Working to **secure your future**

Issue 07 2022

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LIC®
LIVESTOCK IMPROVEMENT

Patty Clayton, lead analyst, dairy, at AHDB, questions how producers can get more in their milk cheque, encouraging farmers to use AHDB's price calculator to see how changes in milk solids can add value each month.

Is there room to boost your milk cheque?

Milk delivered below buyer specifications for butterfat and protein could be costing GB dairy farmers as much as £55 million a year in lost revenues, the equivalent of 0.44ppl[1].

The butterfat and protein content of milk provides value to processors, and most buyers will design their pricing schedules to incentivise farmers to deliver what they need to generate value in their markets.

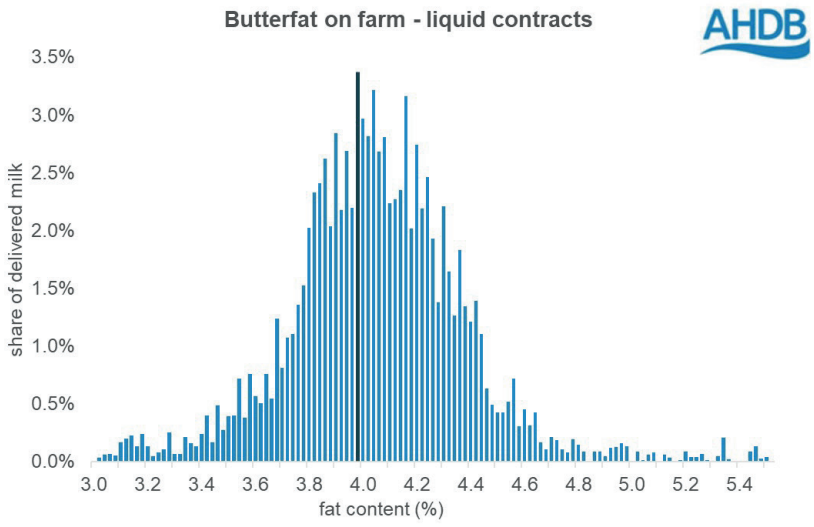
Butterfat

Butterfat is almost universally valuable to processors, whether they are producing cheese, bottled milk, yoghurt or milk powders. In most cases, the value of surplus butterfat will be the market return for cream or butter, because any excess fat can be skimmed off and sold separately.

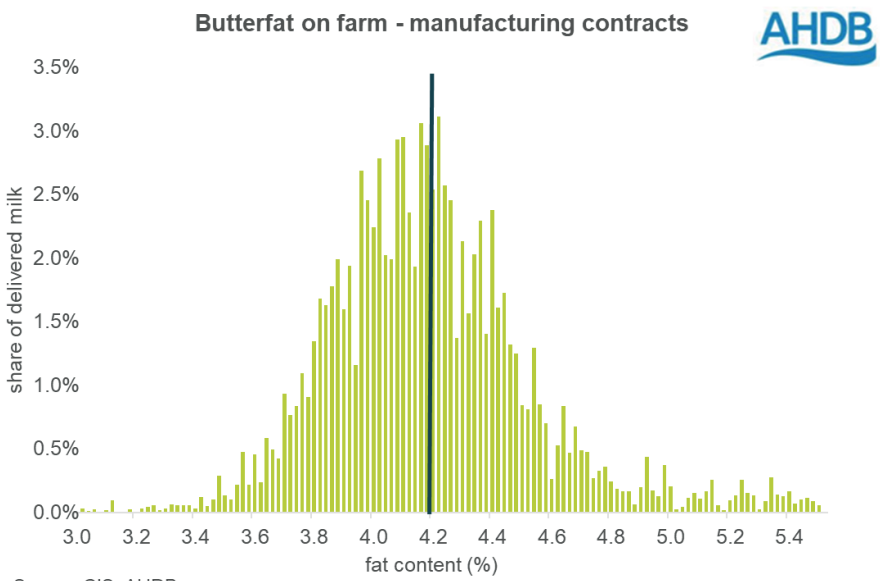
Almost all buyers pay for additional fat above a defined base level, yet an assessment of the butterfat levels produced on farm during the 2020/21 milk year suggests many farmers are not benefitting from this.

The chart to the right is taken from a sample of milk delivered to milk buyers, all of which pay for butterfat. Over 40% of the milk destined for the liquid market was delivered with a butterfat level of less than the base level of 4%. For milk destined for manufacturing, the typical base level for butterfat is slightly higher at 4.2%, and around 55% of the milk delivered for manufacturing fell below this level.

If this milk had reached the desired butterfat levels, it would have generated in the region of £38m of additional income at farm level[2].



Source: CIS, AHDB

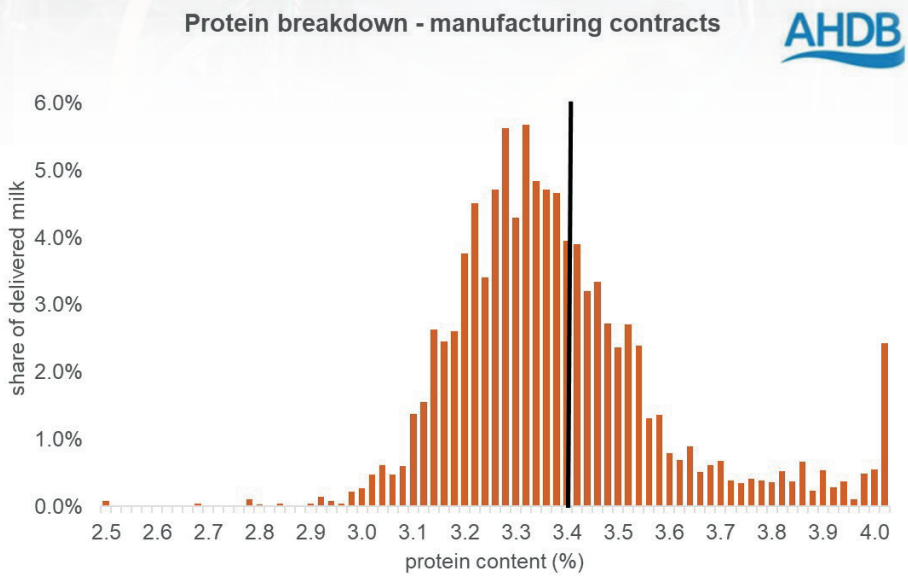


Source: CIS, AHDB

Protein

Liquid milk processors are not able to capture value from the market for additional protein, and therefore do not typically include payment for surplus protein above the base level. Farmers supplying into this sector do not achieve any benefit from producing additional protein, but could incur added costs on-farm. In the 2020/21 milk year, over 40% of the milk destined to the liquid market exceeded 3.3%, the typical base level requested by buyers.

Manufacturers of dairy products can benefit from additional protein, and typically pay for milk delivered above a base value of 3.4%. Based on the sample of delivered milk, around 64% of the milk missed this target, effectively forfeiting an estimated £17m in payments.



Source: CIS, AHDB

What can farmers do about it?

These figures include milk delivered throughout the year, including months when butterfat and protein levels are typically low as a result of seasonality. It is recognised that increasing butterfat and protein throughout the year is not always easy and will come at a cost.

Farmers supplying liquid contracts will often have the added complication of being paid for additional butterfat but not for additional protein. Feeding for higher butterfat levels without also increasing protein can be challenging, and, in theory, any protein above the minimum level is wasted resource.

With many input costs at high levels, with the potential to keep rising, now is a good time to do the **cost-benefit analysis** of pushing for higher solids; if it works now, then it is highly likely to be the right decision for the long term.

For example, at current payment rates, a 1.5 million litres per year farm increasing butterfat content from 4.0% to 4.1% would generate around £3,600 of additional revenue per year on average (equivalent to 0.26ppl). Depending on milk contract, this can reach as high as £5,400 per year. It is important to assess the potential benefit based on your own circumstances and pricing schedule. The **AHDB milk price calculator** can be used for that assessment. It allows farmers to see how changes to the constituents in their milk will impact their milk cheque. Matching this up against the additional costs of achieving higher solids through the use of a partial budget will determine whether pushing for solids is the right route for your farm.

Longer term, farmers can choose to breed for higher constituent cows. **AHDB's herd genetic report** is available to all farmers who milk record, and provides all the necessary information on your current herd to match your breeding decisions to your desired outcomes.

Farmer checklist

to increase milk solids from dairy cows

- Use AHDB's **milk price calculator** to see how changes to constituents affect your milk cheque
- Review your feeding approach and ration with your nutritionist or vet
- Work out a **partial budget** to see whether the costs to increase solids outweigh the additional revenues
- Longer-term, breed from bulls who are likely to pass higher constituent genetics to cows. AHDB's **herd genetic report** allows you to see your herd's strengths and weaknesses and make informed breeding decisions.

[1] Not including any monies lost due to missing quality targets on somatic cell counts and bactoscan
[2] This does not account for the additional cost of feeding for higher butterfat

Under the spotlight

The move from an all-year-round to an autumn block calving system has forced Walford College to turn one of its biggest weaknesses into one of its biggest strengths.

Open days in 2022

Join us at the monitor farm open days this year at Walford College

APRIL 13

The first open day is on April 13 where we will be covering the following topics

- Reviewing the mating performance
- The grazing plan to reduce impact of high fertiliser prices
- The long term plan around growing maize

OCT 26

The second open day will be on October 26 where it will be covering the following topics

- Review of financial performance of the last financial year
- Breeding plan for the year
- Final topic still to be decided

If you are wanting to attend one or both of these open days please email Sean Chubb on **schubb@liceurope.com** to register you place.

"When I took over as manager and started the transition to an autumn block herd, the majority of heifers were being mated at 16 months of age or older," explains farm manager Tom Moore. "This resulted in heifers struggling to get in calf, and once they entered the herd they didn't last long. The impact of this was felt throughout the business. It was nothing to with the genetics, it was all to do with the management. Moving to an autumn block I knew that this had to change otherwise the transition would be a huge failure, and the college wouldn't have a dairy herd anymore."

The plan to improving heifer rearing centred around three actions, changing the location where the heifers were reared, employing someone to solely rear the calves, and the implementation of a regular weighing regime so corrective action could be taken.

"The move to an autumn block made some buildings redundant, such as the dry cow shed," says Tom.

"At first, when we were talking about the options with Sean Chubb from LIC, we were talking about putting intensive beef in the shed or parking caravans, but once we reviewed the existing calf rearing shed, it was a no brainer to rear the calves in there.

The old shed had little windows that could be opened but the air still didn't really move, in the old dry cow shed with the high roof and two mostly open sides there's constant fresh air coming in and around the calves.

"The shed is set up with straw bales and gates making pens for groups of eight calves, groups they will stay in until they are weaned. Then the pens are opened up into a bigger area, and they can mix with the other weaned calves."

Kate Meredith who is contracted to rear the calves doesn't think she does anything too dissimilar to any other calf rearer to which Tom disagrees: "I'm not allowed to do anything with the calves except look at them, as I need to meet Kate's standard. Kate's focus on detail has made a huge impact to the animal growth rates and survivability of the calves. We haven't lost a calf over the last two calving's, and we've only lost one from a twisted gut since Kate took over... so a phenomenal result really."

Kate explains: "When a calf is born it's brought into the shed where it's weighed, tagged and has its navel sprayed. It's put into its pen that will be its home until it's

weaned. For the first three days it'll be given colostrum milk then moved onto a whey-based milk power. I feed the calves three litres twice a day. The ratio of powder to water is 150 grams per litre. The powder has 20% protein, 20% oil and 0% fibre. Calves will stay on this rate until they're four weeks of age, then they move to once-a-day feeds of three litres before being weaned at six weeks.

Calves are also offered water, straw and starter pallets with an additive called Early Bit which encourages intakes, this is offered from the day they enter pen. Through this system, as calves grow, they must eat more and more starter pallets to meet their increasing energy requirements, this in turns helps to develop their rumen early.

"I make sure the water, straw and pellets are topped up and kept clean, this means no wet half chewed pellets left among the other pellets. When I top up the pellets, I mix the old in with the new to ensure nothing is sitting on the bottom going stale. Mixing up the pellets also attracts the calves in, you always see them having a bit just afterwards. While the calves are feeding, I'll do a light bedding up to ensure that there's no wet straw, so the calves have a dry place to sleep no matter where they lay down."

Tom explains that the cost of rearing the calves this autumn has worked out to be just £1.88 a day, down from between £4 - £5 under the old system. "I haven't compared our rearing costs with any other farmers yet, but I think that's a competitive rate. If it turns out that we are still higher than most block calvers I wouldn't be upset, I see this as an investment in the future of the herd. I want these calves to be in the herd for at least six years and you're not going to achieve that by cutting corners.

"Weighing has been something Sean has pushed us hard to do, and it's been an eye opener in terms of what growth calves can do," explains Tom.

"Last spring we had our Holsteins calving down as well as the crossbred cows that we bought in. The calves out of the Holsteins were averaging 1.2kgs per day growth rates, whereas the calves out of the crossbreds weren't too far behind averaging 0.9kgs per day. This autumn the calves haven't reached these heights, only achieving an average of 0.9kgs per day. We're not quite sure why this is, and will need to look back over the weights. We might look to go for a higher spec milk powder next year."

While the autumn calves haven't reached the growth rates of the spring calves, they're still growing at a rate above what is needed for them to achieve 60% mature weight at mating, and 90% mature weight at calving. "I've never weighed calves before," explains Kate. "It's always been done by eye, but what this new information offers is that we can review each stage and make refinements as we go along."

This increase in focus has not only benefitted the calves born into the new system but also the heifers that were born into the old system. "The empty rate in the heifers used to be around 30% but since putting the focus on weighing and growth we have seen this decrease to 8% last autumn, and the percentage of heifers retained to second lactation has jumped significantly... we achieved greater than 95% last year," says Tom. "This has only been achieved through monitoring and focusing on their growth rates."

What a difference two years make

In November 2019 LIC joined with Walford College to work with a new monitor farm. This monitor farm was a break from tradition, as it was transitioning from an unprofitable all-year-round farm to an autumn block one with the goal of becoming one of the top 20% profitable autumn block farms within the LIC CFP database. Since the beginning, there have been many changes to the farm to help facilitate this end goal, below is a quick look at some of these changes.

The first major change for the farm was that the cows would be grazing, so to ensure grass quality was kept, the low yielding cows were turned out by January 2020. To enable this to happen the staff put in a mammoth amount of work over the winter, including creating the initial 1.1kms of cow tracks, splitting seven paddocks up to create 18, and putting in water lines and troughs. Additional work has brought in another three paddocks and extended the tracks by 400 metres. This one act has seen milk from forage increase from 985L up to just under 5000L in the 2019/2020 season and with this the cost of feed has dropped significantly.

A spotlight was also put on the heifer rearing, pre transition around 20% of the heifers were being mated at 16 months or younger. This led to poor heifer retention into the second lactation and higher rearing costs. A dedicated calf rearer has been contracted, and calves are weighed regularly to ensure they're meeting their growth targets. The shed the calves are reared in has also changed which has seen a reduction in health issues. Since these changes and with greater attention paid to the heifers, the retention of heifers into second lactation was 95% from last season and the heifers are reaching target mating weights.

The herd has seen its fair share of the changes as well, with all the cows being mated in the autumn this year. Crossbred cows have also been purchased to increase cow numbers from 160 to 200 cows. Throughout these changes, production hasn't gone below 7000 - 8000L, and constituents have increased.

The most important change that has been seen is in the finances, pre transition the farm was losing £442,000 but now is on target to make a 1.97ppl profit.

Cow efficiency not cow production

Dairy farmers should be concentrating on cow efficiency rather than per cow production... that's the view of LIC's General Manager for New Zealand Markets Malcolm Ellis, who delivered a webinar on the subject in January, saying efficiency was pivotal to delivering a milking herd geared up to meet future challenges.

As a fourth-generation dairy farmer, he's seen the industry move through many different cycles, but sees the challenges facing producers in the next few years as some of the most difficult they have yet to meet.

"Today the letter P stands for profit, not production, irrespective of the farm system you operate. Ten years ago, it was all about production, with the emphasis on working with bigger cows able to deliver higher milk volume. Steadily we have seen the metric changing to kgs/MS /kgs /lwt becoming the key driver. This does not mean that smallest is best as associated non-negotiable per cow costs will not be able to be diluted by the associated lower per cow productivity." Citing two key dairy areas in New Zealand, he mentioned the irrigation costs in the Canterbury area and the wintering costs in Southland. They remain the same regardless of the cows being milked.

"My key message is not to under-estimate the need to have the right cow for the job," he says. It's critical that you identify the best cow for your own situation. I've seen great examples of Holsteins, Friesians and Jerseys performing well, but different breeds will be at their best in different circumstances."

"In a strong milk price environment it will be profitable to supplement cows at seasonal times of feed deficit but unfortunately too often the introduced feed is merely a substitute to the utilization of the cheaper feed in the form of pasture. My reaction is to conclude that too much feed is being used to substitute pasture. Ask yourself whether you are making money out of milk, or milk out of money."

Malcolm says that for 23 consecutive years up to 2015 we've seen cow numbers increase annually in New Zealand by greater than or equal to 100,000 cows per year. The peak was in 2014/15 where the national herd reached 5 million cows, but now this is levelling off and forecast to gradually decline. It is universally accepted that we have now reached 'Peak cow' and as we navigate a landscape of fewer cows those cows are going to have to be better to maintain farm profitability and the posterity of farming families and communities.

"Believe me, the role of herd improvement is going to be more important than it's ever been. We must be milking better cows and better cows must be defined as measured by efficiency of performance".

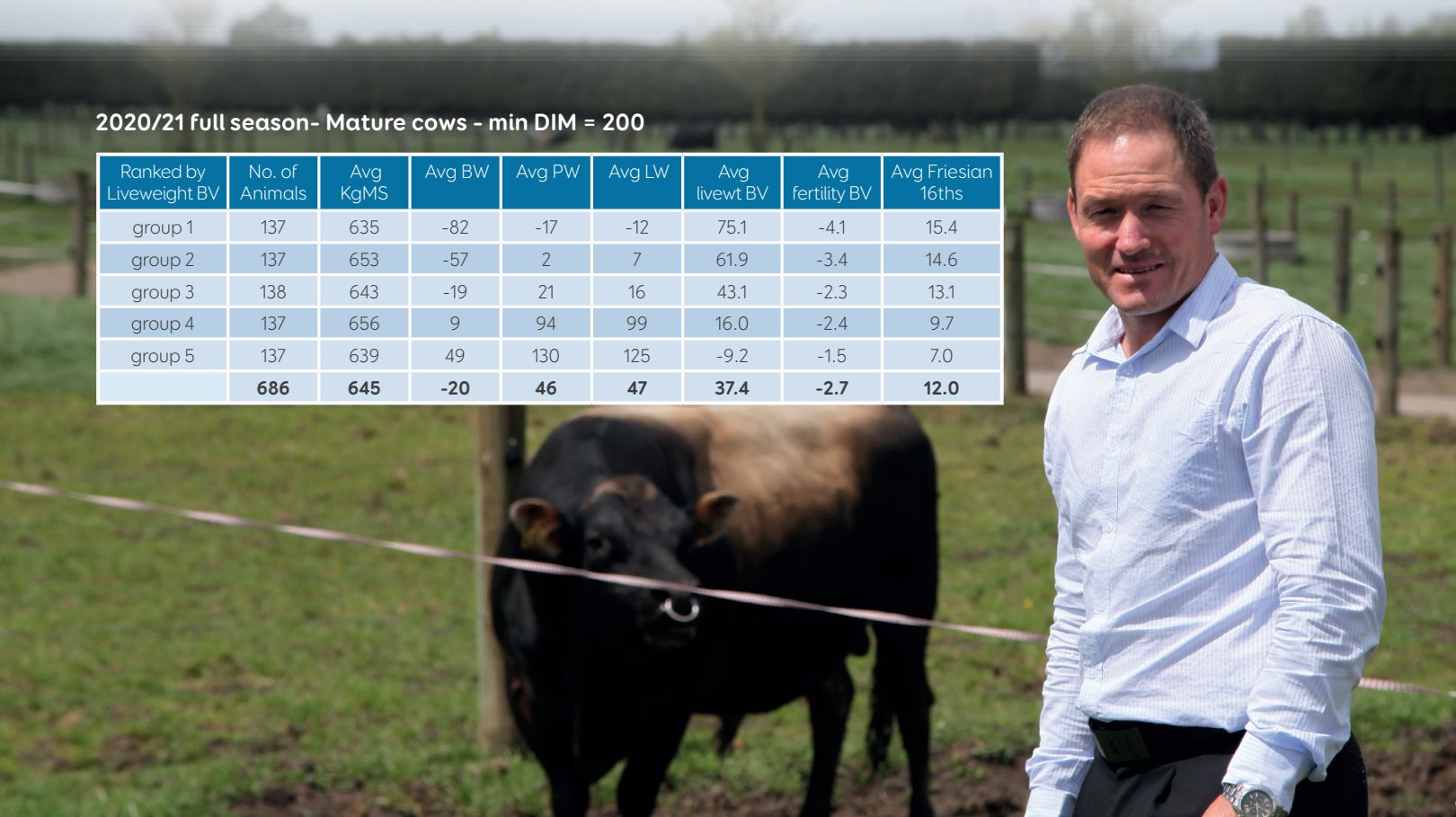
Environmental and Regulatory considerations in New Zealand are pointing to a 15% reduction in cow numbers - by 2030 – in the next eight years – to reduce carbon footprints. While these future predictions vary in different countries around the world, we are all heading in the same general direction. "In the past many have made the mistake of believing that if they are milking less cows, they need to milk bigger cows. This is simply not true."

Focused on the future

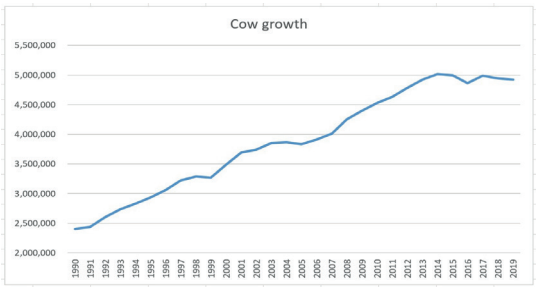
- **'If we are not milking more cows we are going to have to be milking better cows'**
- **'Cow Efficiency needs to be lifted up and targeted in our thinking'**
- **'Profitability, fertility, efficiency and smart cow selection will define success as we move forward'**

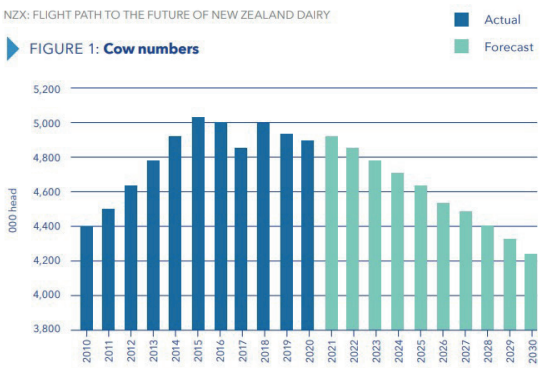
2020/21 full season- Mature cows - min DIM = 200

Ranked by Liveweight BV	No. of Animals	Avg KgMS	Avg BW	Avg PW	Avg LW	Avg livewt BV	Avg fertility BV	Avg Friesian 16ths
group 1	137	635	-82	-17	-12	75.1	-4.1	15.4
group 2	137	653	-57	2	7	61.9	-3.4	14.6
group 3	138	643	-19	21	16	43.1	-2.3	13.1
group 4	137	656	9	94	99	16.0	-2.4	9.7
group 5	137	639	49	130	125	-9.2	-1.5	7.0
	686	**645**	**-20**	**46**	**47**	**37.4**	**-2.7**	**12.0**



Reset looming following 23 consecutive years of cow growth.





So, what does the future hold?

"We need to recognise the need to lift up the value of cow efficiency to enhance farm system profitability. What is the scale of the contribution genetic gain can make to the future profitability and prosperity to a given farm system? We will need to be more efficient and will need to produce at least as much from less, while maintaining profitability and competitiveness.

"It's an important balancing act. We need to protect the next generation. I want there to be opportunities for my children within the dairy sector."

NZ Dairy statistics reveal that over the past 10 years genetic and phenotype trends have combined to add 5.9kgs/MS/cow each year – with 2.7kgs/MS/year coming from genetics (approx. 50% of the gain) and the balance coming from the environmental considerations.

"BW has increased over the same period by, on average, 9 BW units per year. Can we challenge ourselves and increase this rate of gain to 15-20 points if we put increased focus on genetic gain?"

Malcolm refers to the sharpening focus in NZ on herd improvement, pointing to the difference in efficiency between the top and bottom quartiles of a dairy herd, and saying that while increased use of sexed semen speeds up the opportunity for genetic gain, it's the 160kgs difference in milk solids between the top and bottom quartiles within herds that provides the key opportunity. "In reality we already have the cows with the desired levels of productivity, it's just that we need more of them! He's certain there is no justification for milking bigger cows if one is in search of advancement within the farm system. There's a limited correlation between the size of the cow and the efficiency of her output. Bigger cows often have significantly poorer fertility, which is undesirable because getting as many cows as possible in-calf inside the first 6-weeks of mating is a key focus for efficient block-calving farm systems. "If we're not milking more cows we're going to have to be milking better cows.

"Cow efficiency defines 'good cows'. Profitability, fertility, efficiency and smart cow selection will define success as we move forward."

Unique sales days offer future benefits for grazing herds


Gwilym Richards

In a unique collaboration to offer dairy farmers an opportunity to bid for block calving grazing cows at auction, LIC has joined forces with Gwilym Richards and Barbers auctioneers (under the banner of Market Drayton Dairy Sales) to offer six specialist market days this year that will give producers a chance to see any cows they buy playing a major part in their overall herd improvement plan.

The six days will focus on the first Mondays of February (7th), March (7th), April (4th), September (5th) October (3rd) and November (7th) and the days will be marketed under the banner Pasture to Profit Dairy Cattle Sale - solid cows for solid income.

Detailed information on each entry will be provided in the catalogue and, with the first sale in February, farmers are being asked to get in contact now so work on the catalogues can start as soon as possible.

"This is a real first and we're really excited to be leading this initiative with Gwilym, Barbers and Market Drayton," says LIC lead consultant, Sean Chubb. "The cows farmers bring into their herds will have a huge impact on the future performance of that herd, no matter how long these cows remain in the herd. For this reason we believe farmers need to have access to cows that meet the specific needs of their farm, milk contract and current position."

Farmers will be asked to provide the information below for each animal:

- Age
- Weight
- Calving dates (last and next)
- Health status of herd and cows
- Breed makeup
- Sire information of the cow as well as the calf if pregnant

In addition, they'll be asked for:

- Herd production (average litres, fat %, protein % and somatic cell count for the past full year)
- Cow production (litres, fat %, protein % and somatic cell count for the past full year), if it is a heifer, they must also provide the mother's information
- Kg milk solids to Kg of liveweight

And for the following mating information

- Calving pattern of farm
- Length of mating period
- 6-week-in calf-rate
- Empty rate

The cow and herd information that we want farmers to put forward will help potential buyers to select the right cows for them and, at the same time, help sellers to realise the true value of the cows they are selling," adds Sean. "The timing of these sales will correspond with the key decision-making periods for block calving farmers and help those impacted by TB through having windows to target to get clear."

Farmers interested in putting animals forward for any of the sales are invited to contact **Gwilym Richards** for further information or to book cattle in for the first sale. Call him on **01600 860300** or **07768 020399** or email him on **gr@grichards.co.uk**.

"We're delighted to join LIC is this unique opportunity for sellers and buyers alike," says Gwilym. "We believe these special auctions will draw great entries and a lot of interest as many dairy producers are looking for good grazing cows with high solids production to make their herds more profitable and efficient. The information we will promote will put real value on high performing grazing cows and enable buyers to select the right cows for their system. This is a real first, and we're looking forward to the first sale on February 7 2022."

2022 Sale Dates

7th February	**5th September**
7th March	**3rd October**
4th April	**7th November**

A day in the life of... Pasture to Profit lead consultant Sean Chubb

A background in both farming and banking has led Sean into a pivotal role with LIC, where he's able to advise farmers on how to maximise both profitability and production - both key elements of growing a farm business today.

Born in Taranaki in the North Island of New Zealand, his parents were milking 60 Friesians as he grew up, and as well as enjoying life in a rural environment, it wasn't long before he started helping out on weekends and school holidays. When he was three, his grandparents sold the farm, and his parents moved him about two hours south to Manawatu where they bought a new dairy unit, increasing cow numbers to 200+ and rearing calves. It was on this farm that he started helping out at weekends and around his school work.

"This was an all-grass unit and my first experience of a true grazing unit," he says. "As I got older my sister and I were encouraged to rear the bull calves from our herd, we had to work on the farm for the initial value of the calves and cost of feed but at the end when the calves were sold after weaning, we were able to keep the full value of the calves. My sister was only really interested in having one calf, but I could see I could finally get paid for the work I was already doing for them, this resulted in my parents putting a limit on the number of calves I could rear."

Sean says his father wasn't the best at giving instructions, so when he was 15 and was asked 'when are you going to come work for me' by his father, the answer was 'I'm not'. Sean had a different plan for his future which, in turn, led his parents to sell up their dairy unit and buy a 342 dry stock farm for beef and sheep in the Waikato.

"I still wanted to work in farming, but just didn't want to work on the family farm," he says. He finished school and won a place at world renowned Massey University, completing a double major in agribusiness and finance, with his aim being to get a job in rural banking and then go farming, potentially by taking up a share farming agreement before moving to ownership.

"I saw this as my career structure. I wanted to learn the banking side and learn from those farmers who were out there making a lot of money at the time. That was my plan."

Graduating in 2009 he entered the job market at just the wrong time, with the global financial crisis hitting late in 2008. "All the agricultural banks stopped taking on graduates, so my plans went out of the window."

Sean's always been a big rugby fan - both playing and watching the game - and it was here he got his first 'break'. A rugby mate was working for a farmer who owned 650 cows as well as retaining all young stock and some beef on support land. The farmer was needing someone to manage the smaller unit of 200 cows for the last four months of the production year. With a good reference from the mate, Sean had the position before even meeting the owner.

"I really enjoyed this and ended up staying in the role, which was originally planned as a short-term opportunity, for more than two years." In 2012 he left the farm and finally went into rural banking, taking a graduate role with ANZ.

To start off he was a graduate trainee, learning the ropes, and then became a rural agriculture manager with between 40 and 80 clients to look after. He stayed in this role for six years, working in four different regions, and fulfilled his dream of helping farmers to grow, meet their targets and get the capital needed to expand and buy another farm.

"I found there were three very different types of farmers to a varying degree - those who were good pastoral managers but not good with money, and those who were good with money, but not good pastoral managers. Farmers who did

both, who knew what was happening on the farm and in the books, were the ones being successful."

In 2015 his 'leisure' passion of rugby had brought him to the UK to catch the World Cup games, and he enjoyed himself so much that he decided to return, so in 2018 secured a job with LIC and within a month had his visa and started work. Before seeing the LIC job the plan had been to work in the UK, save up money then go travelling for a few months and repeat this until his work visa ran out, then possibly to look to Canada or go home. But the LIC job appealed, and he took another change in direction.

He loves the patchwork of the English countryside and says there is far more variety down every road. "You can find a dairy farmer next to a beef farmer, then an arable farm next to an all-grass farm. There is more potential to talk to people that have different perspectives and you get good ideas from your neighbours. There's more variety here which is a good thing – you're not surrounded by people all doing the same thing."

One of the things that has fascinated him is how quickly and easily circumstances change.

"In New Zealand I had a client in Canterbury who couldn't sell his farm for $200,000 NZD in the 80's as it was considered poor land. Then irrigation came into the area, and now the total farm is valued at $20 million NZD, they built a farm workers house for $200,000 out of cashflow while I was looking after them. The value had gone up astronomically in 30 years. Another client was in Northland, where farms often struggle with droughts. This farm doubled in value once it became apparent that avocados grew really well in that climate and soil. There's always something just around the corner that can change your life."

Long term Sean still plans to buy land and start to build a farm himself, thinking of beef or sheep or even calf rearing. "In New Zealand it's almost impossible to get into share farming now, there are so few opportunities. One recent role offered attracted over 120 applicants. At the moment, with COVID-19, it's hard to plan, but one day I will certainly find a way to make a start.

"My advice to young people would be to find a good farmer who can teach you and mentor you. Be patient and work your way up through the industry."

Soon after arriving in England, Sean met his partner Kat, an educational psychologist, and in October they welcomed their son into the world. He lives in the outskirts of Welshpool and covers an area of Wales and the Midlands. His typical day consists of preparing for meetings, writing reports, keeping up to date with research and developing new ideas, visiting clients and developing ways he can help them to achieve their targets, and running discussion groups.

"I feel discussion groups can be immensely valuable. It's important to share information and learn from others. They're practical, educational and offer a wide range of resources."

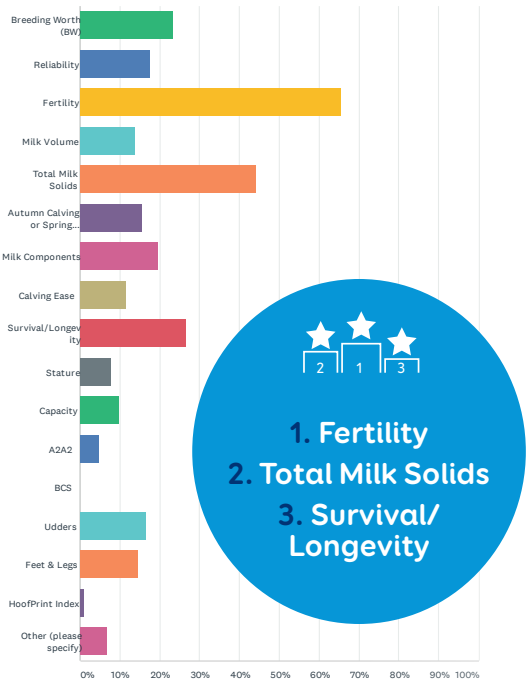
He's still a major rugby fan and travels to see the All Blacks whenever they play in Britain. Technically he still plays, turning out for his local club Owestry, but with an injured knee and a new baby he struggles for time. He enjoys hunting with rifles, and did a lot of shooting in New Zealand, running to stay fit and also says he likes building things and has undertaken a number of projects around the house.

"My job is very satisfying, and I love seeing how I can make a difference. Having both a farming and financial background gives me a chance to set targets, talk future plans and see them through. My client base is growing annually and I'm really looking forward to developing the role further over the next 12 months."

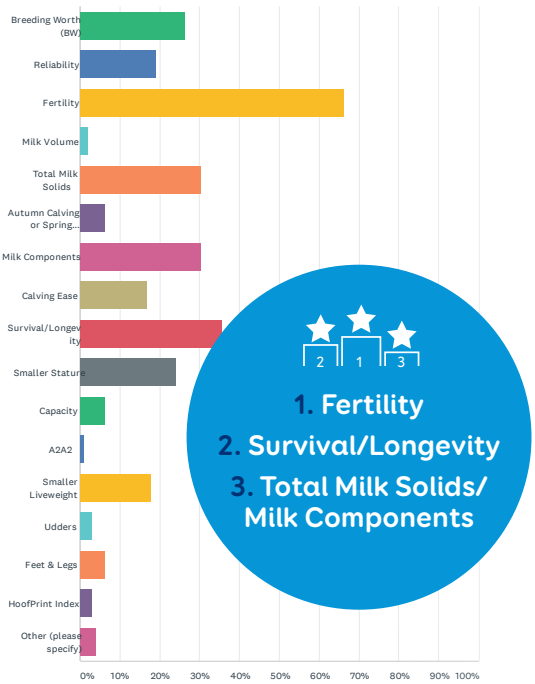
LIC® Survey

A two-part survey with LIC customers in Britain has delivered some key insights into farmer thinking this year.

What are the **TOP THREE TRAITS** you are looking for in the genetics you use?



What do you consider are three **STRENGTHS** of LIC bulls?



The company decided to carry out the activity in a bid to better understand what currently sits behind the breeding decisions of its customers, to obtain a clearer picture of customer perception of LIC, its products and its Pasture to Profit consultancy service, and to use the information gleaned to find ways to improve service and support, and better communicate its offering.

The first part of the survey was emailed to customers at the start of September 2021 and received a 15% response rate. It featured 23 questions which focused on customer structure, buying behaviour, and genetic products. The second part of the survey was mailed in late September and had a slightly lower response rate of 12% and had 13 questions that focused on marketing, consulting services and issues facing the future of farming.

First survey

This showed, as expected, that the annual LIC catalogue is the main source of information about bulls for customers with 52% saying they tapped into this resource. Websites were another popular choice, along with face-to-face meetings with FSMs. More than 65% said they selected for fertility first, then longevity (36%) followed by total milk solids next (29%) Breeding Worth was picked by 25% of respondents. Interestingly stature, A2A2 bulls, udders, feet and legs along with the HoofPrint® index recorded the lowest selection.

Just over half the responses picked up milk volume as a trait that is lacking for the bulls offered, indicating many producers, even after seeing milk contracts changing with more premiums for fat and protein, are still choosing bulls that offer volume rather than milk solids. Next negative traits were udders (37%) and smaller liveweight (27%).

The vast majority of farmers felt the pricing of semen was reasonable (65%), with 30% feeling it was expensive. Asked what their budget was for conventional dairy semen (per straw) more than a third quoted between £10 and £11, with 28% saying between £12 and £13, nearly 10% picking £14 to £15 and 10% saying £15 or more. The majority of farmers surveyed are milk recording.

When asked whether they had a preference to what type of bulls they selected, 46% opted for daughter proven and 2% for a genomic sire, with 42% going for a combination of the two.

Next, they were questioned about their use of sexed semen, with 74% saying they had used it, and 26% saying they hadn't. The results indicated that sexed semen demand is high, and steadily increasing in usage. The main reasons for using sexed were listed as: to meet buyer/ processor regulations (37%), to get extra heifer calves for their own farm (27%) and to reduce surplus calf numbers (20%). Asked whether they planned to use sexed semen in the next three years 77% said 'yes' with 23% saying 'no'.

Looking at how many sexed straws would be used on the dairy herd in the future, more than a quarter of respondents believed they would use between 75% and 100%, with less than 25% saying they would use between 25 and 49%.

And looking at breeding trends, the survey concludes that almost all respondents use AI (95%) with the majority using DIY (55%) but a good proportion (30%) using a technician service instead. The majority of respondents appeared to have purchased a good level of their genetics from LIC last season (84%) with 92% indicating they will be purchasing from LIC over the next three years.

Second survey

This part of the survey looked at the This part of the survey looked at the consultancy service offered by the Pasture to Profit team, and using a points system, concluded that grass production and utilisation advice was the most popular and effective advice offered. Next was discussion group facilitation, followed by breeding performance. Understanding individual farm situations and goals, offering one-on-one consulting and guiding producers through system changes were picked next. They were followed by advice that helped farmers achieve their goals, CFP and financial support, and lastly young stock management.

"The majority of respondents indicated that the consulting service we offer meets their needs and is considered value for money," says lead Pasture to Profit consultant Sean Chubb. "Advice on grass production and utilisation was the most sought-after topic for support, and managing costs thought to be the issue most needing remedying."

When asked which areas of their businesses most needed attention, the top answer was managing costs (63%), followed by finding suitable staff (55%), data management (50%) and animal production (46%). These were followed by feed management (34%) animal health and well-being (28%), plant and equipment (11%).

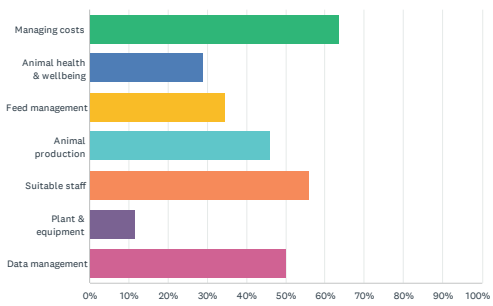
Keen to see where farmers found out about new inventions, or ideas about farming, top of the answers given was the reading of publications and trade magazines (57%) followed by social media (also 57%), industry events: roadshows, events, conferences and so on (44%), word of mouth marketing: neighbours, friends, family (36%), traditional media: TV, radio (6%) and: other' including websites, a similar 6%. Many farmers gave two or more answers to this question.

Producers were then asked what their key concerns were about current or pending legislation in the dairy industry, and how this could impact their business. Most important was identified as regulations on carbon emissions, followed by animal health and wellbeing, treatment of surplus calves, processor supply requirements and land and soil health.

"The survey has been excellent in confirming the key issues concerning farmers about their future, and in telling us where we need to improve our offering," says Sean. "It's always good to carry out this sort of an exercise, and to listen to what our customers tell us, whether that's good news or bad.

"It's interesting that producers are still selecting for milk volume rather than milk solids when contracts are changing. And there is clearly still a belief that big cows are better than small cows because they produce a higher volume. I urge readers to refer to Malcolm Ellis' article in this issue of GrassRoots and to take the time to check out his webinar on the subject."

What are 3 areas of your business that you consider need attention and remedying?



Moving forwards from the survey

Took on recommendations from David Beca to improve our CFP template to gain better insights for farmers.

Building relationships with research institutions to gain a higher level understanding from the research they are undertaking.

GLENMEAD SB TRAPEZE

Efficiency is the key word when it comes to Trapeze. An A2A2 Spring Tralee Bass son, low liveweight at 16kgs, making him a safe option for use on well grown heifers. Trapeze's dam is still a contract at 7 years old, a great innings and sign of a really strong cow family. Bred by Kevin and Felicity Clark from the Glenmead herd in the Bay of Plenty. Some of Trapeze highlights are a gBW of 296 a fertility gBV of 5.4 and 0.58 in the udder.

How do we get you the best possible bulls from New Zealand?

Well, like all good things worth waiting for it takes time... and timing is everything.

TIRONUI SUPERMAN ET

Bred from an outstanding Integrity dam, averaging 11% solids across 5 lactations, this Superstition son really stands out as one of the top of bulls of the class of '18. With a pedigree of Superstition x Integrity x Nevy its easy to see where the production of 74kg solids comes from. On top of this an udder support of 0.56 & functional survival of 1.7%, daughters of Superman will persist in herds for many years to come.

It's a nine-month process to get the best possible bulls selected and onto our EU stud then collecting against the targets set.

First, we need to review what each European market requires to meet their farmer needs. Armed with this each June we start to screen all the eligible bulls in the system along with the new graduates who have daughters calving in August/ September. These new graduates were used as yearlings in our Sire Proving Scheme three years earlier. The scheme will start identifying those rising to the top through the early milk recording information along with information gathered by those farmers around: milking speed, adaptability to milking, temperament and their overall opinion of each animal

Some bulls are excluded at this point due to a number of reasons:

- They have been vaccinated for IBR
- They have developed health issues
- Their daughters aren't out-performing their cohorts
- Their semen is of poor quality

The list of prospect bulls remains relatively unchanged until September when phenotypic data starts feeding into their proofs. This is where we see the biggest re-ranking and some previously unfavourable bulls come back into the mix and, vice versa, some drop away.

At this point the NZ market will also be watching the proofs closely and they have they same focus as us in getting the best available to farmers as soon as possible. So, instead of waiting a year they'll pick the cream of the new graduates to use immediately on the national herd. This can mean several of our preselected bulls become unavailable to collect until a little later in our collection process.

In early October we revisit the entire list of bulls available with a focus on

those that are available to start collections in November, our first intake. We continue to watch the changing proofs as more daughter performance information feeds into the system. We then select an intake of two teams of bulls to collect in December. Often at this point we'll find bulls that have risen later on as more daughter information feeds through.

Intake 1 and 2 bulls are collected for their sexed and conventional targets, and these are reached prior to intake 3 bulls taking centre stage on 20/01.

Meanwhile, in December, we're analysing all the high use NZ spring bulls for those that will add the most to our European farmers, this includes the new graduates that were fast tracked into the NZ breeding plan. These guys need to go through all the same quarantine processes as the other bulls, so are only available from 20/01 onwards for collections. There're our intake 3 bulls.

We follow these with a team of equally as good intake 4 bulls which are generally good bulls that we already hold some stocks of to get us started with our earlier starting farmers in market.

Targets for all these bulls is assessed weekly based on farmer interest, and pre orders with rostering changes made where possible.

Exports to the EU/UK have to undergo a very controlled protocol to ensure both quality and disease status are kept to the very highest levels possible, and this also takes time. It can be 50 to 68 days from the date of collection until the straws are available in market. To achieve this year-on-year without disruption is a feat that requires meticulous planning and attention to detail, along with a little bit of lady luck.

Last spring was a good example when lady luck decided to desert us and, despite all our checks and braces, we ended up a bit late for some. We've invested heavily in the process and expansion of sexed collections to further minimise the reliance on that little bit of luck.

As long as all goes to plan, you'll see some bulls like these guys below here for you this year. And, when you look at this quality, I'm sure you will agree the effort we put in on your behalf is well worth it.

GLANTON DESI BANFF

This outcross bull, sired by the renowned Arrieta Terrific Desi. Banff is the perfect bull to use as a first cross on your Friesian cows. Banff has a massive fat percentage of 6.8%, its easy to see where it comes from with his dam averaging 6.94% fat across 5 lactations. Add in a massive fertility of 5.2%, its hard to look past to improve solids & fertility in your herd.

McKENZIE GF COMET S3F

If you're looking to increase solids and liveweight through capacity Comet is the bull for you. Comet would suit both grass based and high input systems due to his high intake capacity. Add into this Comet's excellent udder support of 0.74 & udder overall of 0.85 these cows will last in both systems.

NOT AVAILABLE IN IRELAND

VAN STRAALENS SAFARI

If you're looking for an easy calving outcross, Safari is the bull for you. An F11 with a liveweight of -5kg combined with 64kg of solids, Safari daughters are extremely efficient cows. On top of this a capacity of 0.71, Safari is the ideal bull to increase volume & solids while also maintaining liveweight & capacity.

WERDERS PREMONITION

Topping the RAS List, and bred by Thomas & Courtney Werder of Patea, ranking highly as a genomic bull, it appears he's come good on his potential! Now with 132 herd tested daughters and 87 TOP (traits other than production) daughter inspections done, Premonition has an udder overall gBV of 0.71 and capacity gBV of 0.62. Sitting at 440gBW, Premonition is part of the KiwiCross Forward Pack and KiwiCross yearling-friendly team. A Priests Sierra son, he looks set for a considerable stint on the RAS list, with rock-solid cows in his back pedigree.

Diverse sward looking full of potential!

Regenerative Agriculture (Regen Ag) – an ecological approach to food production systems focusing on soil regeneration, encouraging and supporting biodiversity, improving the water cycle, optimising carbon sequestration and increasing resilience to climate related challenges.

Regen Ag is fast becoming the most important modern farming methodology. Why?

It resonates with our consumers who are constantly being bombarded with how they can 'save the planet' through the choices they make. Therefore, it's actively encouraged by our processors to keep abreast of this competitive consumer angle. But what about us... the farmers?

In many ways this growing movement is exactly what we need too. Ultimately our livelihoods are linked to the health of the land, so it's in our best interests to nurture and protect it. Regen Ag can give us a model on which we can hang our social licence to farm – allowing us to demonstrate to our local, national, and global communities that as custodians we're an integral part of the solution.

For many farmers Regen Ag is scary (and probably a lot of other words besides). Change always is. A huge hurdle for us to overcome is our belief in what we are doing now, and the 'if it ain't broke' philosophy. After all, we've been led here by science, research and good advice.

It's obvious how current farming methods have an impact on the natural world we can see. A growing network of soil scientists are expanding their understanding, and demonstrating that soil is a living ecosystem which we're also interfering with. The fertilisers and sprays we use, wormers and medicines, cultivation techniques, crop selection and rotation, stock type and grazing management are some of the obvious ones. All of this is being rehashed through the blooming science of Agroecology, the application of ecological principles to agriculture.

Whether you realise it or not, we're gradually adopting these principles already through farming policy and regulation. Processors take this a step further with their own member guidelines. While many environmentalists might argue these are not being implemented quickly enough, they are managed in context with making them financially practicable. But does this mean we should wait until we're 'required' to change?

Regen Ag takes Agroecology a step further... it's about actively repairing and regenerating soil, habitat, and biodiversity, allowing natural mechanisms to support us. Farming more in harmony with nature at all levels, from what we can see to what we can't, both within and surrounding our farm boundaries.

The greatest hook for Regen Ag is its focus on carbon capture. Utilising the natural process of photosynthesis to draw carbon into the soil where it feeds the soil microbiology and improves water infiltration and holding capacity. A healthy stable soil microbiome promotes better plant health, yield and resistance, possibly even plant nutrient density. It helps hold soil together, reducing erosion and sustains plants better through challenging weather events. As all agriculture one way or another is based on plants, this must be a win for everybody.

"It's worth noting here for pasture-based farmers that maximising grass growth via soluble fertilisers (therefore maximising photosynthesis to draw down carbon) may need to be reconsidered. New research is beginning to suggest that soluble fertilisers impede the symbiotic relationships between plants and soil microbiology, therefore negating the other beneficial impacts. (Google Green Cover Seed Dr Christine Jones The Nitrogen Solution) The fact that soluble fertilisers end up in

Grazing group discuss the management of diverse swards, particularly when it wants to shoot

Dry cows grazing a mature diverse sward grown without N

our waterways and atmosphere (without including the carbon footprint of its manufacture and transport) probably means our reliance on this practise should be at the very top of our list if we are to reach carbon neutral status. For most, this will be the hardest hurdle to jump as we grapple with the implications of such a change. Instinctively we assume this means less output. Depending on your farm system maybe it does. However, does it have to mean less profit?

Some early UK research into the regenerative strategy of diverse swards with minimal N use have shown competitive productive output in terms of tDM/ha and comparable ME so large reductions in stocking rate may not be needed long term. (Google Field Options sward diversity or contact Germinal for an update on their trials).

Dairy herd grazing in autumn on tall diverse sward cover

Perhaps instead of seeing these environmental methodologies as challenges, let's see them as opportunities. There are small, relatively low risk changes you can make within your system that will begin your journey and an ever-growing network of early adopting farmers to learn from.

Those who adjust rotation lengths to allow sufficient rest between grazings already have one foot on the ladder. Likewise, those who have plenty of clover in their swards, or are increasing sward diversity. Reducing drugs on farm via selective dry cow therapy or worming based on faecal egg counts is now commonplace. Many look to use min-till cultivation techniques and are reducing their use of sprays. Minimised and more strategic use of soluble fertilisers (if at all) will be an area many of us will need to address in the coming years... so why not start now while cost pressures of this input will really bite.

While these alone are a way off truly regenerative agriculture, they're a start. And those who rely predominantly on grazing with lower proportions of imported feed will find change less dramatic. Bear in mind that those managing this type of low feed input dairy system already have the most resilient profitability (Google David Beca LIC webinar).

Unfortunately, we can't look to research and science for Regen Ag production system blueprints yet. But perhaps we shouldn't wait? Every farm as they say is different. Not just the soil, land, location and microclimate, but your own management. Each farm has its own unique biological system. Seeking advice from those with experience, gradual experimentation, observation, and monitoring what is most successful will be your best allies in the adoption of any regenerative strategies that are outside of your comfort zone.

Regardless of your opinions about the Regen Ag movement, it's forcing us to think more critically about how we manage our farms, question long held beliefs in indoctrinated practises, and lift our eyes to beyond our farm gates into the wider community in which we function.

With our expertise in low input grazing-based production systems, LIC consultants are keen to support those who have an interest in this area and will look to hold an event to continue the conversation. Contact **Bess Jowsey** (**07717732324** or **bjowsey@liceurope.com**) in the first instance to register your interest.

Richard Spelman

New production variants discovered

From spring 2021, all farmers in New Zealand using LIC's GeneMark DNA Parentage Testing service will have their calves screened for six newly-discovered production variants which impact animal health and milk production.

Although affected animals are rare (about 0.5% of animals born are affected by one of the six variants), impacts are substantial and include lower milk production, lower milk solids, smaller stature, smaller chest circumference, and lower liveweight.

Because the variants are recessive, animals need to inherit two copies of the gene to show an effect (i.e. one variant each from the sire and dam).

Richard Spelman, LIC chief scientist, says the discoveries reinforce the importance of continued investment in gene discovery and genetic analysis technology to help farmers breed healthier, more efficient, dairy herds.

"By supporting farmers to identify and minimise the number of animals that are susceptible to particular 'negative' genes, we can breed cows that are more resilient, speed up the rate of genetic gain, and help ensure the sustainability of New Zealand's pastoral industries for years to come," he said.

The implementation of the new Illumina technology at GeneMark has allowed the variants to be included within the new genetic panels used for GeneMark DNA parentage testing.

Information on affected animals will be provided free-of-charge alongside parentage results so farmers can make an informed decision on whether to retain these animals in their herd.

"We're excited to transform our investment in research and development into a simple convenient service for our farmer shareholders, one that could save millions in lost production," Spelman said. "Knowing what calves have these genetic variations will help ensure farmers rear only the healthiest, highest performing animals."

The discoveries were made possible by genetic mapping studies on LIC's large DNA sequencing and animal production datasets, as well as funding received from MBIE's Endeavour fund.

Beverley Cock

Our new Farm Solutions Manager for Wiltshire & Southern England

Hello everyone. My name is Beverley Cock, and I'm delighted to have joined the LIC team as Farm Solutions Manager. I graduated from The Royal Agricultural University in 2020 with a BSc (Honours) degree in Applied Farm Management.

After spending the past 18 months working hands on, in both a large scale high-input dairy system and a large-scale split-block grazing system, my fascination has grown enormously to what the grazing cow can achieve. I'm looking forward to learning more, and meeting many new customers as well as existing ones.

My combination of hands-on experience and academic understanding in the sector puts me in a fantastic position to be able to spread this knowledge, and I look forward to being able to support others in the industry, so they can also achieve their herd improvement targets.

I'm based on the Somerset/ Wiltshire border, and I'll be covering farms in Wiltshire & Southern England.

I look forward to meeting you all very soon. In the meantime, if you have any questions, or you would like me to visit, please don't hesitate to get in contact with me **07773 348 101** or **bcock@liceurope.com**.

Pasture to Profit Insights webinar

For those of you who missed the opportunity to listen to the latest webinar in our Pasture to Profit Insights series, the spotlight was shone on cow efficiency.

Go to **https://youtu.be/rf5910-5gls** to listen, and hear LIC's Malcolm Ellis presenting his findings from farms around New Zealand on efficient cows. Malcolm was joined by Sophie Evers from Teagasc who has researched cow efficiency in the Irish dairy industry, Sarah Baker, farm manager from Plymouth who's monitoring and breeding for cow efficiency, and Sally Pocock LIC's UK sales manager who all answered your questions.

Cogent

In a plan to utilise economies of scale, and reduce carbon footprints, LIC is working with Cogent to develop a distribution programme that ensures its straws are delivered efficiently to farmers across the UK this year.

LIC already has a relationship with ST Genetics, the owners of Cogent, as it's their Ultra 4M technology that is used to sex New Zealand semen, and semen from The Forwards® team in Europe.

"They're managing delivery of our straws to streamline our work, and to allow our Farm Solution Managers (FSMs) to concentrate on providing our customers' with solutions, the main part of their role," says Mark Ryder, LIC Europe General Manager.

"It makes complete sense to work in partnership with Cogent, and, while we both remain as completely separate businesses, this partnership enables us to utilise economies of scale and save on the number of times our customers are visited."

LIC® LIVESTOCK IMPROVEMENT

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