

# Efficiency drive shows dairy margins potential

A DRIVE by dairy farmers to increase their efficiency has the potential to boost the margin over purchased feed by £22,000 a year, according to Promar's latest milk-minder results.

Nigel Davies, Promar's national consultancy manager, said the figure was irrespective of milk price fluctuations.

If the milk price for November 2017 was applied to the same period in 2016, efficiency added an

additional margin of £1,800 for the average herd.

"The average herd in the sample of 212 cows had a comparable number of calvings in November 2017 to November 2016," he said. "They also generated an extra 0.9 litres per cow, per day, and reduced concentrate feed use by 7.6 kg per cow over the course of the month."

Mr Davies added over 12 months these efficiency savings could have a 'real financial impact'.

## PROMAR'S MILKMINDER RESULTS

	November 2017	November 2016
Cows in herd	212.1	208.3
Cows in milk	181.7	176.7
Total milk produced (litres)	138,169	129,386
Yield per cow in milk per day (litres)	25.3	24.4
Yield from forage per cow per day (litres)	5.6	5
Margin over purchased feed per litre (p)	23.54	18.25

## Promar Dairy Farmer of the Year

This year's Promar Dairy Farmer of the Year was awarded to Dale Farm member Roger McCracken, who received his award at the recent Dairy Winter Fair. The award is given annually to a farmer whose Promar management results have shown the most improvement in the last 12 months.

Roger farms alongside his father John, just outside Ballywalter. The main farm enterprise consists of 150 Holstein cows and followers, with 150-170 store lambs bought in annually to assist with grassland management by grazing excess grass during the winter months. 25 acres of barley is also grown each year as part of the grassland rotation, allowing for 25 acres of grass to be reseeded each year. This high yielding herd is currently averaging 8693 litres per cow at 4.13% butterfat and 3.31% protein.

MilkMinder is a dairy management benchmarking tool which allows farmers to input their own information online in exchange for monthly reports on milk production, feed usage and profit margins; as well as allowing you to benchmark your business with other farmers in your area. Roger has used the Promar MilkMinder service to track his herds performance for many years, and uses the data generated to make informed business decisions.

The McCrackens previously won this award in 2010 and have since continued to maintain their focus on maximizing milk production from forage, through utilising bought in feed efficiently. Rogers MilkMinder figures demonstrate that his focus has become a reality with a Milk from forage result of 3626 litres per cow, and a purchased feed cost of 6.29 pence per litre.

Winter feeding consists of a flat rate TMR, made up of 38kg fresh silage, 8kg whole crop silage, and 4kg of concentrate consisting of 2kg home grown barley and 2kg of a 32% protein blend delivered, through the diet feeder. Cows are also fed a 20% concentrate nut through the parlour, this is fed based on individual cow yield, which is assisted by the parlours auto ID system which was fitted, when the new parlour was installed in 2010. Roger aims to keep his average feed rate around 0.28 to 0.30 kg of feed per litre, to achieve this, he works closely alongside the United Feeds team to monitor and adjust rations to suit specific needs throughout the year.

Great importance is placed on aiming to make 3 cuts of high quality silage to achieve these results, with this years first cut silage analysing at 38% DM, D Value of 72, ME of 11.6 and 17.7% Protein. Located on the Ards peninsula, an area renowned for producing 'early grass' is a great benefit to the McCrackens when it comes to making good quality silage. The first cut is often taken in the first week of May, with 2nd and 3rd cuts taking place at 6-8 week intervals. Roger mows and teds the grass using his own machinery, allowing at least 24 hours of wilting before the grass is lifted by his contractor. Additive (Ecosyl) is applied to all grass at ensiling.

Summer months see cows turned out to grass. Typically, cows are turned out in early April for the daytime period between milkings, before being increased to full time grazing by the end of April. Roger finds this allows cows to adjust slowly to the change in diet, with a transition from a silage

based diet to fresh grass. Cows are strip grazed, with a new grazing area being made available after each milking, this system is made possible as a result of good accessibility, aided by a series of lane ways which span throughout the McCrackens farmland, all of which is located within reasonable proximity to the main yard and milking parlour. Grazing ground is sown with 75kg per acre of 27% Nitrogen (1.5 bags/acre) after each grazing. Soil sampling is performed for each field every 4 years, fertilizer and lime application is then applied as required based on the analysis.

The McCrackens herd calves from September to April, with AI used during the housed period. Typically, 3-4 AI bulls are chosen each year. When choosing bulls Roger places an emphasis on fat and protein, as well as keeping an eye on milk volume and fertility index. The farm stock bull is used to catch any cows which fall outside of the main serving period.

Over the past 10 years the McCrackens have made a number of investments, all geared towards making their farm business more efficient. They have made use of available space to install a herring bone crush and automatic backing gate to be more labour efficient. Roger and John have made the most of the space they have through a number of conversions; the old parlour and the old hen loft have been converted into calf houses, the old collecting yard has been converted into a dry cow house, as well as a number of other houses which have been renovated into very functional sheds for young stock.

Looking forward, expansion isn't a priority for Roger and John, this is primarily due to the restriction which land availability poses in the area. Instead they have visions of continuing to improve the farm business system and its efficiency by making what they have better. Roger would like to have the ability to split his main cow herd into batches to allow for more focused feeding to yield during the housed period.

For anyone wishing to avail of the Promar MilkMinder programme, contact the Northern Ireland representative Michael Calvert on 07980694389 or e-mail [michael.calvert@genusplc.com](mailto:michael.calvert@genusplc.com)



Promar Dairy Farmer of the Year was awarded to Dale Farm member Roger McCracken



# Data interpretation opens efficiency opportunities

**It's not recording data that is important—it's how you use it. Two dairy farmers from different parts of the country have seen benefits from comparing data to drive efficiency.**

They may be 250 miles apart but Jack Elliott from Torrington in Devon and John Allwood from Chester have found that they have plenty to learn from each other and the data produced by the Feedface system from Genus ABS.

Both Jack and John run large high yielding all year round calving herds and have been using Genus ABS Breeder Tag System to monitor breeding activity in the herd as a way to achieve high levels of reproductive performance.

John is currently averaging 69% submission rate and a 28% 21 day pregnancy rate from his 730-cow herd which is averaging 11,400 litres sold per cow. With his 400-cow herd averaging 12,000 litres at an average of 40 litres/cow sold, Jack is currently running at 60% heat detection rate and a 24% pregnancy rate.

They have also been using Feedface, a new optional module now available in the UK on the Breeder Tag System which provides comprehensive data on cow behaviour, particularly related to the number and duration of feeding visits. Combined they have over 23 months experience with the system and have gathered significant data.

## Unlocking feed efficiency

Patrick Spencer, Genus ABS Key Account Manager, says that with feed being the most important input on dairy farms a better understanding of feeding behaviours can be used to unlock efficiency improvements.

"How a cow spends her time has a massive influence on performance, both production and fertility," he explains. "The priority use of time is actually lying down. Cows in later lactation should be able to lie down for 50% of the time as this is when blood flow to the udder is optimised leading to greater milk production. However, how she uses the other 12



*Greater feed access per cow resulted in better feeding behaviours.*

hours a day is equally important as this is the time she must fill eating, drinking, social time and expressing heat as well as being milked.

"Accurate data on how cows spend their time can be used to unlock potential management improvements and by spotting changes in routine can highlight management events like heats and also signs of disease."

Mr Spencer says that front leg fitted pedometers are the most accurate way to collect data on activity and movement, saying that collars are less effective at identifying when cows are standing or lying down, as these are deemed as periods of low activity which can be clearly determined with pedometers.

"In an ideal set up a cow will spend 50% of her time lying down, 19% in fixed management activities such as milking and 21% eating. Optimising feed intakes is driven by a combination of visits per day to the feed trough and the length of these visits.

"A wide range of factors affect the time spent eating including timing of feeds, the number of feeds and frequency of pushing up, feed presentation and diet consistency, feed quality, cow grouping, feed fence space, time

on concrete, disease, feed fence design and heat stress to name a few.

## Understand more about behaviour of your cows

"Anything that reduces feeding time will impact on milk production and can impact on fertility so the data collected by Feedface can highlight potential problems and allow management changes to improve feeding time."

Both Jack Elliott and John Allwood have been using Feedface to understand more about the behaviour of their cows. John Allwood says that monitoring and the use of data will become increasingly important.

"The bigger the farm, the more professional we have to be and can be. We have to be able to identify where our system can be improved. In part this will come from gathering more data on our own herds and using sensible benchmarks, but increasingly I think it will come from comparing detailed data with other farms to challenge what we are doing and this is what Jack and I have been able to do," said John.

Although they are a considerable distance apart and have

several differences, there are a lot of similarities between the two. Three times daily milked herds and studying patterns of eating has indicated a number of opportunities for improvement.

## Feeding routines

In Jack's system the cows start being fed at 3.30am with each group fed during milking. Feed is pushed up regularly during the day in mid-morning and at each milking with the last push up after night milking.

John feeds twice a day with the first feed put out at 5.30am, available as groups come back from milking. The second feed is structured around afternoon milking.

In mid-June last year, the cows in Devon started to show a decline in both milk yields and submission rates. Analysis of the behaviour data showed the number of feed visits was increasing but each visit was shorter leading to reduced dry matter intakes. Social activity and lying times were also reduced.

In search of a reason and solution, it was at this point, that Patrick Spencer suggested comparing herd behaviour with the herd in Cheshire. While these cows had shown a small reduction in feeding times it was more marginal.

"The big difference was that John Allwood's buildings had fans installed. This was a time of particularly hot weather combined with high humidity which was leading to heat stress," he explains. "Despite Jack's building being new and constructed to a high specification, cows were suffering environmental stress manifesting in reduced eating behaviour."

Armed with this evidence, Jack has taken the decision to install fans in the milking cow buildings to prevent any reoccurrence of the problem. "Without the data we would not have known what was behind the reduced performance,"

he admits. "As we are in a phase of driving efficiency before considering any further expansion these incremental changes can all add up."

### Performance comparisons

More recently John visited Jack in Devon to compare performance of the two herds. The data for the two herds was showing some differences in average feeding behaviours (see table). The question was what was driving the differences and what could or should be done about it?

"When looking at the data and discussing the possible reasons, one of the factors affecting the herds was feed space per cow," Patrick Spencer comments. "Jack

is in a consolidation phase. In the milking herd, 95% of cows will be lying down after milking and night lights are turned off to encourage cows to lie down until milking begins at 4.00am.

In the same period John has been expanding his herd.

"Looking at the access to feed, John's milking and dry groups have 15cm less feed face access per cow, due in part to an improved fertility performance leading to tighter calving, and in part due to a new building not being finished.

"This difference in feed access explained the different behaviour seen and prompted a healthy debate. John's cows, both milking and dry, are making more visits but each visit is significantly shorter leading to reduced feeding time



John Allwood (left) and Jack Elliott.

### Differences between Allwood and Elliott in average feeding behaviours

	Intake duration (hours/day)		Intake visits (visits/day)		Lying time (% of day)	
	Allwood	Elliott	Allwood	Elliott	Allwood	Elliott
Milking	3.26	4.30	10	8.9	49	54
Dry	2.40	5.00	11	10	50	54

per day, possibly due in part to increased competition at the feed fence. However, the lying times are pretty consistent and cows are averaging 38 litres per day.

"The question is would milk output from the building be constant if stocking rate was reduced and the remaining cows milked better as a result of improved eating times?

"Armed with the data and

comparisons at least an informed discussion can be held, the consequences understood and management changes implemented and monitored

"As pressure grows to drive efficiency, the wider use of data will help improve the quality of decision making and so improve productivity, reproductive performance and welfare," Patrick concludes.