European Milk Board

Analysis of the Dairy Sector

Efficiency of various instruments with regard to their stabilising effect on the market

Abstract

Owing to the persistent instability in the dairy sector, the implementation of crisis instruments is necessary. Currently different instruments are under discussion. The present document analyses the effectiveness of these tools and their suitability for the dairy sector. The analysis shows that the industry needs instruments that do not further burden the sector but allow producers to actually generate their income from the market. The implementation of voluntary production cuts last year was a first step in this direction. However, a permanent instrument defined in an EU-wide legal framework is still necessary.

This legal framework has to:

1. **Include a market index implemented through the MMO**
This index would be determined by factors such as developments in product quotations, milk prices and production costs (margins).

2. **Enable the capping of production volumes**
In the future, during voluntary production cuts in times of crisis, the remaining production must be capped in order to allow for a sustainable and sufficient recovery.

3. **Provide for charging a levy on producers to finance the crisis instrument**
With such a levy, producers also take on financial responsibility for the programme.

Monitor the market – predict and prevent crises!

Instrument check

I Increasing market transparency

Increasing market transparency is an important aspect for the dairy sector. If the aim is to improve the position of producers, the reporting of production costs that include a fair income for producers is an essential element of market transparency. Only when the costs are clear is it possible to realistically evaluate the market situation.

Market transparency alone cannot resolve problematic situations. It can only contribute to market stabilisation in conjunction with effective measures.

This can be easily demonstrated using two possible scenarios in the dairy sector.

Let us assume that, based on market data, producers see that:

Scenario 1) Butter prices are dropping – producer prices will also fall soon

> Realistic producer reaction: most producers react only when farm-gate prices actually drop. However, this will not lead to lower production across the board. Many producers actually increase production precisely due to falling prices in an attempt to compensate for income losses. Of course, there are also producers who reduce production. But not to a sufficient degree so as to balance the market and often only after the price has reached its lowest point, by which time the sector has already suffered greatly.
>
> In the past, we have repeatedly seen this reaction on the part of producers, which clearly shows that individual rational behaviour in the face of price drops does not lead to the desired cumulative market reaction.

Scenario 2) Butter prices are rising – producer prices will also rise soon

> Realistic producer reaction: producer reactions are hardly driven by quotations and projections. Many producers only react once price increases become tangible, for example when they are announced by dairies. Especially in periods with high-loss trends and significant price drops, producers try to quickly boost production on their farms, in an attempt to compensate for at least part of their losses.

As described above, greater transparency alone does not lead to the desired market reaction necessary to stabilise the market again. On the one hand, producers do not react until real price increases or decreases are observed. On the other hand, their behaviour in the event of price drops does not have a stabilising effect on the market. Therefore, transparency must be combined with measures to elicit the desired market reaction. One example would be implementing the **Market Responsibility Programme (MRP)**, where market data are analysed and measures are then implemented to motivate producers to react accordingly. In times of crisis, for example, a cumulative volume reduction could be achieved through voluntary production cuts. This would be the timely reaction required in order to balance the market again.

II Risk management instruments

Risk management instruments are very important to stabilise the dairy sector. There must be a clear analysis of the extent to which a proposed instrument fulfils the following conditions in terms of agricultural price risks:

The instrument:

1. prevents sudden drops in income for EU producers and
2. does <u>not</u> worsen the market imbalance

Two simple examples of risk management or crisis prevention measures

Insurance systems that pay compensation in the event of price collapses do not per se fulfil both conditions.

1. The money paid can compensate for a price collapse in the short term but in fact it leads to continued surpluses – and thus has the contrary effect, because
2. it undermines market stabilisation and worsens the problem instead.

   ➔ However, pay-outs from insurance policies could be coupled with production reductions – this could reduce the market imbalance. However, the problem can only be solved completely if production of all producers is at least capped during crises.

In comparison, the measure of **voluntary production cuts** fulfils both conditions.
On the one hand:

1. Compensation in exchange for reduced supply means that participating producers receive money and all producers can benefit from higher prices and, on the other hand
2. if the market imbalance – the surplus – is reduced or removed, the problem is not worsened or simply put off. (A complementary production cap for all producers during crises is, however, essential.)

To check if risk or crisis management tools are appropriate, they should always be examined for their compliance with conditions 1 and 2.

III Futures markets – *What are they capable and incapable of delivering?*

1) How does futures trading work?

In futures trading, two markets are important:

1. Cash market (physical market): this is the real market on which goods (i.e. milk and milk products) are traded. The milk producers receive their farm-gate price from this market (through dairies).

2. Futures market: this is where futures contracts are traded.

Relation between cash market and futures market:

Real-life prices on the cash market influence prices on the futures market, *i.e. the futures market is but a reflection of the cash market.* If prices or price projections on the cash market are high, prices on the futures market are also high. If cash market prices are low, this is also reflected in futures market prices.

2) Can futures markets reduce price fluctuations?

To analyse if futures markets can effectively reduce price fluctuations for milk producers, let us consider one example. In October 2016, a producer sells 12-month contracts on the futures market accounting for 10 percent of his annual production at the rate of 34 cents/kg milk (calculated in butter contracts and skimmed milk powder contracts)[1]. He thus 'freezes' his milk price for this volume at 34 cents/kg.
In October 2017, he buys his contracts back. If the actual cash market price (= farm-gate milk price) is now higher than 34 cents/kg, the producer will also pay more on the futures market for this buy-back. Thus, he has a trading loss which is, however, compensated for by the higher milk price on the cash market (farm-gate milk price paid). He would thus maintain a price of 34 cents/kg. (Without futures contracts, he would have earned a higher price/kg.)
Conversely, if the actual milk price on the cash market has dropped in the meantime, he would pay less on the futures market to buy back his contracts compared to the previous year's price, i.e. he makes a trading profit. The latter offsets the lower milk price (cash market price), to a final level of 34 cents/kg. (Without futures contracts, he would have earned a lower price/kg.)

Thus, in theory, it is possible to even out price fluctuations.

However, there are the following problems in practice:

a) If price prospects are positive, the producer can also sell his contracts at a higher price. Buyers, after all, expect to make a profit on the buy-back by producers.
If price prospects are negative, the producer will not be able to sell any contracts at higher prices because buyers do not expect to make any profits on the futures market.

   ➔ *This means that in the case of negative price prospects, which are particularly common in the dairy market, it is unlikely that prices can be effectively guaranteed.*

b) By using futures contracts, the milk price is evened out to some extent over time, as both price troughs and price peaks are flattened out. In the long term, however, the producer does not earn more by trading on futures markets.

c) The entire production volume of a farm should never be traded in this way. For example, when supplying milk to a cheese-producing dairy, it should be maximum 50%.

d) To trade on the futures market, very high liquidity is needed. For example, a producer wishing to trade a production of 3.5 million kg would need about 400,000 euros. Not many producers have such liquidity. It is very questionable if credit and guarantee funds would actually solve this problem.

e) Furthermore, an annual production of about 1 million kg is necessary to participate in the futures market in the first place. As not many producers have such production volumes, they are excluded. In Germany, for example, over 85 percent of farms produce less than 1 million kg and thus do not qualify[2].

[1] e.g. at Eurex in Frankfurt no raw milk contracts are traded, but butter and skimmed milk powder contracts. Producers can only hedge prices by trading with such contracts. In this case, we have to assume that the value of the butter/skimmed milk powder contract corresponds to a certain raw milk price and that commodity prices, contract prices and the farm-gate milk price paid by the dairy will develop in the same way.

[2] Source: German Statistical Office (Statistisches Bundesamt)

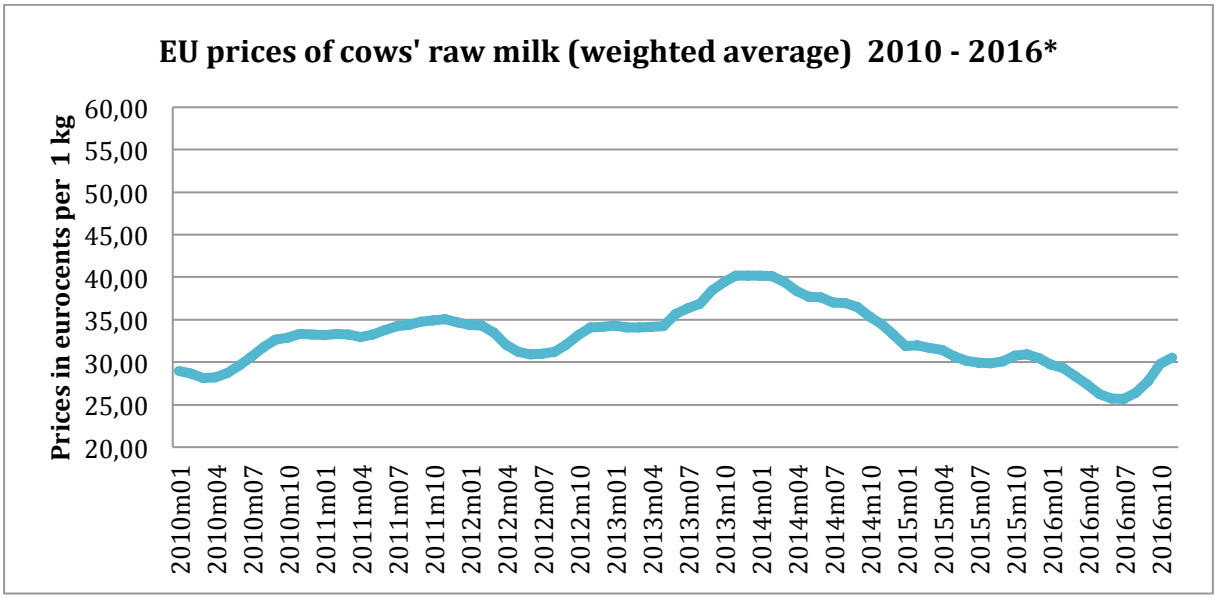
f) Trading on the stock market requires expertise. Most farmers are not trained for complex futures trading. Moreover, one must not forget that being a farmer is already a highly demanding, full-time job.

g) Both trading gains and trading losses are possible. It is a risky endeavour where a negative outcome could be an additional burden for farms.

3) Can futures markets ensure cost-covering prices?

To cover milk production costs, farm-gate prices of at least 40 cents are a must. Futures markets are connected to real markets, i.e. cash markets, or are aligned to actual price projections. If cash/ physical markets rarely or never reach cost-covering prices, it will also rarely or never be possible to ensure cost-covering prices on futures markets. Futures markets hence cannot have an effective impact during long periods of low prices.

The problem becomes clear when you look at EU milk prices (=cash/ physical market prices) in 2016 and check how often they were under and over a cost-covering level (between 40-45 cents EU-wide).



* Based on Milk Market Observatory

Overview: Number of months where EU prices were over or under a given price level*

Prices	Months in 2010	Months in 2011	Months in 2012	Months in 2013	Months in 2014	Months in 2015	Months in 2016
Under 30 cents	6	0	0	0	0	2	10
Under 35 cents	12	11	12	5	2	12	12
Over 40 cents	0	0	0	2	2	0	0
Over 45 cents	0	0	0	0	0	0	0

* Based on weighted EU monthly average price, self-compiled

It is apparent that prices on the spot market are often under 35 cents, i.e. very low prices decidedly below the cost-covering level of 40-45 cents are the norm. In fact, prices below

30 cents are not uncommon. However, they never go above 45 cents and hardly ever over 40 cents – i.e. the cash market as a base market is rarely at a cost-covering level. As the futures market is simply a reflection of the cash market, it is not possible to ensure cost-covering prices on the futures market either.

This proves that the underlying issue with the dairy market, i.e. the milk prices paid are markedly below cost-covering levels, cannot be remedied with futures trading. It is necessary to solve the problem in the real-world dairy market!

IV EU-level framework against unfair trading practices

The right approach consists in creating an EU-wide legal framework instead of building on voluntary initiatives. This is the only way to reduce unfair trading practices across the board.

Within such a framework, the following point is also key: a **law against unfair competition at producer level must be adopted. Banning the sale of products below cost price should apply to raw milk and other agricultural raw materials as well.** The background to this demand is the fact that to some extent milk producers are forced to use unfair practices to survive. Especially on family farms, labour costs cannot be incorporated and they use income from other activities like biogas production to keep their milk production going. This leads to distortion of competition and other farms are undercut. By prohibiting sales below cost price or actual production cost, this market imbalance would disappear.

V Contracts

Experience in France, where contractual relations in the agricultural sector are widespread, has shown that contracts as such cannot in any way solve the problem of the producers' weak market position.

Only if contracts become mandatory across the EU (and also apply to members of co-operatives) and include the condition that milk prices have to be determined on the basis of production costs, will they be helpful.

VI Producer organisations

Collective producer action – i.e. collective price negotiation – does not occur often enough in the EU.

There are many reasons for this. Firstly, the Milk Package exempts milk processed by co-operatives from such negotiations. This means that a large group of producers across the EU are excluded from the possibility of collective bargaining from the outset. Furthermore, pooling thresholds are too low to allow farmers to negotiate with dairies on an equal footing. Regulatory confusion, too, can create difficulties for producer organisations. In addition, milk producers are not confident that joining an existing producer organisation can improve their economic situation sufficiently. This can be concluded from the persistence of old economic relations.

It is necessary to promote collective action more strongly and effectively by raising pooling thresholds in collective negotiations and by including milk from co-operatives, and to take political measures such as incentives for producers to motivate them to join producer organisations. Steps toward practicable and clear legislation are also required.

VII Easier access to finance

In this context, it is also important that financial support for milk production does not exacerbate the issue of surpluses.

The best time for producers to make investments is when the market is balanced, and profits can be re-invested or loans can be paid back out of producers' own resources. Loan programmes are definitely helpful for young farmers, for instance. However, the standard approach in the dairy sector cannot consist in pumping money into a highly unstable market, boosting overproduction and keeping prices for all producers well below a cost-covering level. It must mainly be about stabilising the market so that financially sound investments can be made. Producer confidence in investments has suffered significantly in recent years because the growth promised after the abolition of quotas has not materialised. A stable market can win back lost confidence in investments.

VIII Voluntary production cuts

After other instruments had failed, an EU-wide voluntary production reduction scheme was implemented in 2016, which had a positive effect.

When the measure was decided in July 2016, the average farm-gate milk price in the EU was slightly under 26 cents. At the end of the programme in January 2017, the average price had reached a level in excess of 33 cents per kilogramme of milk, and even in June 2017 it remained on the same level. The high degree of participation of dairy farmers in the programme (about 48,000 milk producers, with production cuts totalling almost 834,000 t in the period between October 2016 and January 2017) as well as its effect on prices showed that the instrument is effective. It also became clear that it is not necessary to reduce production by a lot for the programme to make an impact. Compared to the EU's yearly production, the volume reduction represents about half a percent. The decisive factor was that this specific measure was aimed at reducing raw milk volume in order to reduce harmful surpluses. It would have been possible to achieve an even higher price increase and a longer lasting effect if production volumes of all producers in the EU had been capped during the reduction period.

IX Market Responsibility Programme – MRP

The MRP is a programme for the EU milk sector that is to be used when there is a risk of a milk market imbalance. A combination of market monitoring and response to the market enables impending crises to be recognised and reacted to in a three-phase programme. This instrument acts at the level of the raw milk market and limits surpluses in times of crises. By doing so, it prevents strong drops in producer income without burdening the market. Voluntary production cuts are an essential element of the programme.

Recognising crises – Market Index

- **A Market Index consisting of the trend in product quotations, milk prices and production costs (margins) enables crises to be anticipated.**
- **If the index is over 100, the prices are covering production costs – the market is stable, no action is needed. If the index falls below the 100-point threshold, costs are not being covered. If the shortfall is too big, the Market Responsibility Programme is started.**

Reacting to crises – applying the MRP

The MRP is implemented in three phases.

1. **Early warning (Market Index falls by 7.5 %)**
   - **Monitoring agency issues early warning**
   - **Private storage is opened**
   - **Incentive programmes for extra consumption such as sucking calf breeding, milk fattening of heifers etc.**
   - **Phase is maintained until the index returns to 100**

2. **Crisis (Market Index falls by 15 %)**
   - **The Monitoring Agency officially recognises and declares a crisis**
   - **Core elements of the Market Responsibility Programme are started**
   - **A reference period is defined**
   - **Call for tenders regarding voluntary production cuts (at least 5 %), bonus for reducing production**
   - **Market responsibility levy from the first kilo for farms increasing production**

3. **Obligatory cutback phase (Market Index falls by 25 %)**
   - **Universally applicable reduction in milk supply by 2–3 % for a defined period, e.g. six months**

End of the crisis – crisis measures lifted

If the index trend continues towards 100 points and the Monitoring Agency's forecasts for the market development are positive, the crisis can be declared over. On this date, all measures restricting production are terminated. Voluntary commitments made on a contractual basis end as agreed.

For further details about the MRP:
http://www.europeanmilkboard.org/en/special-content/market-responsibility-programme.html