Working to secure your future

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Sexed semen plans

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Overtime was introduced to the UK in Autumn 2020, +69kg solids, his daughters are slightly smaller sized so he ticks all the boxes for farmers looking to reduce size but increase solids.



Exciting sexed semen plans

A massive increase in demand for sexed semen from here in the UK as well as Ireland and France has led Livestock Improvement Corporation (LIC) to consider significant investment and changes to its collection policy.



Working closer with Sexing Technologies at LIC's Awahuri European collection centre in New Zealand (NZ) will be a focus, with the aim of increasing supplies three-fold. Key to this will be the decision to extend from a six-week collection season (in January/ February) to a more full-time processing model which would allow product to be built up throughout the year to cater for the increasing demand for this product. "Unprecedented demand has led us to look at these investment decisions," says Mark Ryder, LIC Europe general manager.

"We take the approach that bulls considered for sexing are picked on their merits to allow our customers to breed from the best available. This philosophy will continue as we aim to give all our customers access to the leading genetics to improve herd profitability. "Like any major changes to a business model, there is a lot of complexity involved with the new plan and one of the key areas includes juggling the demand from NZ farmers with those from the European market. It also happens that the NZ and European collection sites are a long distance from each other, so logistical planning is also a major consideration.

"There'll always be supply challenges around our desire to offer the very best genetics around the world," explains Mark. "We will only sex our best bulls and the new plans will enable us to offer consistent supply.

"Investment into a purposely built sexing lab at the Awahuri centre is our priority, and working closely with Sexing Technologies, their staff and ours, our aim is to ensure we have a long-term optimal supply model for sexed semen to support our customers' needs here in Europe. "Included in our sexed offering is The Forwards® bull team, born and bred in Ireland, these bulls are from daughters of outstanding LIC bred Irish cows. This allows LIC to be able to offer our farmers a substantial sexed team with The Forwards® bringing in more diversity to the offering.

"Ordering early does help, of course, but our aim is to build supplies so stock is readily available.

"It'll take a few months for those stocks to be built up, but our new collection months will soon offer us a better long-term solution and I would like to reassure all our customers that we will have supplies available this autumn, which will include a blend of our NZ and The Forwards® teams."

Bull burps could hold answer to climate-friendly cows

The opportunity to breed more climate friendly cows is one step closer for New Zealand dairy farmers after a Waikato trial finds a possible link between a bulls' genetics and the amount of methane they produce.

The pilot trial, by artificial breeding companies LIC and CRV, with funding from the New Zealand Agricultural Greenhouse Gas Research Centre, measured feed intake and methane emissions – in the form of burps – from 20 young bulls destined to father the next generation of New Zealand's dairy cows.

LIC Chief Scientist Richard Spelman says results from the pilot trial are promising.

"Methane production primarily relates to how much an animal eats. We've accounted for this and we're still seeing variation which suggests genetics plays a role in a dairy bull's methane emissions – now we need more data to prove it."

The research will progress to a much larger study where operations have scaled up to collect measurements from 300 young bulls, the full intake from LIC and CRV's Sire Proving Scheme.

"If this genetic link is confirmed, farmers will ultimately be able to breed low methane-emitting cows from low methane-emitting bulls," he adds.

Agriculture Minister Hon Damien O'Connor attended the launch of the project at LIC's farm outside of Hamilton.





"What makes me so excited about this project is the cooperation. A company from the Northern Hemisphere and a company from the Southern Hemisphere working together for a common objective. There are lots of options for methane emission reduction being looked at, and this is a great one," Minister O'Connor said.

"Each one of the cows we have in New Zealand now produces a whole lot more for the same inputs that we put in maybe 20 or 30 years ago. That kind of progressive development that we've seen in production, we want to now see in methane reduction and I'm sure we can do that. We are innovative, we're creative and we're cooperative."

Although methane emissions have been shown to be heritable, Richard says LIC and CRV will carry out additional research to validate their findings.

"We'll be methane testing daughters from the bulls that are identified to be high or low methane emitters to check their emissions are representative of their father's.

It's a long-term project, but it has the potential to deliver real benefits to farmers in the future by providing another tool to reduce their farm emissions," he said.

The welfare of the bulls taking part in the trial is being constantly monitored by LIC, with oversight from the Ruakura Ethics Committee which has approved the project. The bulls have the freedom to move around in their pens; eat, drink and sleep when they wish.

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The trial

- The trial is being run by Livestock Improvement Corporation (LIC) and CRV, which together sire 90 per cent of the New Zealand dairy herd through their AI bulls.
- The project has received funding from the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC).
- The bulls involved in the trial are housed in a barn so their feed intake can be measured.
- Bulls help themselves to feed throughout the day. They eat Lucerne hay cubes via feed bins which measures how much each bull eats.
- The bulls independently visit the Greenfeed machine (a special methane measuring device).
- They're enticed to visit the machine as they get a small feed of pellets which keeps them in the machine for three to five minutes – enough time to get a methane measurement (ruminant animals burp every 1-2 mins).
- Bulls are under 24/7 video surveillance so scientists can monitor them remotely. It also allows scientists the ability to go back and review footage if they see any odd pieces of data from the machines that need further explanation.

Project timeline



Make sure you sign up for the BGS spring walks this autumn

The British Grassland Society, in partnership with LIC and AHDB, will be holding two spring walks this autumn, the first in Wiltshire on September 8, the second in Scotland on September 14.



Lanarkshire: Growing grass with success

Jim Baird

On September 14 the focus moves north of the border, to the farm of former First Milk vice chairman, Jim Baird.

Farming 260 acres, all grass, at Nether Affleck Farm near Lanark, he runs 230 dual purpose milkers, most are a twoway cross using black and white cows with Norwegian Red and Montbeliarde. This has ensured his dairy beef calves return a good price when sold in big lots each spring.

With yields of around 8300 litres, some 5000 of these litres come from forage. Four cuts of silage are made to ensure high quality and he supplement rations with 1.3 tonnes of concentrates/cow and brewers grains.

"Once the cows are out at grass - the target is for them to be out by April 10 - they get very little else. We're very committed to a milk from grass system and gear all our planning around keeping our costs down."

Cows are autumn calving, beginning 1 October and 85% calve in 12 weeks. "We've been steadily increasing cow numbers on a 20% replacement rate so I have been more tolerant of late calvers than perhaps I should."

The discussion here will include:

- 1. Grass, the how and the why;
- 2. Silage making for winter milk production;

- 3. The right cow for the system;
- 4. Transition cow management;
- Informed decision making the role of benchmarking in our business success.

With heavy stocking rates it hasn't always been easy to reseed, and Jim points out that in his area grass does recover quickly. Strip grazing around the 12-acre paddocks ensures good utilisation, and he's religious about the use of a plate meter from spring onwards, sometimes cutting grass in front of the cows, and aiming to get into paddocks when covers are 3000kgDM/ha.

"Our usual rotation length is 21 days through the late spring and summer, but we're flexible and it depends on grass growth. We don't 'abuse' any of the fields, and believe our farming



is dependent on having the right cow for our system, which is why we use LIC genetics, and get the maximum utilisation from every blade grown."

Once again:

The event will conclude with a light lunch (Covid allowing) and the opportunity to talk with trade sponsors.

To assist with biosecurity and conform to Government guidelines, please ensure outer clothing and vehicles are clean and that clean boots that can be disinfected are worn. Please note children under the age of 16 and dogs are not allowed at the event, even if they are staying in the car.



Wiltshire: Growing grass with success Robert and David Mallett



Robert Mallett is the host for the southern event. With 230 autumn calving cows in milk at Northleaze Farm, Highworth near Swindon, he's set about showing that high-yielding pedigree Holsteins can milk from grass, managing to top 11,800 litres a cow with over 3600 of those litres coming from forage.

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"Grazing can be a challenge, but when you get it right, there's no doubt it pays. Grass is the most cost efficient feed available, and I started to go this way because I was looking for cost savings. You lose so much feed, especially protein when making silage and carting it to the clamp rather than grazing it fresh from the field."

Today he reckons he will save around $\pounds200/day$ in purchased feed alone as soon as the cows get outside, in addition to less bedding, labour and slurry.

Laying tracks across the grazing platform has made it easier to get the cows out to extend the grazing season.

On September 8 the farm will be leading a discussion in six key areas:

- Grass the how and the why including variety selection and infrastructure;
- 2. The use of new technology to monitor both the cows and grass;
- Silage policy how it fits with an 11,800 litre herd;

- 4. The economics of the highs and lows of grazing;
- 5. Transition cow management;
- 6. A new beef enterprise use of sexed semen and its role in the farm's developing meat business

Three-times-a-day milking works well at Northleaze, with the cows milked at 5am, 2pm and 9pm. The grazing platform of a little under 50ha is mainly split into 1.1ha paddocks, with the low yielders turned out into paddocks after each milking, and the high yielders normally going out once a day after the morning milking.

One of the secrets to getting the most from a grazing Holstein, he believes, is for them to graze as calves. "They learn early this way, and we've had no issues with getting them to maximise grass utilisation. It's not just about growing the right quality, it's also about utilising it properly."

Sexed semen was used across the whole herd for the last two breeding seasons and with accurate heat detection through the use of CowManager ear sensors, there hasn't been a single heifer that's scanned empty.

"Accurate heat detection is key as we need to produce about 60 replacements, with the top 50% of cows served with sexed, and the remainder put to beef. All the heifers go to sexed."

Due to pressures from TB, his son David has started an enterprise to rear the beef calves, with large framed animals from proven Belgian Blue bulls . "I hated giving them away but it remains to see if we can make a profit from an intensive but forage based system," he says.

Cost savings from moving to a grassbased system have been reinvested in more infrastructure for grazing, tracks, electric fencing and the installation of water troughs has been developed since 2013 across the farm – but Robert does not look back.

"I'm looking forward to BGS members coming to look around and challenge me with their questions. There are still lots of improvements to make, and I look forward to learning more myself on the day."

The event will conclude with a light lunch (Covid allowing) and the opportunity to talk with trade sponsors.

To assist with biosecurity and conform to Government guidelines, please ensure outer clothing and vehicles are clean and that clean boots that can be disinfected are worn. Please note children under the age of 16 and dogs are not allowed at the event, even if they are staying in the car.



LIC's The Forwards® bull team now available in the UK

For over 25 years, UK farmers have been using LIC's high quality pasture-based genetics. The co-operative is utilising LIC's genomic selection breeding expertise in Ireland to create The Forwards® team.



The Forwards® team complements our flagship delivery of high-quality daughter-proven New Zealand LIC genetics to UK farmers with an LIC genomic bull offering from within the British Isles itself.

The young bulls undergo genomic evaluation using LIC's long-standing expertise in both purebred and crossbred animal evaluation, in addition to evaluation on EBI.

Uniquely, these bulls have both gBW and gEBI figures, with the very best picked for The Forwards® team.

The Forwards[®] bull team.

These bulls are sourced from Irish LIC Premier Club members' herds. The herds are mainly spring-calving, grass-based systems and contain many exceptional cows. The young bulls are the offspring of matings between high genetic merit cows, with strong LIC pedigrees, and the very best of LIC's elite daughter-proven bulls, available through the Premier Club.

LIC's breeding experts examine the candidate bull's pedigree, physical attributes and cow family information to increase the accuracy of delivering genetics to further improve the genetic merit of your herd. Evaluation using both EBI genomic evaluation and LIC's own powerful genomic evaluation tool, the Single Step Animal Model (SSAM), provides a more reliable estimate of a bull's genetic quality at a young age than that from ancestry alone. With both gBW and gEBI to look at, The Forwards® team brings you a unique opportunity to fast-track genetic gain in your herd.

Programme manager, John Tobin proudly presents the latest bulls from the IBB.

"The Forwards® bull team is very promising as these four bulls are worthy of the SPS program in New Zealand. While the motivation is to create herds that are more efficient converters of feed-to-profit, we're always mindful that a balanced approach is paramount," John adds.

"The balanced approach to breeding not only delivers profit on farm, but ensures that resulting cows have good parlour attributes, the physical capacity to compete (i.e. get their share of feed), and an ability to walk, conceive, and stay in-calf." Available in sexed and suitable for heifer use, these bulls also cater to OAD and high input needs.

IRE AI Code	Name	gBW	gBW rel %	Fertility BV	Milk Volume BV (I)	Fat BV (kg)	Fat % BV	Protein BV (kg)	Protein % BV	SCCBV	Longevity BV	Heifer Calving Diff BV	Cow Calving Diff BV	Liveweight BV	Body Condition Score BV	Capacity BV	Udder overall BV
JE6886	LIC Kilvoige Aaron	301	55	5.3	-94	41	5.8	13	4.2	0.20	536	-1.5	-0.4	2	0.25	0.67	0.34
JE7194	LIC Newbawn Lily	159	51	4.7	277	30	5.1	15	3.9	-0.32	325	0.4	0.2	58	0.35	0.65	0.57
FR6823	LIC Kilvoige Stephen	173	56	1.0	484	36	5.0	22	3.9	0.02	415	1.6	0.1	40	-0.02	0.32	0.20
JE6898	LIC Moorehill Galaxy	202	55	6.2	141	15	4.9	20	4.1	-0.11	536	-0.5	0.1	7	0.19	0.27	0.17
	TEAM AVERAGE	209	54	4.3	202	31	5.2	18	4.0	-0.05	453	0.0	0.0	27	0.19	0.48	0.32





A Taste of The Forwards® team

Stephen is a Priests Sierra son out of a Moodys Executive cow coming from Andrew Dineen's herd in Cork. This is one of the top herds and most profitable farms in Ireland. The dam's five-year production average is 587kgms from 276 days. Stephen is 236 gEBI and 173 gBW.

Also coming from the same herd, Aaron is a G-Force son with good fertility indexes. His dam has done 473kgms in her first lactation, 20kgms above her liveweight. She is predicted to do over 619kgms in 2021. Aaron is 301 gBW and 258gEBI. High Milk and fertility figures under both indexes. This bull is also suitable to high input herds.

Joining these two is Galaxy with 202 gBW and 230 gEBI, sired by the wellknown Glen Koru Epic, impressive on fertility at 6.2 gBV. Last year, the dam produced 716kgms over a 280 day lactation from 400kg cake and grass only.

Finally, Lily is a Misty son with 159 gBW and 262 gEBI. The dam in an autumn calving system has produced 685kgms with 9% solids over 5 lactations.

Sie	Breed Split	A2 Status	Birth Date	OAD	High Input
VAN STRAALENS G-FORCE	J10F6	A1/A2	11/02/2020	1244	1301
CRESCENT EXCELL MISTY ET	F8J8	A2/A2	15/02/2020	1160	1223
PRIESTS SIERRA	F12J4	A2/A2	17/02/2020	1173	1203
GLEN KORU EPIC	F9J5O2	A2/A2	02/03/2020	1159	1202
				1184	1232

To order or for advice on how to use The Forwards® bulls as part of your breeding programme, contact your FSM.

Elite LIC bulls creating elite EBI cows Andrew gets the recipe right in Macroom

A cow that offers great efficiency, excellent fertility, is easy on the environment and produces more than her bodyweight in milk solids, that's the type of cow most Irish farmers would want to see in their herd. And Cork farmer Andrew Dineen is achieving this.



Running 131 cows on a grazing platform of 48ha outside Macroom, Co. Cork, he has spent the last decade following Irish research data about what is the most profitable cow for a grazing system. These results have been driving his breeding decisions. While he doesn't select high genomic EBI bulls, the reality is that he's using 'lower' EBI bulls yet breeding high EBI cows.

His latest co-op performance report shows his herd's EBI is €193, compared with the top 10% of their producers at €156 and the all-Ireland top one per cent figure which is €178. "When I look at the report, at the bottom it says I'm using low EBI bulls but I've ended up with a high EBI cow, so I must be doing something right," says Andrew.

In addition, he has great milk solids figures - his herd's protein stands at 3.99% and fat at 4.46% giving him a return of 37.2cpl and is worth an extra €40,000. His herd produces on average 570kg/milk solids from a 560kg cow. Andrew's been farming all his life, taking over his parent's farm and managing to rent an adjoining unit four years ago. One of his challenges is that both farms are long and thin, meaning cows must walk up to 1.5 miles to the parlour when grazing the outlying fields.

"We've spent a lot on infrastructure improvements," he says. "The rented land was poor and had to be reclaimed. There's drainage in almost every field and it took four years to get it up to scratch. We've concentrated on the cow tracks too, paying particular attention to the 60 per cent nearest the parlour that are always walked on.

"We do have to look at traits such as udder depth, legs, feet and hooves as the walk, at times, can be quite demanding."

But the real changes on the farm started nearly 10 years ago when he decided

to move away from the larger Holstein cow, known for her yield rather than milk solids, capacity and fertility, and decided to go crossbreeding. Today his herd is between 75-80% crossbred.

"Once milk price moved to A+B-C, rather than being on a pure yield basis, it was an obvious choice," he says. "I suppose I was a bit nervous to begin with, which is why I went slower than perhaps I should, but now I'm reaping the benefits and frankly can't understand any farmer still going for yield alone."

His hard work is really beginning to pay off. As an example, he has recently weighed all his cows, and found to his surprise that his most productive animal was the lightest. "It was a bit of a eureka moment," he says. "She was probably the cow you would look at and might think was one of your poorer cows.

"She's all LIC genetics and weighed 390kgs but is giving 472kgs of milk solids from 4557kgs of milk. Her fat is 5.76% and her protein 4.58%. When I look at her I just see how little maintenance she needs when she's eating when compared to one of my bigger 700 kgs Holsteins still left in the herd."

Andrew says he is never happy to stand still, or accept where he is, and while he can't increase his stocking rate unless he was lucky to get more land, he does aim to select bulls for fertility and for milk solids. This spring the main bulls used were Integrity, Sierra, Cairo, Gallivant, and Dexter. G-Force is the sire of the bull, Aaron he's submitted into the IBB (Irish Bull Breeding) programme.

Aaron's dam is doing more than her weight in production and is predicted to do almost 500kg/ms in her first lactation. Andrew is excited to have two bulls in the IBB programme this year. "It's good to see LIC taking the initiative, and it'll be interesting to see how the IBB develops and contributes to the national and international herd in the future," says Andrew.

"Grass is our key input here," he continues. "When the grass stops growing, the parlour stops. When the grass starts growing again in the spring, the parlour opens up." His rationale behind a 10-week breeding season is to keep to a six week in-calf rate and give himself time to have a break between breeding and calving.

All youngstock - both calves and in-calf

heifers - are contract reared away from the farm. This allows the herd to make the most of the grass and offers Andrew the best return per hectare.

"We were wary when we started out, it's true," he says. "But we bred some fantastic animals for a grass-based system with tremendous hybrid vigour. Since those first heifers started joining the herd we haven't looked back. You need to breed an animal that fits your system, and with grass so important in Ireland, it's obvious that New Zealand genetics have a huge role to play."

In late September he sold eight empty cows, and it wasn't until he looked through the catalogue that he realised seven of them were Friesians. "That tells a story in itself," he says. "The crossbreds are much more fertile, and fertility is a key when it comes to building a cost-efficient herd."





"I'm very happy with my results and how they compare with others. I'm sure there's still further to go, and I look forward to producing even better cows."

Herd size	131					
Milking platform	48Ha					
Kgs/MS/cow	570					
Cow liveweight	560					
Concentrates per cow	800-1,000kg					
Empty rate (10 week breeding)	10% 0% cows heifers					
6 week in-calf rate	77%					
Calving interval	369 davs					

2021 IBB bulls

Name	gBW	gBW rel %	Fertility BV	Milk Volume BV (I)	Fat % BV	Protein % BV	EBI	EBI Rel %	Fertility SI	Milk SI	Milk kg	Fat %	Protein %	Sire	Breed Split
LIC Coolhull Daly	218	60	2.3	651	4.7	4.0	228	55	93	92	-57	0.28	0.21	ARKANS BEAUT ET	F11J5
LIC Kilvoige Aaron	297	54	4.8	-70	5.8	4.2	269	49	105	109	-200	0.52	0.27	VAN STRAALENS G-FORCE	J10F6
LIC Brooklawn M Eclipse	265	56	2.8	142	5.2	4.2	268	49	94	114	88	0.21	0.21	GLEN KORU EPIC	F8J8
LIC Kilvoige Stephen	198	56	1.2	529	5.0	3.9	260	58	95	108	-75	0.45	0.21	PRIESTS SIERRA	F12J4
LIC Newbawn Lily	152	50	5.1	257	5.1	3.9	268	58	99	110	-88	0.48	0.21	CRESCENT EXCELL MISTY ET	F8J8
LIC Moorehill Max	345	58	4.7	479	5.2	4.0	266	50	109	100	58	0.26	0.17	CARSONS FM CAIRO S3F	F12J4
LIC Moorehill Galaxy	205	55	6.5	118	5.0	4.1	253	48	87	120	11	0.32	0.24	GLEN KORU EPIC	F9J5O2
LIC Ahabeg Defender	174	52	6.1	197	5.1	3.8	232	50	74	100	-36	0.45	0.16	VAN STRAALENS G-FORCE	F11J5
TEAM AVERAGE	232	55	4.2	288	5.1	4.0	256	49	95	107	-37	0.37	0.21		



Come ebrate and Ce our 25th anniversary



2021 is a special year for LIC as it celebrates the 25th year of being based in the UK. Our celebrations peak in September when we invite all our customers and supporters to join us at a charity ball and farm walk.



Our exciting celebration gets underway with a free-to-attend farm walk on September 24 on the 138ha grazing farm of Kieron and Gaynor Wellwood at Saltby Dairy Unit, Stonesby Road, Melton Mowbray LE14 4RF. They've been tenants here for the past 10 years and have used LIC genetics on their 330 crossbred cows throughout.

On average the grass yield is 11 tonnes/ha with their cows yielding 6300 litres with 540kgs/MS. The aim is to get the cows' bodyweight in milk solids, and they're hitting this target.

We will kick off the day with arrivals from 12 noon, and lunch, before we start the farm walk at 12.20pm. Registration for this event is important for catering purposes, so please email **schubb@liceurope.com** to book your place.

To mark our milestone anniversary, we'd like to do something to support one of the country's top agricultural charities, the Farm Safety Foundation which is run by the NFU and is also known as the 'Yellow Wellies'.

All donated funds and money raised from the auction and raffles at our charity ball later the same day, as well as the profit from the event itself, will go to this charity – one that supports farm safety, one of the most important issues within the rural community at the moment.



After the farm walk, we move to our evening of entertainment at Brooksby Hall, Melton Mowbray. This black tie event includes a three-course dinner, charity auction, raffles with some great prizes on offer, and live music from local band 'The Sounds'. Please put this date, September 24 in your diary and consider taking a table of guests from your company, or friends and family, to support this important celebration.

Bookings can be made on Eventbrite through this link: https://www.eventbrite. co.uk/e/lic-charity-balltickets-163824991961 and tickets

are £120 each including VAT. They are bound to sell out fast as there is a limit on numbers, so make sure you book your place fast. Should Covid-19 restrictions prevent this event from taking place, you will be entitled to a full refund.

We're still looking for donations of any size, and for auction/raffle prizes that will bring in some big bids on the night.

To make a donation and support this worthwhile charity, please go to their Just Giving page here: https:// www.justgiving.com/fundraising/ farm-safety-foundationfundraising.

If you have any ideas for auction or raffle prizes we would be happy to accept these too. Please get in touch with the organisers, Claire Hunter on 07966 090848 or chunter@liceurope.com or Libbie Harris on 07773 348101 or eharris@licurope.com.





Hall of Fame bulls

LIC has a proud history of honouring and recognising the bulls that have made a huge contribution to the dairy industry in New Zealand. This is captured in a concept known as the LIC Hall of Fame.

"For a bull to be inducted into the Hall of Fame he needs to have had a significant influence on the dairy industry by producing genetically superior female offspring that farmers want to milk. Inductees do not only excel through the performance of their own progeny but also through the contribution of their sons," explains LIC's General Manager of NZ markets, Malcolm Ellis.

Here are a few that have made a positive impact on the UK dairy industry:

90274 SRD Dawsons Belvedere

One of four bulls that has reached 1 million lifetime inseminations. At the time of induction, he had recorded 198,000 herd tested daughters across herds throughout the country. His sire pathway includes Pajak Sheik Atlas X Clovernook L Greg. He was part of LIC's Premier Sires breeding team from 1994 – 1997, which are the top bulls used for mating within NZ. In the UK, he has sired close to 1200 daughters.

90281 Kingsmill PA Walesa

Another bull to have also reached 1 million lifetime inseminations. Siring more than 211,000 herd tested daughters at the time of induction. A sire pathway of Pajak Sheik Atlas X Athol Famous Prefect. Part of LIC's Premier Sires breeding team from 1994 - 1997 and siring 561 daughters from 95 herds in the UK.

96329 SRB Collins Royal Hugo

One of the most celebrated bulls in LIC history. At the time of induction, he was the youngest bull in the world to achieve 500,000 inseminations (as a five-year-old) and another member of the bulls to reach 1 million lifetime inseminations. Part of the Premier Sires team from 1999 - 2003, and at one stage, he was the highest use Premier Sires bull of any breed. He also contributed 13 sons to the Premier Sires programme. Sire of more than 2,700 daughters in the UK.

508154 Priests Solaris-ET

A Holstein Friesian x Jersey crossbred bull that proved very popular during his Premier Sires years from 2009 - 2015. He reached over 540,000 inseminations and recorded more than 45,000 herd tested daughters. A sire pathway of Ingrams Ramrod X Amadeus JC12. He was a highly popular bull in Ireland and also sired 1259 daughters in the UK.

311013 Okura LT Integrity

A Jersey bull that became the first bull of any breed to achieve eight years in Premier Sires (2011 - 2019). A sire pathway of Lynbrook Terrific ET S3J X Mitchells Likabull S3J, he achieved close to 230,000 inseminations and recorded more than 35,000 herd tested daughters. He also sired 628 UK daughters.



Day in the life of... Ian Foster

"Attention to detail... that's what I'm about," says LIC's senior Farm Solutions Manager, Ian Foster, a man who still has all his payslips going back 40 years and can tell you his first ever monthly pay was £176.24!



"I always try to start the day with a clear desk policy as this allows flexibility. I build a plan the previous day to have an idea of where I am going to client or area wise, however, my initial focus is on my email inbox and to make sure that any emails received overnight from clients, LIC NZ, management or any team member, that's time critical, are dealt with and that I've contacted everyone who wants to hear from me. There are times when even the best laid plans can move so I find it's best to remain fluid. It works for me. I've always

been this sort of person."

His accuracy, and determination not to let anyone down, led him to the LIC title of salesperson of the year in 2018, an award received that, he says, was one of his proudest moments since he's been with the company.

lan is the son of a tenant farmer who rented a 100-acre mixed unit with dairy, beef and sheep in Sandon Nr Stafford on the Lord Harrowby Estate. At the time they had 34 Guernsey's plus followers and used to bottle raw, untreated milk for the Landlord and Estate Manager. He's the youngest of four children and grew up with his father saying, "The farm isn't big enough to keep all four of you at home and I'm not prepared to prefer one over another." Therefore all four were encouraged to go and find their own way in life.

He did just that, joining the banking industry in August 40 years ago, working first for Barclays and later for Yorkshire Bank, where he ended up running the agricultural team across the Midlands.

In 2003 he started attending the Turf Accountants dairy discussion group,

as the banking figure, and learnt a lot about grazing from there. This is where he first met LIC, and he soon realised, having access to farm accounts, that those who were grazing their dairy cows stood out in terms of profitability.

"I'd seen grazing as a kid growing up," he says, "and I often think that the concept isn't new, today we're doing what we did before, but doing it with better cows and resources. We're utilising them more efficiently and getting better results."

Made redundant due to the banking crisis, he joined LIC in May 2012. He started in the role of area manager for Cheshire, where his responsibilities were to contact customers and sell straws, then soon after to a wider area and to manage some of the team... a job very similar to the one he holds today apart from the staff management where he now offers support as the senior FSM.

One of the things he enjoys most about the job is that he finds no two days are the same, and while every day means sorting emails, dealing with phone calls, and making lists of customers, he can ring when he is on the road to make the most of his travel time. "It's the clients that make each day varied as they're at different stages with their business and needs."

He makes at least one appointment before he sets off, and leaves others until he's certain he has the time. He says there's 'nothing worse' than having to clock watch and start to feel angst to leave before a conversation is finished or a deal sealed just to get somewhere else.





"Service is everything," he says. "People make recommendations to their friends if the service you offer is right. I'm not a huge fan of pure cold calling, but sometimes, if I'm in the area and have time, it makes sense."

Today his area stretches from where he lives in north Cheshire down to Daventry in Northamptonshire then across in the east to the A38 in Derbyshire and Chester/Whitchurch in the west. It's a large chunk of the Midlands, but lan enjoys driving, often for up to three hours in one direction a day, yet also believes in embracing new technology to make the most of his time where he can.

"I take a whole farm view when I visit my customers," he says. "I believe a farm should be farmed with the resources available to it, not because someone tells them it's a good idea to do this or that."

He's also a committee member of the Cheshire Grassland Society and helps to work on the plan for winter meetings and the annual Spring farm walk.

"At LIC UK, when we get to Spring, it's full on," he says. "There can be long days especially with deliveries. It is not unknown to work right across Easter and over weekends to ensure all our customers get what they need. Being organised is the key."

Asked which bull he thinks has had the most positive response for his customers he doesn't hesitate for a second. "Mint Edition sons," he says. "His family offers a wide range of variants to suit all styles and seeing his progeny in the herds I visit always gives me a great feeling."

Looking forward he says every farmer

will have to look at how they farm environmentally, so believes he needs to provide as much information as possible to help. "We need to help them to produce a cow that they want to milk and one that ticks every box. Our work on the HoofPrint® index and now on methane emissions will help a lot."

Away from the job he's been busy doing a house extension and landscaping his garden. He says it's his wife who has the green fingers, and jokes that he's not allowed anywhere near the plants with a pair of secateurs as Janet knows he'll be too heavy handed with his pruning.

"At the same time, Janet can't touch my lawn," he adds. "I'm afraid it has to have stripes! It would be no good using a plate meter on it... I keep the residuals very tight!"

His wife does the majority of the cooking, but Ian says he makes a mean full English breakfast and roast dinner and is known for loving his food! Favourites are foods from the Mediterranean and Italy. "Hosting dinner parties is a pleasure and I can't wait to restart."

"I enjoy walking around the local area especially Tatton Estate which is right on my doorstep... or maybe on a wide promenade by the beach, or the Lake District. I'm not really one for going abroad and flying. I live under a flight path of Manchester airport so I see enough planes in my life – although I must admit that since Covid-19 it's been a pleasure living here as the skies have been quieter."

Finally, he admits to enjoying watching a variety of sport and says he started playing for Eccleshall Rugby Club as a winger when he was 19. Twelve months later he was a front row tight-head prop. He's also a founder member of Stone Rugby Club.

"I love my job," he adds. "I'm very settled and I have a great group of customers who have, over the years, become friends. LIC has a great selection of bulls that can really make a difference, and there's nothing better than seeing the results of your recommendations milking well in the herd a couple of years later."

Succession is key for the Marrow brothers

Three brothers are working together to develop a plan that'll see them each run and grow their own dairy businesses and are well down that road to success.

Andy (31), Dave (29) and Peter (27) Marrow are currently running three units all within an hour of each other in the heart of dairy country, Cheshire. Their older brother Will (33) has built his own groundworks business but helps out with all infrastructure work on the farms.

Two of the three units are owned, the third is tenanted, and each is all grass with grazing platforms to support the LIC crossbred cows they've been breeding for the past 12 years, concentrating with three-year rotations of three bulls across all farms.

"We've never considered doing anything else but farm," says Andy. "There aren't many careers or jobs you can do where you can hold up your hand and say you enjoy them, day in, day out. I don't feel the need to switch off, this is my passion, but I must admit it can get stressful at times."



Bagmere Farm near Sandbach is a total of 200ha with a grazing platform of 120ha. The remaining 80ha is used to support youngstock and cut for silage. The unit supports 450 dairy cows and around 100 R1s/R2s with the emphasis on milk solids and fertility. Pacemaker, Beaut and Prelude have been used for the past three years, this time around they have switched to Izabull, Kartel and Krypton.

"We haven't used any sexed semen yet, and unless the bulls we want to use are available, we won't explains Andy. "The most important thing is to have a breeding plan and to stick to it, so our choice for each three-year cycle is vital."

The Bagmere herd is returning around 5500 litres with 480kgs milk solids and an average lactation length of 3.5. Some 5000 litres comes from forage with only 0.5 tonnes of cake fed through the parlour. "Our aim across all farms is 1kg of solids per kg of bodyweight. Ideally we would like a little more."

Park Farm is a tenanted 240ha unit with a 100ha grazing platform running 360 cows this year and 200 youngstock grazing the remaining 140ha. Sadly, this farm went down with TB last year, so the surplus calves couldn't be moved off, and more animals may be added to the herd moving forwards. Yields here are 4800 litres, but this is a young herd, with the oldest cows just entering their 5th lactation. The aim for this year is to increase to 5000 litres with a parallel increase in milk solids, currently sitting at 460kgs. Again only 0.5 tonne of cake is fed. Cow numbers here will increase to 400 over the next year or so.

And finally there's Hawthorn Farm, a 123ha unit with a 93ha grazing platform and 30ha for the youngstock. This supports 320 milkers giving close to 5500 litres and 480kgs milk solids. This is the first full year, so while this is the aim, the figures may end up a bit lower. The main difference with this unit is that all the cows here are put to beef bulls, no replacements are bred from this herd, with Angus or Herefords used through AI and clean up across the last four weeks from the farm's own Friesian bulls.

Managing the grazing platform is a key to the brother's success with these three herds, and all grass is plate metred weekly with the aim of keeping residuals around the 1500-mark. At Bagmere Farm, which is on very sandy soil, the aim is to have the cows out from early February to late November, whereas at Park and Hawthorn they're usually out from early March to early November. Paddock grazing managed with electric fencing is installed across all three units, with the average size of around 3 - 5ha and an aim of 30 paddocks per farm. The plan is to move the cows every 24-36 hours, but decisions are made on a paddock-by-paddock basis. Andy says the cows are noticeably more content when the turnaround is 24 hours.

Milking is done through three different units. There are two Waikato herringbones, one a 40:80, the second a 24:48, and a Westphalia 20:40 herringbone they inherited. The two



Waikato's were installed as green field developments with new cattle buildings to improve cow flow and stock handling.

Each brother has overall responsibility of one farm and all brothers agree this works well.

"Our father and uncle farmed in partnership until 2009 and as we grew up we were never made to do any farm work, we were encouraged," says Dave. "It was our choice all along, and we grew up enjoying farming, getting involved with Young Farmer groups and schools. Today we are all completely committed to growing our businesses whenever we have the chance and our aim is to buy another farm, when the right one comes along, so we can further grow our asset pot."

Andy agrees and says planning



for succession is key. "We bought Hawthorn and our goal is to buy another unit. A lot of farms get split up and sold for development these days and we'll wait until we find the right one with a good set up that doesn't need massive investment. The tenancy works well as it involves lower capital costs so it's a good way of growing without huge capital outlay."

Silage is taken across all three farms, with the aim of up to 1500 tonnes across each. Should they feel they are short at the end of the season, they buy additional supplies in.

All three herds are spring calving, starting from February 15 on the first farm. All the calves, around 1100 in total, are held on each farm. At Bagmere there are 150 beef and 350 dairy, with all the beef calves, and the calves from heifers, sold at between three and eight weeks through the local market.

Heifer replacements come from Park and Bagmere – kept from the best cows. All the heifers run with the farm's stock bulls.

"Throughout we have gone for the best bulls that meet our requirements," says Andy. "They are all well-proven and we want to see the best genetics coming into the herd. We understand we have to improve gradually, but we are now getting to the stamp of cow we want, a robust grazing animal giving great milk solids.

"When we began we had more Friesian cows and less Jersey, now we are looking at more half and half. We went for NZ genetics because the cows can handle being rotationally grazed all year round, and they're efficient converters of forage to milk solids. We feel we are getting to where we want to be now."

While saying that, the NZ genetics are giving the higher milk solids, the brothers point out that they can get an extra 10% increase in milk price from their Arla manufacturing contracts, so it's a vital selection tool.

At Bagmere butterfat is currently running at 4.67% and protein 3.71% while at Park its 4.25% and 3.44% from a herd currently carrying fewer crossbred cows with LIC genetics.

"We could probably go for more litres, but we don't want to push for that," says Andy. "We see the value of solids above all else. We have hardier cows, less cases of lameness and an easycare animal that's content and delivering the goods. What more could we ask for?"

Environmental and Production Efficiencies are key to success

Joyce Voogt, International Technical Manager for LIC, sums up why both are such important targets on your dairy farm



Breeding more efficient animals helps dairy farmers globally unlock both profitability and environmental gains.

Summary:

- High genetic merit cows partition more of their feed intake to milk production, and lose less to the environment as nitrogen and methane per kilogram of milk produced.
- Kilograms of milksolids per kilogram of liveweight is a good proxy measure for production efficiency.
- High genetic fertility heifers calve down younger and re-calve sooner than their low fertility herd mates.
- Long-lived cows contribute for more lactations in the herd, diluting their rearing costs through greater lifetime milk and progeny income and lower replacement heifer requirements.

While pressure is mounting on food producers to demonstrate their environmental credentials, economic reality dictates that farmers must at the same time, be consistently profitable.

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- 1. https://ahdb.org.uk/estimated-milkproduction-costs
- 2. Feed Use in the NZ Dairy industry, MPI Technical Paper 2017/53
- 3. Facts and Figures, Chapter 4, DairyNZ
- 4. https://landly.com.au/projects

Production efficiency:

Feed efficiency is a key component of on-farm efficiency, and animal feed conversion efficiency (FCE) plays an important role in this. Feed and forage costs are significant and in 2020 accounted for 43% of the cash cost of production in autumnblock and all-year-round calving herds, and 29% of cash costs in spring-block calving herds¹.

One measure of FCE is the calculation of kilograms of milk solids as a percentage of liveweight², with ≥100% being the 'glittering target'. A highly efficient cow will, kilo for kilo, exceed her liveweight in milksolids production. Some British farmers already achieve in excess of this across their herd, a feat that is more achievable with moderate sized cows.

Heavier animals use a greater proportion of feed eaten for growth and maintenance, and a lower proportion for milk production. A 50 kg heavier cow will require 200 kg DM more feed annually just for maintenance and will have used 374 kg DM more feed* for growth from 3 to 22 months of age³.

This means lighter cows can be more feed-efficient in terms of milk output per kg of dry matter eaten, hence the focus on optimising the size and efficiency of LIC-bred dairy animals.

Phenotypic feed efficiency is increasing at 1% per year, at a national level in New Zealand cows. Two thirds of the gain is attributed to a better feeding environment and one-third to genetic gain. See Figure 1.

Over the last 10 years, the average annual rate of genetic gain in New Zealand Friesian cows saw gains in liveweight matched by gains in milksolids, kilo for kilo.

* at 11 MJME/kgDM



Figure 1: Production efficiency gains over time, New Zealand cows

Environmental efficiency:

Improved production efficiency comes with environmental benefits too. In the last 30 years, genetic gain in the New Zealand herd has delivered a 16% reduction in urinary nitrogen and 13% reduction in methane outputs per kg of milksolids.

The current annual rate of genetic gain, (\$10BW points/year), can achieve 2g less methane and 1.7g less urinary nitrogen per kg milksolids, as environmental efficiency increases.

Figure 2 shows the relationship between methane efficiency/ kgMS ranking and feed partitioning. The highest-ranking animals, (HoofPrint rating 10), apportion less feed to growth and maintenance and more to production.

For dairy cows, three key influences stand out for environmental efficiency: liveweight, productivity and longevity.

Higher ranking animals are, on average, smaller and higher producing, directing a greater proportion of their feed to milk production.

Longevity modelling suggests that increasing the herd average number of lactations from four to five can reduce urinary nitrogen by 5.2% and methane by 4.5%/kgMS through lower replacement rates and higher lifetime production efficiency. Fertile cows are essential to this.

Genetic trends for LIC bulls are strongly positive across all these important traits, as the breeding programme delivers sires that will meet future global farmer needs -

that is, cows that increase profit and reduce the environmental impact to deliver a more sustainable future.





Figure 2: Lifetime Energy partitioning by methane efficiency ranking (LIC, 2020)

The 10 steps

A recent project from Australian dairy industry body, Dairy Tas, 'The 10 Steps', has identified ways for Tasmanian dairy farmers to reduce their carbon footprint.

Central to the findings was the need to breed a cow which produces high

milksolids relative to its liveweight, while lasting longer in the herd. The project suggested a milksolids target of 90 to 100 per cent of liveweight.

Rachel Brown⁴, a Tasmanian environmental consultant who worked on the project, said genetics was an obvious starting point for the investigation, as cattle produce 60 to 65 per cent of the emissions from the state's dairy industry.

"This project showed you can milk less cows, but milk better cows," she said.

"With the right animals you can focus on profitability, not production. With the right cows and the right genetics, it flows through the whole business, and you can have good people, who run the farm well."

Walford - What we are eyeing post transition

For the past two years, the focus at Walford has been to get the herd into a single 12-week block and out grazing for at least nine months of the year. To enable the farm to achieve this, a mammoth amount of development work was undertaken in the first winter to get infrastructure in place to enable the cows to get out to graze.

From there, it's been a bit of a juggling act to train the Holsteins to graze, while stopping them from milking off their condition so they can get in-calf within the two initial blocks. With the herd now all to be mated within this autumn block, our focus can turn to our target of achieving 6000 litres from forage.

We've made good gains in this area since we started the transition, moving the litres from forage up from 985 in 2018/19 to 3,598 in 2019/20 season, this was achieved through simply turning the cows out. The farm is on target to achieve 4,500 litres from forage in the 2020/21 season, this has been helped through a full season of grazing and the Holstein cows being more content on a grazing diet.

To achieve the target of 6000 litres from forage we'll be focusing on the following areas - silage quality, days at grass and transitioning cows post calving.

Silage quality is going to be vital in driving



intakes and production while they're housed. With mating starting in November, the cows will be housed as they're reaching their peak production month. To maintain production, the silage needs to be top quality, otherwise concentrates and the likes will need to be increased.

Simply running a multi-cut system is not going to get the silage quality needed to achieve the production targets we've set. Grass samples will need to be taken before cutting to ensure that D-values, energy and nitrate levels are at their optimum. Once cut, the grass will need to be managed to ensure it's dried quickly but not over dried, and finally clamp management needs to ensure there's as little degradation as possible.

With the farm having a good proportion of sand-based soils, the ability to maximise the days at grass can be done with minimal risk to soil damage. With the amount of growth that's been experienced over the past two winters, we'll be looking to measure growth

through the winter with the idea of keeping the cows out grazing through winter. If the growth allows this we'll see 3-4 kg/DM of grazed grass in the cows diet, which will help to reduce the level of concentrates and the protein within the mix.

Being an autumn block, the farm will experience two transition periods that need to be managed correctly. These include the transition from pregnancy to post-calving, and the housing transition.

If any of these production goals are of interest to you please join us at our open days and follow the monthly updates on Facebook. Alternatively contact me schubb@liceurope.com or on 07833 228501.





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