Latest news and views from **June 2022**

The Dairy Group

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Albyns Farm – Gold Cup Winners!

Christine Pedersen, Principal Consultant

I have the privilege of visiting Albyns Farm and spending a few hours with Robert, John and Lucy Torrance on a monthly basis to review performance, challenge the team and to be challenged!

The annual figures for herd performance parameters outlined here are outstanding:

Litres produced annually	9 million litres	Approximately 13,000 litres per cow, 3 x milking
Fat **Protein** **SCC** **Bactoscan**	4.00% 3.20% 110 18	NMR Silver Salver, awarded to the qualifying Holstein herd with the highest CF&P production
Herd £PLI	£319 (April 22)	Top 1% UK Holstein herds.
Average concentrate use	0.35 kg/litre	
Average purchased feed cost	10.2 ppl	12-month rolling average to May '22
Pregnancy rate	29 %	
Average age at 1st calving	22.5 months	
Carbon footprint	< 900 g	Grams of carbon dioxide equivalent per kg of fat and protein corrected milk produced.

What is the secret to achieving this level of performance?

Team work: The Torrance family have a very clear vision for their herd and business which the team are fully engaged with. Communication and positive/constructive feedback are key to employee buy-in.

Cow health and welfare: This is a priority and healthy cows are productive, profitable cows. Health, fertility and production parameters are reviewed frequently. Significant investment in buildings and facilities means cows are doing what cows should do; being milked, eating and drinking or lying down. Technology to monitor health and fertility support the exceptional level of stockmanship at the unit.

Genetics: It goes without saying that the Top 1% PLI of the herd means the cows have the genetic potential to achieve very high levels of performance.

Forage quality: Great forage quality is the backbone of any dairy production system. John makes and manages high D-value 1st and 2nd cut grass silage

EDITORIAL

Welcome to our June 2022 newsletter. As Managing Director of The Dairy Group, I have taken over the editorial this month to congratulate the Torrance family and team at Albyn's Farm in Essex, very deserving winners of the NMR / RABDF Gold Cup. Consultants from The Dairy Group have worked with Robert, John and family for a number of years and articles from Christine Pedersen and Tim McKendrick will focus on this award winning farm. I encourage anyone interested in dairying to take the opportunity to visit the herd at the NMR / RABDF Gold Cup Open Day on 5th July.

This newsletter also includes a Road to Net Zero article from Richard Lane who has recently completed his Trehane Trust fellowship looking at opportunities for dairy producers to reduce their carbon footprint.

Finally, the 'In Brief' section covers SFI, Slurry Infrastructure and Animal Health and Welfare Pathway grant updates.

If you would like to discuss any of the topics featured in this newsletter further, please speak to your consultant or ring the office on 01823 444488.

Ian Powell
Managing Director

(mainly Italian ryegrass) and maize silage which tends to suit the low annual average rainfall of 600 mm better than grass which may be limited to 2 cuts in some years. The combination of high digestibility grass and high starch maize silages promotes high forage dry matter intakes, reduced concentrate feed rates and a lower carbon footprint.

Nutrition: Feeding these high genetic merit cows is not about 'pushing them' to achieve this level of performance, it's about removing the barriers or bottlenecks to allow them to express their genetic potential. Successful transition management set's the cow's up for their subsequent lactation and body condition score is monitored to ensure that cows dry off and calve in the correct condition and calve with fewer issues and better appetites than cows carrying more condition.

Dry matter intake (DMI) is key to milk production and every effort is made to promote DMI such as rubber matting at the feed fence, feed space allowances, time available to eat, management of feeds and TMR and frequency of TMR push-ups. Feeds are selected on the basis of relative feed value and straights used would be similar to those used in many TMR fed herds. By-products which also contribute to lower carbon footprint are included to extend forage or as concentrate if priced competitively.

John Torrance adds: "We benchmark our technical and financial results to ensure that we are meeting the targets that we set for our business. We benchmark against other farms as it is an excellent method to review business decisions to ensure that our business remains within the Top 5% of UK dairy farm businesses and that the business performs at a level that meets the objectives of the business partners. I look forward to welcoming visitors to the farm on 5th July."

Christine provides nutrition, dairy technical and business management advice to clients across southern England. She can be contacted on 07831 172940.

'Roadmap to Net Zero'

Richard Lane, Dairy Business Management Consultant

Analysing data from real dairy farms to calculate their carbon footprint has been a critical part of a fellowship I have recently completed on behalf of The Trehane Trust to deliver 'A Roadmap for achieving Net Zero in UK Dairy Farming Practically and Profitably'. The report went on to review financial and physical performance and to model recommended carbon reductions with financial outcomes. It has been encouraging to find that virtually all carbon reductions have resulted in improved farm profitability so they should be approached positively.

Whatever producer's motivations are, reducing farm carbon emissions makes good financial sense and with current input price inflation there has never been a better time to start building resilience into businesses. Some lenders are now incentivising those seeking finance to assess their carbon footprint and it has been suggested that milk buyers may start to financially reward lower carbon footprints with the next 12 months.

Whilst not reported as part of the Road Map, most Green House Gas (GHG) reduction strategies are likely to have positive effects on water and air quality at the same time as improving farm biodiversity, therefore delivering multiple environmental benefits. It is also positive to see that when comparing dairy systems, well run efficient farms can have very similar carbon footprints; this isn't about finding the best system, it's about making the best of the current system.

Managing carbon efficiently is likely to have a positive effect on farm profitability. Low carbon is linked to efficient animal productivity, high input utilisation and low levels of waste. Maximising these and incorporating additional strategies that increase soil carbon should build a strong case that UK dairy farming is part of the carbon solution rather than being seen as part of the global warming problem. While UK dairy is a global leader in production standards there are still huge improvements to be made in carbon reduction. Innovation and new technologies will no doubt make a significant impact over the next 20 years.

The most appropriate value to measure on a dairy farm is **kg $CO_{2\text{-}e}$/kg energy corrected milk (ECM)**. Once calculated, a full evaluation of the farm can be prepared. The best place to start any carbon reduction is to understand where the greatest emissions are produced and to identify 'the low hanging fruit' i.e.: the areas where reductions should be easiest. However, to make significant reductions, many areas will need targeting as there is no silver bullet.

Carbon Reduction Targets - The current UK average figure for dairy is 1.25 kg $CO_{2\text{-}e}$/kg ECM so this is a good initial target for those above it. Some herds are already achieving a carbon footprint of **1kg $CO_{2\text{-}e}$/kg ECM** or less which should be a short-medium term goal. If already below 1kg $CO_{2\text{-}e}$/kg ECM, then target a 5% reduction per year.

A key message from the study is that monitoring herd performance and benchmarking is key to improving productivity and reducing carbon. Key Performance Indicators:

1. Lifetime Milk Yield	5. Reproduction and fertility
2. Age at 1st calving	6. Health - mastitis/lameness/injury
3. Herd replacement Rate	7. Disease levels – TB/Johnes/BVD etc
4. Death/mortality Rate	8. Feed efficiency

1, 2, 3 and 4 are largely determined by 5, 6, 7 and 8. Healthy fertile animals will create longevity in the herd. Age at 1st calving is a function of calf health, growth rate and fertility efficiency. Targeting 22 to 24 months age at 1st calving means animals become productive sooner. Improving health and welfare means less animals are unproductive or need to leave the herd. Good cow comfort plays a big part as does transition management and targeted body condition scoring. Improved feed efficiency is achieved through feed ingredient selection, reduced wastage, feed presentation and genetics.

With enteric methane (rumen methane) and purchased feeds contributing approximately 40% and 25% of total dairy carbon emissions respectively, feed and diet are likely to be a key area of interest as discussed in the previous article. Other areas to review include forage production systems, power requirements and carbon sequestration.

By carrying out a full farm assessment, informed decisions can be made by identifying the opportunities to deliver environmental benefits, reduce carbon emissions and maintain or increase profitability.

The full report can be found here: https://www.trehanetrust.org.uk/fellowship-report-roadmap or contact Richard to discuss.

Richard provides nutrition, herd monitoring & business management advice, driving efficiency, reducing waste and improving animal welfare & environmental sustainability. Contact Richard on 07717 502505.

Housing and facilities for the future

Tim McKendrick, Principal Consultant

It was with great pleasure and pride that I learnt that John Torrance, family and team are the 2020 Gold Cup winners. I was first asked to go and look at the cow housing at Albyns Farm in October 2012 with the brief of improving cow housing for the long term to improve cow welfare and in particular reduce the incidence of herd mastitis. Great efforts had been made to improve milking routines and parlour management, but the simple fact was that the mixture of old cubicles and straw yards were just inadequate, unsuitable and outdated for a herd of high yielding Holstein cows. Typical of many UK dairy units, the poor housing layout meant that they were not efficient to manage, cow flow was poor and bedding up and cleaning out was tedious. On this first visit it was clear that things had to move on and new 'fit for purpose' housing would be necessary for the long term.

Having persuaded Robert and John that significant investment in new housing was necessary, the 2nd brief was to come up with a good layout and design for sand based cubicle housing and slurry handling system. I had visited some excellent dairy units (mainly in the US) that had really well designed housing with cow health, comfort and welfare as the priority. I had already been involved in designing similar housing for some progressive clients in the UK and the sand bedding was proving to be very successful.

The next part, the siting of the building was not so straightforward as some of the existing buildings had to be replaced. The new buildings also had to be integrated into the existing farm set up including the milking facility to ensure excellent cow flow, ventilation, good machinery access and designing a new slurry system to work with the existing set up. The design stage always involves several 'draft' versions to try and come up with the best options available whilst at the same time looking ahead and leaving options open for future expansion/new milking facilities etc. The addition of a second building, a mirror image of the 1st in 2018, showed how important that was.

Outcomes are a really important measure of whether a design has accomplished what it set out to do and the milk quality, cow health and productivity results at Albyns Farm indicate that the objectives are being achieved.

Tim is a building design, dairy husbandry and milking technology specialist working across the UK. He can be contacted on 07979 707493.

News in brief.....

Grant Updates - The **Sustainable Farming Incentive (SFI)** is the first of 3 new environmental schemes being introduced under the Agricultural Transition Plan. In 2022, there will be 3 standards available, with different levels and payments:

Standard	Level	Payment
Arable and horticultural soils	Introductory	£22 per ha
	Intermediate	£40 per ha
Improved grassland soils	Introductory	£28 per ha
	Intermediate	£58 per ha
Moorland	Introductory	£10.30 per ha
	Additional payment	£265 per agreement

Whilst the payment rates are modest, the SFI may be an attractive proposition as the standards are designed to fit in with existing farming practices. For example, the introductory level of the improved grassland soils standard requires soil organic matter (SOM) testing, a soil assessment to be undertaken and a soil management plan produced and no more than 5% of land to be left bare over winter.

SFI is expected to be a flexible scheme; you do not have to include all land parcels and there is no minimum or maximum area. In future it will be possible to add more standards, increase levels (e.g., from introductory to intermediate) and to add land. Advanced levels for these existing standards will be introduced from 2023.

Farming Investment Fund – more details of the new **Slurry Infrastructure** grant have been released. Key points are:

- The grant which is initially open to pig, beef and dairy farmers will be competitive. In the first year the RPA will prioritise projects that have the biggest environmental impact, focusing on those located near protected sites. RPA will say which locations it will prioritise before applications open. If you do not get a grant this year, there will be more opportunities to apply in future rounds.
- The grant will be available to help replace, build new or expand existing slurry stores to provide 6 months storage. All grant funded stores must be fitted with an impermeable cover, unless slurry is treated through acidification. You are not eligible for this grant if you already have 6 months of slurry storage that is fit for purpose.
- Grants of £25,000 - £250,000 are available for each applicant business and can cover up to 50% of the eligible project costs which will include a range of slurry store types, impermeable covers, extra equipment like pumps, pipes and safety equipment

Applications for the Slurry Infrastructure grant will open from autumn 2022, more information will be available this summer. Your consultant can help you start to prepare now by:

- Calculating your storage capacity requirements
- Discussing your options for the type and location of the store
- Checking planning permission requirements.

The **Animal Health and Welfare Pathway** is to launch in 2022 to support the continual improvement in farm animal health and welfare. It will include 4 funding programmes including Animal Health and Welfare capital grants (planned for late 2022). Farmers will be able to apply for grants to co-fund capital investments to support the delivery of the published health and welfare priorities. This will include:

- smaller grants, where farmers can select from a list of equipment and technology items
- larger grants, for bespoke infrastructure projects such as new housing, building upgrades and pasture improvements

This competitive grant is likely to be of interest to anyone planning to upgrade cow or youngstock facilities.

The Dairy Group consultants work across the UK providing a wide range of independent dairy technical and business advice. Please contact Karen or Anne in our admin team on 01823 444488 or visit our website for further information or to contact our consultants.

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