

Review of Dairy Market Indicators Summary of changes

Background

AHDB/DairyCo publish market indicators for the dairy sector to provide broad, general estimates of market returns. They are not intended to be correct for every plant – but instead aim to be indicative of the industry. The value of market indicators is as a basis for identifying trends and to use them for more precise purposes goes beyond the limits of their scope and accuracy. **AMPE** (Actual Milk Price Equivalent) is an indicator of the factory gate value of a litre of milk used for butter and SMP while **MCVE** (Milk for Cheese Value Equivalent) assesses returns from mild Cheddar and whey powder/butter.

In recent years, DairyCo has noted how some processing costs (notably energy) have increased which may mean the indicators are no longer accurate. DairyCo, therefore, decided to instigate an independent review of the method of calculation. The review aimed to establish how UK processor costs and yields have changed.

The review was conducted by independent consultant Dr Ken Burgess. Dr Burgess has over 35 years' experience in the International Dairy Sector. He held a number of positions at the Teagasc Dairy Research Centre in Ireland, and at the Milk Marketing Board, before joining Dairy Crest as Head of Development in 1984. He was then Technical Director of Yoplait UK and Group Technical Director of Dairy Crest for 17 years until 2009. For the past 5 years he has been an independent Technical Consultant working for dairy industry clients in the UK, the EU and the USA. Dr Burgess holds a Master's degree in Biological Engineering and a PhD in Chemical Engineering, together with a MBA. He has held technical leadership positions with the International Dairy Federation, UK-IDF and Dairy UK, and is currently President of the Society of Dairy Technology

Review Recommendations

The review report¹ makes a series of recommendations for changing the current market indicators. These are summarised below together with the AHDB/DairyCo response:

Recommendation	AHDB/DairyCo position
<p>Revised conversion factors and process cost estimates should be used.</p>	<p>AHDB/DairyCo has decided that the conversion factors proposed in the review will be used. These are based on a standard milk composition of 4% fat, 3.3% protein.</p> <p>The process cost estimates proposed in the review will be used. These are based on a 'middle ground' level of plant utilisation of 65%, which the review highlighted as being reasonably representative of plants operating in the UK.</p>

¹ Review of Dairy Market Indicators, April 2014 is available at <http://www.dairyco.org.uk/market-information/milk-prices-contracts/market-indicators/>

<p>Existing costs relating to the intervention system should be removed from AMPE.</p>	<p>AHDB/DairyCo has decided these costs will be removed. The inclusion of these costs was a legacy of AMPE being original developed by adapting the IMPE indicator.</p> <p>This change will mean that both AMPE and MCVE will be 'factory-gate' measures. This is to say they will not include costs for transport/distribution to the retailer/customer.</p>
<p>AHDB/DairyCo should decide whether or not a profit margin should be included.</p>	<p>AHDB/DairyCo has decided not to include a profit margin within either indicator. The review highlighted that most international market indicators do not include a profit element.</p>
<p>AMPE should be changed to measure protein standardised SMP (rather than the current conventional SMP)</p>	<p>AHDB/DairyCo has decided that AMPE will measure standardised SMP as recommended.</p>
<p>Communicate the proposed change to the industry with a change over timetable.</p>	<p>AHDB/DairyCo has decided to continue publishing the old and revised indicators for a period of 12 months.</p>
<p>Review the process cost elements on a three to five-yearly basis.</p>	<p>AHDB/DairyCo has decided that the processing costs will be reviewed every three years.</p>
<p>Estimated transport cost figure should continue to feature alongside the indicators.</p>	<p>AHDB/Dairy will publish a typical transport cost range for transport of milk to the dairy alongside the AMPE/MCVE figures.</p>

AMPE

As set out in the report, the revised AMPE is based on SMP with protein standardised. The Butter Milk Powder (BMP) is not standardised so needs to be accounted for separately.

$$AMPE = \text{Butter value} + \text{BMP value} + \text{SMP value}$$

$$\text{Values for each product} = (\text{Market price} - \text{processing cost}) / \text{Conversion factor}$$

Using February market prices and the report estimates for processing costs and conversion factors:

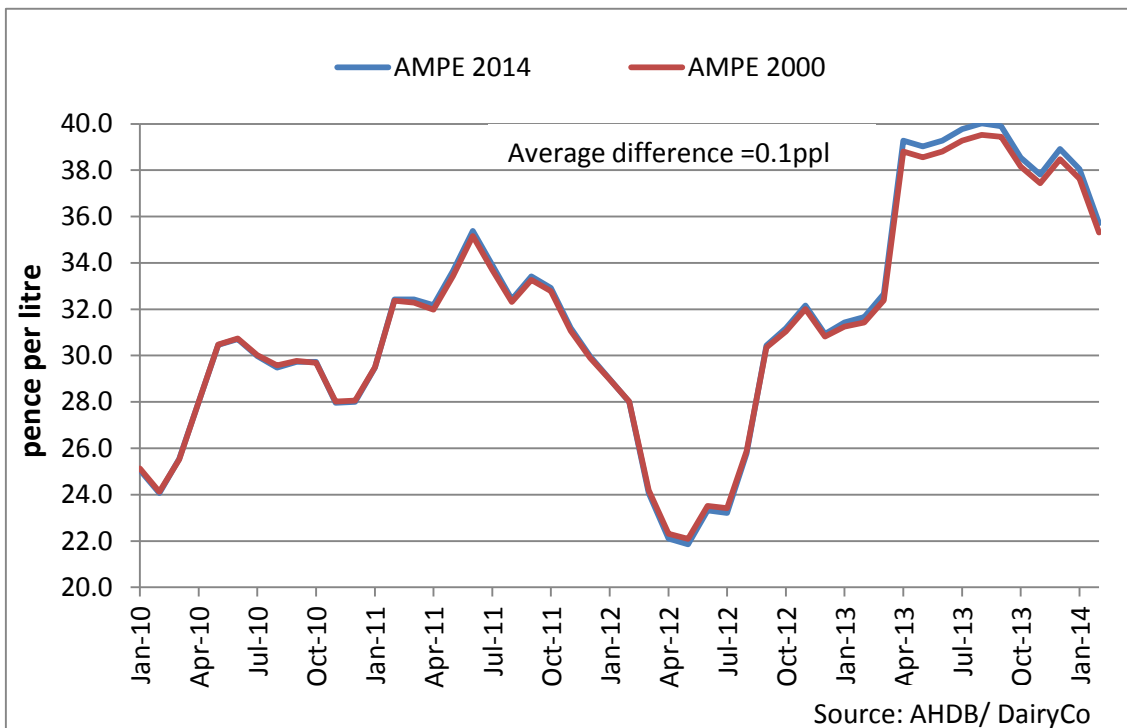
$$\text{Butter value, ppl} = (2875 - 237) \times 100 / 20273 = 13.0\text{ppl}$$

$$\text{BMP value, ppl} = (2647 - 352) \times 100 / 217740 = 1.1\text{ppl}$$

$$\text{SMP value, ppl} = (2750 - 430) \times 100 / 10720 = 21.6\text{ppl}$$

$$\text{So the revised AMPE value} = 13.0 + 1.1 + 21.6 = 35.7\text{ppl}$$

This compares with the February AMPE figure of 35.3, although it must be remembered that the current AMPE provides for a profit margin of 0.44ppl.



Comparison of elements of current & updated AMPE formula

Element	AMPE 2000 formula	AMPE 2014 formula
Market prices	Monthly DairyCo wholesale prices for butter and SMP. BMP dilution factor estimated using a £120/t discount to SMP	Unchanged for butter and SMP. BMP price estimated using a £103/t discount to SMP.
Conversion factors	20,273 litres per tonne butter. 10,885 litres per tonne SMP.	Unchanged for butter. 10,720 litres per tonne SMP. 217,740 litres per tonne BMP.
Costs - Intervention related:		
<ul style="list-style-type: none"> • payment delay • transport to store 	0.38ppl 0.17ppl	Aspects of AMPE linked to the intervention system have been removed.
Costs - Buttermilk dilution	0.05ppl	0.10ppl*
Costs - Processing:		5.34ppl (Butter £237/t, BMP £352/t, SMP £430/t)
<ul style="list-style-type: none"> • fixed (1% + 3.4% gross IMPE) • variable 	1.756ppl 1.426ppl	
Total processing costs	3.782ppl	4.51ppl
Profit	2% of intervention price for SMP, 2% of 90% of butter intervention price. 0.44ppl	A profit margin has not been included

* assumes buttermilk powder discount from SMP at £103/t based on Global Dairy Trade data average for 2013

MCVE

The updated MCVE value incorporates the revised processing cost estimates from the report, and the revised cheese and whey butter conversion factors. In the figures below, a cheese conversion factor of 9300 litres/tonne is used.

MCVE = cheese value + whey butter value + whey powder value

Values for each product = (Market price – processing cost)/Conversion factor

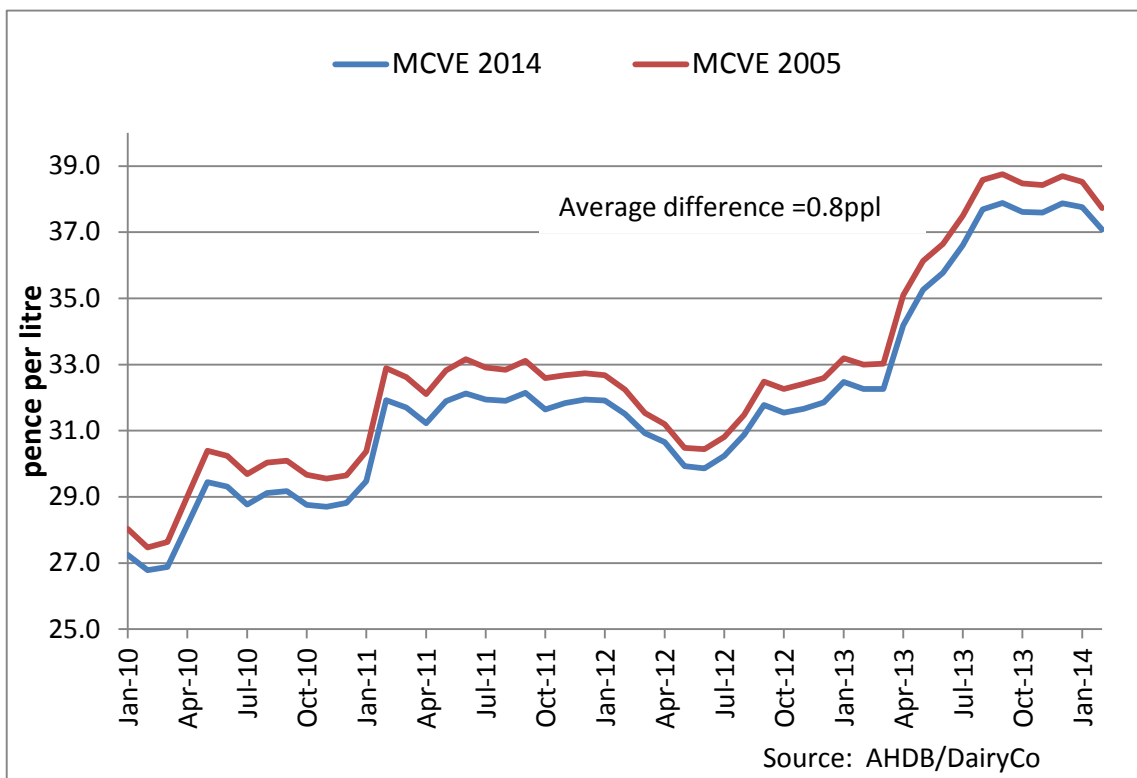
Cheese value, ppl = $(3400 - 322) \times 100/9300 = 33.1\text{ppl}$

Whey butter value, ppl = $(2575 - 237) \times 100/218000 = 1.1\text{ppl}$

Whey powder value, ppl = $(836 - 340) \times 100/17000 = 2.9\text{ppl}$

So the updated MCVE value = $33.1 + 1.1 + 2.9 = 37.1\text{ppl}$

This compares with the February published MCVE figure of 37.7ppl, although it must be remembered that the current MCVE provides for a profit margin of 0.75ppl.



Current and updated MCVE values (ppl)

Element	MCVE 2005	MCVE 2014
Market Prices	Monthly DairyCo wholesale price for mild Cheddar. DDB price for whey powder. Whey butter price estimated using £300/t discount to standard butter price	Unchanged
Conversion factors	9,400 litres per tonne mild Cheddar 17,000 litres per tonne whey powder 133,000 litres per tonne whey butter	9,300 litres per tonne mild Cheddar Whey powder unchanged 218,000 litres per tonne whey butter
Processing cost – Cheese		3.4ppl (£322/t)
(Interest for cheese storage)	0.42ppl	(Included above)
Whey butter		0.1ppl (£237/t)
Whey powder		2.0ppl (£340/t)
Total MCVE processing costs	4.59ppl	5.6ppl
Profit margin	0.75ppl	A profit margin has not been included