Arrangement Regarding Bovine Meat

INTERNATIONAL MEAT COUNCIL

The Instability of World Beef Markets

Note by the Secretariat

This note has been prepared in response to the request made at the June, 1983, meeting of the International Meat Council to be used as a basis for discussion at the December, 1983, meeting of the IMC. The following sources, inter alia, have been used: FAO, "Cyclical Problems in World Production and Trade in Beef and Veal: Possibilities of Ameliorative Action" (CCP:ME 75/4) July, 1975; FAO, Trade Yearbook, various issues; International Monetary Fund, International Financial Statistics, various issues; MacBean, A.I., Export Instability and Economic Development, London, 1966, OECD, The Instability of Agricultural Commodity Markets, Paris, 1980; GATT, various information from the IMC/STAT and IMC/INV document series.
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The Instability in International Bovine Meat Trade

I. Definition and Measurement of Instability

1. The secretariat believed that its first task was to formulate an acceptable definition and measure of "instability" as regards international trade in bovine meat. It began by noting that instability as concerns international trade is different than that which could arise in individual markets. In the latter, instability is usually measured in terms of price only. The stability or instability of price in any individual market is determined by the stability of supply and demand and by the elasticities of each. In international trade, however, there need be no relationship between quantities traded and prices. Each could fluctuate independently. Stability or instability of trade therefore should take account of both prices and trade volume. The secretariat also noted that, since prices and trade volume could move independently, instability could also manifest itself in total value of trade.

2. Secondly, the secretariat noted that there was no "absolute" definition of instability. It observed that in general instability was a comparative concept: prices, quantities, etc. were viewed as being more unstable during a particular period than during another. Therefore, for the purpose of this study the secretariat thought that instability should be thought of as the situation in which fluctuations in the magnitude of the variable of interest increase and occur more frequently.

3. Thirdly, the secretariat noted that it was usual to "measure" instability in terms of fluctuations from trend value of the variable of concern for some particular period. Due largely to data availability the secretariat decided that it would be convenient to measure fluctuations in terms of average annual percentage deviations from linear trend values.

II. Objectives of Analysis

4. Noting that it had been asserted during the June 1983 IMC meeting that international trade in beef over the past decade has been unstable, it was the secretariat’s opinion that the objectives of the analysis should be as follows:

1. to determine if in fact there had been an increase in the amount of instability (as defined above) in international beef trade since 1971;
2. if it is determined that there has been increased instability in bovine meat trade, to examine the causes of that instability;
3. to determine whether there is any reason to believe that conditions remain which would give rise to trade instability in future.
FIG.1

VOLUME OF WORLD BOVINE MEAT EXPORTS
RELATIVE TO THE TRENDS FOR 1961-70 AND 1971-81

- Estimated trend
- Actual

* Calculated by the GATT Secretariat on the basis of FAO data (excludes intra-EC trade).
FIG. 2

UNIT VALUE OF WORLD BOVINE MEAT EXPORTS

RELATIVE TO THE TRENDS FOR 1961-70 AND 1971-81*

* Calculated by the GATT Secretariat on the basis of FAO data.
VALUE OF WORLD BOVINE MEAT EXPORTS
RELATIVE TO THE TRENDS FOR 1961 - 70 AND 1971 - 81

* Calculated by the GATT Secretariat on the basis of FAO data.
III. The Amount of "Instability" in International Bovine Meat Trade

5. In order to measure the magnitude of fluctuations of world bovine meat export volume, unit value of world bovine meat exports, and total value of world bovine meat exports, trend lines for each variable were calculated* for the periods 1961-70 and 1971-81. These appear in fig.1-3 (pages above). The annual percentage deviation of each variable from trend was then calculated. These deviations were then averaged and appear in Table 1 below.

<table>
<thead>
<tr>
<th></th>
<th>World Bovine Meat Export Volume</th>
<th>Unit value of world bovine meat exports</th>
<th>Value of world bovine meat exports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- P E R C E N T -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1961-65</td>
<td>10.6</td>
<td>7.4</td>
<td>4.6</td>
</tr>
<tr>
<td>1966-70</td>
<td>4.8</td>
<td>3.6</td>
<td>5.4</td>
</tr>
<tr>
<td>1971-75</td>
<td>16.2</td>
<td>7.8</td>
<td>23.4</td>
</tr>
<tr>
<td>1976-81</td>
<td>5.5</td>
<td>9.5</td>
<td>14.7</td>
</tr>
</tbody>
</table>

1Calculated as the average percentage deviation from trend. Separate trends were calculated for the periods 1961-70 and 1971-81.
2Fresh, chilled and frozen excluding intra-EC trade.
3The average unit value of world beef exports including intra-EC trade. (It was not possible to distinguish between the value of EC exports to 3rd countries and value of intra-EC trade.)
4Derived unit value multiplied by trade volume, excluding intra-EC trade.

Source: Calculated from data in FAO Trade Yearbook and NIMEXE

6. Using this technique it is quite clear that the degree of instability in international bovine meat trade was significantly greater in the period 1971-81 than it was during the period 1961-70. Whether measured in terms of volume, unit value or total value, the average magnitude of fluctuations from trend were greater after 1971 than it had been in the preceding 10 years. The value of world beef trade fluctuated by 18.6 per cent from its trend value on average after 1971 versus 5.0 per cent from 1961 to 1970; the volume of exports fluctuated by 10.4 per cent after 1971 versus 7.7 per cent in the 1960's; and the unit value of exports fluctuated by 8.7 per cent versus 5.5 per cent.

* Using simple linear regression
By way of comparison, and to place the instability in international beef markets in some perspective, figure 4 compares the fluctuations in prices of beef on a certain part of the world market with price movements for grains and with the price movements of a "basket" of other commodities. It is clear that the international bovine meat market is not unique in having experienced increased instability since the early 1970's. It would also seem that the amount of price instability in bovine meat markets has been less than that in markets for other commodities.

7. The "traditional" exporting countries experienced even greater instability during the 1970's in the export sector of their bovine meat industries than existed in world trade in general. For the 5 major exporters the magnitude of fluctuation from trend of bovine meat export volume and value are represented graphically in fig. 5 below.
FIG. 5

PERCENTAGE DEVIATION FROM TREND OF THE VALUE
OF BOVINE MEAT EXPORTS IN MAJOR EXPORTING COUNTRIES

(1971-1982)*

Calculated on the basis of National data supplied to the Secretariat.
IV. Factors Causing Increased Instability and the Effects thereof

8. Factors causing increased instability in bovine meat trade will be examined under the following headings: (a) bovine meat production in importing and exporting countries; (b) bovine meat demand in importing countries; (c) the "structure" of bovine meat trade; (d) the influence of trade policy measures; (e) national price support and/or stabilization measures (f) other influences.

(a) Bovine Meat Production in Importing and Exporting Countries

9. It is evident, and well-documented, that there is an inherent tendency for beef production in many countries to evolve in a cyclical manner (OECD, FAO, other sources). The cyclical fluctuations in production reflect the cycles in cattle inventories which, in turn, are provoked by alternating views on the part of cattle producers with regard to the profitability of cattle production. A "building" phase is typically characterized in its early stage by sharply reduced production as cattle producers withhold female animals from the market to build breeding herds. Later, these attempts to increase numbers are rewarded by rising cattle slaughter and beef production. At some point the rate of growth of beef production exceeds the rate of growth of beef demand and prices begin to decrease. This development usually signals the commencement of a liquidation phase of the cycle. In the early stage of the liquidation production typically rises at rapid rates as the increase in slaughter arising from the preceding increases in calf crops is augmented by increased slaughter of breeding animals. The liquidation continues until production falls to such a level that prices begin to rise; a new cycle then begins.

10. There are several aspects of this cyclical tendency of beef production of principal concern to the stability of world bovine meat trade in the 1960's and 1970's:

- During the 1960's the cyclical supply fluctuations in North America and Western Europe (which together accounted for 90% of world beef imports) were much more subdued than they had been in the past (fig. 6). Moreover the cycles in these two areas were "out of phase", that is to say that a cyclical increase in beef production in Western Europe during 1960-64 corresponded to a cyclical decrease in North America. The roles were then reversed from 1964 to 1966. During the balance of the sixties, although production increased in both regions, growth was slow. In terms of international bovine meat trade, the subdued nature of beef production cycles (in combination with consistent growth in beef demand) forestalled major fluctuations in their import activity. Moreover, certain exporters were able to maintain fairly consistent export levels by diverting exports from North America to Europe and vice versa.

- For virtually the entirety of the 1960's the production cycles of the world's two main exporting regions also tended to be out of phase (fig. 6). High production in Oceania from 1961 to 1965 was somewhat offset by decreases in Latin America and vice versa from 1967 to 1970.
PERCENTAGE DEVIATION FROM TREND OF
BOVINE MEAT PRODUCTION IN FIVE MAJOR
EXPORTING COUNTRIES

\* ARGENTINA
\* AUSTRALIA
\* NEW ZEALAND
\* URUGUAY
\* BRAZIL

PERCENTAGE DEVIATION FROM TREND OF THE
BOVINE MEAT PRODUCTION IN FOUR MAJOR
IMPORTING AREAS

\* CANADA
\* EEC
\* JAPAN
\* UNITED STATES

\* Calculated on the basis of National data supplied to the Secretariat.
- The production cycles of all major importing countries coincided in a declining phase during the period 1970-73. The primary factor bringing them "into phase" was the abnormally strong growth in consumer income experienced in that period. This growth caused sharp increases in producer prices which in turn caused producers to withhold cattle from market to expand breeding herds resulting in sharp decreases in beef production. "Beef shortages" developed and imports increased rapidly. This growth in import demand caused prices to escalate in exporting countries. Producers there also began accelerating herd building, accentuating the short term "shortage" of beef on international markets.

- The production cycles in major importing countries turned sharply upward through 1974 and 1975. In North America the sharp increase in beef production from 1974 to 1977 resulted from the liquidation of cattle breeding herds, aggravated further by the sharp increase in cattle numbers which had just occurred. In the EC and Japan the sharp increase in production which occurred in 1974-75 reflected the sharp increase in feeding out of calves (although some modest herd liquidation did occur in the EC). In response to these sharp increases in production the volume and prices of imported beef declined.

- The general sharp increases in beef production in the major importing countries from 1974 through 1976, and the restrictions placed on beef imports by most of these countries, caused beef production cycles in all major exporting countries to coincide in an increasing phase. Production increased in all major exporting countries from 1974 to 1977 as cattle herd liquidation started then accelerated. This period was characterized by a record surplus of bovine meat on world markets.

- From 1977 to 1979 the production cycles of, on the one hand, North America, and on the other the EC and Japan diverged. That of North America and the major exporting countries coincided in a decreasing phase. Surpluses on world beef markets disappeared and prices rose rapidly.

- North American beef production began rising again from 1980 while that in Western Europe and in major exporting countries continued to decrease.

The significant conclusions to be derived from this review of production cycles are:

(i) in the 1970's the fluctuations of production in most individual countries, for a number of reasons, were of a greater magnitude than those which occurred in the 1960's; and

(ii) the production cycles amongst the major importing and exporting countries coincided frequently in the 1970's whereas they generally tended to offset one another in the 1960's.
(b) Bovine Meat Demand in Importing Countries

11. As has been pointed out in other secretariat documents (IMC/W/10) demand for bovine meat in any country is strongly influenced by income levels, by prices of other meats, by consumer tastes, and by beef prices. In fact beef consumption is more sensitive to changes in consumer income and changes in its own price in most countries than are most other types of food (i.e. income and own price elasticities are higher than for other types of food).

12. The increased instability of bovine meat consumption in the 1970's in many major beef importing countries can, therefore, be understood in relation to the increased instability of consumer incomes and of retail beef prices due to increased supply fluctuations. Increased instability of consumption of course contributed to increased instability of import requirements. The instability of consumption in countries in which price support mechanisms for cattle existed was much less than it was in those which did not have such systems. In fact, there was virtually no fluctuation in per capita consumption in the EC of 9 and Japan after 1974. That being said, however, sharp increases in consumer beef demand occurred in all major importing countries between 1970 and 1974. The fluctuations of this period was the single most important factor causing world beef cycles to "come into phase" at that time.

13. During the period 1970-1973 the fluctuations of beef demand departed from the relatively stable pattern which had existed throughout the 1960's. The upswing in beef demand during this period reflected, in particular, abnormally sharp growth in consumer real income. This growth in income was accentuated in many countries by major decreases in supplies of competitive meats during 1972 to 1973. Conversely beef demand regressed sharply during 1974 to 1975 following the "first oil crisis". The consequent weakening of beef prices was a major factor in provoking herd liquidation in a number of countries during 1975 to 1976. This liquidation weakened prices still further with beef consumption rising accordingly. In countries which did not ban beef importation during this period import levels remained at relatively "normal" levels, but prices for imported beef decreased sharply, both relative to those existing in 1972-74 and to those for higher-quality beef.

14. The sharp up-swing in world beef prices from 1977 to early 1980 was due more to the cyclical reduction in beef production than it was to strengthening beef demand, although beef demand did strengthen in most countries. The strengthening of demand was due primarily to the resumption of economic growth and to relatively low levels of production of competitive meats.

15. The "second oil crisis" of 1979 however marked the commencement of a progressive decrease in beef demand in most countries. The erosion of beef demand, however, was more extended and more severe than it had been following the previous crisis owing to the restrictive macro-economic policies introduced to contain inflation. Consumer incomes stabilized or declined and consumer spending was distorted by high interest rates. This weakness of demand since 1979 has been the principal cause of the decreasing prices on international beef markets during the last three years.
(c) The Nature and Structure of the International Beef Market

16. There are certain aspects of the structure of trade relations in the international bovine meat market which make trade in that market inherently susceptible to instability. While these factors are probably not in themselves the cause of instability they tend to amplify fluctuations originating from other factors. Such factors are:

(i) Geographic concentration of exports of beef exporting countries. In other words, exports of most bovine meat exporting countries go to a limited number of markets. The fact is that a high degree of concentration of exports to a small number of markets makes it impossible for exporters to offset fluctuations in import demand in one market by increasing exports, immediately, to other markets. Moreover, given the fact that there are a relatively small number of "high-priced" markets, export diversification would probably mean that the average price of exports to other markets would be lower. This problem is accentuated for certain exporters by the fact that they are excluded from exporting to but a few "high-priced" markets because of veterinary regulations.

Table 2
Geographic Concentration of Bovine Meat Exports
of five "Traditional" Exporters

<table>
<thead>
<tr>
<th></th>
<th>Largest Market</th>
<th>Largest two Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1971-73 (per cent)</td>
<td>1980-82 (per cent)</td>
</tr>
<tr>
<td>Australia</td>
<td>61</td>
<td>60</td>
</tr>
<tr>
<td>Argentina¹</td>
<td>71</td>
<td>35</td>
</tr>
<tr>
<td>New Zealand</td>
<td>60</td>
<td>73</td>
</tr>
<tr>
<td>Uruguay</td>
<td>41</td>
<td>43</td>
</tr>
<tr>
<td>Brazil¹</td>
<td>51</td>
<td>39</td>
</tr>
</tbody>
</table>

¹Excluding cooked and canned beef.
Table 2 suggests that the degree of geographic concentration in world bovine meat trade is rather high. During 1980-82 all five of the major traditional beef exporters each shipped 60 per cent or more of their exports to no more than two markets. The indicated concentration for Brazil and Argentina would be even higher if cooked and canned beef were included in the calculation. The degree of concentration for New Zealand is extremely high at 84 per cent. It is interesting to note that, except for Argentina, the degree of concentration remained the same or increased during the 1970's. As Table 2 suggests this factor seems to still be an important one in world beef trade.

(ii) The Residual Nature of Import Requirements of Major Importing countries. In most of the major beef importing countries beef and veal imports hold a small proportion of the total beef and veal market (see table 3 below). The only exception is Japan where beef imports constitute over 27 per cent of bovine meat consumption. In importing countries imports are basically determined as the difference between national demand and national production. Variations in either demand or production cause fluctuations in imports and/or import prices. Since the volume of imports tends to be small relative to the domestic market, small variations in either production or demand can cause significant percentage variations in imports. Moreover, imports tend to be the "adjusting" factor between supply and demand in the domestic market. For example, rising beef production with static demand causes imports to fall; rising national demand with static production causes imports to increase.

(iii) Exports are a large proportion of production in several exporting countries or, in other words, national beef demand is small relative to production. As a consequence the domestic cattle industry is heavily influenced by events on export markets. Moreover, in these countries, the domestic market is generally of such a size relative to production that it is either incapable of absorbing "excess" production at all or incapable of absorbing it without large decreases in prices. Consequently increases in production result in these countries in increased supplies offered on world markets.

Table 3
Imports as a Proportion of Bovine Meat Consumption in Major Importing Countries - Average 1981-82

<table>
<thead>
<tr>
<th>Country</th>
<th>(per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>7.6</td>
</tr>
<tr>
<td>EEC-10</td>
<td>5.1</td>
</tr>
<tr>
<td>Japan</td>
<td>27.1</td>
</tr>
<tr>
<td>USSR</td>
<td>6.8</td>
</tr>
</tbody>
</table>
### Table 4

**Exports as a Proportion of Bovine Meat Production in Major Exporting Countries - 1981-82**

(per cent)

<table>
<thead>
<tr>
<th>Country</th>
<th>Export Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>52.2</td>
</tr>
<tr>
<td>Argentina</td>
<td>18.5</td>
</tr>
<tr>
<td>New Zealand</td>
<td>68.8</td>
</tr>
<tr>
<td>Uruguay</td>
<td>42.4</td>
</tr>
<tr>
<td>Brazil</td>
<td>14.5</td>
</tr>
</tbody>
</table>

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**d) The Influence of Trade Policy Measures**

17. The importance of trade measures in international bovine meat trade increased sharply in the 1970's, both in terms of the number of countries applying measures and in terms of the influence of these measures on trade. This increase occurred equally for both import and export measures.

18. With regard to import measures there was a significant increase in the number of countries regulating imports in the 1970's. Additionally, the restrictiveness of import regulation measures already existing in certain countries increased or, at least, the nature of their application changed. By 1980 there was virtually no country participating in world bovine meat trade which did not regulate in some manner the quantity of bovine meat imports.

19. The introduction of quantitative import regulations, or the increased restrictiveness of existing measures, occurred quite suddenly in different countries during the period 1974 to 1976. Although it is not apparent that such measures triggered increased fluctuations of trade volume and of prices, it would appear that they may have accentuated existing instability. The beef production cycles of most countries involved in world beef trade coincided in a sharp upswing during 1974-76. In European countries and in Japan the upswing resulted mainly from increased slaughter arising from sharp decreases in calf slaughter during 1972-74. In North America it resulted from the commencement of cattle herd liquidation. In most exporting countries the increase was also due to the commencement of cattle herd liquidation. It was probably the case that the initial stimulus for cattle herd liquidation in exporting countries came from reduced prices due to increased beef production in major export markets. It would seem to be equally true, however, that the closure or restriction of major markets at that time accentuated the reduction of trade and the decrease in prices on world markets.

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1Including cooked and canned, on a carcass weight basis.
20. All the major import markets introduced some form of import regulation, or further restricted imports to a greater or lesser degree during the period 1974-76. The EC and Japan restricted imports completely for various periods during 1974 and 1975. The United States and Canada controlled imports at various times between 1974 and 1976 by either negotiation of voluntary restraint agreements with principal supplying countries or, as in 1976, by imposing quotas. It could be noted that for South American exporting countries, the difficulties presented by the closure of the EC market in 1974-75 were even more serious since the United Kingdom, which had been a major market for all South American exporters, had acceded to the EC in 1973.

21. While it is clear that the increased restrictiveness of import measures during 1974-76 contributed to increased market instability during that period, it is difficult to determine to what extent such measures have affected market stability since that time. In general, it would seem that there was relaxation of the restrictiveness of import measures after 1976. The EC established a series of tariff quotas which today amount to about 172,450 tons, product weight. Japanese import quotas were progressively increased from a level of about 100,000 tons in 1976 to 135,000 tons in 1982. The United States established, as a result of the MTN a minimum import commitment of 567,000 tons and Canada established a minimum commitment which amounted to 63,000 tons in 1980 and grows at the same rate as the Canadian population in each year thereafter.

22. In the past ten years there has been a notable increase in the number of countries in which the sole right to import bovine meat belongs to a state trading company. The history of the imports of such countries suggests that they are subject to abrupt entry and exit from international markets depending on either internal needs or the level of international prices. To the extent that such trading enterprises increase imports during periods of decreasing world prices they probably act as a "safety-net" to prices. To the extent, however, that they increase or decrease importation to balance internal demand and supply they may tend to act as a destabilizing influence on world markets.

23. It is difficult to say to what extent export measures have influenced international market stability. With regard to export subsidies, it is evident that they have significantly increased the volume of exports of certain countries. It is not so evident, however, to what extent they have caused sharp fluctuations of either the total volume of international trade or of prices of that trade. In a global context the increase in exports occasioned by these subsidies in recent years has probably caused world export volume to remain at a higher level than it otherwise would have. In recent years the powers endowed to governmental or quasi-governmental meat boards in exporting countries have increased. These powers in general relate to increased control over the volume of exports and increased ability to develop markets and undertake trade. To the extent that this permits a greater diversification of export markets, this development has probably contributed to the stability of world bovine meat trade. To the extent also that these boards have negotiated long term export agreements such contracts have also contributed to market stability (see also IMC/W/15).
(e) Price Support and/or Stabilization Systems

24. As was noted in GATT document IMC/W/16/Rev.1 a number of countries participating in the world bovine meat market have introduced, over the years, schemes to support and/or stabilize domestic cattle prices. These systems are usually designed to adjust either domestic beef production or beef imports to maintain domestic cattle prices near targeted levels. In the countries in which they exist, these programmes appear to have significantly affected both production and consumption of bovine meat. In short, they appear to have stimulated production by higher off-take rates from cattle herds, due to reduced calf-slaughter and by encouraging the adoption of more efficient production methods, and to have impeded consumption (in particular price support measures) by maintaining retail beef prices at a higher level than they would otherwise be, and higher than prices of competitive meats. In several countries the result has been that surplus beef production has occurred which has had to be disposed of on world markets at sometimes high costs for the exporting country. In addition to creating exports several of these countries have experienced a reduction of imports.

25. It would seem that the effects of these measures may have contributed to increased instability in international bovine meat markets even though they undoubtedly did much to stabilize prices on the domestic market. Firstly, it would appear that the regulation of imports to stabilize domestic market conditions transfers much of the adjustment process to the world market. Secondly, however, the magnitude and timing of adjustments in these programmes (e.g. target price setting) is relatively unpredictable. As a consequence the effects of the programmes on national production and consumption, and thus import requirements, are also unpredictable, further adding to the instability imparted to world markets.

(f) "Other" influences

26. There appears to have been a number of factors other than "endogenous" factors which increased the instability of supply and demand in both importing and exporting countries in recent years. These factors can be broadly classified as follows:

(i) increased instability of certain costs related to cattle production, the two most notable of these costs being grain prices and interest rates. In GATT document IMC/W/11, it was concluded that feedgrain prices and interest rates have exhibited unprecedented volatility in recent years, have posed major problems for beef industries in a number of countries, and have affected world trade in beef. It was noted that this increased volatility has been particularly influential on beef production changes in North America. More indirectly, but importantly, changes in these costs affect production of pork and poultry, thus lending another element of instability to beef demand in a number of countries.
(ii) weather conditions have exacted (and are currently exacting) a significant influence on the stability of beef production in a number of countries. Most notable, however, have been Australia and Argentina. Periodic drought conditions in these countries have resulted in higher levels of beef supplies being offered on world markets.

(iii) the increased volatility of exchange rates (see IMC/W/11). In recent years there has been unprecedented fluctuations in the exchange values of currencies, notably against the United States' dollar. Aside from the uncertainty that such volatility imparts to traders, it could be noted that an appreciation in a currency's value (or a slower rate of depreciation than is warranted) effectively acts as a tax on that country's exports, while the contrary situation encourages exports.

V. Current Situation and Prospects

27. Instability has continued to characterize world bovine meat markets in the early 1980's. Whilst it had generally been expected that a period of greater stability would have followed the upswing in international prices in 1978-79, in fact beef demand in almost all countries weakened steadily from 1980 to 1983. Added to this was a continual increase in beef production in a number of countries. As a consequence prices obtained in international markets trended downward from early 1980 to early 1983.

28. Although globally trade volume has been relatively stable since 1978-79, this is accounted for in large part by the fact that the growth in exports of a number of countries, amongst which are a number of the "traditional" importing countries, has to a certain extent compensated the reduction of exports of a number of traditional exporting countries. It could be noted, for example, that in 1976-77 the exports of a group of 7 countries (Norway, Sweden, Finland, Austria, the EC, Canada and the United States) accounted for only 10 per cent of world exports. In 1981-82, however, these same 7 countries accounted for 22 per cent of world exports (while world exports increased by 13 per cent).

29. With regard to the future, the reduction in instability does not appear to be particularly promising. It seems improbable that, in the near term, one will see a return to conditions as stable as those experienced prior to 1971. A recovery of economic growth in world economies would presumably lead to some recovery in beef demand. This would result in some degree of price strengthening on world markets. The total price rise could be sharp if the initial price rise were sufficient to institute cattle herd rebuilding in exporting countries (i.e. female stock would be withheld from market to rebuild herds causing a short term reduction in beef supplies). In this connection, it seems probable that world beef supplies are currently, and will be for the next several years, inadequate to meet a "strong" upsurge in demand. Furthermore, as recent events have proven, the world feedgrain and protein feed markets are highly volatile and there seems to be no reason to anticipate any reduction of this volatility in the near term. It is by no means clear whether recent events in feed markets will prove positive or negative for world beef markets, but it seems probable that they will contribute to continued instability.
30. In essence the negative consequences of instability, be it in a national market or in international trade, is that it engenders uncertainty in the minds of market participants. It is generally believed that such uncertainty is particularly adverse for the bovine meat sector where planning horizons (in both the primary and subsequent levels) are long. In other words, as would seem evident from the developments described in the preceding pages, and taking into consideration the influence of a number of endogenous and exogenous factors, it would seem that predictability of market conditions is one of the elements determining market stability. An improvement of this predictability could therefore contribute to a more stable market. Amongst the elements on which depends this predictability one could note the following:

(a) information (which should be complete, detailed, rapidly available and used);

(b) guarantees on trade volumes (minimum access commitments, the development of which contributes to trade expansion and more stable trading conditions; and supply commitments which give the importers a minimum food security);

(c) guarantees concerning prices and/or its components.

It could be noted, furthermore, that a diversification of export markets also appears to have a stabilizing effect on international market conditions.