COMMITTEE OF THE PROTOCOL REGARDING MILK FAT

Communication from Australia

The following communication, dated 9 December 1991, has been received from the Australian Permanent Mission.

Relativities between Minimum Prices for Anhydrous Milk Fat and Butter

At the March, June and September meetings of the International Dairy Arrangement, the issue of the relativity between the minimum prices of anhydrous milk fat (butter oil) and butter was raised. The EC delegation indicated its concern that the current differential between the minimums was too small.

This paper analyses the price relativity between these two products in terms of:

- the physical relation between pilot products; and
- the international market relation between butter and butter oil.

It concludes that:

- the current relativity between the minimum prices of these two products is reasonable; and that
- concerns raised by the EC with respect to the current relativities would appear to have their foundation (and remedy) in the relativity between EC export refunds for butter oil and butter.

Physical relation between pilot products

Butter and butter oil are closely related products and hence one important consideration for the relation between minimum prices is the technical relativity in terms of product constituents.
Article 2 of the Protocol defines these two products as:

<table>
<thead>
<tr>
<th>Product</th>
<th>Milk Fat Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhydrous milk fat (butter oil)</td>
<td>99.5 per cent</td>
</tr>
<tr>
<td>Butter</td>
<td>80 per cent</td>
</tr>
</tbody>
</table>

Article 3 specifies that for butter, the minimum price applies to butter in the range of 80 to 82 per cent milk fat. Outside of this range, the minimum price must be adjusted for fat content. Inside this range, the one price applies. In this respect, it is noted that the most commonly traded product on the international market is unsalted butter with an average fat content of 82 per cent.

On a milk fat basis, the relation between the two products is that 1 kg. of anhydrous milk fat equates to:

- 1.244 kg. of 80 per cent butter
- 1.213 kg. of 82 per cent butter (the form most commonly traded on the international market)

The current GATT minimum price for butter oil exports has been set at 120 per cent of the minimum export price for butter. This relativity has been maintained in all minimum pricing reviews since October 1980. The only period when this relativity did not apply was during the first nine months of 1980 when a slightly lower relativity of 110 per cent was used.

While it may appear an anomaly that the relativity between minimum prices has been lower than the relativities between the milk fat component of the two pilot product, it should be remembered that under Article 3, the minimum price must account for factors in addition to the technical relation between products. These other factors include the market situation.

Market relation between pilot products

Supply side

Butter oil has two alternate forms of production. It may be produced direct from cream or it may be produced from butter. The production costs associated with these two options are quite different, a factor which has tended to confuse debate on the relative prices.

Discussion with manufacturers and traders, both in Australia and internationally, has indicated that the processing costs associated with the production of butter oil direct from cream are very similar to those of producing butter. Expressing both in terms of cost per tonne of butter equivalent, butter oil produced by this means has a processing cost slightly higher than butter, but the differential is less than 10 per cent.

If however, butter oil is produced from butter, the cost of processing is higher in that the cost of conversion from butter to butter oil is additional to the original cost of making the butter. While the total cost
of processing is higher using this technique, its value to the industry lies in the ability to use aged or sub-standard butter to produce good quality butter oil. A major advantage of this production stream is its ability to salvage sub-standard butter and convert it to a marketable product.

In this sense the market relation between the two production streams is as follows:

Producing butter oil from cream: Cost of input (cream) is the same as butter and processing costs are marginally higher.

Producing butter oil from butter: Total processing costs are significantly higher than butter, but cost of inputs is usually lower because lower priced (sub-standard) butter may be used.

Butter oil traded on the international market is derived from both sources. However, it is believed that most is butter oil produced directly from cream. This is the predominant source of EC production. The supply of butter oil on the international market is dominated by a few countries. While IDA statistics are not complete (e.g. not including the USA) they encompass the major suppliers. These statistics, listed below, illustrate the narrow supply base for the international market and the importance of the EC as the major supplier to the market.

**IDA Exports of Butter Oil**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EC*</td>
<td>148.3</td>
<td>171.0</td>
<td>98.2</td>
<td>81.0</td>
<td>498.5</td>
</tr>
<tr>
<td>New Zealand</td>
<td>59.5</td>
<td>37.5</td>
<td>24.3</td>
<td>42.4</td>
<td>163.7</td>
</tr>
<tr>
<td>Australia</td>
<td>13.1</td>
<td>20.0</td>
<td>22.0</td>
<td>22.1</td>
<td>77.2</td>
</tr>
<tr>
<td>Other</td>
<td>0.6</td>
<td>0.2</td>
<td>0.8</td>
<td>0.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>221.5</td>
<td>228.7</td>
<td>145.3</td>
<td>146.2</td>
<td>741.7</td>
</tr>
<tr>
<td>EC as % Total</td>
<td>67%</td>
<td>75%</td>
<td>68%</td>
<td>55%</td>
<td>67%</td>
</tr>
</tbody>
</table>

*Excluding intra-EC trade

As indicated by the above, the EC dominates the international market for butter oil. This is important for a number of reasons, but in particular because of the impact of institutional arrangements in the EC market.

In the EC, butter oil is very largely produced for export. IDA statistics show that over the four years 1987 to 1990, nearly 70 per cent of total EC production of butter oil was exported. Domestic consumption is
therefore low, both relative to total production of butter oil but more importantly in relation to total butter production and consumption. Thus while EC butter oil dominates the international market, butter oil represents a relatively minor part of the EC butterfats industry and one predicated on exports.

Being a relatively minor part (e.g. 10 to 15 per cent) of the total EC butterfat market, the economics of the EC butter oil industry (and hence both its internal and export pricing) will largely be determined by the operation of CAP institutions. In particular, with butter being subject to intervention, butter oil manufacture will be made mostly on a direct marketing basis. If butterfat is in over supply, manufacturers are able to make standard grade butter for intervention. They would not make butter oil unless it provided an immediate market for a price at least equal to the price being paid for butter sold into intervention.

Because of the operation of intervention, butter oil has no direct rôle as a storage product (unlike the case in some other countries). In addition, supplies of age-affected butter from commercial stores should also be relatively low, as commercial inventories of butter should not be subject to forced increases in times of over supply (this function is fulfilled by intervention). Thus, the economics and institutions of the EC butterfat market, indicate that butter oil manufactured from butter should be a relatively minor part of total EC butter oil production.

The industry should be based on the direct manufacture of butter oil from cream. This would be done on a relatively immediate sale basis, principally for export. The wholesale price structure for butter oil would be based on the cost of production direct from cream. The cost of production from butter would not impact on butter oil price, but rather on the price paid by the butter oil industry for sub-standard butter.

Available statistics support this view. Production statistics published in the Agra Europe 1991 Dairy Review indicate that production of butter oil direct from cream in three EC countries (France, Belgium and the Netherlands) accounted for around 70 per cent of total EC butter oil production in the period 1987 to 1989.

Both the theory and the practice of EC butter oil manufacture indicate that its pricing will be based on production direct from cream, that is, with input and processing costs very similar to butter. This infers that the wholesale price of butter oil in the EC will be close to that of butter, when expressed in commercial butter equivalents (CBE).

It is in this context that the EC's policy with respect to export refunds is important. Because of the above factors, export prices for butter oil (in CBE) will approximate those of butter when export refunds are similarly in balance. With most butter exported from the EC being 82 per cent fat, this implies a refund for butter oil of 1.21 times that of butter.
The EC’s policy on this issue has varied over time. In the early 1980s, the refund for butter oil increased markedly in comparison to that of butter. In the latter part of the 1980s, the refund was brought more in line with product relativities, but has remained significantly above.

One implication of this is that EC export prices for butter oil, expressed in butter equivalents, will tend to be lower than for butter.

As noted above, IDA minimum prices for these two products are close to equivalent on a product component basis. Hence, when international butter prices are near the IDA minimum, EC export pricing will challenge and potentially breach the minimum for butter oil before that of butter.
Importantly, such a situation is likely to be made worse if the relativity between IDA minimum prices for butter oil and butter is increased. Alternatively, if the EC continues with a higher relative refund for butter oil, its compliance with the IDA minimums will be assisted by a smaller (rather than larger) relativity in the minimum prices. That is, given current institutional arrangements in the EC, the higher the export refund for butter oil relative to that of butter, the lower the ratio between international prices for butter oil and butter.

**Demand side**

It is not intended to provide a detailed analysis of international demand for butter oil. Destinations and uses for this product are well known and do not impact overly on the issue at hand.

However, consideration of this issue should account for the following generalizations:

- the international markets for butter and butter oil are distinct from each other;

- in terms of the international market for oils and fats, the market for butter oil is very minor;

- the price of butter oil is well above those of most products traded in the international oil and fats markets. Most vegetable oils are priced in the vicinity of US$400 to US$500 per tonne f.o.b., around a quarter to a third of the price of butter oil;

- users of oils and fats able to substitute on the basis of price have done so, the remaining demand for butter oil reflects its particular value to a relatively narrow subset of end users. These users are willing to pay a premium for butter oil because of its particular taste and other specific qualities;

- butter oil is most unlikely to ever be a major proportion of the international market for oils and fats;

- demand for butter oil is unlikely to be much affected by its price relative to that of vegetable oils until the relative prices are much more in line. Price variations in the vicinity of current pricing is unlikely to significantly impact total demand;

- as the international price of butter oil declines relative to that of butter, it becomes more economic to reconstitute butter oil into butter.

With respect to this latter point, cost of reconstitution would appear to be no more than around US$200 per tonne (butter equivalent). Hence a sustained price for butter oil below this relativity would encourage this industry and threaten the international market for butter.
These factors suggest that from the perspective of total butterfat demand, the price for butter oil should not be allowed to fall significantly below its product relativity with butter.

Conclusion

Analysis of the relativity between pricing of butter and butter oil cannot be based simply on the technical relation between the two products. Market issues, pertaining to both supply and demand must also be considered. On the basis of the above analysis it would seem reasonable to conclude that:

- the current relativity between the minimum prices of these two products is reasonable; and that

- concerns raised by the EC with respect to the current relativities would appear to have their foundation (and remedy) in the relativity between EC export refunds for butter oil and butter.