

Model for Payment of Milk

January 2008





1. Introduction

In October 2003 changes were made in the payment model. The aim of the former model of payment was to distribute the dairies' economic results between the suppliers in a fair manner. In this model the attempt is to lead milk production in a more marketorientated direction.

Experience show that milk producers respond to the signals of a model of payment. Based on this experience the new model requires an offensive and marketorientated approach to influence milk composition in a direction, matching consumer demands.

As previously, payment is based on analyses of the content of fat and protein in the milk. The remaining quantity of dry matter is estimated to be too low to justify separate payment.

Whereas the prices of fat and protein in the former model were based on the EU intervention prices for butter and skim milk powder, the prices will in the future be based on the raw material value, the volume-based costs and the value ratio from each dairy.

This model encourages the production of concentrated milk and milk with a high protein content in particular. To better understand the significance of producing consumer relevant products to the earning power of the dairies; the payment is divided into a raw material payment and a premium for added value.

The intention is to further stimulate production of peak quality milk, as this is a condition to produce high quality products with a reasonable earning capacity.

2. Payment model

Recommendations from the Danish Dairy Board in 2008

- Value ratio between protein and fat (p/f)	1,7
- Volume-based costs	12 øre pr. kg
- Fixed costs per member	355 kr pr. 2 uger

Example of payment of milk

(if you want a raw material value at 222 øre/kg (average milk price in 2006))

<i>Parameters</i>	<i>Øre per unit</i>	<i>Øre per kg milk with 4.20% fat and 3.40% protein</i>
Fat value	23.45	98.49
+ Protein value	39.87	135.56
- Volume-based costs		-12.00
= Raw material value		222.05
+/- Quality payment/deduction % of raw mat. value		x
- Fixed costs/member DKK 355/2 weeks		x
= Aconto price		x
+ End of the year bonus % of raw mat. value		x
= Milk price ex farm		x

Value ratio

Market analyses show that on the long view, the largest demand and the highest profitability stand to be gained from milk protein. In contrast, the demand for fat is estimated to continue its downward trend. More than 80% of total milk deliveries in Denmark are used for other products than liquid milk. In these products the content of protein is decisive to the product yield. Consequently increased protein content in the milk could improve the total profitability. In the remaining 20% of the milk deliveries - used for liquid milk - the protein content is not equally decisive. But, the calcium content is closely linked to the

content of protein, so a high protein content has a positive effect on liquid milk. The fact that milk is an important source of calcium is an important asset to the marketing efforts.

In the long term an increase of the value ratio is expected, as the long-term market of high-protein products continues to be significantly better than that of high-fat products.

Raw material value

The raw material value is decided individually by each dairy. The calculations of premiums and deductions in percentages are based on the raw material value.

Volume-based costs

This cost is the sum of the volume-based costs of milk transport and costs of milk reception at the dairy, storage, homogenization and heat treatment at the dairy.

Fat and protein values

The unit prices of fat and protein are based on the raw material value, the volume-based costs and on the fixed value ratio.

Fixed costs per member

The purpose of this deduction is to cover a number of costs, which vary regardless of the size of the delivery, i.e. the fixed share of the costs of milk collection, quality analyses, milk payment, etc.

End of the year bonus

End of the year bonus is calculated as a percentage of the raw material value of the individual deliveries. This implies that the bonus is paid as per same ratio between fat and protein as the current milk payment.

Quality payment

Quality payment and deductions are calculated as a percentage of the raw material value. Milk is classified and paid according to below list:

<i>Analysis</i>	<i>Frequency</i>	<i>Classes</i>	<i>Limits</i>	<i>Premiums/deductions % of raw material value</i>
Somatic cell count <i>1000 cells per ml</i>	Once a week	1 S	- 200	+ 2%
		1 E	201 - 300	+1%
		1 B	301 - 400	0
		2	401 - 500	-4%
		3	501 -	-10% ¹
Total plate count <i>1000 bacteria per ml</i>	Once every 2 weeks ²	1 E	- 30	+1%
		1 B	31 - 50	0
		2	51 - 200	-4%
		3	201 -	-10%
Anaerobic spores <i>Spores per litre</i>	Once every 4 weeks ³	1 E	- 400	+ 1%
		1 B	401 - 1100	0
		2	1101 - 3000	-4%
		3	3001 -	-10%
Freezing point	Once a week	1 B	≤ - 0,510°C	0
		3	≥ - 0,509°C	-10%
Inhibitors/ antibiotics	Once a week	OK		0
		3		-10% ⁴
Visibly changed milk	Once a week	OK		0
		3		-10%

¹ Class 3: Three successive times: -20%.

Class 3 and up four successive times: -30%.

² Analysis made in week 1. Class 1B, 2 and 3: Follow-up analysis in week 2.

³ Classes 1B, 2 and 3: Follow-up analyses in the following 2-week period

⁴ Inhibitors/antibiotics: look next page.

Antibiotics

In the event of traces of inhibitors/antibiotics following deductions will apply:

1. The first time within 12 successive months the value of 2 days' milk deliveries will be deducted and the dairy will issue a penalty of DKK 3,000.
2. The second time within 12 successive months, the deduction is doubled to the value of 4 days' milk deliveries and the penalty of DKK 6,000.
3. The third time within 12 successive months, the deduction is doubled to the value of 8 days' milk deliveries and the penalty is DKK 12,000.
4. In any following incidence within 12 successive months the deduction will be doubled further.

Each dairy company should fix an upper limit of the size of the penalty.

Seasonal price differentiation

With the purpose of encouraging seasonal equalisation of milk production, the following price differentiation is recommended (calculated as a percentage of the raw material value at dairy of each individual supply):

January-March:	0%
April-June:	- 10%
July:	0%
August-November:	+ 10%
December:	0%

The August-November seasonal premium are cancelled, when the money accumulated during April-June is spent.

It is important to emphasise that the price differentiation must be of a permanent character to enable the farmers to include it in their production plans.

