

British Milk – What Price 2007?

National Farmers' Union
and
Royal Association of British Dairy Farmers

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Introduction

The NFU and RABDF have once again joined forces to produce an update to the 'British Milk - What Price?' series of reports, examining developments of production costs and other market related factors.

In the last twelve months, 'British Milk – What Price 2006?' has been used extensively in commercial discussions with processors, milk buyers and retailers, as well as being utilised as a benchmark by many producers. Many consider the report to have directly contributed to the recent milk price developments that have benefited some milk producers.

This latest report provides an appraisal of:

- Increases in farm costs of production
- Regulatory pressures
- The market context
- The impact of modulation on SPS receipts by dairy farmers
- Milk production and farmer intentions
- Re-investment levels

1) Increases in farm costs of production

In order to assess the cost of milk production in 2006/07, we have based our calculations on the 2002/03 data from the 'Economics of Milk Production Survey 2002/03' report (Colman, Farrar and Zhuang) by the University of Manchester (which is widely regarded by industry, retailers and government as the most robust data set available). Independent and reputable agricultural indices from the past four milk years have been applied to the original figures, with the detailed results shown on Page 5 of this report.

It should be pointed out that the analysis does not take account of potential increases in farmer efficiency that may have occurred over the same time period, which might have mitigated, to some extent, some of the impact of these cost increases.

Labour costs

Labour costs have continued to rise over the last milk year. Specific Labour and Overhead Other Employed Labour have been costed at Agricultural Wages Board (AWB) Grade 1 rates and have increased by 16.11% between 2002/03 and 2006/07. Forage Labour which has been costed at AWB Craft Worker, rates has increased by 16.38%. Casual Labour has been costed at AWB Grade 2 rates, and has risen by 16.94%. The cost of unpaid family labour has been included in the figures.

The continuing rises in labour costs enforced by the AWB are proving difficult for many dairy farmers to cover. Acquiring skilled and experienced dairy labour is also becoming harder year on year and is expected to become increasingly difficult, as higher minimum statutory rates for students make additional labour unaffordable for dairy farmers, resulting in

less students being provided with the opportunities to gain essential work experience on dairy farms. This might have major implications for the future of the industry.

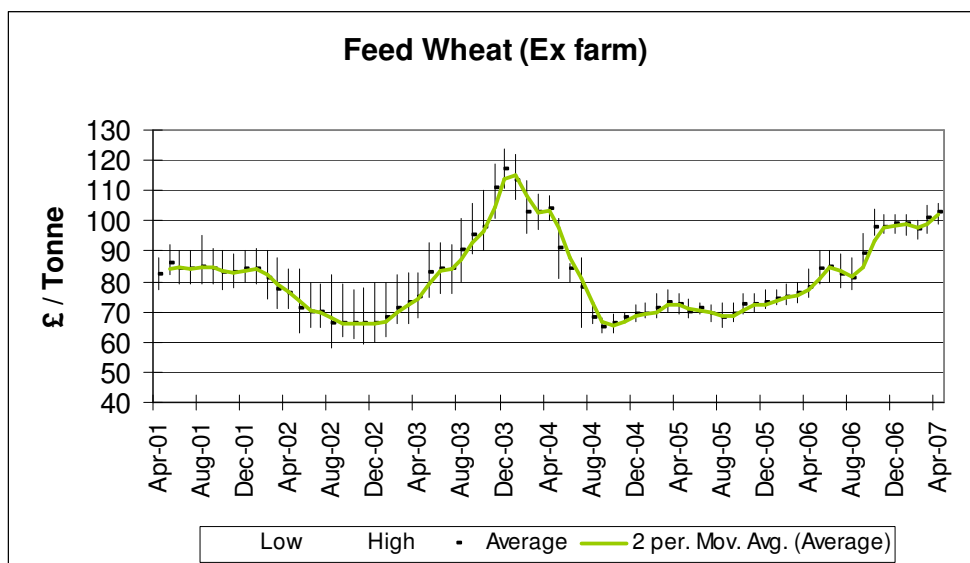
Utility costs

Over recent years there have been dramatic increases in energy costs, and the 2006/07 milk year has been no exception. This has not only caused general farm overheads to rise by 19.32% since the 2002/03 milk year, but has resulted in further cost increases, as rises in costs such as fuel have knock-on effects on other types of expenditure, including contractor charges, feed costs and herd replacement costs.

In September 2006, NFU and RABDF carried out a survey into the exceptional production costs farmers were facing at the time. One of the areas investigated was the additional financial burdens resulting from higher energy and other utility charges. The study proved that large numbers of milk producers have faced marked increases in the main utility bills (fuels, electricity and water) for their businesses. With farmgate milk prices consistently remaining lower than production costs, producers have not been in a position to absorb these additional costs.

Feed costs

Since 2002/03, feed costs have fluctuated year on year as highlighted by the feed wheat graph below. The variation in feed costs over the last four milk years has largely been determined by weather conditions, although in future there might be other factors that may potentially increase the volatility of grain prices, such as the implications of bio-fuel production. During the 2006/07 milk year, firmer cereal prices caused feed costs to rise. Because expenditure on feed is one of the major costs of production, this had serious implications on dairy farm profitability. It is anticipated that feed costs will continue to escalate over the next year.



Source: MDC Datum

In addition to higher feed prices in the last milk year, farmers have also had to cover additional unexpected costs brought about by last summer's dry weather. Many dairy farmers were forced to feed home-grown forage early in an attempt to mitigate yield losses. Consequently, they then had to buy in supplementary feed stuffs to fulfil their winter feed requirements. These costs were investigated in the Exceptional Costs Survey referred to in the utility cost section on the previous page. Due to the methodology of the 'British Milk – What Price?' work, the exceptional costs farmers had to contend with during 2006/07 have not been incorporated into the costs of milk production figures laid out in this report, and therefore must be considered in addition over and above the figures stated.

Interest charges

Interest charges were not included in the Economics of Milk Production Survey 2002/03. However, interest charges are becoming an increasingly significant cost for farmers in general - The Bank of England recently released figures stating that at the end of December 2006, the total farming debt in the UK stood at £9.375 billion. Dairy farmers partake in these high levels of debt, with many having to borrow money to remain in production and/or undertake necessary investment.

In order to quantify an average interest charge for dairy enterprises, we have used DEFRA data from the "Farm Business Survey for England, 2005/06" (FBS, 2005/06), updating it to allow for the increase in interest rates that has taken place since then.¹ Assuming that the level of debt has remained constant (a fairly cautious assumption, taking into account the growing financial pressure faced by dairy farmers) and that the increase in the Bank of England's official rate has been fully transmitted to dairy farmers, our estimates show that the average dairy farmer in England is facing net interest rate payments equivalent to 0.8 ppl.²

Overall cost increase

The table on Page 5 of this report documents the changes in the costs of milk production between 2002/03 and 2006/07 and demonstrates a 16.43% increase overall. These figures do not account for exceptional costs incurred and do not provide scope for re-investment (which is essential for the future viability of the dairy sector). They also do not allow for increases in farmer efficiency that may have occurred over the four-year period in question.

According to DEFRA, the average farmgate milk price from April 2006 to February 2007 (March 2007 figures are yet to be released) was 17.90ppl, whilst our calculations show (accepting the caveats previously mentioned) the average cost of production was 21.32ppl. Our estimates highlight that the deficit between the farmgate milk price and the cost of production has extended to nearly 3.5ppl and it is anticipated that even recent price increases will have little impact on this gap.

¹ The average official interest rate during the period 2005/06 covered by the FBS was 4.62%, against the current rate of 5.25%.

² The average level of net interest rate payments is allocated on a 'per litre' basis by using data on average production per English farmer, obtained from MDC data on English production and number of English producers.

VARIABLE COSTS	Cost 2002/2003 Pence/ litre	Cost 2006/2007 Pence/ litre	Difference 02/03 vs 06/07 Pence/ litre	Approx % Change	Factors Contributing to Change
Herd Replacement Costs	1.21	1.47	0.26	21.25	AWB inflation and inflationary costs
Concentrates	3.62	3.76	0.14	3.74	Inflationary costs
Bulk Feeds	0.30	0.35	0.05	15.67	Inflationary costs, fuel prices
Bedding	0.25	0.31	0.06	23.92	Inflationary costs, fuel prices
Vet & Medicines	0.57	0.64	0.07	12.55	Inflationary costs
AI & Bull Hire	0.34	0.46	0.12	35.00	Inflationary costs
Recording & Consultancy Fees	0.18	0.21	0.03	13.89	Inflationary costs
Consumables, Dairy Sundries	0.45	0.53	0.08	17.50	Inflationary costs
Contract Work (Excluding Forage)	0.13	0.19	0.06	46.34	AWB and fuel inflation
Casual Labour	0.11	0.13	0.02	16.94	AWB inflationary changes
Forage Variable Costs	1.32	1.74	0.42	31.82	AWB inflation, fuel & gas prices, inflation
Milk Quota Leased In (Net of Quota Leased Out)	0.25	0.03	-0.22	-88.21	Fluctuation in value of leased quota
TOTAL VARIABLE COSTS (A)	8.73	9.80	1.07	12.28	
FIXED COSTS					
Dairy Specific Labour	3.75	4.35	0.60	16.11	AWB inflationary changes
Forage Labour	0.20	0.23	0.03	16.38	AWB inflationary changes
Direct Machinery & Equipment	1.29	1.33	0.04	3.19	Inflationary costs
Forage Machinery	0.34	0.43	0.09	27.13	Inflation and increased cost of fuel
Dairy Specific Buildings	0.50	0.61	0.11	22.33	Increased cost of steel, inflation
Annualised Charge for Purchased Quota	0.55	0.55	0.00	0.00	Not comparable
Net Field Rent	1.33	1.28	-0.05	-3.52	Reduction in tenant rent rate
Interest Charges		0.80	0.80		Not comparable to 2002/03 results
TOTAL FIXED COSTS (Before Overheads) (B)	7.96	9.60	1.64	20.54	
OVERHEAD COSTS					
Other Employed Labour	0.49	0.57	0.06	16.11	AWB inflationary changes
Machinery	0.17	0.21	0.04	22.06	Increased cost of fuel
Buildings	0.08	0.10	0.02	22.36	Increased cost of steel, inflation
General Overheads	0.88	1.05	0.17	19.32	Increased cost of electricity, water etc
TOTAL OVERHEAD COSTS (C)	1.62	1.92	0.30	18.79	
TOTAL COSTS (A) + (B) + (C)	18.33	21.32	3.01	16.43	These figures do not account for exceptional costs incurred or provide scope for reinvestment

2) Regulatory pressures

Nitrates Action Plan

Since the last 'British Milk - What Price?' report was produced (in March 2006), English dairy farmers have anxiously been waiting for proposals to emerge from DEFRA to update the current Nitrates Action Plan. The Nitrates Action Plan places controls and restrictions on the use of manures and slurries in Nitrate Vulnerable Zones (NVZs). The Government will continue to face infraction proceedings from the EU Commission for failing to implement the Directive if the Action Plan is not considerably tightened up. Although it still remains unclear when the anticipated proposals from DEFRA may emerge or the precise nature of the content, in the meantime the NFU and Dairy UK have been seeking to examine the impact that any proposals may have on dairy farmers. We understand that the proposals are likely to:

- Extend so-called 'closed periods' during which slurries cannot be spread from the current 2 months to as much as 5-6 months depending on the farm's location
- Extend closed periods to land of all soil types (currently only applies on sandy and shallow soils)
- Increase the level of mandatory storage capacity required on dairy farms in NVZs to cover the entire closed period (i.e. up to 6 months)
- Reduce the amount of nitrogen (N) from manures and slurries that can be spread on land

NVZs cover around 55% of England (and 3% of Wales) and it is estimated that some 45% of English milk quota is held in NVZ areas. The biggest impacts on dairy farmers will come in the form of enforced expenditure required to cover the cost of putting in additional storage capacity (including planning and architects fees, as well as construction and materials) and the management constraints imposed by any reduction in the amount of N that can be spread, even if certain derogations can be negotiated.

It is difficult to put a precise cost estimate on these measures in the absence of confirmed proposals, but based on the Regulatory Impact Assessment prepared by DEFRA for the last Action Plan Revision in 2002, we believe that the total annual cost of these measures for English dairy farmers would be in the region of £62 million per year³. The annual cost of this is equivalent to 1.45 ppl for those producers affected.⁴

Although NFU, RABDF and Dairy UK are exploring, at the time of writing, the extent of grant assistance that may be available from DEFRA through Rural Development measures to

³ The annual cost estimates in 2002 RIA for dairy farms were £3.66m for storage and £0.72m for transport. Under the assumption that the DEFRA RIA figures are an accurate basis, these figures need to be updated to take into account the likelihood of: (a) a change in the soil types, where the restrictions apply from 20% of farms in NVZs to all farms on all soil types affected, and (b) an extension of storage period from 9 weeks to 15-22 weeks. On the basis of (i), both storage and transport costs will be expected to increase by a factor of 5; on the basis of (ii), storage costs can be estimated to increase by a (further) factor of 3 and transport costs by a factor of 2. The combined effect of these changes would lead to an annual cost estimate in the region of £62 million. This is based on the areas currently designated as NVZs, and takes no account of increased building costs since 2002.

⁴ Value estimated by dividing the estimated annual cost by the milk quota held in English NVZs (estimated at 4.275 billion litres).

help with the financial impact of these measures, it is unquestionable that any contribution from government (should it take place) will be rather limited in comparison with the full cost impact of the NVZ Action Plan; as a result, most costs will have to be met ultimately by the supply chain.

Water Framework Directive

Many producers, including those outside of NVZ areas, are likely to face additional regulatory challenges in the form of the Water Framework Directive. This piece of legislation must be implemented by 2015. Currently, implementation in the UK has focussed on a supportive approach, with a network of Catchment Sensitive Farming officers deployed in 45 sensitive catchments, giving advice on how to minimise environmental impacts to producers. Later this year we expect further proposals from Defra on the implementation of the WFD. This is likely to contain some regulatory measures, still to be determined.

3) The Market Context

Most dairy farmers faced brutal milk price cuts during the course of 2006. These were attributed, according to some quarters, to falls in the value of butterfat on EU and UK markets and weakening of the wholesale cheddar market. However, since last summer, market conditions have broadly improved, with protein markets in particular demonstrating incredible strength.

Liquid milk

The liquid milk market has experienced a greater degree of stability over the last few years at retail level. This has enabled some price rises, allowing modest milk price increases to be returned to some producers supplying liquid dairies. The recent announcement by Tesco that it intends to establish direct contracts with 850 dairy farmers at a starting price of 22ppl demonstrates the kind of value that the liquid sector ought to be returning to producers, irrespective of commodity markets.

However, competition in middle ground markets remains fierce, impacting adversely on the returns to producers supplying processors/ co-ops, who predominantly supply this market. Frequent reports of business being secured or retained at very low prices continue to be extremely concerning. It is hoped that a combination of rationalization, strengthening commodity returns and some sheer common sense about the sustainability of the sector will bring some order into this market.

Cheese

The simple question to be posed in respect of the cheese market is 'where is the money?'. While twelve months ago the MDC's Milk for Cheese Value Equivalent calculator (MCVE) stood at 21.11ppl, the average for March 2007 was 21.31ppl. During the same period, prices to producers supplying the main cheese processors fell by as much as 2ppl. Wholesale mild cheddar prices fell by around £200/ tonne last summer and whilst they have not recovered, more cheese is being sold as mature, a market which continues to be robust at around £2,400/ tonne.

The main issue to be considered, however, is the strength of the whey market. This has boosted returns to processors through the doubling in value of whey powder in a year. The simple question asked at the start of this section merely requires some straightforward answers from major cheese manufacturers who have not yet delivered cheese milk price increases. This fact is made all the more striking by the increases that have been paid by some of the medium sized operators (Wyke Farms, Heler).

Dairy commodities

EU and world commodity markets have strengthened considerably in recent months, especially in respect of milk protein where demand continues to outstrip available supply. The world price for Skimmed Milk Powder (SMP) stands at 3,550 \$/tonne, some 70% higher than twelve months ago and, on some quotations, is now effectively higher than the EU price. Although the world butter price remains significantly below that of the EU (owing to tariff protection), EU butterfat prices have also significantly strengthened from their weak position immediately after Christmas. Moreover, many market commentators anticipate further price rises as we move into the summer and weakening milk production across the EU. Price increases of over 0.02 €/litre have been awarded in the Republic of Ireland recently.

What does this mean for the UK? For a start, rising wholesale prices coupled generally to a more favourable £/€ exchange rate mean that the Actual Milk Price Equivalent (AMPE) has risen to 19.9ppl, which could encourage more milk to be sold into the ingredients market as the price becomes more attractive. Indeed, these markets have recently returned milk prices to producers in Northern Ireland of over 20ppl. In turn, it is reasonable to assume that this ability to achieve better commodity returns should help to push prices up to other end users. Of course, the ability to maximise returns from dairy commodities depends on a company's ability to switch milk and minimise the distance it has to travel to factory (i.e. the cost involved in trucking milk from Cumbria to Westbury). Nevertheless, the strength of commodity markets should be a strong incentive for other markets to move upwards.

4) Modulation of Single Payment

DEFRA's recent announcement that it is to levy a rate of voluntary modulation on the Single Payment Scheme (SPS) of 12% in 2007, 13% in 2008 and 14% on 2009 and onwards (on top of 5% compulsory EU modulation) will further reduce the level of support available to English dairy farmers through the SPS (an announcement in Wales is not expected until after the May Assembly elections). It should be noted that the UK and Portugal are the only EU countries making use of the voluntary modulation facility.

Example:

Assumptions

- 1,000,000 litres of milk quota
- 85 ha of non SDA land

- Exchange rate 1Euro = 0.7 £⁵

EU modulation = 3% in 2005, 4% in 2006, 5% in 2007 and onwards; first €5,000 are exempt
National modulation = 2% in 2005, 6% in 2006, 12% in 2007, 13% in 2008 and 14% in 2009 and onwards

	2005	2006	2007	2008	2009	2010	2011	2012
Gross Payment	16,987	24,508	23,396	22,285	21,172	20,239	19,162	18,445
Deductions	744	2,241	3,802	3,837	3,847	3,671	3,466	3,330
Final Payment	16,243	22,267	19,594	18,448	17,325	16,568	15,696	15,115

5) Milk Production and Farmer Intentions

The downward trend in milk production witnessed in the last few milk years has continued into the 2006/7 quota year. Although final official figures will not be available before the summer, the initial figures for the year to 31 March 2007 released by the RPA indicate that UK production has fallen by a further 1% over 2005/06 and could be as much as 400 – 500 million litres under national milk quota.

Some of the decline in milk production during the last year can be attributed to the climate, the summer drought taking its toll on milk output and/or high feed costs dissuading producers from chasing marginal litres. Cow numbers have also played a part. The decline in numbers has remained relatively constant: according to MDC figures, a further 42,000 dairy cattle came out of the dairy herd in the year to December 2006 (equivalent to a 3% drop in the milking herd). Yields, however, have grown by just 1.7% during the year, further explaining the drop in production.

It is becoming increasingly evident that the underlying reason for this reduction in output is the decline in farmer confidence. The recent MDC Farmer Intentions Survey released in April 2007 shows a shift in attitudes from previous years. The number of producers seeking to expand has decreased from 26% in 2006 to 20% in 2007. 16% of producers are seeking to cease production in the next 2 years, whilst 17% are yet undecided. On the basis of these results, the survey predicts a 7% fall in production by 2008/9, with 3,000 farmers leaving the industry. Of course, this position would be considerably worse if those currently classified as ‘undecided’ do indeed opt to quit.

⁵ For the purposes of an effective analysis of the impact of the movement towards an area-based system of payments and the impact of modulation on isolation, exchange rate movements are assumed constant for the whole period at a rate of 1 Euro = 0.7 £

The report emphasizes the need for strong, clear signals from the supply chain about the future. The recent announcement by Tesco that it intends to put in place direct producer contracts at a starting price of 22ppl is a welcome boost to the confidence of some dairy farmers, especially if, as is hoped, it acts as a spur to other retailers to get their act together. Yet, it needs to be highlighted that a very large proportion of milk produced on farm does not end up on supermarket shelves. Moreover, the move towards dedicated supply chains, while offering hope to some groups of farmers, might potentially heighten the sense of resignation amongst the 'have-nots', who represent the essential critical mass of the British dairy sector.

6) Re-investment Levels

To achieve long term viability, it is imperative a business re-invests capital. Indeed, regular investment is not only essential for the individual farm business to maintain the unit in an operationally-fit state of repair, but is also vital for the long term sustainability of the industry as a whole. Investments are needed to keep up with increasing regulatory requirements and/or for expansion. It is evident that the declining rate of expansion indicates that farmers are less confident in the future, although some dairy farms have expanded dramatically in recent years in an attempt to deal with the harsh economic circumstances faced on farm. What is less clear, and requires detailed consideration, is whether the capital investment that has been made is sufficient to sustain the dairy farming industry.

Research undertaken by the French Institut de l'Elevage in 2006 into the productivity of dairy units in Northern Europe paints an interesting and somewhat worrying picture. The report, released in January 2007, confirms the well held belief that British dairy farms are on the whole amongst the most productive and efficient in European terms yet, owing to low milk prices, farms have invested less in buildings and equipment than their counterparts and competitors elsewhere in the EU. Whereas Danish and Dutch dairy farmers have invested around €40 and €30 per tonne of milk production per year in infrastructure and machinery, specialist producers in the UK have invested a mere €10. This is even less than the EU average in the period 1989- 2004 of €25.

Given that the ability to make gains in productivity and efficiency in the long term depends on making investments in both infrastructure and machinery, these results are particularly worrying. Indeed, it is feared that whilst dairy farmers in the UK may be currently efficient in physical terms, this level of efficiency masks a lack of reinvestment that will ultimately affect productivity in the medium and long term.

The work carried out by RABDF and NFU over recent years consistently shows that, due to low farm-gate milk prices, the average dairy farm is unable to cover their production costs, let alone make a profit. As a consequence, the average producer has been unable to reinvest for several years and that a large number of dairy farms are likely to be in desperate need of capital reinvestment.

It is not possible to quantify a figure for reinvestment for inclusion in this report due to the variability of individual farm need. However, it is of paramount importance that this is

considered when analysing the document as the necessary investment levels would require farmers to make a sufficient margin above and beyond the estimated cost.

Summary

This joint report by NFU and RABDF has documented the changes in the costs of milk production between 2002/03 and 2006/07. On the basis of our estimates, the average cost of milk production in 2006/07, even without taking into account the exceptional costs faced by farmers or providing any scope for business re-investment, was 21.32ppl. With an average farmgate milk price in 2006/07 of 17.90ppl, it is clear that the dairy sector faces an unsustainable situation. We believe that it is imperative that the supply chain acknowledges the significance of these findings and swiftly takes action to counteract the dire situation British dairy farmers are contending with.

The case for action is reinforced by the fact that costs are expected to continue rising in the next milk year. For instance, feed prices have continued to escalate since the end of the 2006/07 milk year, while farmers will be also face substantial additional regulatory costs (such as the impact of NVZ legislation).

Production levels are falling year on year as producer confidence in the future continues to diminish. The sector is in desperate need of re-investment in order to remain competitive and viable. The recent announcement by Tesco of their intention to offer direct producer contracts is a welcome boost to confidence and it is hoped that it will have positive connotations for many, both directly and indirectly. This said, the direct contracts offered are only available to limited numbers of producers and it is therefore of paramount importance that the remaining retailers and other parts of the supply chain follow suit in order to ensure the long term viability of the whole dairy industry.