Latest news and views from **September 2022**

The Dairy Group

For more information on any article contact Christine Pedersen on 07831 172940 or christine.pedersen@thedairygroup.co.uk

Volatile energy market

Susie Felix, Senior Consultant

As you will be aware the global energy market is experiencing extreme volatility due to various global events. This is having a significant impact at UK dairy farm level on the cost of some key inputs including:

- Feed prices have increased by at least £100/t since last winter.
- A challenging marketplace for fertiliser with production and availability of AN fertiliser being limited, prices withdrawn at short notice and urea fertiliser quoted at +£850/t
- Electricity prices quoted at the time of writing are up to 5 times the current rates with the length of fixed electricity contracts increasing to 2-3 years. We are yet to fully understand what the Government's new energy plan means for businesses.
- The cost of fuel on farm has increased by 83% in the last year alone.

This all means an increase in the cost of production (COP) as shown below:

	COP Year Ending March 2022 (ppl) Actual	COP Year Ending March 2023 (ppl) Forecast
Feed	11.1	13.4
Fertiliser	1.4	3.0
Electricity	0.8	1.8
Fuel	1.0	1.2
Total	14.3	22.4

What can be done to reduce the cost of these key inputs? Tackling feed costs which represent 25 – 35% of total production costs is covered in the next article.

Fertiliser – Autumn is the time to consider your fertiliser requirements for the following year by producing a nutrient management plan so you know how much and the type of fertiliser you require. Limiting the amount of fertiliser applied, especially nitrogen, can have a detrimental effect on the quality and quantity of forage which can add a much higher cost at the point of feeding the forage.

Electricity – Milk cooling, water heating and vacuum pumps are generally the three biggest energy users on dairy farms, accounting for almost 90% of energy use. Typical electricity consumption for dairy units to benchmark your own electricity use against are as follows (source AHDB Dairy):

Consumption type/user	kWh/cow/yr	kWh/1000 litres milk
High	687	98
Average	405	54
Low	264	42

EDITORIAL

Welcome to our September 2022 newsletter. Production costs are likely to continue to rise due to rising input costs linked to various global events. Higher production costs are becoming permanently embedded which means higher prices also need to be embedded if milk supply is to be maintained into the future.

The 1st article this month looks at the effect of the volatile energy market on key inputs of feed, fertiliser, electricity and fuel. The 2nd article covers nutrition and feeding issues to consider as we move into winter feeding routines.

The key to low mastitis incidence at award-winning Albyn's Farm is covered in the 3rd article whilst the in brief section highlights MCi developments, chlorate legislation, SFI, Slurry Improvement Scheme updates and soil sampling.

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

Christine Pedersen

Consider installing plate coolers, refrigeration systems, variable speed drive vacuum pumps and heat recovery units if not already installed. If installed, service equipment regularly to ensure that it is working efficiently.

The increased unit cost of electricity is likely to make investments into on-farm energy generation including solar panels more attractive and should also be considered to help reduce direct energy costs.

Fuel – With red diesel prices now around 1.09ppl on farm (31.8.22), it's time to review your fleet of vehicles and machinery to identify opportunities to reduce fuel consumption. This will include a review of the number, type, size and age of vehicles but also the machinery operations you are carrying out; can they be streamlined, outsourced or even eliminated?

These are just some of the areas of your business that should be assessed now to understand where any costs can be reduced. However, it is important that any savings made on these key input costs do not have a detrimental impact on the performance of the dairy herd resulting in reduced profitability at a time of high milk price.

Susie Felix specialises in farm business consultancy, working across the North West, West Midlands and North Wales. She can be contacted on 07471 035199

Nutrition update

Christine Pedersen, Principal Consultant

I get lots of emails about feed ingredients promising higher milk yields, higher milk constituents, improved herd fertility, improved feed efficiency, the list goes on. These products may appeal as a "silver bullet" solution to the herd performance issues that farmers and nutritionists seek to address. Whilst some of these products may have a place, I favour a 'back to basics' approach, focusing on forage and formulating rations to provide the necessary nutrients for health and productivity.

When carrying out herd performance reviews to troubleshoot performance issues, sometimes the rations look good on paper but the cows just aren't performing as well as expected. In short, the cows are not eating the ration that was formulated. There are numerous reasons why this might be the case including:

- Unrealistic expectations of total dry matter intake and forage dry matter intake
- Inconsistent forage quality and/or incorrect silage analysis
- Poor feed management and hygiene including mould, mycotoxins, pathogens
- Incorrect and/or inconsistent mixing and feeding
- Reluctance to group cows so high or low yielders are compromised
- Health issues e.g., lameness or mastitis incidence

Often these issues can be relatively simple and quick to address to significantly improve feed efficiency and herd performance. These practical areas need to be monitored regularly, even daily as it is easy for things to slip, particularly where multiple personnel are involved. In many cases feed costs can be saved if expensive ingredients that were previously included as a 'sticking plaster' can be taken out.

As concentrates have become more expensive there has been a shift towards higher forage diets as home-grown forages are more cost effective in most cases. There can be significant variability in the quality of forage within and between clamps so forages should be sampled frequently and rations re-formulated. The fibre (NDF) levels and NDF digestibility of forage sources will determine how much can be included in diets. Average 1st cut grass silage results for 2022 show an increase in NDF level compared to the previous year in which case we can expect to see higher milk constituents, possibly at the expense of litres although yield (kg) of fat and protein may be comparable.

As I write this, maize harvest has started and we wait to see whether crop yields (which vary enormously across the country), will meet forage requirements. This is another year when monitoring forage stocks is essential as the widespread drought conditions have severely limited grazing which has forced many producers to feed winter forage stocks to buffer grazing. The dry summer does mean that there are plentiful supplies of good quality straw and replacing forage with straw for dry cows and youngstock (with appropriate concentrate and mineral supplementation) is an option to consider. Recent rain and the weather change into September will produce a late flush of grass which many producers will be eager to take advantage of. It could be a disaster for productivity and fertility if too much reliance is placed on the contribution from autumn grazing, especially for fresh calvers, but there is a strong argument for splitting the herd so late lactation cows in good body condition can maximise intakes.

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

Low mastitis incidence

Tim McKendrick, Principal Consultant

Following on from the success of the Gold Cup open day at Albyn's Farm, I thought it would be interesting to pick up on the mastitis control success at the farm. John Torrance and his team have managed to achieve the enviable position of simultaneously increasing yields and reducing mastitis incidence to 6 cases/100 cows/year with SCC running at 85,000.

The big question is can other dairy farmers achieve similar results? Well yes, quite a few already are! The number one factor to consider is the cow environment which is absolutely key. In John's case, housing dry cows on sand-based cubicles rather than straw yards allows him to take better care of his dry cows which he cites as a turning point in his ambition to reduce mastitis cases.

But the reality is that mastitis is a multifactorial disease and an excellent environment in isolation is not going to enable excellent mastitis control. Milking routines, protocols and milking machine maintenance are all essential factors in preventing mastitis; cows should be milked effectively, efficiently and without causing pain, discomfort or teat damage.

Teats should be visibly clean when cows enter the parlour, but teat preparation is important to minimise the risk of infections being transferred during the milking process. Pre-disinfecting teats will reduce the environmental mastitis risk, wiping the teats with a clean cloth/towel and allowing adequate prep lag time (60 to 90 seconds) before attaching the milking unit will go a long way to ensuring the cows are milked correctly.

Post milking disinfection carried out quickly after milking is completed, with good coverage over the barrel, as well as the teat end is also important. Some parts of the milking routine such as pre or post milking disinfection can be automated which can help either to reduce labour requirements or speed up milking throughputs.

At Albyn's Farm the excellent management of the cow environment plus these elements of mastitis control are carried out effectively by a very reliable team which is in fact the most important factor in achieving exceptionally low mastitis incidence.

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.....

MCi development update - There are unprecedented cost pressures on dairy farms and our aim is to have the best management tool to support our consultancy to dairy farmers. MCi is our web-based management system which combines physical and financial data to help our clients improve herd and business performance. The forage module provides a forage plan for the year ahead and a monitor of actual versus plan and an updated forecast of stocks. The live link to milk quality data from Arla, Barbers, Parkham and Saputo is used to highlight trends and provide alerts when quality is moving off track. Our MCi APP allows daily recording of milk and feed data to provide a real time view on cow & feeding performance to assist with feeding management on farm. We are currently testing a new module which calculates the carbon footprint from data recorded on MCi for any time period, which also allows for data collection through the APP. For more information go to www.dairy-mci.com or contact the office on 01823 444488 or email enquiries@thedairygroup.co.uk.

Avoid using chlorine products when cleaning milking equipment - EU Legislation has set a maximum residue limit for chlorates in milk products to not exceed 0.1mg/kg. Chlorates are produced as a result of chlorine-based cleaning and disinfecting products breaking down.

The risk of residues is greatest with heavily processed milk products such as milk powder and baby formula. At this stage the use of chlorine-based cleaning products for milking equipment has not been banned and the focus is on the final rinse of the equipment in particular. Adding a disinfectant to the final rinse of milking parlours and bulk milk tanks is carried out routinely and sodium hypochlorite is commonly employed due to its efficacy and cost effectiveness. There are other disinfectants available, in particular peracetic acid and consideration should be given to using these as a terminal disinfectant rather than sodium hypochlorite. If automatic dosing of chemical is employed, check the manufacturers recommended rate and ensure that any alternative product is being used at an appropriate rate.

The Sustainable Farming Incentive (SFI) opened for applications on 30th June. The relevant standards for most dairy farms are likely to be the Arable and Improved grassland soil standards. Each standard currently has 2 ambition levels with varying payment rates:

Standard	Level	Payment
Arable and horticultural soils	Introductory Intermediate	£22 per ha £40 per ha
Improved grassland soils	Introductory Intermediate	£28 per ha £58 per ha

The pros and cons of the scheme are discussed below:

Pros	Cons
• Straightforward online application • Applications processed quickly • Rolling start dates with the first quarterly revenue payment being made 3 months into the agreement • Flexibility in how much land you enter, the 'ambition level' and opportunity to select different levels for different land parcels. • Opportunity to upgrade your agreement annually (add additional standards, increase levels within standards and add land) • Winter cover starts from 1 December	• Limited financial incentive to introduce cover cropping if not already utilised within the rotation due to seed, establishment and destruction costs • Requirement for a soil organic matter test for each parcel with the expected lab cost at approximately £10/sample

An SFI standards agreement will last for 3 years for which time you need to have 'management control' of the land entered into the agreement. Discuss the scheme and actions required for each standard with your consultant.

We await the final details of the **Slurry Improvement Scheme** which will grant fund up to 50% of the eligible project costs to help replace, build new or expand existing slurry stores to provide 6 months storage. You can start to prepare for the grant now by calculating current slurry production and storage capacity, reviewing options to reduce slurry volumes (utilising other grant schemes if possible) and discussing design and location options and the requirement for planning permission.

Soil analysis - Autumn is typically a good time to take routine soil samples to inform your nutrient management plan (NMP) for the following season. Soil analysis is a regulatory requirement under the Farming Rules for Water, but also continues to be hugely important given the uncertainty of the fertiliser market and prices.

NMPs commonly use the RB209 Field Assessment Method to determine soil nitrogen supply (SNS) where it is read from tables with no requirement for soil sampling or analysis. With the uncertain cost and availability of Ammonium Nitrate it is worth considering soil mineral nitrogen (SMN) testing to determine actual SNS to inform more targeted nitrogen applications, particularly where the supply of plant-available nitrogen could be unusually large, for example, where organic manures have been regularly used in recent years.

For farmers entering the Sustainable Farming Incentive, soil organic matter (SOM) in conjunction with your routine testing should be included this autumn. There are various methods to test organic matter within soils and the most cost-effective is 'loss on ignition'. The estimated laboratory fee for a standard soil test (pH, P, K, Mg) including SOM testing loss on ignition is approximately £20/sample. Speak to your consultant about soil testing this autumn and spring 2023.

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.

Website: www.thedairygroup.co.uk,

Email: enquiries@thedairygroup.co.uk
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