current calving spread. The plan we came up with was to move all the cows and heifers into two blocks, first an autumn block and then whatever wasn't in-calf from there would be mated in the spring to form the second block.

From there the spring block will be rolled around to autumn after calving down in the 2021 season, this would see all cows calving in the autumn block by the autumn of 2022.

	Pre-mating heats	3-week submission rate	Conception rate	6 week in-calf rate
2019/20	93%	94%	55%	64%
Target	85%	90%	60%	78%

The mating in the autumn was a success, with half of the herd - including the heifers - able to get in-calf for this block. The key performance indicators of conception, and 6 week in-calf rate, indicate the success of this mating period. These figures were never going to meet the targets, as the number of eligible cows was increasing all the time throughout the mating period.

The spring mating period is on target to meet block calving standards with an early pregnancy test showing 46% are to calve in the first two weeks. Tom Moore, farm manager, puts the success of the mating periods down to the herd management tag they're using, with the tags enabling him to focus more time on the development of the farm and working with the students while being down one staff member.

A key aspect of making the transition a success was to get the cows out on grass and achieve good residuals. We were constantly told, leading up to turnout, that Holsteins can't graze and that corrective measures would be needed to keep grass quality.

But this hasn't been the case, with the cows happily grazing down to below 1600KgDM on a regular basis. This is lucky, as the farm has grown more grass than we expected. Average growth is currently 5.45T/ha but if the reseed paddocks are taken out then it is closer to 8T/ha with the highest growth being over 10T/ha.

With a litres-based milk contract we wanted to achieve a good level of production, but also to maximise litres from forage to make the production of milk as cheap as possible. The starting point was turning out the low producing cows in January. This saw no real movement in the production, but a good drop in cost of production, with reductions in both housing and feed costs.

The target was to achieve 8500 litres a cow, as the cows would have half of the year under a high input housed system and we expected to be topping up the cows with additional feed to meet their energy requirements.

	2019/20	Target 19/20	Target long term
Milk – litres/cow	8300 litres	8500 litres	7500 - 8000 litres
Milk from forage	3000 litres		6000 litres

The milk production per cow wasn't met due to the decision to move the high producing cows out to grass full-time instead of keeping them housed part-time, but the loss in milk production was made up for by the decrease in costs.

Covid-19 permitting, we're hoping to hold our next monitor farm open day in October. Details are on this page. We'll be looking at the goals for the season ahead, as well as going over the CFP for this financial year, and we'll be keeping up to date with what's going on at Walford with our monthly updates on Facebook.

We'd also like to invite you to tune in to our series of webinars from the farm by going to our YouTube channel: **LIC-UK Livestock Improvement Corporation**

Timetable

Farm walk Start time: 10:30am Finish 2:00pm

10.00am	Please start arriving and move to the welcoming point
10:30am	**Welcome to Walford Farm**
	Introduce the speakers and the format for the day
	Tom gives an overview of the farm and where they have come from
10.45am	**First topic** - review of 19/20 season and target going forward start with highlighting the targets for the season as well as long term targets. Compare the progress against targets and where the farm was prior to the move to grazing (financial, milk production, feed efficiency)
	out the targets going forward for 20/21 season and how we plan to achieve them
	Questions
11.30am - 12.30pm	**Farm walk** - to look at grass and grazing
	Visit the paddocks that have been identified that need work to get them to produce more grass and get them closer to the top producing paddocks.
	Look at the cows and how well they are grazing, what has Tom done to achieve these results
	Questions
12.30 - 1.00 pm	**Lunch**
1.00 - 2.00 pm	**Breeding**
	Cow manager tags - how they are being used, where the value is seen and how does this compare with other farmers
	What should walford and other farmers be looking at to obtain a tight block and retain cows within the block
	Breeding going forward - what bulls are being used and why, mating length,
	Questions

Please keep checking our Facebook page to ensure this day is able to go ahead. If you register your wish to attend by emailing schubb@liceurope.com we will be sure to keep in touch with you should circumstances change.

Refresher course gives confidence

LIC is hoping to run its usual round of Hanny refresher courses this autumn or next spring - obviously whether or not they can happen will depend on the latest Government guidelines surrounding Covid-19. To know what you can expect, we run you through the course and talk to a dairy farmer who found the experience really helped with his AI success rate.

Each course is usually held on a host farm, with the day being divided into three topics covering: semen handling, mating management and then a practical AI session using Hanny, LIC's anatomically correct artificial cow.

Attending farmers are provided with an in-depth refresher of all areas associated with the service period from health and safety regarding liquid nitrogen utilisation through to heat detection and record keeping. Hand-outs are provided along the way, with a quick bite to eat to finish off the course.

Courses are held across the country with previous Hanny days having been conducted on farms, at the LIC headquarters as well as in village halls for events such as Young Farmers evenings.

Moving forward, LIC is looking to target the agricultural educational sector, with plans to become involved in the university and college curriculum where possible... so if you know any organization that might be interested, please get in touch.

Farmer feedback

It was a desire to strengthen his skill set that led Ollie Scantlebury to take part in an LIC refresher course last spring, and results from last year show he made the right call.

"I have AI'd on other farms before, but just wanted a refresher on a few aspects," he says. "I hadn't done AI for a while, so this course was perfect to get me back on board with some of the finer details."

Herdsman at Appledore Farm in St Ive, Cornwall, Ollie manages a 300-acre grazing spring calving herd. With 274 cows in milk this is a young herd. "Around 300 bulling heifers were purchased, most of them from Ireland in 2018, and they started calving in spring 2019. There are a few liquorice allsorts among them, but the aim is for a F10J6 cow, an aggressive grazer with good fertility, solids and feet.

"I spent a year working on dairy farms in New Zealand and this opened my eyes to extensive block calving systems and how they allow you to focus on one job at a time. The cows are out as much of the year as possible, so they need to be hardy. Bodyweight is around 500kg on average, and our aim with the 5500-litre yield is to match milk solids to bodyweight."

All milk is sold to local Cornish dairy Trewithen and used for liquid milk, butter, cream and yoghurt, so milk solids are important.

"The course was excellent." He says. "I learnt a lot more about handling the semen, and that's a vital part of getting good conception rates. Just a few weeks after the course I started inseminating."

The first year's results were pleasing, with around 60% holding to first service. In 2019 all cows were served with conventional semen, with sweeper bulls put in after the first five weeks of AI. His 6-week in calf rate was around 70 per cent and 150 cows calved in the first 10 days.

"Keeping the block tight is very important, as it protects the days in milk," he says. "We've used sexed semen on the best 25% of the cows and on all the heifer replacements, this year we concentrated on fertility and solids."

All bull and beef calves go back to the home farm for rearing, and Angus bulls are used for the sweeping.

The refresher course, he says, gave him more confidence using the sexed semen that he hadn't used before. "Timing and temperature are important, and for the best chance we inseminated both in the morning and evening to maximise conception rates."

"It's really a matter of confidence... the more you do, the easier it becomes," he says. "I couldn't recommend this LIC course more."

Ollie milks in a 24:48 Waikato Milking Systems herringbone parlour which was installed in 2018, along with a 280 head cubicle building to house the cows from around December to February.

"We rotationally graze paddocks and use a lot of electric fencing inside all the fields. We use a plate meter to measure the whole farm at least once a week, aiming to keep residuals around 1500kgDM/ha.

"Grass and silage are both so important here. Although this is a relatively wet farm, we, like many others have suffered with grass growth this spring due to the dry spell, but it's really picked up now we've had some rain.

"The average fats are 4.5% and proteins 3.6% and we're always trying to improve. Constituents are more important than yield because of the contract we're on."

Looking into the future his plan is to maximise milk from pasture and keep developing the genetics within the herd.

Our hanny cow

To keep in touch with when these courses will be running, email **admin@liceurope.com** with your details or keep watching our **Facebook** page

Heat detection products on offer

LIC® LIVESTOCK IMPROVEMENT

All the LIC vans carry an array of AI and heat detection products to ensure all aspects of the breeding period are covered. Be it sheaths, gloves or lube, each product is available from LIC in advance of the start of service.

Heat detection: LIC offers a variety of options, starting with the more traditional tail paint. Available in orange, blue, green, pink, yellow and red, the oil-based paint is fluorescent allowing easy identification and assessment; particularly useful for autumn breeders when the days are shortening and nights are closing in. Bottles to cover approx.50 cows are available for £11.50.

In addition to the paint, LIC also supplies the LIC **Scratch Patch**, available in pink, red, yellow, blue and green. They feature a highly adhesive glue for easy attachment to the cow and the security of knowing they'll remain in place. Priced at **£48.68 per pack of 50**.

Finally there are the LIC **Heat Patch Plus**. This product contains a well of dye that's released on pressure and slowly changes the colour of the patch to either pink, red or blue. This clever technology requires 4 seconds of continuous pressure to be activated- a trait particularly useful in reducing the likelihood of false-positives or for those cows that are just enjoying a good scratch on their rump. The more pressure applied, the more the dye will spread, allowing for a more accurate identification of bulling, and seeing how long she's been bulling. The heat patch plus is available for **£129/box of 100**, buy three or more boxes, and the price is reduced to **£115/box**.

All prices quoted exclude VAT

A day in the life of farm solutions manager **Jenny Eno**

Milking a 30-head herd of Jersey and Guernsey cows and making Cornish Clotted cream on Bodmin Moor got Jenny Eno hooked on dairy... and from that day, shortly after she left school, she's never looked back.

The same activity started her love of Channel Island cows, and today in her role as a farm solutions manager for LIC, she sees the value the Jersey is bringing into black and white herds across her patch, particularly when her customers are looking to increase milk solids.

But, above all else, within dairying her real passion is reproduction. She says along with selling NZ genetics she enjoys the chance to practice AI when required, with her reproductive knowledge helping farmers to get the best results and hit calving interval targets.

Her grandparents were farmers, her grandmother was in the land army, so she admits she must have 'the country' in her genes, but hadn't set her heart on a career in agriculture.

"To be honest nursing was my first career choice, but once I started working with cows to fill some time before training, I was hooked. Since then I've worked my way up from the bottom, calf rearing, relief milking, progressing to herd manager positions and latterly AI technician specializing in reproductive management roles."

She's always lived on the Devon/Cornwall border, and her area for LIC today covers the length and breadth of Devon and Cornwall. "Its my home patch so I know a lot of people here, which helps with my job, and am quite often now working with the sons and daughters of previous AI customers and acquaintances."

But when it comes to pastimes, she is the opposite to a 'home bird', putting travelling top of her fun things to do in her spare time. Over the past few years, she's travelled in countries as varied as Greece, Iceland, India, Morocco, New Zealand and the US.

Looking ahead, Cuba is next on the list, and she admits Covid-19 has halted travel this year but was very lucky to have squeezed in three weeks in New Zealand with LIC before restrictions were imposed. Instead she will take a 'staycation' later in the year, hoping to get back into international travel in 2021.

"I was lucky to do quite a bit of AI training here and in the US," she says. "I worked in Reproductive Management Services before joining LIC for the first time in 2012 and after a brief spell away working as a Precision Technician returned to LIC in 2017. Before this I had been an LIC customer and a member

of their Grass Masters discussion group from 1999 and have 20 year relationships with some of those fellow members who are now my customers. We have a long history together!"

Talking reproduction, she says that perhaps she was a wannabe vet, such is her interest in biology and science. "I love anything medical, watch lots of those sorts of programmes on TV, and honestly devour all sorts of scientific papers on reproduction every chance I get."

Whenever she has the opportunity, she talks to vets and looks at everything from semen quality – and preserving it – to the texture of the cow's bulling slime. "Not a popular subject perhaps, but there is evidence to prove that conception is affected by the quality of this."

She loves meeting different people and being out on the farm, often having lengthy discussions with her customers to pass on her knowledge and help them get the best conception rates. The variety of different days keeps her motivated and she says there's nothing 'normal' about her week.

"I might start the day with a local AI call, or go straight to a farm visit. I might join a discussion group meeting with a Pasture to Profit consultant, or take an AI Refresher training day. Ideally I would see three or four customers a day, but recently, due to Covid-19, a lot of my calls have been over the phone rather than physical visits. Having completed a mammoth 12 week AI run covering three counties this Spring stepping in for Kiwi AI Techs unable to work this year, it's been good to catch up on office work and planning. Just lately I've been busy delivering our new bull catalogues."

The introduction of sexed semen has been very popular in her area, and she is aware that she needs to be particularly conscientious when helping farmers to get good results. "I've been very impressed with the figures so far this year, and at the moment our sales are increasing rapidly."

Looking ahead she's looking to become the 'go to' person for gene testing, and fulfilling this role is bound to involve more travelling within the UK. "We are in the process of launching this service, but we'll be able to accurately record parentage, which will be beneficial in eliminating inbreeding and selecting cows to breed replacements from. The same testing will also pick up the A2 gene."

"Really I am interested in anything that lets me be hands on. I want to be out on the farm, not on a computer in the office. We've got so many exciting developments, the Hoofprint™ index, the Herd Improvement Tool and now Gene Testing. Then there's the aim of increasing the AI Refresher training and taking the concept into colleges and universities. My job is much more than just selling."

Jenny's other big interest also takes her outdoors and encourages travel... she's a big festival and live music fan, and attends local smaller festivals as well as being a Glastonbury veteran.

"There's something special about being part of an appreciative crowd and the atmosphere at festivals" she says. "It's something I've really missed this year – let's hope festivals are back on the agenda for 2021."

In the first issue of GrassRoots, LIC's UK sales manager Sally Pocock introduced the new LIC Herd Improvement Tool. Here she continues explaining how it can help farmers improve their cows and efficiency, and we talk to a Welsh farmer who has used the tool for the first time this season.

Herd Improvement Tool

Calves you rear

Applying selection processes and developing a mating plan that increases the quality of the calves you rear will ensure your efforts are rewarded with the best possible heifers entering your herd.

Selecting any surplus dairy calves to sell is therefore simplified, as these have already been identified through the herd improvement report based on the production records of the dams. Retain your best and move off the rest.

Strategically mating your bottom ranked cows to beef from day one ensures your non-replacement stock are a profitable product that will not impact on the future milk production of your herd.

When planning to mate your heifers, remember they need to be well grown (60% of mature liveweight) at the start of mating. A good quality heifer will be in your herd for multiple lactations so give her the best start possible.

Bulls you use

With such a wide a variety of semen options available to farmers, measuring the performance of the progeny being produced is even more important. To drive the industry forward (from a genetic point of view) the measurement of your cows once they enter the herd is the true realisation of the breeding decisions you've made.

Your bull selection should always be in-line with your overall herd improvement strategy and remain true to improving your key breeding traits such as fat, protein and fertility, while maintaining the type of animal you want to be milking.

With sexed semen, conventional, beef and short gestation options available it can be difficult to choose a team of bulls that will give you what you are looking for.

Remember you have half the equation in the dam and that LIC is here to help you select the best bulls to support your herd improvement plans.

Where possible avoid inbreeding and watch the calving difficulty of bulls especially when planning your heifer mating.

Cows you cull

Having a strategic herd improvement plan allows focused selection to be applied across your herd.

The ability to identify (well in advance) poorer performing cows, and being able to select and remove these animals should pressure be placed upon the milking herd, will enable you to continuously increase the profitability while selectively removing passengers not earning their keep.

Record and measure the traits of your cows. Informed decision-making is critical to profitability, and the more evidential data you have, the better the decision you make.

Take the time to physically look at your herd. Identify those animals your like and want more of, it's no good breeding replacements that you won't want to work with every day.

Remember breeding is a long-term game.

You already have one half of the equation, the Dam. The selection of the best sires to go to your best dams will enhance all areas of your herd.

Please give the team at LIC a call to discuss how we can assist your herd improvement and ensure your next generation of calves are securing your future profitability in the industry.

Go to **www.licnz.com/contact_us2.cfm** to find your nearest FSM or call the office on 01725 553008.

Feed efficiency is key

Rhys Williams has been working with LIC for the past 16 years, and is always keen to use new technology that will help him get the most out of his dairy cows, spread across five farms in North Wales.

He's the first to admit he gathers a lot of information on his herds, mainly through milk recording regularly and inputting data on Farm Wizard, Rhys feels it's time he started to use this to identify the most efficient cows, and cow families, and breed from the top performing cows moving forward.

His main unit, Trygarn Farm on the Llyn Peninsula runs 300 crossbred cows on a 70ha grazing platform. All are LIC-bred, with a heavy emphasis on the New Zealand Friesian/Jersey.

He recently made the decision to weigh all his cows, finding their average weight was 507kgs, a weight he is happy with and wants to keep moving forwards.

Now his aim is to keep the weights stable and improve efficiency.

"Using the tool has definitely made decision making a lot easier," he says. "You can get very bogged down in cow efficiency when it's actually farm efficiency that matters."

Entering the data into the improvement tool has enabled him to pick out the best feed converters, for example.

He's keen to research cow families and keep records going back several lactations, so he can ensure he keeps the best of the best. "When animals are culled or die this information is often lost with them, so you're never sure what the mother did."

"I have a lot of data but to be honest I haven't really been in a position to use it effectively. This is a very powerful tool, and I'm looking forward to integrating all my data so I can select from the best.

"We use a team of bulls here, and when we can pull out a league table of the cows it will be very easy to do what we have done on one of the other farms already – have a simple list up on the wall in the farm office clearly indicating which cows are going to dairy and which to beef, based on their performance.

"I can already see there are 40 cows that have moved up the league table that we perhaps should have put to a dairy bull. They had been overlooked before."

Rhys admits he's been wanting to get to this 'position' for a long time, but had been scratching his head about how to get there.

"My aim is for each cow to do between 90 and 110% of her liveweight in milk solids each lactation. That means between 475 and 510 kgs milk solids per cow. The aim will be to use the tool to help me put an extra 10-20 kgs milk solids in the tank without spending more money."

Going back to efficiency, Rhys says he has to get the correlation between milk solids/cow and milk solids/ha right, and feels this tool, as well as helping with selection and efficiency, may also allow him to find a route to increase stocking rate and therefore profitability per hectare.

Rhys and his wife Kelly along with his daughter Cadi, the youngest of five children

More profit... less cows?

Does that sound appealing?

Then listen to this story from Sean Nicholson at Castiles Farm near Ripon, Yorkshire, who features in the video found here:
https://www.licnz.com/news2.cfm?article_id=199&archive=N

Sean's aim was to achieve a goal of building a more sustainable, resilient and profitable business. Prior to working with LIC, Castiles Farm ran a high input, housed farming system with the cows living inside 12 months of the year, feeding high amounts of concentrate.

Sean's team managed all year round calving and milked their 120 pedigree Holsteins using milking robots, but this system proved expensive, time consuming and inefficient. They also had issues with herd longevity, fertility and milk quality. The farm's overheads were high, so profits were minimal.

They needed a new system that required lower input but delivered the same, if not better, output. Sean and Colin Nicholson previously considered extending their land and moving to grass, but needed some guidance on the best approach. Joining the local LIC discussion group run by LIC consultant Bess Jowsey helped provide the knowledge and confidence to make the transition to a pasture-based farming system. At the same time, Bess provided advice to Sean and his team on moving to autumn block calving using LIC genetics.

Tune into our latest podcast...

...to hear senior farm solutions manager Ian Foster talking about some of the top bulls in this year's LIC catalogue. Whether you're looking for a Friesian Holstein, KiwiCross™ or Jersey bull to use this autumn or next spring, the line up of top bloodlines on offer is well worth a look.

Go to **https://licuk.podbean.com/e/lic-ian-foster-bull-1600616287/** to catch up with the latest information and listen to some interesting information on the new Hoofprint™ index featured on pages 2-3 in this issue of GrassRoots.

Calf competition

You still have time to enter our calf competition and win a completely free half day consultancy with one of our three Pasture to Profit consultants. To be in with a chance to win, all you have to do is go to our Facebook page **@LICintheUK** and send us a picture of your calves born this year. A camera phone shot will work well. At the same time as giving us your contact details, please tell us where you farm. This is a great prize to win, so please keep your entries coming in.

⚠ PLEASE NOTE...

Sadly since our feature on Walford Farm was written, and the recent changes in Government legislation referring to Covid-19, we have had to postpone our plans for a monitor farm open day there on October 27. However, we will be filming on the day, following the programme detailed on page 9 and preparing a webinar that you can enjoy at a later date. There will be an opportunity to engage with the team, and ask questions, so please continue to email **schubb@liceurope.com** to stay in touch with proceedings and let's hope we can go ahead in the spring.

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