Working to **secure your future**

Issue 01 2020

GRASSROOTS

"Whether you love them or hate them, these little Jersey cows at Moorepark are punching well above their weight"

Irish Farmers Journal

Read more on page 2

Picture courtesy of Alfie Shaw

Pasture to Profit

IN THIS ISSUE:

LIC® LIVESTOCK IMPROVEMENT

Jerseys deliver the goods

Early results show New Zealand Jersey animals outperforming the top 1% EBI cows in Ireland according to data from the latest on-going trials at the world renowned Teagasc facility at Moorepark in Ireland. In addition FXJ crossbreds were deemed to outperform both the three-way cross and Holsteins at their Clonakilty Research Facility.

The Next Generation herd was established at Moorepark in 2013, and the first phase of the project compared high EBI (elite) Holstein Friesian cows to those that represent the national average EBI. These elite animals are now said to be 10 years ahead of the national average.

A new dimension was added to the study in 2018 when high-EBI purebred Jerseys were included in the study. The Jersey females originated as heifers purchased in Denmark, embryos imported from New Zealand along with females from a small Jersey herd established by Teagasc some years ago, mostly NZ genetics. Looking at the two strains of Jersey, it soon became apparent that the NZ Jerseys were more suited to the grazing-based system than the Danish Jerseys, with higher milk solids, higher body condition score and better longevity.

Pictures courtesy of Alfie Shaw

In Denmark dairy cows are mainly kept indoors all year round and fed a TMR ration. That's very different to asking a cow to walk to the paddock and graze down to 3 or 4cm every day. It highlights the importance of selecting cows that are bred for the system.

The early findings provide clear evidence of continued additive genetic gain in NZ. This is evidenced by both the production and fertility performances compared to that of previous studies conducted by Teagasc and is reflected by high EBI of the NZ Jersey cows in the study. This reinforces the value of NZJ as eminently suitable for cross breeding with (and complementary to) the HF to generate highly efficient and highly profitable dairy cows, particularly in the context of Ireland's pasture-based production system.

In terms of milk solids, the performance of the NZ Jersey was 12kg/cow less than the elite cows, but there was a difference in liveweight, with the Jersey's weighing an average of 406kg and producing 445kg MS/cow (1.08kgMS/kg LWT) and the elite cows weighing 514kgs and producing 457kg MS (0.88kgMS/kgLWT).

The lighter Jerseys were stocked 9% higher at 3 cows/ha compared with 2.75 cows/ha for the Holstein Friesians. Concentrate levels were the same per cow.

When the production performance is extrapolated to a per hectare basis, the NZ Jerseys come out on top at 1,305kgMS/ha followed by the elite herd at 1,259kgMS/ha.

These results were recently published in Irish Farmers Journal and led the author to comment: "Whether you love them or hate them, these little Jersey cows at Moorepark are punching well above their weight. Their EBI is almost €40 behind the elite herd, yet they are whipping the socks off both Holstein Friesian groups in terms of production and they have good fertility."

According to a recent article in Irish Farmers Journal, written by Aidan Brennan, while all three breeds performed well, it was the Jersey crossbred that came out on top.

In the same article he presented data available from the Clonakilty study which showed no significant difference in milk solids production per cow between the Jersey-cross at 469kgMS/cow and the Holstein Friesian at 460kgMS/cow. But the three-way crosses produced significantly less than the Jersey-cross at 453kgMS/cow, he wrote. The potential to carry more Jersey-cross cows per ha was not considered, however.

Fertility performance was excellent across all three breeds but was particularly exceptional for the Holstein Friesian who recorded an average of just 3% empty after 23 weeks of breeding with the other two groups recording 7%.

"Despite this excellent performance for the Holstein Friesian, the Jersey crossbred was still more profitable, even on a per cow basis," wrote Aidan. "Where cow numbers are fixed, net profit per cow in the grass and clover swards came out at €938 for the Jersey crossbred, €926 for the Holstein Friesian and €890 for the three-way cross."

"As more and more evidence emerges from the Moorepark trials that the Jersey and crossbred cows are outperforming their high EBI herd mates in Ireland, we're predicting significant growth in demand. And it becomes more and more critical that we're able to service that demand," says LIC Europe general manager Mark Ryder.

"It's refreshing to see some neutral science-based analysis being produced. This is very much in line with what we're seeing on farm in NZ, Ireland and the UK, and won't come as a surprise to our customers but it's great to see this being formally realised by true scientific research.

"We're really pleased to be able to report on this work from such an esteemed research facility as Moorepark. The results confirm what we've been telling Irish and UK farmers for many years, yet some producers have remained concerned about the Jersey influence in their dairy herd. Now they can go ahead and buy Jersey and crossbred semen, conventional or sexed, and use it with total confidence when they're looking to secure their future."

Moorepark Next Gen Elite Holstein Friesian v New Zealand Jerseys 2018 Summary

KEY POINTS:

- Elite EBI Holstein Friesians are 150kgs (36%) heavier than Jersey's, but only produce 16kg more Milk Solids
- 5% fewer Jersey's empty after 12 weeks breeding (3% v's 8%)
- Jersey's are 36% more efficient, 1.1 kgs MS/kg BW for Jerseys v's 0.8 kg MS/kg BW for Holstein Friesians
- Jersey's stocked higher @ 3.00/ha v 2.75/ha for Holstein Friesians
- Elite EBI Holstein Friesians have a 25% higher body weight maintenance cost (+300kgs BW per ha).
- Jerseys held a 0.2 higher BCS throughout lactation.
- Jersey's had less mastitis.

Figures from Seamus O'Loughlin

Pictures courtesy of Alfie Shaw

"The key to milk producers securing a profitable and sustainable future will be careful planning and cost-effective investment in their businesses"

Mike Green

Addressing your future challenges

The editor of British Dairying looks ahead at the next 12 months and tells Grass Roots what challenges he feels face the dairy industry.

Precision feeding whether grazed cows or housed, will take on an even more vital role.

"The key to milk producers securing a profitable and sustainable future will be careful planning and cost-effective investment in their businesses. To do this, they need to look at using the information and technology available to face the future.

There are going to be lots of changes continually affecting dairy farmers—including fluctuating milk prices, updated milk contract terms and conditions, commodity market movements, loss of the Single Farm Payment, Brexit, and both political and consumer demands.

But there's very little individual farmers can do to influence these changes, so concentration has to go onto factors that are within their control.

For most this will mean doing more of the same but doing it better. All farm businesses can make improvements, but the priority is identifying the key areas that will make the biggest difference. Improving herd efficiency and attention to detail will be the key here.

Some of the factors that will gain prominence in the future include benchmarking and using technology to monitor and manage cows more effectively.

Benchmarking

Benchmarking will become of increasing importance. Farmers must assess where they are now, where improvements can be made and then monitor these changes. The key target for businesses is to be in the top 25% of producers—certainly above average—to ensure future sustainability.

The ultimate is to be part of a benchmarking group that meets regularly and discusses all aspects of the business and performance. And there are plenty of places farmers can find basic benchmarking figures, including websites such as AHDB Dairy, or publications such as British Dairying.

One of the best measures of overall performance to monitor is Daily Lifetime Yield (DLY) of each cow and the herd average. This is influenced by many factors including production, health and fertility, breeding, age at first calving and longevity.

Body condition scoring

The recognition and importance of dairy cow body condition is increasing all the time. Meeting target BCS is vital throughout the lactation. This will have benefits on herd health and fertility—so using technology to treat cows in the herd as individuals will be important.

Many farmers have adopted mobility scoring and seen the advantage in doing this in terms of early treatment options, reduced lameness and the associated benefits. Now we are seeing technology developing to constantly monitor mobility.

The same trends are starting to happen with body condition scoring with more farmers undertaking regular monitoring. Again, automated systems to measure BCS are being developed and these could bring big and positive benefits to herd management as well as and health and productivity.

Monitoring cows

Cow monitoring will get more hi-tech and accurate to help manage cows and herd health.

Probably one of the most cost-effective investments farmers have made over the last decade has been in activity monitors. These have brought considerable improvements in herd fertility, with additional benefits for cow health.

These systems are becoming more sophisticated as the equipment develops and computer algorithms to monitor cows become more precise. Parameters such as activity, lying times, dry matter intakes, temperature and rumen pH will become increasingly important in managing cows as individuals.

At the same time, monitoring milk for constituents and cell counts is common. This will be extended to further help monitor cow nutrition and health, including instant alerts for identifying fertility status, metabolic problems and diseases.

Automated feeding

TMR systems and feeder wagons is another area that has become more sophisticated and accurate over the past decade. A viable option to consider in future will be automated feeding systems that offer benefits such as precision nutrition, consistency to the diet and better utilisation of homegrown forages—which will all bring improved herd health and productivity.

Other advantages include the ability to target feed a large number of cow and heifer groups, delivering fresh feed regularly, and labour savings.

Factors that will be key to a sustainable future include embracing the benefits of genetics, and the use of genomic proofs and sexed semen. Producing more milk from homegrown crops, particularly grass, should continue to be a priority.

Do you agree with Mike's vision of the future?

Go to our Facebook page to tell us and win the chance to grab an LIC baseball cap

Grazing management this autumn

Pasture to Profit consultant Bess Jowsey talks us through two distinct periods that define the way to best manage grazing from now to closing up for the winter.

While it may seem as though this season is only half done, it's time to start planning for turnout next spring while still maximising grazing days this autumn. Profit is generated in autumn by maintaining a higher proportion of grazed grass in the diet, and by keeping housing costs to a minimum for as long as possible.

This involves identifying some key dates that are applicable to your calving pattern and setting targets for these dates in relation to average farm cover (AFC).

Looking back at the deficits most farmers had in the spring, it's likely that some are still behind in their winter forage requirements. When this is the case the temptation to take late surplus cuts is understandable, and it's possible - provided you have a plan for hitting your autumn targets and you aren't putting these at risk.

Throughout the autumn it's vital to keep measuring, looking at long-range weather forecasts and using your grazing software to help you make good decisions.

Autumn grazing management is defined in two distinct periods, one of building AFC followed by the last rotation where that AFC is mined down to closing levels to carry through to spring. The key dates and targets that further define these periods are:

- Target housing date. Spring herds likely to be well through November while autumn herds might go in a month or more earlier
- Start of the last rotation. This is directly influenced by the housing date as it'll affect how long your last rotation needs to ensure you're creating a wedge of grass to carry through
- The target AFC at closing on all farms should be no lower than 2000 kgDM/ha. The later you close, the higher this should be, as your ability to rely on late autumn growth diminishes
- The target AFC at the start of the last round will largely depend on your calving pattern. Generally autumn calvers will target better quality and limit AFC to 2600 whereas spring calvers will target to hit 2800

Building AFC should take place from mid-August through September. At this time the UK typically experiences a boost in grass growth allowing AFC to build naturally as growth rates exceed stock demand per hectare, resulting in an extended round length.

When growth is significantly above demand this may provide the opportunity to harvest some surplus. If you're not building AFC naturally, you can extend the round length by reducing demand via destocking or increasing supplementary feed.

By the start of the last rotation your round length should already be extended to between 45 - 65 days (depending on timing). The quantity of grass available for each day of the last round is then dictated by the pre-grazing cover accumulated on the daily area and should be balanced with supplements if required.

A key goal on the last rotation is to hit good residuals to minimise dead matter in the sward being carried through winter. The introduction of silage as a supplement at this late stage of the season can upset grazing behaviour and result in poor residuals therefore, if possible, delay introducing silage until the point where the herd comes in overnight.

Using an autumn rotation planning tool, in conjunction with your farm walk and feed wedge data, will help you budget your actual progress against AFC and round length targets. The big picture is being able to maximise grass utilisation in the autumn while protecting the spring opportunity (spring pasture is more profitable than autumn pasture).

For more detailed advice on your own farm situation get in touch with our Pasture to Profit Consultancy team. Our LIC Grazing discussion groups are now safely getting back to meeting on-farm by following the latest Covid19 recommendations, so let us know if you are interested in coming along to a meeting to see what it's all about. Call me on **07717 732324**.

Have you got our new **autumn bull catalogue** yet?

Call the office on **01725 553008** to order your copy or go to **www.licnz.com/uk.cfm** to view it on-line

Weighing calves is a **vital** management tool

Longevity and fertility are two of the key traits sought by Jeanette and Jim Pyne when planning the future of their Devon dairy herd. Weighing calves - from birth onwards - is crucial to make sure the replacements grow at the right rates, stay healthy, go to the bull and join the herd at the right weight.

"The cow you never notice is the one you want in your herd," says Jeanette. "To be honest I don't think we've been strict enough in our selection in the past."

The couple farm 500 acres, all grass, whole crop, brassicas and folder beet at Pulhayes Farm, East Budleigh close to the south Devon coast. They are tenants of Clinton Estates, a business currently looking at taking over 25% of their grazing platform back for a major environmental project. While no final decisions have been made, losing this amount of grazing will mean a major change in policy.

At the moment they milk 228 cows and have around 135 followers. All genetics used come from LIC, with the aim of keeping a F10 J6 herd. Milking at 5am and 2.30pm, Jeanette says the welfare of the farm staff is every bit as important as the welfare of the cows and tries to ensure all farm work is completed by 5.30pm.

Pulhayes Farm was run by Jim's father up until a few years ago, and when they had the chance to move on to the farm, Jeanette had never milked a cow in her life.

"I've learnt on the job, so to speak, I've really had a great deal of help from LIC and from their Pasture to Profit consultant Piers Badnell and his predecessors, who work with our local discussion group, Coast to Coast."

As an organic farm, the milk is sold on contract to Arla, and one of the aims is to produce as much home-grown feed as possible, particularly protein which is always expensive to buy-in. Currently they're looking at growing lucerne and maize. This year they have a pea and barley vetch mix for whole crop silage: the peas bring protein and the barley energy.

"We need volume as well, to fill the cows up, so it's a fine balance to get it all right," she says.

Cow weights average 500kgs, and the target is to match milk solids with body weight. The herd is NMR recorded monthly with current averages at 5329litres with fats and proteins at 4.85% and 3.46%.

Jeanette has been working with a local vet, Johanna Marsden from Molecare Veterinary Services in Lympstone Devon on a calf weighing project using the Zoetis Calf Tracker programme, as she's certain weight plays an important role in the future health and welfare of her herd.

"The more information we can get the better," she says. "We want them to weigh at least 95kgs at weaning from milk (10 weeks) and to hit a target weight of between 260 and 300kgs for service.

"When they're too small, they won't last in the herd. Longevity is really important to us, because the cost of rearing replacements is so high. Ideally, we want eight lactations or more. The value these older cows bring to the herd is incalculable. They're like matriarchs, teaching the younger cows the ropes."

Working with Johanna, Jeanette is able to select 'out' the lighter calves at birth and sell them on rather than trying to keep them at greater expense to move them into the herd. Birth weights have varied from 18-20kgs to 50kgs, and this is now one of the key selection tools.

"It's important to work with the same vet, as it's so easy with a weigh tape to get errors if more than one person is involved. Where exactly it's placed and how tight it is... both are vital."

Johanna agrees with the importance and value of weighing calves, says she's always trying to persuade her clients to go this route. "It's much easier to pick up underlying health issues, and while it's quite normal to see a growth check post weaning, monthly weighing allows you to make sure you're heading in the right direction. Sometimes it's not cost-efficient to rear the smaller calves."

Meanwhile Jeanette says she likes LIC genetics because 'you get what it says on the tin' and that while the calves hit the ground running they're both low maintenance and hardy. "They're aggressive grazers and grass is key on this farm. The cows are out all day, all year round, we don't have any housing, and 80% of their ration is grass or conserved grass. It's a low-cost system but we want to reduce costs even more."

LIC Herd Improvement Tool helps breed the best

LIC's UK sales manager Sally Pocock is certain we all want to breed the very best cows, in the first of two articles she talks us through a new LIC tool that can help make sure we do just that.

Having easy care cows that last in the herd, are healthy and hassle free, produce well and get in calf every year without intervention are key goals for any element of herd improvement.

I was once told 'It takes a very long time to breed out a poor decision at mating time.'

Herd improvement certainly takes time, the progeny from your breeding plan this autumn won't be realised until the autumn of 2022 when those cows come into milk.

So, getting it right first time round with sound and supported decision-making is very important.

How can LIC help with your herd improvement planning?

By keeping it simple and following the 3 Bs: Breed from the best and beef to the rest.

LIC has a fantastic new herd improvement tool available that produces a herd improvement report to help you make strategic breeding decisions to ensure continued herd improvement and profitability for your herd, generation after generation.

It's essential to have a clear idea of the type of cow you want to be milking at the start, and then to tailor your breeding plan to replicate this type of cow in your herd.

Data

Every day across the UK, herd data and information is being recorded on farm and used in many different ways.

What are you doing with your data? LIC can bring your relevant data together into one report which can be used to provide a strategic breeding plan for you.

We'll utilise production information from milk recording to identify the animals that are producing and the maximum output for your milk contract. Their individual fertility, days in milk, health information and using liveweights will rank their efficiency in converting grass into milk and ensure that your most efficient and profitable cows are identified to produce your next generation replacements.

Our report will identify the cows that are best suited to your system and provide a recommended sire match to ensure your cow's traits are enhanced in their progeny.

This may sound complicated, but rest assured it isn't. Our reports can be tailored to suit your specific requirements, from simply identifying the poorer performing cows for a beef breeding option to offering an in-depth report focussed at individual cow level.

In order for herd improvement to work, you need to have established these fundamentals for identifying the right cow. (see right)

Reproduction - Why this is important?

Reproduction is the method through which you generate your replacements providing greater choice and better quality stock.

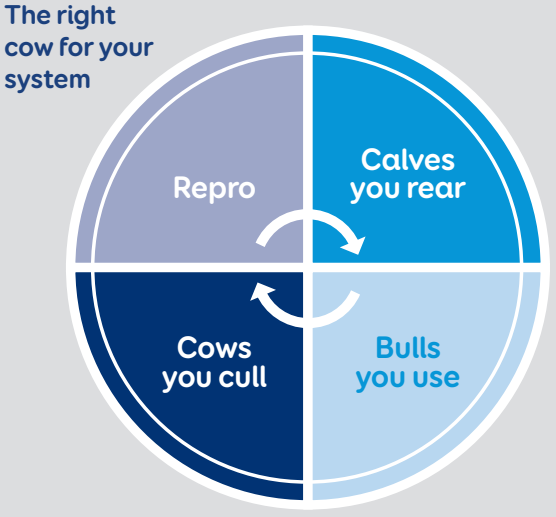
There are many ways to measure repro success:

- 6 week in-calf rate (6WICR)
- 6 week calved rate
- Conception rates
- Empty rate
- Not in-calf rate
- Submission rates
- Straws to pregnancy

Whichever measure you're using to record this information be sure you review the data to improve your results year-on-year.

For both block and all-year-round, more cows that are in-calf early equals more days in milk and greater profitability.

In the next issue of Grass Roots we'll be talking to a producer already using the herd improvement tool, looking at the calves you rear, the cows you cull, and bulls you select.



Learn more about our herd improvement tool in September and see how it's helping one LIC customer improve his herd

Please give the team at LIC a call on **01725 553008** to discuss how we can work with you on a plan to ensure your next generation of calves are securing your future profitability.

Longevity is a key to maintain profitability


Dam of 62112037 Te Poi

By Joyce Voogt, LIC's technical manager

"Long-lived, highly productive cows constitute an ideal herd for dairy farmers all over the world.

Good cow longevity delivers financial, social and environmental benefits on farm. With high fertility, longevity and productivity, lifetime yield and profit can be maximised through lower replacement rates, increased stock sales, and more room for discretionary culling. On top of the gains in herd quality, we should mention the immense sense of satisfaction gained from working with great cows for many years.

What contributes to cow longevity?

Longevity is complex: the result of both genetic, environmental and management factors.

It varies from farm to farm, so understanding the reasons for removal from the herd is a good starting point. This can vary between cow groups within herds, across herds, farm systems or countries. Within herds, issues impacting longevity may include production, health or functional traits.

Recent research[1] into cow longevity in New Zealand revealed the following:

1. Cow longevity in herds is high by international standards, averaging over 4.5 lactations/cow.
2. Mortality rate is low (2.1%) and not increasing, in contrast to other modern dairying countries. This could in part be due to the outdoor farming systems and the high proportion of Friesian x Jersey animals.
3. Annual replacement rate is about 20%. Of the cows replaced, the study classified 20-40% as discretionary culls and 60-80% as involuntary. Top reasons for involuntary culls included reproduction (37%), health disorders (31%) and udder health (11%).

How can farmers boost cow longevity?

Genetics plays a part, but heritability of longevity is low (5.5%). More than 90% of total longevity is due to factors other than additive genetics, so both management and breeding strategies are required to increase herd life.

On the breeding side, strategies include using:

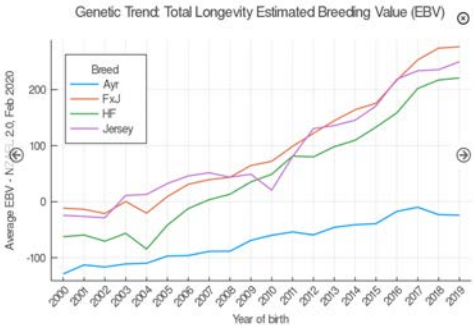
- sires with high genetic merit for contributing traits
- crossbreeding for an immediate longevity boost
- mating plans to minimise inbreeding depression and genomic evaluation for more reliable longevity estimations.

On the management side, important focus areas include pre-calving body condition score, transition nutrition, calving period, health, breeding period, management, heifer rearing and disease control.

Breeding strategies:

1 Use high genetic merit sires:

Additive genetics plays a part in cow survival and survival makes up 9% of Breeding Worth (BW). Current trends for longevity in LIC sires are strongly positive across the main breeds, gaining 4-7 days per year.



Source NZAEL, June 2020 https://www.dairynz.co.nz/animal/animal-evaluation/animal-and-herd-averages/#category=sires&breed=all&status=ras

2 Hybrid vigour boost with crossbreeding:

Numerous studies report that crossbreeding allows farmers across all farm systems to enjoy the complementary traits of the parent breeds and a performance boost from heterosis. It notably improves fertility and longevity as well as production, and the crossbred is now the most common dairy cow in New Zealand.

The first cross daughter of a NZ Friesian and a NZ Jersey, on average, produces 20kgs more milk solids, has 4-5% higher fertility and achieves a 220-day longer herd life than expected from her parent average. Because of genetic distance, the Holstein x NZ Friesian cross can expect to see a heterosis boost of around 30% of that seen in the NZF x NZJ first cross.

Strong additive genetic merit trends for longevity in both NZ Friesian and NZ Jersey breeds means the farmer crossing these is in the enviable position of gaining from both additive genetic merit and heterosis.

Introducing third breeds can be challenging; the third breed should be of comparable genetic merit to the other two. Heterosis gains should not come at the expense of reduced genetic merit for desirable traits, or the farmer could ultimately be worse off.

3 Manage inbreeding depression risk:

Inbreeding depression occurs when animals share DNA from a common ancestor that reduces performance. Inbred animals risk being less fertile and productive, smaller, have a shorter lifespan or display genetic defects. For survival alone, a 2007 study[2] indicated a 0.3% decrease in cow survival from first to second lactation per 1% increase of inbreeding, while another study estimated increases in dystocia and stillbirths of 0.2-0.42% per 1% increase[3].

Crossbreeding removes the effects of inbreeding and is a good strategy for herds running into inbreeding risk problems.

To limit inbreeding, as a minimum, farmers should keep detailed records of matings and calvings, and can use DNA parentage testing of calves for more accuracy. They can seek help from their farm solutions manager to develop a mating plan that will identify the best bulls for their cows.

CONTINUED ON PAGE 16

Finding those synergies on farm

Pasture to Profit consultant Sean Chubb looks at how combining activities can deliver a greater outcome

It's my firm belief that synergies should be sought on every farm, as pulling mutual elements together will always result in a better combined result rather than treating each individually. As a farmer's aim is to secure his future moving forwards, this is a key consideration.

Every farm is different and will have different opportunities available to it. One available to all, irrespective of the system that's being run, is the chance to combine milk recording with bull selection for greater herd improvement.

Too often I see farmers undertaking milk recording for Johnes and SCC to find the cows for discretionary culling. And then selecting bulls to be used for the first six weeks of mating on any cow that cycles in this period.

Much like a rising tide that lifts all boats, this practice will provide some improvement to your herd over time, but the full potential of herd improvement will never happen.

For me, there are three key elements essential to achieve your full potential:

- Ensure you are using the best bull for your farm and milk contract
- Keep the calves from your best cows
- Ensure your heifers meet their weight targets

Of course, all of this can only be achieved when the cows and bulls are underpinned with good fertility which allows for selective pressure... and culling within the herd.

And to truly know which are your best cows, you need to be taking at least four full milk recordings a year, as well as weighing your cows mid-lactation every year.

Perhaps milk recording may not seem important to you when you're looking at the profitability of your entire herd, but you might change your mind when you start working out the profitability of each cow. If we take the milk solids production of the herd in the table (see figure 1) we have an average milk solids per cow of 420kgs/MS with the highest at 762kgs/MS and the lowest at 230kgs/MS.

When we combine this, the average comparable farm profit (CFP) per cow is £540 and the kgs/MS (£1.064/kgs/MS) from the 2019 LIC CFP dataset. We see that the highest producing cow contributed a total of £903.89 and the lowest just £337.84 of CFP farm profit.

Remember that the CFP excludes rent, interest and principal. These profits could drop by £200 accounting for rent (£500/ha with a stocking rate of 2.5/ha). When your rearing costs are likely to be around £800, this means that the lowest producing cow needs to remain in the herd for almost six years to pay off her rearing costs.

To help farmers ensure they are putting the best bulls over the £903.89 profit cows, and are putting beef over the £337.84 profit cows. LIC has developed a herd selection tool which looks at the profitability of the milk and the efficiency of the cow – aimed at ranking the cow as shown in the second table (see figure 2)

The tool places different values on the production of fat and protein, much as your milk contract does, and can be changed to replicate your milk contract. This information allows for a more targeted breeding for the likes of sexed semen and herd liveweight.

It could also highlight the need or value of using bulls that might not have been on your radar in the past year for what value they can add to your milk cheque.

To get the most robust breeding plan, supplying your milk recording information and cow weights to your LIC advisor before a discussion on which bulls to use this autumn or next spring, will enable us to work with you to rank your herd and get this right.

Are you realising the full potential of your herd? Look again at the tools that are there to help you... there really is no reason to hold back.

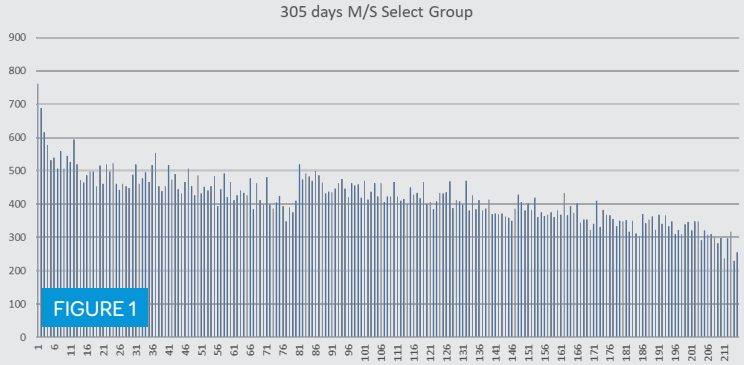


FIGURE 1

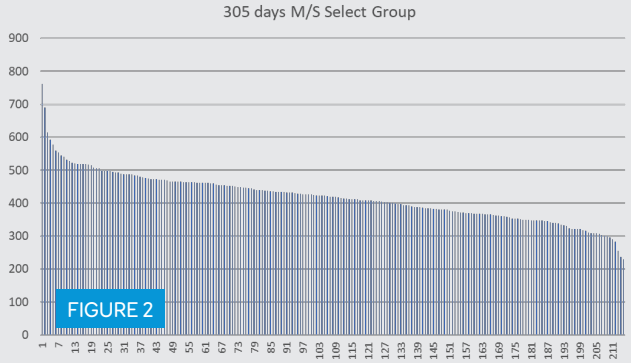


FIGURE 2

Looking after the bottom quarter of your dairy herd

Pasture to Profit consultant Piers Badnell gives some valuable tips on how to look after the bottom 25% of your dairy herd. Maintaining attention to detail for these animals is just as important as for those at the top.


Piers Badnell

I'll start off by answering exactly what I mean by this. Every herd has a social order with dominant animals all the way down to the most submissive. The cows at the top of the social order get what they want and the best that's on offer in their winter housing, but the low order cows, in some situations, get what's left. In some circumstances that's not a great deal for them when aiming for the best physical and financial performance.

The cost of replacing a cow is significant.

Generally, your bottom 25% will be your heifers with some cows. Cows will be coming off grazing into their winter accommodation in a couple of months, so it may be worth your time to see whether you can make any modifications now to help the bottom 25%.

What are the gains you can expect from working on this?

- Lower replacement rates
- Enabling these cows to realise their potential whether that be in production, fertility or longevity, or a combination of them all.

It's very surprising that on some autumn block herds many of the first and second lactation animals end up empty.

A number of years ago I was on a unit with an autumn block herd looking at performance, and the biggest thing to strike me then was how thin some of the cows were compared to the rest of the herd. The thin animals were mostly heifers and watching them you could see they were unhappy. The herd was quite highly stocked in the buildings, and they didn't have the room to find their way through the herd to the feed trough and cubicles.

Remember that in an ideal situation, a cow rests for 14 hours, eats and drinks for about six hours, milks for two hours and socialises for two hours.

Cows are social, but they do compete for cubicles, water and feed. Too much competition and some animals will lose out. Compromising her requirements will mean she underperforms.

Ask yourself whether there is anything on your unit that is restricting what the cow wants to do.

My picture shows a blind ended cubicle passage and a low order cow at the far end would feel trapped until she feels confident enough to come past any cows at this end. This may not seem much, but if we go back to her ideal 24 hours this is a compromise. Any overrun on her activities, for example a longer milking as she is probably one of the last through the parlour, she's kept waiting and this will exaggerate the problem.

The Cow Signals work shows that any cow waiting is a cow that's heading for problems.

On another unit the end block wall was knocked out and there was a concrete pad beyond the building so this enabled the cows to go round and into the next passage. They were no longer trapped.

Remember that a waiting cow is no longer eating, drinking, resting or socialising and as such is under pressure. This manifests itself in lower dry matter intake and thus body condition loss, compromised yield and increased incidence of lameness.

Key areas to look at are:

- Cow flow
- Ability of the low order cow to get to water or feed
- Ability of the same cow to get to a cubicle easily
- And ability for her to feed when she wants to, not at 2am in the morning as that's the only time she can get to the feed

There's a lot of anecdotal evidence to suggest that reducing stocking density in housing increases milk production per cow. An example was this spring during lockdown when milk buyers were asking producers to limit production. Some culled early and yet a lot of the time the milk in the tank didn't drop.

Increased replacement costs are a financial cost to the business, and most of those costs are mixed in with all the other costs, and as such are 'hidden'. But they're there, even if you don't write out a cheque for the replacement costs.

There's plenty of work from around the world showing that the greatest driver of profit is cost of production, with the cost of production explaining 60-80% of profit.

Take a good long hard look at your accommodation and, before your herd comes indoors, ask whether there are any ways in which you can make it easier for your low order cows this winter, and at the same time help your bottom line.

A day in the life of farm solutions manager **Libbie Harris**

When she's not working, you'll find Libbie busy with her menagerie of animals, from gun dogs to pigs aptly named Piglet and Twiglet, to the 'Disney' Valais Blacknose sheep, geese and chickens.

Joining LIC four years ago, straight from Harper Adams where she gained a BSc in agriculture and animal science, this was her first job. She hasn't looked back since, building up an impressive list of customers who value her commitment to dairying and knowledge of New Zealand genetics.

In her last year at Harper she did her dissertation on the freezing of ram semen, which she says was 'a bit of a conversation' stopper with family and friends. This began her interest in breeding and genetics. While she'd been around cattle and the dairy industry for a long time, she'd never taken a commercial interest.

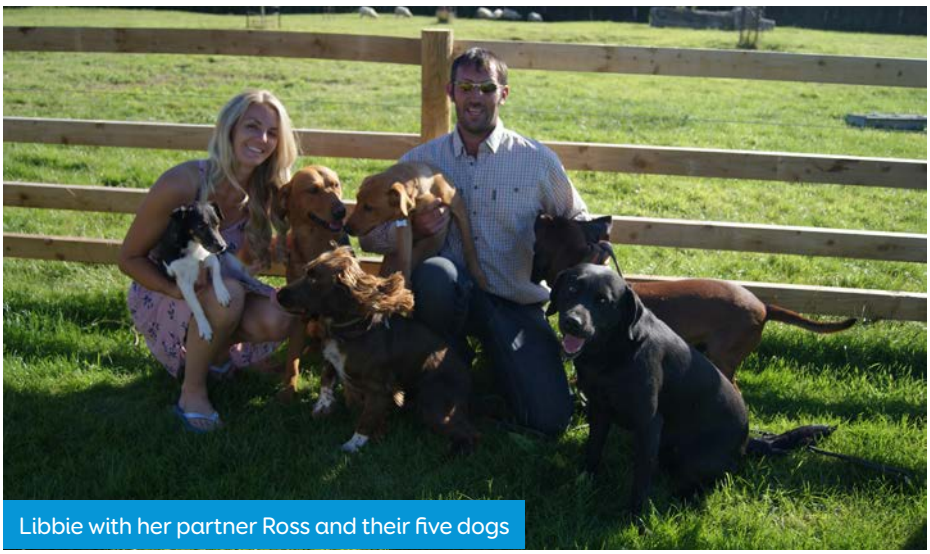
Her partner Ross owns and runs a dairy farm in North Somerset that Libbie calls home, the farm is perfectly located as she covers a wide area from the top of Dorset to Shropshire and pretty much everywhere in-between, including parts of Wales.

"It's a big area and I probably visit between 100 and 150 farms in any 12-month period," she says. Some will be existing customers, some new ones keen to see what LIC can offer to improve their herd genetics and some are more 'long-term potentials' where she aims to start building relationships that will yield business in the future.

Libbie is a very organised person. She has to be to get through her daily workload which kicks off at 7am with an alarm call to start the daily feeding programme. She's not a coffee drinker and rarely eats breakfast, preferring to keep her calories for dinner in the evening when she gets home and can relax.

She looks after her animals at home first, five dogs get walked and fed. She has two Labradors a sprocker spaniel, Jack Russell and Bavarian Mountain Hound. Next up are the 20 ewes and five lambs that include the four Valais Blacknose she's hoping to breed.

Then it's a walk down to the smallholding of four acres she's had since the start of the year. Here she has 25 geese and 15 chickens. She sells the eggs but during lockdown popped them in an incubator and to her delight reared four goslings.



Libbie with her partner Ross and their five dogs

Libbie also has the two Berkshire pigs Piglet and Twiglet and says "it was a mistake giving them names, I'm not sure I can take them to the abattoir now." Piglet and Twiglet were a birthday present and were supposed to become sausages and roast joints... but now their future is looking brighter!

On the road by between 8:30 and 9am Libbie says every day is different. She always does her prep the night before and plans her route in advance to make the day efficient. Farm visits can vary tremendously in time, but always start with a good chat, an evaluation of the past 12 months and a sit down to plan out the next set of goals.

"One of the best things about the job is that your customers become your friends," she says. "It's great to be welcomed into the office or farmhouse, meet the family and feel part of the team. We go through the new bulls available, all our other services, and look at the herd's inbreeding and match the genetics to their plans.

"I always like to go out and walk around the farm and see the cows. When you go back year on year you get to see the farm develop and to watch the changes in the breeding of the herd."

During Covid-19 her role did change significantly. Social distancing, no unannounced visits, no AI techs over from New Zealand to help with inseminations. "I tried to operate as efficiently as I could, but every day brought a new challenge," she says. "Somehow dealing with people on the phone just wasn't the same."

In her LIC van she always carries a full range of products to sell, from plate meters to heat detection aids and AI sundries.

This year she says she has seen a 'massive' increase in sexed semen sales, due in part to changes in buyer contracts and public perception. "I do get the odd grumble about price, but once I've talked it through, people see the added value, and want to invest in their future."

Some afternoons she's home by 3-4pm, then it's time for the planning phone calls and paperwork to take over. When she's working in the north of her patch, she might get home by 8pm, and there are still animals to feed and check.

Going back to her animals, Libbie admits her passion is training gun dogs. Along with Ross she runs a shoot putting down 300 birds a season, uses the farmland to run training classes and group lessons at weekends, and organises a once-a-year BASC young shots day where children can come and enjoy a shooting experience.

As the mastermind behind the master chef she becomes in the kitchen, she often has up to 20 guests to feed and still finds time to go shooting herself, belonging to several local shoots and running duck shoots on the farm at night.

Where does she find all this energy? "Chocolate," she says laughing. "I must be the unhealthiest person in the company. I eat it for breakfast, lunch and tea."

A dream becomes a European reality

Irish brothers Paul and Stephen Costello had a dream... a dream that is fast becoming reality.

Their dream?

To set up a pasture-based dairy system in an area of Germany not known for year-round grazing of cows. Using NZ genetics and grassland management systems they're now producing millions of litres of quality pasture-fed milk for the discerning German household, and the farm is attracting visitors from across Europe, all keen to see how this system works.

The Netzen farm, south of Brandenburg, is 1600ha and carries 900 dairy cows. When they aren't grazing grass, they're eating conserved grass, silage, and they remain outdoors 365 days a year. The farming practice is centred around the growth of grass when determining cow numbers, when the cows calve, the introduction of any supplement feeds and the drying off process.

The aim?

To maximise quality milk production from grass.

While this farm aims to graze the cows all year-round, this isn't essential. Many farms across Europe are interested in extending the grazing period and to gradually transition cows to a more grass-based system. And it's much easier to take incremental steps rather than jump straight in at the deep end.

When the Netzen farm was purchased in 2014, Paul took on a herd of 400 high-yielding Holstein cows on an all-year-round calving system with all stock housed every day of the year. The cows were fed large amounts of concentrates and maize silage with very small amounts of grass silage and no grazed grass in the system. The herd was in very poor condition with health, yield, reproduction and costs all in a bad way.

"Our view was that this type of system wasn't sustainable or profitable and to move forward we would need large investments in sheds, cows and infrastructure to sort out these issues," says Paul.

"In 2015 the quota system was ending and we felt that the milk market would become more volatile with no cap on production, We believed the big would get bigger to stay in the same place and only the fittest and most efficient farmers would do well. We didn't really fit into either of those brackets. We had to change and look for a niche market for our product, or get out of dairy altogether."

This led the brothers to look at the New Zealand and Irish systems and ask whether such a system could be successful in East Germany... and they decided it would.

They began to switch to a grass based system of seasonal – spring – calving, to change genetics to breed a crossbred cow much smaller and more suited to grass, and to start to produce a quality grass fed product with high animal welfare and environmental benefits that was both sustainable and economically viable.

"Our view is that a successful grazing system in Germany needs to work across three key areas – first with the correct cow, then the correct calving pattern (making sure you match the grass growth curve to the lactation of the cow) and thirdly to ensure you have the correct grassland management.

"The cow is the most important which is why we decided to go with genetics from LIC. The crossbred cows are undoubtedly best suited to this system. They offer advantages in size, grass conversion, fertility and health. They're flexible, able to adapt to systems in both directions... feed them and they can milk more or reduce feed costs when necessary without sacrificing the animal's health and condition.

"The genetics we used were pure Jersey on the initial herd to produce F1 crossbreds. We focused our selection based on fat and protein and fertility as we knew the Holstein would bring milk volume. Bulls we've been using include Integrity, Conrad, Misty and Jericho.

"Finally we bought a lot of crossbred cows and heifers from Ireland from farms already using LIC genetics for many years. These animals were by Moody's Executive, Solaris, Easyrider and others."

For Paul and Stephen the journey has really only just begun. They still have a lot to learn, are working more and more closely with the retail side of their sales business and looking at how to roll out their concept across other European countries.

To learn more about Netzen and what they are busy trying to accomplish please go to:
https://therealgrassgroupnetzen.podbean.com/
to listen to some podcasts with the team.

OPEN DAY

There are plans, Covid-19 restrictions allowing, to do an open day to be held on the farm late spring or early summer 2021.

To register your interest in attending, and to be kept informed about how the farm is progressing, please email **realgrassmilk@gmail.com**

Longevity is a key to maintain profitability

(continued from page 9)

4 Genomic evaluation for more reliable longevity estimations:

Farmers desire as much certainty as possible when choosing bulls. Longevity, by definition, takes many years to express, so for young bulls the breeding value is less reliable.

Genomic evaluation helps by lifting reliability for early estimations from the ancestry-based 20-30% to over 50-65%.

LIC includes genomic information in their bull genetic estimations, even when the bulls are daughter proven. This boosts BV reliability, as daughter fertility and longevity results continue to flow in.

What's next with longevity?

Longevity, health and fertility are the focus of much research, including two large New Zealand projects - 'Pillars of a new dairy system' and 'Resilient Dairy: Innovative breeding for a sustainable future'.

Dairy NZ is leading the eight-year 'Pillars' research programme to further boost longevity through genetic and management solutions. The research is wide-ranging, reflecting the complex nature of cow survival. Findings to date have demonstrated the benefit of using high fertility-BV bulls, updated colostrum management recommendations and a new 'functional survival' trait to be included in BW within 12 months.

LIC is leading the seven-year 'Resilient Dairy' research programme to enhance the health and wellbeing of the national dairy herd through disease management technologies and genomic advances.

The research includes understanding the bacterial and viral composition of milk and its impact on cow health; developing a range of new health and welfare-related genomic BVs; and improving the genomic evaluation models for New Zealand's pastoral dairy herds.

Farmers should benefit from new animal health and welfare BVs, using the power of genomic evaluation to increase rates of genetic gain. Cow longevity should increase as genetics delivers healthier, ever-more resilient cows with a reduction in clinical infections, associated treatment costs and involuntary losses to the herd.

1 Compton, (2018),
2 McParland et. al (2007),
3 Adamac et.al (2006)

Joyce Voogt

Have you got our new **autumn bull catalogue** yet?

Call the office on **01725 553008** to order your copy or go to **www.licnz.com/uk.cfm** to view it on-line

MONITOR FARM OPEN DAY

Keep an eye open for details of our first monitor farm open day at Walford College. Covid-19 restrictions allowing we will be holding this on October 27, and will ensure any social distancing requirements are met. Please email **schubb@gmail.com** to make sure you get the latest information

SW DAIRY

As we go to press, South West Dairy is still going ahead on October 7 at the Bath and West Showground and is celebrating 40 years of the dairy show.

LIC has a stand booked and hopes to see you there, watch our Facebook page for details of the stand number, directions and times, once these have been confirmed.

The postcode for the event is BA4 6QN and tickets are available on-line by going to **www.bathandwest.com**.

Should the event be confirmed it will be one of the few opportunities we will have to chat to our customers this year, so we would love you to pay us a visit and meet the team.

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