

Feeding for profit with 100% autumn-calving

Martin Quigley, Dairy Farmer

My name is Martin Quigley. I am a dairy farmer milking 90 cows at Kilconnor, Inniskeen, on the Louth/Monaghan border. We operate a 100% autumn calving system, supplying Glanbia and Lakeland Dairies. Today I am going to describe to you how the focus of our dairy enterprise has fundamentally changed over the last couple of years, particularly in relation to feeding management of the herd. I will also outline our recent decision to switch away from the liquid milk payment system to solids-based payment for all milk produced, while continuing to calve the entire herd in autumn.

Background

I will begin by describing where we have come from over the last decade or so. The farm at Kilconnor has a grazing platform of 30 hectares. Land is very dry with shallow soils over shale rock, making it very prone to drought (if we could get a dry summer). Traditionally we would have kept around 50 cows and these were split calved with 50% in the autumn and the rest in spring. The focus at the time was very much on pushing yield, which seemed to be the 'done thing' for liquid milk farms. High levels of supplement feeding and a strong emphasis on breeding for increased production drove herd rolling yield averages close to 8000 litres.

Around 10 years ago, we decided that a move to calving all cows in autumn would make overall herd management easier and allow a welcome period of downtime in late summer. Autumn was the preferred time to calve the cows because i) we had a high proportion of liquid and winter bonus milk, and ii) we would be better able to cope with a summer drought if the herd was in late lactation. However, fertility was a major concern in that we would no longer have the option of carrying cows from one season to the next to compensate for poor conception rates. The fertility issue became extremely apparent when the EBI system released its first ranking. Our herd average EBI was €32, with a minus €6 for fertility.

Discussion Group Influence

Around this time I had joined our local Discussion Group, The Fanesiders which was just being formed. There is a wide diversity within the group, from 100% spring to split calving and 100% autumn systems, allowing for analysis across a range of physical and financial data. The emphasis in the group was on pasture management, production costs and breeding. Grass measurement and budgeting was made compulsory to gain membership. This has been one of the major catalysts for change on our farm. Completion and comparison of annual Profit Monitor was another essential part of group activity. It is said that people ask for criticism but only want praise- in our discussion group you mostly get what you ask for.

Changes in Herd Feeding Management

We had been fairly happy with feeding management prior to analysis with the discussion group, mainly because herd average milk yield was on target. Our system was pretty typical for a liquid milk herd and can be summarised as follows:

- Buffer feeding commenced in early September when the first of the cows calved down;
- the buffer diet consisted of maize and grass silage, brewer's grains, concentrates and straw, and was fed to maximize peak yield;
- cows were fed a balanced TMR during housed period and then buffered from turnout in spring until late April/May; and,
- supplementary feed was removed in May when cows were reaching late lactation. Total purchased feed was over 1.5tDM per cow.

Cow nutrition was a priority and we were always conscious of details such as protein levels, minerals, fibre chop length etc. However, one major feed source was not so closely monitored and that was grazed grass. I would have had a reasonable handle on pasture quality but was not operating to any budget or specific targets. We had one of the higher yield averages per cow in the discussion group but it soon became clear that some of the other farms were actually selling more milk per hectare despite spending much less money on bought-in feed. We saw that this was being achieved by utilising more grass which really underlined the need to examine how we could make better use of our own pasture as a feed.

The first issue to address was getting to grips with grass measurement and budgeting. Working within the discussion group was a major benefit, but if I am honest I would say that it took the best part of 6 years to find a grazing plan to suit our own calving pattern. I feel that progress maybe wasn't helped by the lack of a research-based blueprint for the autumn calving herd, and a perception that guidelines for spring herds could be directly translated for autumn calving. For example, the practice of building large covers (>400kg DM/cow) to extend autumn grazing was important for spring herds, but did not work for us as it was impossible to have decent milk yields and graze to correct residuals with fresh autumn calvers on heavy swards. However, we did see that grazing guidelines for all calving patterns were similar for much of the year, and we adjusted our targets (after much trial-and-error) for early spring and autumn grass.

The next major area of concern was stocking rate, which had been at around 2.0 cows per hectare. Comparing our feed inputs and milk outputs on a per hectare basis with the most efficient pasture systems opened our eyes to the fact that we could meet much more of total herd feed demand from pasture than we had previously thought possible. It was obvious that stocking rate was too low to have good grass utilisation, especially at the levels of supplement feeding (1.5t DM/cow) we were at. The logical step was to begin building up stocking rate close to three

cows per ha while cutting back on purchased feed to create a better balance between the feed demand and potential supply on the grazing platform.

The move to balancing feed demand and supply has shifted the whole basis of our management decisions which now can be summarised as follows:

- The farm is set up for autumn by baling out heavy paddocks and grazing very tight with dry cows in late summer. Autumn grazing management is decided by working to targets for pre-grazing yield, farm cover and post grazing residuals;
- The focus for feeding the freshly calved herd is grass quality. Avoiding heavy grass covers means earlier housing, but early spring turnout is targeted. Moderate levels of concentrate (4-6kg) are fed at grass;
- The herd is fed grass silage and meals during the housing period. Making good quality silage has become a real priority; and,
- Supplementary feeding of the herd from spring until late lactation is decided by matching feed demand to grass cover on a weekly basis.

Change in milk pricing and contract situation

The changes outlined above have started to result in real cost and labour savings. When we examined the situation further and began to look at milk price, a number of key issues arose. The first was that with milk output expanding the percentage of liquid quota relative to annual supply was falling and will probably end up at about 30%. The second is that while liquid milk is supposed to achieve a payment of 6 cent/litre above manufacturing, in reality this is much less as constituent bonuses can generate an additional 2-3 cent/litre. The high solids milk is also being produced on the back of lower input cost due to the higher levels of grazed grass going into cows during the grazing season.

At the end of February we decided that we would sell our liquid quota, the aim here twofold (1) to ensure that we were fully concentrated on solids production (ii) the money from the quota sale would provide a cushion for us in a tight year should we not achieve our targets. Winter milk bonus payments would be retained. The following table outlines what we believe is achievable relative to our current quota position and when we increase output.

Table 1. Projected changes in feed costs, bonus payments and farm profit.

	Retain Contract	Move to A+B-C	€
Current Position			
Total output	600,000	600,000	
Liquid contract @ 6c/l	200,000	-	(12,000)
Solids bonus	-	+ 1.5c/l	9000
Feed Costs	-	-2.0c/l	12000
Net Change in Farm Profit			€9000
Future Position			
Total output	700,000	700,000	
Liquid contract @ 6c/l	200,000	-	(12000)
Solids bonus	-	+ 2.5 c/l	17500
Feed costs	-	-2.8c/l	19600
Net Change in Farm Profit			€25100

We had considered retaining the liquid quota and moving to A+B-C, but decided that liquid contract was shrinking as a proportion of total output, so the system could be simplified if all milk was sold on the same price basis. I must come back to our groups goals on grass budgeting and EBI which have given me the flexibility to make this decision. If we had continued to breed for milk volume only and were still tied to feeding to yield, we would have been in no position to switch payment system or exploit potential cost savings from pasture.

Current situation autumn 2009

At our groups first meeting this year which deals with the profit monitor it became very clear that 2009 was going to be a very difficult year financially, when we took 10 cent a litre off last years profit. I felt that in order to survive we would have to go through every detail of our business with a fine tooth comb and see where we could increase our revenue and reduce costs. This year we concentrated on grazing lower covers (1400kg DM) within the group and this helped to increase milk protein. We kept a very tight rein on concentrate costs, looking at feeding levels and value per tonne purchased. Also, on the breeding side we had have selected bulls fertility to sort out our overall empty rates which had gone to unsustainable levels of 20%. Current EBI stands at €65 milk €37 and fertility €18. Going forward we will increase fertility sub index further and will concentrate on constituents than output. We are confident that with improvements in breeding over the next few years we hope to achieve a solids output of 1800 kgs/ha. This will require 7500 litres/cow @7.5% solids and stocked @ 3.3 cows/ha. This we hope to achieve on a concentrate input of just over 1.2 tonnes.

Summary and conclusions

The compact autumn calving system we operate is not widely practiced in this country, but has suited our circumstances well. As with any dairy system, overall profitability depends on producing quality milk from the most economical feed, by the most suitable cows. Even with 100% autumn calving, this means getting grassland management sorted. The advantages from a lifestyle viewpoint of moving to compact calving have been immense (as I write we have only 2 cows left to calve between now and next September). Our decision to sell the liquid quota was a major one, but I believe that I have been very fortunate to have been involved with a discussion group whose influence has guided me to a position where the introduction of the A+B-C payment system poses no threat but rather opportunities. However, it saddens me to think that liquid milk producers who have continuously strove to increase volume output to increase profitability could now find themselves between a rock and a very hard place with the introduction of the new payment system in 2 years time.