

UNITED DAIRYFARMERS OF VICTORIA

Milk pricing Discussion Paper

A Comparison of Complex Milk Price Structures and
Suggested Components of a Better Milk Pricing
System

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Background

The United Dairyfarmers of Victoria (UDV) organised a meeting with industry leaders to respond to members' concerns that a comparison of complex milk price structures was needed to help ease confusion. There is a view in the industry that the complexity of the current milk price structure is directly impacting the ability of some farms to operate profitably. A simpler milk price structure is required if industry profitability is to be the basis for industry growth. The UDV invited experienced dairy farm consultants from all regions of Victoria to be a part of the discussion.

The meeting participants discussed the following:

- Australian dairy industry milk pricing structure history;
- Components of the current milk pricing system;
- Farm profit drivers and milk processor profit drivers;
- Impacts of the current milk pricing systems and
- Components of better milk pricing systems.

Objective

UDV brought the consultant group together and followed up with this paper, to assist the industry in the discussion about current milk pricing systems and distorted pricing signals to farmers. The paper also covers profit drivers for farmers and processors and includes some suggestions for improvements to the payment systems on offer.

This paper is a summary of those discussions.

Australian Dairy Industry Milk Pricing Structure History

Milk pricing has changed gradually over 30 years:

- 1970s – 2 tiered system: contract (Domestic Supply) and non-contract suppliers (seasonal/export). Large price differences and significant inequity in the industry meant there was enormous industry angst in this period.
- 1980s & 1990s – Victorian Dairy Industry Authority (VDIA). Every dairy farmer shared in the domestic and export market at some level. Introduction of the fat + protein – volume system we still have today. Additionally, incentives such as milk quality payments were introduced, but generally monthly payments were independent of one another.
- 2000 to 2007 – Industry deregulated, no VDIA, milk pricing retained fat + protein – volume milk pricing system and the supply months remained independent of one another for most processors. The payment system did not offer any significant variability between traditional seasonal and flat farm milk supply patterns (20 to 30 cents/KgMS, across our client base). Rewards for farm scale introduced (production incentive).
- 2007 to 2010 – Introduction of incentives that link milk production months together, reward increased milk growth, including some competitive rewards for farmers changing supply arrangements. The industry potentially rewarded some farmers with up to 90c/KGMS variation amongst farms with the major determinants of this variation being some form of seasonality payment and productivity. This was a large variation in milk price, but was it equitable and did it send the appropriate price signal to the dairy farming population?

- 2012 onwards – Processors use all competitive tools available to hold current supply and attract new supply. Innovations in payment systems are normally related to retaining or increasing supply, often at any cost. The variations in milk price now equate to the profit on many dairy farms, hence if a dairy farmer receiving 90c/KgMS less in price they cannot proportionately reduce costs leading to reduced profit.

The definition of seasonal calving has changed and is best described as, “**producing milk to maximise directly harvested feed by cows in an average 300 day lactation**”. Historically, seasonal calving has meant late winter spring calving, but for a whole range of reasons this definition of seasonal no longer applies. This has very significant implications for milk payment systems and industry cost of production. It may hold the key for a more sustainable dairy industry.

Murray Goulburn seasonal price premium 98/99 – 11/12

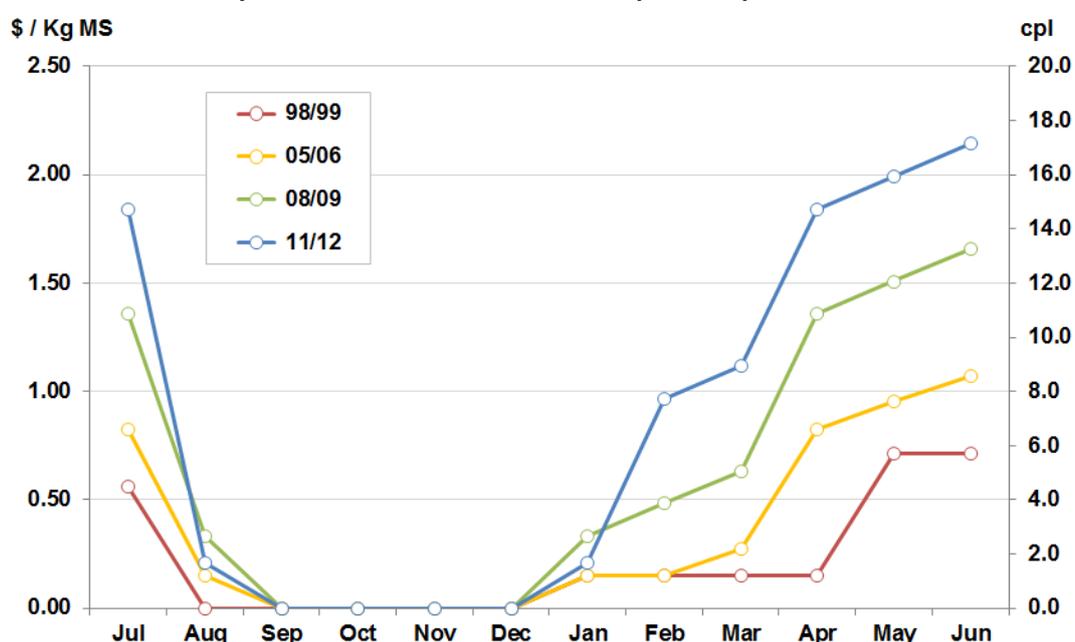


Figure 1. Murray Goulburn seasonal price premium 98/99 – 11/12

The Victorian processors have progressively increased seasonal payments over the past 15 years.

Seasonal payments come in the form of both direct increases in certain months and an increase for a target percentage of supply in the “Off Peak Period”.

Many features of the current payment system do not distribute the funds from the pool of income to farmers in an equitable way. Moreover, the funds are directed at larger, often less resilient, farm business or farms that have flatter off peak milk production, often with higher cost of production farming systems.

Components of the Current Milk Pricing Structure

A list of components currently on offer that may impact current milk price structure:

- Fat + Protein – Volume + Seasonal Incentive = Base Price + Step ups.
- Quality Incentives/Penalties.
- Productivity Incentive.
- Quality Assurance Incentive.
- Stop Charges.
- Seasonal Incentives, regionally priced for some processors.
- Increasing Productivity Incentive.
- Volume Charge discounts for improved milk tanker access.
- Combined farm Productivity Incentives.
- Alternative payment systems available (Changes to base price systems, Seasonal, 7/5 December & March).
- Growth Incentive.
- Regional Growth Incentive, Gippsland (New Supply).
- Conversion and start up incentives.
- Herd test rebates.
- Increasing seasonal incentives.
- Changes to contracts for domestic markets processor suppliers.
- Stop charge rebates for farms on skip a day all year.
- Price increases, rather than retrospective step ups.
- Subsidised factory finance available.
- New milk sign on bonuses.
- Merchandise store account terms and discounts.
- Loyalty payments become more common than step ups.
- Linkage between months of supply for milk volume for additional payments (SRP, DMI, SRP Plus, FMI).
- Productivity incentives calculated and paid monthly.
- Field Staff touted as being able to offer better services to farmer suppliers, adding significant value.
- Changes to fat and protein value ratios.
- Adjustment to seasonal incentives lessening the value of winter milk.
- Changes to volume charge based on location in addition to tanker access.
- Quality incentives that cumulate and pay bonuses to those with particularly good milk quality.
- Increasing published and unpublished milk supply agreements to retain or gain milk supply.
- ‘No Disadvantage’ clause

Main Findings

The following are the main findings:

1.0 The main farm profit driver

There is a strong correlation between direct grazed home grown dry matter and operating profit.

There is no correlation between farm milk flow seasonality of supply and operating cost and operating profit, despite increased milk prices being paid to farmers for off peak milk production. Some farms lend themselves to autumn/winter production from direct grazed pastures.

Cost of production and margin are clearly linked to directly grazed pasture in the cow's diet. Some farmers are gaining from additional payments at no extra cost as they have farms that naturally allow high levels of directly grazed pasture in the autumn and winter months. Farms not allowing naturally high levels of directly grazed pasture in the autumn and winter months may well be making changes to gain extra income through higher milk prices with additional risks to the business creating a potential reduced profit.

Alignment of payment systems and farm profitability

For any given farm system and location there is a strong correlation between the opportunity for directly grazed home grown feed and farm profit. This opportunity does however vary markedly from farm to farm and region to region. The opportunity and seasonality of pasture growth depends very much on factors such as the supply and reliability of rainfall and the availability and cost of irrigation.

The incentives for unseasonal milk production have been developed on the basis of historical norms for milk supply seasonality. The traditional shortfall in winter milk continues to be rewarded with very high price incentives. Similarly, Off Peak incentives mostly apply a one size fits all approach.

The continuation and exaggeration of historical payment models has created inequities of opportunity between farm systems and regions. Some farmers are gaining from additional seasonal payments at no extra cost as they have farms that naturally allow high levels of directly grazed pasture in the autumn and winter months. Farms that do not have this natural advantage either miss out altogether or alternatively may be chasing extra income via higher input cost or additional risks in stocking rate and seasonality of production.

In many cases, farms that cannot take advantage of seasonal and Off Peak premiums none-the-less deliver processors a seasonal supply curve and peak : trough ratio that is comparable with farms that can tap into the autumn / winter milk opportunity.

2.0 Milk payment systems have been developed as a result of a competitive environment for milk rather than a true reflection of the market returns

At an industry level, natural increases or organic growth in milk supply has not been a feature of the industry, other than increases in milk supply due to seasonal variation. Processors wanting to increase factory efficiency by volume opted to attract the milk supply from the market via competitive pricing that has strongly contributed to the current milk payment systems.

New milk pricing products appeared that appealed to individual farmers by offering them increased payments for milk solids, processors justified these payments to existing suppliers using efficiency gains and stronger payments for the industry through increased competition for milk.

Growth incentives and start up conversion milk pricing defies the laws of economics (law of diminishing returns) for individual dairy farmers. This encourages farmers to produce milk that has a lower margin and that generally carries a higher risk. The last kilogram of milk solids out of the system takes the most effort, carries the highest risk and generally costs the most to produce.

The processors see this milk as increased throughput and therefore of greater value. This is a genuine conflict of interest between dairy farmers and milk processors unless the dairy farmer has a developing farm producing less milk solids than its profitable potential and was going to produce the additional milk anyway. In this case, the farmer is rewarded for growth in the short-term and the processor pays an increased value for milk it would have received anyway.

Alignment of payment systems and processor profitability

The issues of improved plant utilisation, more profitable product mixes, efficiencies gained from more cooperative milk transport arrangements and so on, may increase processor margins and potentially industry milk price through reducing overhead costs. In this case, farmers would not be tempted to take risks and lower profit to produce milk in a way that is desirable for the processors, therefore securing the future production of profitable milk and a sustainable dairy industry.

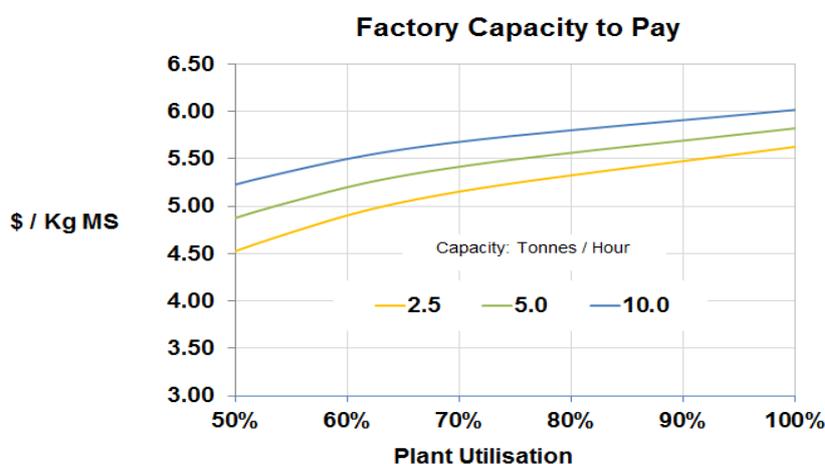


Figure 2. Estimated Milk Price payable by a Whole Milk Powder (WMP) factory: WMP price \$AU 4,000/Tonne.

Figure 2 provides an estimate of the benefit to a milk powder processor from a flatter milk supply. This is measured in terms of plant utilisation – the effective usage of total plant capacity.

Payment of seasonal incentives for specific months of the year creates the opportunity for some farms to manipulate their production and tap into very high seasonal prices that exceed the economic value to the factory. This is often at the expense of lower production in other periods – the net effect being a marginal gain in factory capacity utilisation.

The key point is as noted in section 1.0 the current payment systems are inequitable. They provide some farms and regions with the opportunity to achieve a higher milk price without necessarily contributing to factory cost efficiency and market opportunity.

3.0 *Current milk pricing systems and short term impacts*

3.1 Complexity and lack of industry understanding

Many farmers do not understand the payment systems being offered to them. The linkage of each month's production and potential growth become very confusing when unplanned production changes occur due to many difficult to predict, factors on the farm, such as seasonal variation, cow health issues, unplanned changes to calving pattern, etc. This added complexity, combined with a lack of understanding, adds significant difficulty to planning and decision making and often results in farmers opting out of activities that are precursors to business growth.

A ripple effect of system changes is evident, ensuring the whole decision making process is very complicated and difficult. Decisions made using simple measures are not usually adequate, when significant and complex changes are made to the system in order to increase income, such as changing calving patterns or investing in infrastructure.

3.2 Management difficulty, increasing risk and cost of production

Changes to the payment system result in individual farming decisions being more difficult both on a daily basis and an annual basis. Planning becomes more difficult as payment system changes have been made without enough warning or detail for farm businesses to prepare.

Farmers are now changing calving dates and reducing direct grazed pasture in the cow's diet with the aim of maximising milk price. However, if not done with a great deal of management skill, this can significantly increase the cost of production and risk, with probably no profit increase. This increased cost of production and likely lower profit with increased risks plays a major role in the lack of growth or potential reduction of milk production in the dairy industry.

Farms that tend to grow less pasture or have direct grazed pasture utilisation issues in the autumn and winter months are often tempted to adjust the farming system slightly in order to take advantage of higher milk prices. Often these changes involve investing in infrastructure and modifying the system, causing a complicating effect to farm management. This also puts farms under cash flow pressure as short term loans are often used to fund these developments. The changed infrastructure could involve the purchase of machinery, building of feed and calving pads and changing calving patterns. These systems are significantly more difficult and risky to manage and carry far more risk than systems that focus on directly grazed pasture.

3.3 Distorted market signals and attempt to increased processor efficiencies

Depending on the region of Victoria and farming system, milk pricing system changes pay farmers more or less for milk produced at various times of the year, which on some farms makes more money and on others makes less. So, farmers can make more or less income with increased or no additional risk to cost of production along with no justifiable link to market returns for processors.

If farmers ignore cost of production and respond to milk pricing system market signals they will take the majority of the risk and increase cost of production, whilst processors increase plant utilisation in the short term.

4.0 Current milk pricing systems and long term impacts

4.1 Distorted pricing signals

Distorted price signals have potentially contributed to less milk in the industry via a distortion of any alignment between payment systems and farm profitability. This is potentially leading to a less competitive and less resilient industry, through an increasing farmer cost of production, with a weakness in export competitiveness and an increased reliance on a domestic market that does not require all the milk produced in the industry.

4.2 Increased farm cost of production, increased demand for higher farm gate milk prices and a less competitive Australian dairy industry from an export point of view

Increased industry cost of production is resulting from calving dates and patterns encouraged by milk pricing systems rather than direct grazed pasture availability. This results in a higher demand for increased milk price that is not possible for processors to pay, which results in farmers having reduced margin and therefore less milk production.

This is the basis of poor milk pricing signals being a major threat to the export competitiveness of the Australian dairy industry.

4.3 Shrinking Australian dairy industry as farm cost of production increases and milk prices remain at the current long term average rates

If farmers change calving dates and patterns to chase milk price, they will have an increased cost of production because the percentage of direct grazed pasture is lower. Any increase in processor efficiency as a result of less directly grazed pasture, is likely to be less than the farmer's increased cost of production. The main drivers of processor's income, and therefore their ability to pay farmers for milk, are milk flow, commodity prices and exchange rates. This loss of production could contribute to the decline of the industry. Farmers profit will decline and less growth or an increased rate of shrinkage could occur, simply pricing farmers out of the market.

Less milk in the industry would also have a strong negative impact on processors, as less milk throughput will result in lower plant utilisation and lower processor profits. The current milk pricing systems pose a major threat to the Victorian dairy industry's export competitiveness, and unless resolved, would accelerate the decline of the industry.

5.0 Suggested Components of a Better Milk Pricing System

Four main areas that can be retained or changed were identified. The change motivators are for farmers to receive simple commercial market signals from processors in milk prices rather than competitive signals. This is based on a need to concentrate the dairy industries profit at the farm and processor level to maintain its competitive advantage on the world market.

Suggested components for a better milk pricing system going forward were as follows:

5.1 *Retain 'Fat + Protein – Vol = Base Price' system*

This is seen as an essential part of a milk pricing system. It is based on the value of components and the cost of removing water from those components. It has worked very well in the past and will continue to do so in the future.

5.2 *Develop Seasonal payments that reflect market returns*

The current seasonal payments (payment differences above the base spring milk prices) should reflect the value of processor product mixes and commodity prices. Very high monthly prices and crude payment constructs such as Off Peak Milk % send the wrong signal to farmers about monthly milk value and create inequities in income opportunity.

Seasonal pricing has been elevated through competitive activity in the industry to the point where it is no longer a representation of the value of milk.

6.0 *Exclude the following incentives that send poor market signals*

The group did not want to include scale, new milk, off peak incentives or growth incentives in their new pricing system as these are motivated by competition between processors and do not send accurate pricing signals to farmers about what drives farm profit.

a. **Productivity payment**

A payment made to farms based on scale or linkage of farm business supplying a milk processor.

b. **Sign on bonus**

A payment made to a new supplier as goodwill for the supply of the milk.

c. **Monthly linkage of milk production for bonus payments**

Payments made in return for individual farms achieving production that reaches a percentage of the total year's production in certain months of the year, typically off peak months are targeted.

d. **Growth Incentive**

Payment made for milk production growth from an individual farm. This is measured on a base and rewards the production of additional milk solids based on their value to the factory rather than the value of the milk solids to the farm.

e. **Processor finance deals**

Funds that are made available to farmers from processors at an agreed interest rate. The funds are usually only available over a short period of time and have limited use to a farm business.

7.0 Quality payments that reflect the true value of milk quality in the market place

Milk quality payments should represent the true value of high quality milk. The payment should be determined by market returns and may need to be reviewed.

Conclusion

In summary, the current milk pricing structure creates the perfect storm: an industry that has an increased cost of production and risk profile with a limit to the funds available to pay for milk.

Unless market signals change as a result of different milk pricing systems, and farmers reduce cost of production, the industry is set to consolidate to a domestic market focus.