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**GENERAL AGREEMENT ON
TARIFFS AND TRADE**

Arrangement Regarding Bovine Meat

INTERNATIONAL MEAT COUNCIL

The Medium-Term World Demand/Supply Outlook in the Light
of Article IV, Paragraph (a) of the Arrangement
Regarding Bovine Meat

Note by the Secretariat

Revision

This paper was originally prepared in response to the request made at the December 1981 meeting of the International Meat Council. It has been updated and revised twice at the request of the International Meat Council made a first time at its meeting in December 1982 and a second time at its meeting in December 1985. Apart from the sources indicated in the text, the secretariat has used information furnished directly to it by participants.

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This paper has been prepared and revised on the basis of information furnished by participants and on all other information available to the secretariat. However, due to the lack of adequate information the coverage of some countries is not complete. It is hoped that additional information for these, and any other participating country, will be forthcoming at the meeting of the International Meat Council. For ease of reading, the paper has been organized into three parts (i.e. Historical Background, Summary of Policies and Measures in the Bovine Meat Sector and Medium-term Outlook).

HISTORICAL BACKGROUND

(a) Summary Analysis of Broad Trends in International Bovine Meat Markets from the nineteen-fifties to 1981

1. Up until the nineteen-fifties international beef and veal commerce was largely characterized by imports by the United Kingdom from major traditional suppliers: Australia, Argentina, New Zealand, Uruguay and Brazil. This pattern of trade had been developing relatively slowly for a number of years. The United Kingdom's imports of bovine meat accounted for almost 100 per cent of world beef trade throughout the thirties, and well over 70 per cent in the forties and early fifties.

2. From the mid-fifties to the mid-eighties however, international trade in beef expanded rapidly. FAO estimates suggest (Table 1) that world bovine meat exports (fresh, chilled and frozen) increased from an annual average of 581,000 tons during 1952-56 to 2,317,000 tons during 1980-84, or by almost 300 per cent.¹ In addition to this absolute increase in trade the data suggest that certain exporting countries increased their dependence on trade: ¹ as a proportion of world production, world bovine meat exports¹ accounted for about 5 per cent in the mid-eighties versus less than 3 per cent during 1952-56.

3. The rapid evolution of bovine meat trade from the mid-fifties resulted mainly from the swift expansion of imports by the United States, from the expansion of intra-European trade, and from the continued growth of imports of certain continental European countries from "off-shore". This growth was augmented through the sixties by the entry into international markets of Canada and Japan. ¹ By the early seventies (1970-73), the United States, the EC of Nine¹, Japan and Canada accounted for 78 per cent of world bovine meat imports. On the export side, Argentina, Australia, New Zealand and Uruguay accounted for about 65 per cent of world exports.

¹Excluding intra-EC trade

TABLE 1
World Beef and Veal Production and Trade, Annual Averages
for the Periods 1952-56, 1976-80 and 1981-84

	<u>Production</u> (000 tonnes)	<u>Trade</u> ^{1/} (000 tonnes)	<u>Trade as a proportion</u> <u>of production</u> (%)
1952-56 ^{2/}	22,444	581	2.6
1980-84	45,055	2,294	5.1

^{1/} Fresh, chilled and frozen beef and veal only, carcass weight equivalent, excludes intra-EC trade.

^{2/} For the USSR trade figures are not available for this period. They are nevertheless believed to be insignificant.

Sources: FAO production and trade yearbooks; Nimex

4. From the mid-fifties to 1973-74 the rapid expansion of bovine meat trade was based largely on the inability of the beef industries in the above-mentioned importing countries to increase production apace with the expansion of beef demand. There appear to be several reasons for this. In North America the beef industry was geared mainly to the production of grain-fed beef, while lower-grade beef was obtained primarily as a by-product from culled beef or dairy cows. The rapid expansion of beef herds up to 1973 meant that supplies of lower quality bovine meat did not expand at the same rate as that of high-quality beef. Additionally, the rapid growth of the "fast-food" industry created a parallel growth in demand for this quality of beef. Imported bovine meat filled this requirement and, it would appear, fostered the growth of this sector of the beef industry.

5. In Japan, the number of cattle of beef breeds had been in decline since the late fifties. The growth in the number of cattle of dairy breeds, particularly of dairy steers, was still slow. As a consequence, the growth of beef production was insufficient to meet the growth in demand.

6. In Europe, bovine meat demand grew steadily until 1973 at a faster rate than that of bovine meat production. In part this was due to the fact that the full beef productive potential of the dairy herd had not yet been tapped and to the fact that beef herds were in cyclical expansion.

7. The circumstances which had favoured the rapid and largely profitable (for exporters) growth of beef trade ended during 1974-75. A regression of beef demand in practically all countries occasioned by the world-wide economic crisis of that period was paralleled or followed by sharp increases in bovine meat supplies in all the major importing countries and the imposition of trade restrictions in several of them in order to safeguard the internal market. These events provoked price declines in the major exporting countries which resulted in the commencement of herd liquidation in these countries. As herd liquidation progressed in the exporting countries the volume available for export increased. The net result was quantities of beef offered on world markets in excess of those necessary to satisfy demand in import markets. Therefore, although trade volume continued to increase during the period 1974-77, it did so in general at unprofitable prices for exporters.

8. The increase in bovine meat supplies in Canada and the United States during the period mid-1975 to 1977 was elicited mainly by herd liquidation in those two countries. As liquidation slowed in 1978, and the effects began to manifest themselves (i.e. decreasing beef production) domestic prices and those of imported beef rose sharply. The principal suppliers of these markets, Australia and New Zealand, shared in the rise. In Japan, beef demand recovered after 1975 and imports (which had largely been prohibited from mid-1974 to mid-1975) increased. In the European Communities beef production, after initial sharp increases in 1973-74, did not decline significantly. (It declined by 3.6 per cent from 1975 to 1977, but then increased by 11 per cent from 1977 to 1980.) The higher level of beef production in the EC in the seventies seems to be linked to the increased "feeding-out" of calves (which formerly had been slaughtered for veal) and to an increase in average carcass weight of adult cattle, likely reflecting more intensive feeding (phenomena evident in other European countries as well). In any event, it is significant that the up-trend in beef production during the seventies occurred while total cattle numbers trended downward. Therefore, although beef imports by the EC trended upward after 1975 (imports had been under severe limitations during 1974-75) they did not regain levels which had been attained prior to 1974.

9. South American exporting countries, principally Argentina and Uruguay, for which European countries had been the most important markets prior to 1974, had, as a consequence, to adjust to these new circumstances. Both Argentina and Uruguay sought out and developed new markets in subsequent years. The Soviet Union became a principal market for Argentina, Brazil for Uruguay, and Egypt, Israel and other Middle Eastern and North African countries for both these countries.

10. Although price conditions on international markets were buoyant during 1978, 1979 and early 1980, they deteriorated fairly consistently through the second half of 1980 and through 1981 and 1982. Furthermore, even though world beef supplies contracted rather sharply during 1978-79 and 1980, beef demand weakened steadily following the oil crisis of 1979. Although full-fledged "recession" was not apparent until mid-1981, the effects of the oil crisis, and the concurrent and subsequent tight monetary policy pursued in several countries, seemed to

adversely affect demand. The effects were more palpable after mid-1981. Moreover, in North America, sharply increased production costs (in conjunction with a weakening economy) after the crop shortfall in 1980, slowed down the growth of cattle herds which had commenced in 1979. As a consequence more beef (especially cow beef) was placed on the market than had been expected. In sum, beef imports and prices of those imports declined during 1980 and 1981.

11. Further to the effect which it had on demand, the oil crisis of 1979 and the macro-economic policies which were adopted to deal with it, imparted certain effects which exist to the present day, notably high and volatile interest rates and sharp fluctuations in exchange rates. These two factors have contributed to a general atmosphere of international uncertainty which has influenced the trade in beef.

12. In spite of the improvement in beef demand registered in some major areas in 1982-83, producers have generally been faced with serious economic constraints due to declining cattle prices and returns. The exceptions to this situation were those countries where producer prices were supported, or those exporting countries where major currency devaluations took place. In 1984, the world bovine meat sector was marked by the contraction of import demand in major importing areas provoked, in North America by the high level of beef cow slaughter, in the Middle East by declining oil revenues and in the Soviet Union by a rising production. Furthermore, the situation was aggravated by increased export supplies in the European Community which resulted partly from the dairy programme implemented there at the beginning of the year. In 1985, and in spite of some encouraging signs, such as the higher volume of trade, bovine meat prices remained generally depressed as the result of continuing weak demand and large availabilities of all types of meat. At the present time recovery of beef trade in volume, but especially in terms of price, seems to depend on the economic situation in a number of major importing markets, on the level of output of competing meats, on the stabilization of international financial markets, but also on the effects of policy measures (not only in the beef sector, but also in other closely related sectors like dairy) in major producing countries.

TABLE 2
WORLD EXPORTS OF FRESH, CHILLED AND FROZEN BOVINE MEAT
(¹000 metric tons carcass weight)

	Africa	N. & C. America*	South America	Asia	Europe**	Oceania	USSR	World
Average 1950-57	13	39	235	1	118	185	...	590
1958	14	62	422	-	137	284	...	919
1959	25	44	391	1	135	322	...	917
1960	25	44	338	-	174	292	...	873
1961	32	52	328	-	242	233	...	888
1962	33	51	456	-	377	322	...	1,240
1963	37	61	610	-	362	393	...	1,462
1964	43	69	564	1	263	408	...	1,348
1965	31	99	460	2	285	443	...	1,319
1966	42	97	481	3	323	379	...	1,325
1967	71	87	452	2	510	369	158	1,649
1968	63	119	392	2	482	385	113	1,556
1969	47	132	597	1	494	390	82	1,742
1970	78	167	598	1	451	506	38	1,840
1971	102	167	432	4	465	520	11	1,701
1972	120	190	695	3	422	589	37	2,057
1973	145	187	540	3	484	786	47	2,193
1974	80	142	255	16	335	677	27	1,532
1975	63	127	182	17	418	609	18	1,434
1976	88	194	400	20	344	778	8	1,833
1977	67	209	407	15	317	896	8	1,920
1978	87	230	421	24	351	981	10	2,104
1979	99	230	422	25	544	1,080	6	2,405
1980	52	210	314	64	855	796	8	2,299
1981	39	223	427	74	833	747	41	2,385
1982	36	227	480	84	623	777	5	2,233
1983	43	212	471	85	718	871	1	2,403
1984	45	235	354	79	895	638	2	2,248

*North and Central America

**Excluding intra-EC trade as of 1958

Sources: FAO Trade Yearbooks; Nimexe

**WORLD EXPORTS OF FRESH, CHILLED AND FROZEN
BOVINE MEAT* (Carcass Weight Equivalent)**

(Shares of major regions)

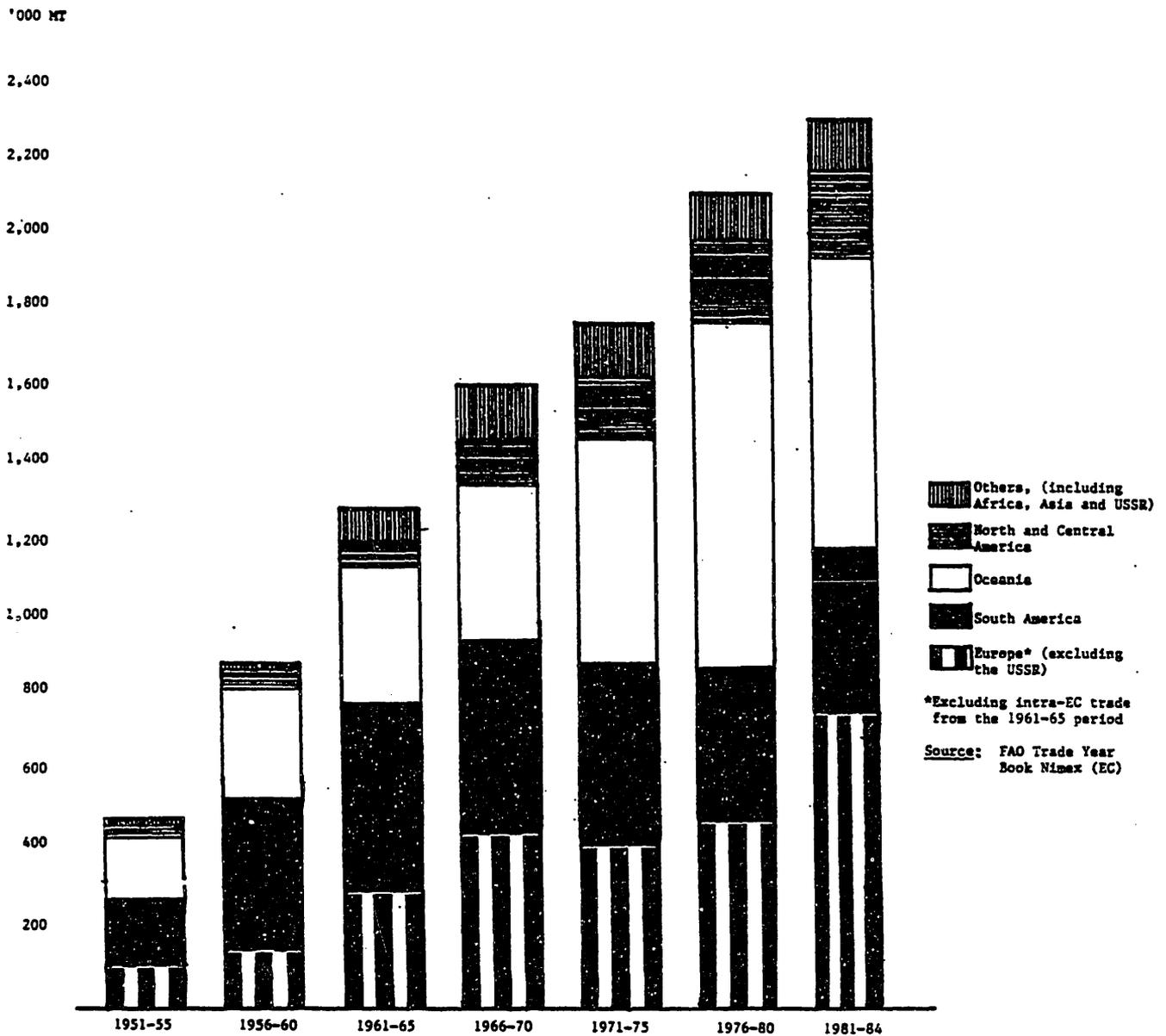


TABLE 3

WORLD IMPORTS OF FRESH, CHILLED AND FROZEN BOVINE MEAT
(⁰000 metric tons carcass weight)

	Africa	N. & C. America*	South America	Asia	Europe**	Oceania	USSR	World
Average 1950-57	16	36	11	16	452	1	...	569
1958	16	178	4	19	597	1	...	815
1959	14	256	10	13	603	1	...	896
1960	18	204	7	16	621	2	...	869
1961	24	274	10	17	526	2	...	853
1962	17	411	12	25	649	2	...	1,116
1963	24	470	11	29	895	3	...	1,433
1964	24	339	18	39	905	3	...	1,328
1965	21	282	13	50	851	3	...	1,219
1966	45	366	16	69	859	4	...	1,359
1967	42	408	24	49	972	4	13	1,511
1968	44	458	26	64	891	5	14	1,501
1969	42	540	19	72	1,028	5	23	1,728
1970	61	611	25	78	1,024	8	82	1,889
1971	56	588	34	96	912	9	116	1,811
1972	63	689	42	93	1,138	9	40	2,075
1973	74	704	27	172	1,070	7	46	2,101
1974	72	566	100	107	370	7	396	1,613
1975	85	648	36	164	259	10	406	1,601
1976	127	735	52	206	458	12	226	1,816
1977	147	638	56	249	558	14	438	2,099
1978	147	779	159	315	552	18	40	2,011
1979	124	801	128	390	547	19	210	2,218
1980	165	725	78	351	547	18	333	2,217
1981	236	634	93	431	434	15	385	2,228
1982	246	718	70	549	368	16	350	2,317
1983	266	668	51	604	383	19	400	2,392
1984	317	666	55	584	331	18	345	2,315

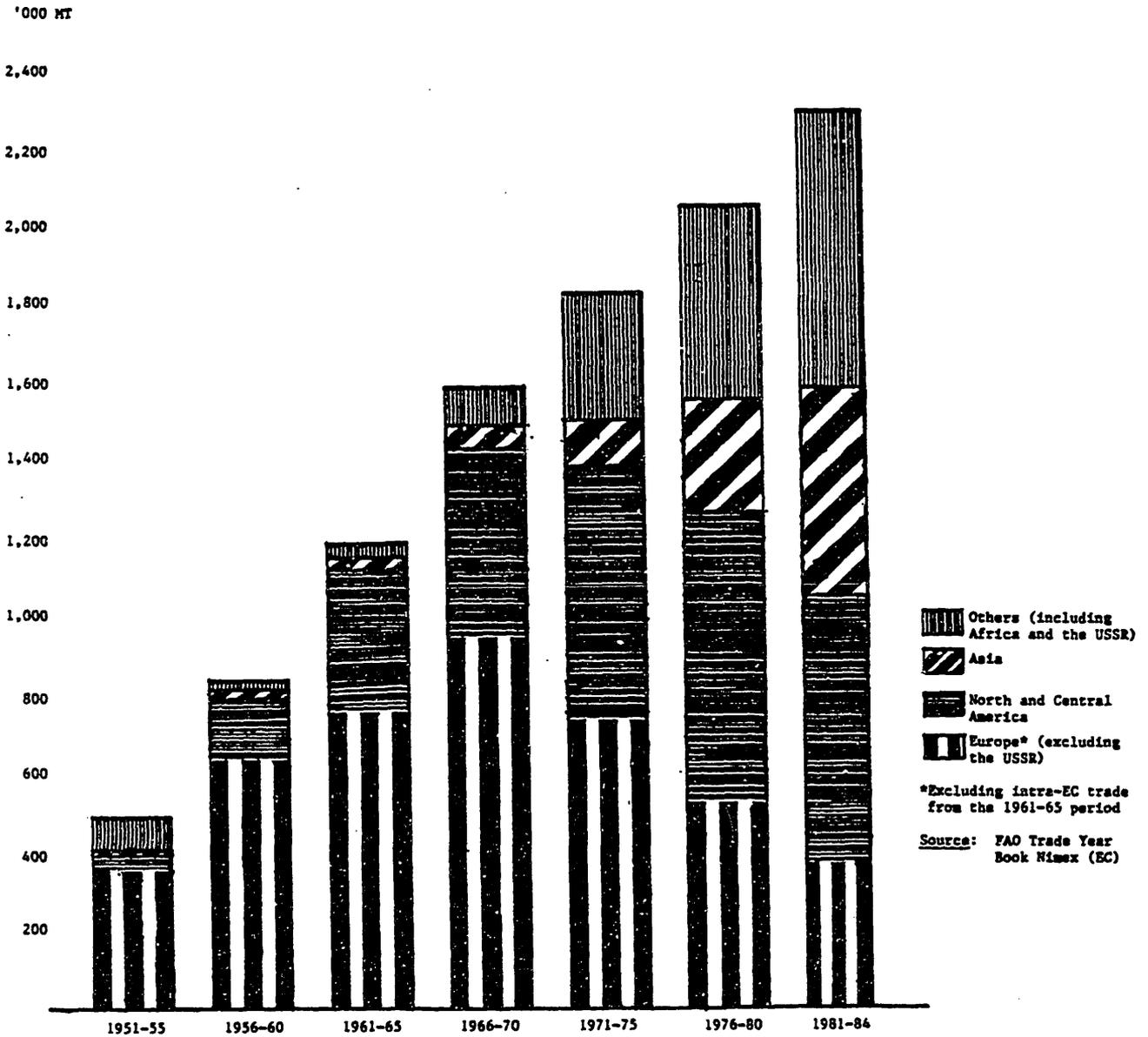
*North and Central America

**Excluding intra-EC trade as of 1958

Sources: FAO Trade Yearbooks; Nimexe

**WORLD IMPORTS OF FRESH, CHILLED AND FROZEN
BOVINE MEAT* (Carcass Weight Equivalent)**

(Shares of major regions)



(b) Country by Country Analysis¹

Argentina

13. The Argentinian beef industry was particularly affected by the adverse situation on world markets during the seventies. Since 1974, Argentina has had to radically alter traditional exporting patterns. It would appear that the Argentinian cattle industry is still in the process of adaptation to this altered state of export markets. Historically, and until 1974, the majority of Argentina's beef exports had been to countries of Western Europe, principally to the United Kingdom, and the Argentinian cattle industry had grown apace with the growth in exports to, and prices in, these markets. From 1964 to 1973 the growth in the average value of exports to all destinations was particularly rapid. During the period 1971-73 exports of fresh, chilled, and frozen beef to the EC(9) accounted for 71 per cent of Argentina's exports of this type of beef. Moreover, during this period, the average of prices for fresh, chilled and frozen beef to this market was 27 per cent above the average of prices to other markets. Consequently, the Argentinian beef industry was seriously affected by the severe limitations of the EC market during 1974-75 and by its sharply lower level of imports (relative to the sixties and early seventies) after 1975. Further, the important declines of exports to its largest and most lucrative market was exacerbated by the general decline in international beef prices from 1974 to 1978. The net result of these events was that a period of relatively robust expansion of the Argentinian cattle industry ended in 1977. A liquidation of cattle herds commenced in the second half of 1977 and ended in 1982, when cattle numbers declined to 52.5 million head, down from 61 million in 1977. Although it can be noted that the cattle herd remained larger than it was at the previous low point in the cattle cycle in 1970 (when cattle numbered 48.4 million head), the rebuilding of cattle herds initiated in 1983 came to a premature end in 1985. Highly depressed prices in the domestic market coupled with relatively low prices in the international market were the main reasons for this evolution.

14. For Argentina, there were three major factors which tempered the effects of the loss of its major European markets after 1974: firstly, domestic consumption levels increased sharply (per capita consumption increased from 66 kgs in 1973 to 88.0 kgs in 1976, and remained at these higher levels until 1981). Secondly, new markets were developed, particularly in North Africa, the Middle East and the Soviet Union. As a consequence export levels trended upward from 1976 to 1979. Thirdly, although prices of exports to these markets were lower than those received in traditional markets, a general recovery of international beef prices occurred during 1978-80. Consequently, the value of Argentina's exports during this period recovered at a faster rate than the volume of exports. However, since 1980 Argentina's beef export prices have entered a declining trend due to a depressed international beef market. This situation resulted both from the general economic recession and strong competition from subsidized exports.

¹For statistical country-by-country tables, see IMC/W/46.

15. Since 1964, the Argentinian cattle industry has experienced two complete cycles. The first cycle, from 1964 to 1970, resulted in a net gain in numbers of 4 million head, and the second, from 1971 to 1982, in a further net gain of 4.1 million head. Notwithstanding the liquidation of cattle herds which occurred between 1977 and 1982 and the sudden interruption of herd rebuilding registered in 1985, cattle numbers trended upwards from 1961 to 1985 at an average annual rate of about 0.8 per cent. The upward trend in beef production was stronger, with an average annual increase of 2.2 per cent, resulting not only from the growth in cattle numbers, but more importantly from increased "off-take" rates and from higher average carcass weights.

16. With regard to exports, it is difficult to suggest a trend because of the events of the seventies. It could be noted that Argentinian exports did not increase at rates comparable to those for Australia and New Zealand during the late sixties and early seventies largely because Argentina could not share in the rapidly expanding North American market for boneless beef. While Argentina shipped substantial quantities of canned beef to North America, veterinary regulations in the United States and Canada preclude importation of unsterilized meat from countries with endemic foot and mouth disease. Nevertheless, it appears that in spite of the then historical lows of 1974 and 1975, Argentinian exports trended upwards by an annual average of about 10.9 per cent from 1961 to 1979. However, from 1980 to 1985 this trend reversed to minus 17.9 per cent, illustrating the difficulties experienced by the Argentinian beef industry during this period.

17. Domestic beef consumption trended upward at a faster rate than production during the period 1961-85 (+2.7 per cent per year) largely because of rapid increases during the seventies (on average, +5.8 per cent per year between 1973 and 1981). It should be noted that, historically, the domestic market has always been the most important one for the Argentinian cattle industry. During the sixties, domestic consumption accounted on average for 75 per cent of domestic production, during the seventies for 78 per cent and, from 1980 to 1985 for about 85 per cent.

Australia

18. Trends on the supply side of the Australian cattle industry since 1966 have been distinguished by peaks and troughs associated with changing circumstances within the industry itself as well as significant developments in other industries and the effects of drought. Cattle numbers declined continuously from 1976 to 1984 associated with falling relative profitability levels of beef compared with other enterprises as well as with a succession of droughts. Prior to 1966, fluctuations in cattle numbers and beef production had occurred but had been subdued. From 1944 to 1966 the trend rate of growth of cattle numbers was less than 1 per cent. From 1966 to 1976, however, cattle numbers nearly doubled (from 17,936,000 head to 33,434,000 head). Beef production, between 1967 and 1977, more than doubled (from 895,500 tons to 2,158,000 tons). Between 1976 and 1984, on the other hand, cattle numbers declined by 11,273,000 head (34 per cent), while beef production declined by 910,000 tons (42 per cent) between 1977 and 1984. The basis for this departure from past cyclical behaviour is fairly clear. With regard to the build-up, the period from 1966 to 1973 corresponded to

rapid growth in beef demand and therefore import demand in many countries, but in particular in the United States, Canada and Japan. Beef export returns grew, and producer prices correspondingly increased. The growth in profitability coincided, until 1973, with weakness in international grain and wool markets. Much of the growth in cattle numbers occurred during this period in the beef-producing States of the south-east (i.e. the States of Victoria and New South Wales) where the bulk of beef for the domestic market is produced. Around the mid-seventies, 38 per cent of Australia's cattle population was situated in the northern part of Australia, compared with around 50 per cent currently. The collapse of beef demand in major export markets during 1974, however, led to a general decline in prices on most of these markets. In Japan and the EC this problem was accentuated, in 1974, by sharply higher domestic beef production levels. Both these markets severely restricted imports from mid-1974 to mid-1975. It might be noted that these two markets combined had accounted for roughly 150,000 tons of Australia's exports in 1973. In North America it was not until late 1975 that the problem of weakened beef demand was compounded by major increases in domestic beef production (as cow herds began to be liquidated). As it increased in 1975, 1976 and 1977, Australia also faced quota restrictions in both Canada and the United States. Cattle prices in Australia fell continuously from late 1973 to late 1975 and remained "low" until late 1977. It was evident that cattle herd liquidation was under way by the latter half of 1976. It might also be noted that during 1972-73 prices for both wool and grains increased sharply and stayed at relatively high levels to the end of the decade. The most rapid decline in cattle numbers during this liquidation phase occurred in the States of New South Wales and Victoria where the build-up in cattle numbers had also been the most rapid. At least part of the reason for the continuation of herd liquidation beyond the upturn of prices in 1978 can be attributed to the existence of severe drought conditions in certain cattle producing areas of the country.

19. With regard to exports, the proportion of domestic production exported during the seventies averaged well above the level of the sixties (indicating that the rapid growth in production was due largely to expanded export demand). During the period 1961-70 exports accounted, on average, for 45 per cent of domestic production; this proportion increased to 51 per cent during the period 1971-75, to 55 per cent during the period 1976-80 (and was at 52 per cent from 1981 to 1985). The overwhelming majority of Australian beef and veal exports since the early sixties have been to North America and Japan. From 1970 to 1985 these markets comprised, on average, 73-74 per cent of Australian exports of fresh, chilled and frozen beef and veal (which accounts for about 96 per cent of total bovine meat exports); the United States share alone was over 50 per cent of the total, on average. The Australian cattle industry's single most important market has been, and remains, the domestic market. Since 1960 domestic consumption has accounted for between 40 and 60 per cent of production on a year-to-year basis. Although this proportion has generally trended downward, it has fluctuated greatly depending on the level of exports. While the internal market constitutes a "core" quantity, on a yearly basis, of higher-quality domestic beef production, it also absorbs a residual quantity of "export-quality" beef. The quantity of such beef consumed domestically fluctuates inversely to movements in export prices.

Austria

20. The cattle herd in Austria has for decades been remarkably steady with only relatively minor year-to-year changes. The number of cattle slaughtered has fluctuated rather more than production which has shown a consistent upward trend for many years (at an average annual rate of 2 per cent from 1961 to 1983) reflecting in part higher slaughter weights due to better feeding, rearing conditions and natural selection. Consumption, though, has increased at a slower pace than production: about 1.5 per cent per year on average during the same period. Unlike some other European countries veal production in Austria has remained relatively stable over the years, although, as in other countries, the proportion of veal produced compared to beef has decreased considerably (from 15 per cent in 1965 to 8.5 per cent in 1983). Austria has for many years exported relatively large quantities of live bovine animals, both for breeding purposes and for slaughter. In spite of important variations from one year to another, exports of live cattle trended upwards during the sixties and beginning of the seventies (by an annual average of 10-11 per cent from 1961 to 1972), but the trend has been reversed since around 1973 (-3.3 per cent from 1973 to 1984). It appears that as a result exports of beef and veal began to rise significantly at the end of the seventies, and from 1979 onwards Austria became a net exporter of bovine meat with imports declining by nearly 16 per cent on average per year, and exports rising by 23 per cent, reaching some 43,000 tons in 1984. This evolution has been exacerbated since 1980 by a marked decline in domestic consumption (160,000 tons in 1984 against 188,000 tons in 1980) and a continued growth (although at a slower pace than in previous years) of production. Exports of meat may take place with the help of export subsidies when domestic prices are higher than those on world markets.

Brazil

21. Brazil undoubtedly possesses one of the world's largest cattle herds, estimated at 136,641,000 head in 1985. Cattle raising activities are concentrated mainly in the south-east, centre-west and south regions. In spite of the efforts made to expand these activities in the north and north-east, these regions still represent a very small percentage of national output. Cattle is mostly raised on pasture lands and is subject to seasonal variations, losing weight during the off-season periods bringing slaughter rates down. Due to the extensiveness of the country, off-season periods do not occur at the same time in the different regions, thus allowing the transport of live cattle from one region to another, in particular to the south-east where consumption of beef is by far the highest of the country. The low annual slaughter rate in Brazil (around 11 per cent) may be one of the causes of the relatively low per capita consumption which, although subject to annual variations, seems to have been relatively stagnant since the sixties averaging 17.0 kgs per year. Total consumption, after having slowly increased during the sixties and until 1973 inclusive, fell drastically in 1974 due to the general economic events of that period. Since then, it has gone through a series of ups and downs. Even though between 1975 and 1985 an upward trend of 2.6 per cent on average per year can be noted, this is only due to the population growth. This is clearly illustrated by the declining trends of per capita consumption from 1979 to 1985 (-3.8 per cent on average per year), reflecting a lower purchasing power of consumers.

22. Moreover, the strong increase in poultry and pork production during the seventies should also be taken into account. The prices of these products fell sharply compared to beef prices, thus stimulating the substitution of the consumption of beef for that of poultry and pork. During the 1970's the level of prices of poultry and pork was comparable to that of beef. At the end of the decade, due to better techniques and productivity gains, the price of poultry had fallen by about 46 per cent compared to the beef price and the price of pork by about 60 per cent. During the same period, per capita consumption of pork and poultry passed from 4 kgs to 9 kgs and from 4 kgs to 10 kgs respectively.

23. Brazil's cattle industry has been mainly concerned, over the years, with production for the domestic market. Thus, exports represented traditionally, until the seventies, a relatively small proportion of overall production of beef and veal (about 3 per cent). Since the beginning of the seventies however, exports of canned and other prepared meats have increased sharply (from 34,000 tons in 1971 to a record level of 325,000 tons in 1984) while exports of fresh, chilled and frozen meat, after having decreased almost continuously during the seventies, have risen dramatically since 1980 (7,600 tons) reaching 187,000 tons in 1985. This means that since the beginning of the eighties, total exports have not only represented on average some 17 per cent of production, but also that Brazil has become the third most important exporter of beef and veal.

24. Imports of beef were generally low until the seventies and linked to the domestic supply situation. They tended to increase during the 1970s and rose sharply in 1978, reaching a record level of 117,400 tons. This appears to have been the result of rising domestic prices. Since then, imports have fallen and reached a very low level in 1982, rising again afterwards. It should be noted, however, that beef imports are related more to the "draw-back" system used by Brazil for its exports of canned meat, and to the increased overall export performance, than to the needs of domestic demand.

Bulgaria

25. Between 1960 and 1982 cattle numbers in Bulgaria grew some 28 per cent. Although there were important increases between 1960 and 1963, numbers decreased again to around the level of 1960 by the end of the decade. The net gain in cattle numbers took place during the seventies in accordance with Government policy to increase and improve the stock. Although fluctuating substantially over the last two decades, production of beef and veal had more than doubled by 1984 compared to 1960. Some of this increase was due to higher slaughter weights. Contrary to what appears to have happened in some other European countries, production of veal has increased in Bulgaria in the last two decades both in absolute figures and relative to beef production (in 1975 veal production represented around 61 per cent of total bovine meat production, compared to around 66 per cent in 1984). This would partly reflect consumer preferences in Bulgaria but also the importance of veal in Bulgaria's export trade. Compared to many other European countries, consumption of bovine meat is still fairly low in Bulgaria. However, since 1960 per capita consumption appears to have more than doubled, reaching 10.6 kgs in 1981. Bulgaria is a net exporter of bovine meat and live animals. Exports have, in spite of

strong year-to-year fluctuations, tended to increase since the sixties much in line with production increases. Bulgaria has, however, also been affected by various problems on the world market and saw for instance its exports decrease substantially in 1974 as a result of increased import restrictions in major markets.

Canada

26. During the sixties, or more precisely between 1959 and 1969, the Canadian cattle industry experienced a complete "cycle" in cattle numbers and beef production. From 1970 to 1975, cattle numbers entered a rapid build-up phase basically due to the sharp increase in cattle prices between 1971 and 1973, arising from strong beef demand and the weakness of grain markets between 1969 and 1972. The liquidation phase of the cycle began in 1976 and was, in its first year, exaggerated by weakened beef demand and sharply higher prices. In total, cattle numbers grew by 25 per cent between 1969 and 1975, then fell by 15 per cent to 1980. What is interesting about this herd liquidation phase, is that it was not yet finished by 1985 and it is probably continuing at present. In fact, when cattle numbers grew in 1981, it was thought that a new herd rebuilding phase had started. However, factors such as weakening cattle prices, sharply increased production costs at the beginning of the decade, the high level of interest rates and severe drought conditions in Western Canada, coupled with declining demand, provoked a relapse into herd liquidation. In 1985, cattle numbers, at 10,980,000 head, were at their lowest level since the beginning of the sixties.

27. Estimating Canadian "self-sufficiency" in beef and veal is a tenuous exercise due to the large volume of trade in live cattle and calves between Canada and the United States. Canada exports both slaughter cattle and calves and feeder cattle and calves to the United States, and imports slaughter cattle and calves in return. Nevertheless Canada's self-sufficiency declined rather rapidly from the late sixties to the mid-seventies. However, this decline concerned almost exclusively manufacturing-quality beef. This "short-fall" was met by imports from Australia and New Zealand. The reasons for the growth of imports were related to both demand and supply factors. With respect to demand there was rapid growth in the "fast-food" industry in the late sixties and seventies plus rapid growth in demand for "hamburger" meat generally. With regard to supplies, the availability of beef cows for slaughter declined from 1969 to 1975, corresponding to the growth in cattle herds. Additionally, the number of dairy cows available for slaughter declined continuously from the mid-sixties to the mid-seventies.

28. Canada only began making significant imports of beef and veal in 1969. Imports of fresh, chilled and frozen beef and veal trended upward to 1976 (to 95,000 tons), fell sharply in 1977 and remained relatively stable until 1983. In 1984, imports increased sharply to 117,000 tons, and in 1985 Canada restricted imports of beef and veal which nevertheless reached some 116,000 tons. Canadian exports of beef and veal (virtually all of which are to the United States) grew steadily from 1978 to 1985 (from 34,000 tons to 117,000 tons). This growth in exports relates on the one hand to higher per capita supplies of manufacturing beef in Canada than in the United States, and on the other to a sharp decline in the Canadian dollar in relation to the United States dollar over this period.

Colombia

29. During the sixties and the seventies until 1977, Colombian cattle numbers have risen steadily (except in 1965 when they fell by about 12 per cent) and in 1977 totalled 24,468,000 head compared to 15,400,000 head in 1960. From 1978 until the beginning of the 1980's, the cattle industry went through difficult years and producers began to slaughter their animals. Also, female cattle slaughtering increased sharply to reach almost 45 per cent of the total slaughter mix in 1982. The displacement of investments provoked by the attraction of a capital market with speculative activities giving quicker profits at lower risks, the increase in beef demand provoking premature liquidation and social conflicts in the cattle-raising regions with resulting insecurity were the major reasons advanced to explain this evolution. Although fluctuating somewhat, beef and veal production during the sixties and the seventies showed annual average increases (3.0 per cent during the 1960's and 2.6 per cent during the 1970's) close to those presented by cattle numbers. Beginning in the last years of the seventies, reflecting the herd liquidation, production rose sharply until 1981, when it reached the record level of 652,000 tons. In 1982 and 1983, production dropped as a result of herd rebuilding and has begun to rise again since then. Like production, consumption of bovine meat has increased over the years, in spite of some fluctuations from year to year. In 1981, as a consequence of the increase in output, it reached the record level of 630,000 tons, or 24.0 kg. per capita (compared to 445,000 tons, or 20.9 kg. in 1971). In 1982-83, sharply increased retail prices provoked a decline in both total and per capita consumption. A recovery seems to have been under way since 1984.

30. Colombia is a traditional exporter of beef and veal, whose sales abroad rose steadily during the second half of the sixties, reaching a record 32,000 tons in 1973. Exports then declined until 1977 as a result of the decreased international demand, and having recovered in 1978, have declined since then (except in 1981) to reach, in 1985, their estimated lowest level since 1968. The main characteristic of the Colombian bovine meat export sector has been, over the years, its strong dependence on the Venezuelan market and, since 1975, its decrease in exports of live cattle to the benefit of beef and veal. Factors such as the devaluation of the Venezuelan peso and the decline in world oil prices often have repercussions on the Colombian export performance. That was the case when an important devaluation of the Venezuelan peso occurred in 1984. Exports to that market fell from 11,000 tons in 1983 to 3,000 tons in 1984.

Egypt¹

31. Cattle numbers in Egypt were estimated at 1,825 million* head in 1984, up 17 per cent from 1963 but down 14 per cent compared to the peak year 1972. Since that year cattle numbers have not stopped declining. The cattle herd is kept primarily for milk production and it has been estimated that 80 per cent of the dairy herd is scattered over a million small holdings. The number of buffalo in the country has increased from 2,135,000 head* in 1968 to 2,410,000* head in 1984. This increase is explained, inter alia, by the conviction that buffalo are particularly

¹ IMC/W/12

*FAO production and trade yearbooks

well suited to the domestic conditions and needs and also because they have a potential of comparatively high return. Egyptian production of meat has been increasing relatively slowly. The figures vary according to sources but the FAO figures suggest a growth in total meat output from 375,000 tons in 1973 to 543,000 tons in 1984 (an average increase of 3.6 per cent a year). Beef and veal production averaged some 123,000 tons annually and has shown very little growth in the last decade but, according to estimates by the FAO, expanded by more than 10 per cent in 1983 compared to year earlier (120,000 tons for 1982 and 133,000 tons in 1983), and was estimated at 136,000 tons in 1984. Production growth of buffalo meat was slightly more pronounced (from 103,000 tons* in 1969/71 to 134,000 tons* in 1984). Calculations made on the basis of FAO estimates of production and imports suggest that total consumption of meat in Egypt increased from 386,728 tons (10.8 kgs per capita) in 1973 to 809,010 tons (17.7 kgs) in 1984. The preferred meat seems to be that of bovine animals (beef and buffalo meat), total consumption of which has increased some 201,000 tons since 1973 to 433,000 tons in 1984. Beef consumption, for which consumer subsidies are given, increased from 129,000 tons to 189,000 tons from 1973 to 1980 (3.85 kgs and 4.50 kgs per capita respectively).

32. Imports of cattle, which fluctuated considerably during the seventies with a peak of 45,250 head in 1973, have been rising steadily since 1980, and were estimated at 135,000 head in 1984*. Bovine meat imports (frozen beef, veal and buffalo) have registered a substantial increase in recent years from 1,776 tons* in 1968 to an estimated 163,000 tons in 1984.

European Communities

33. The general trends in cattle numbers¹, beef and veal production, consumption, and cattle prices of the EC¹ broadly paralleled those in other major beef and veal consuming and importing countries or regions during the sixties and early seventies. That is to say that beef and veal consumption in the EC grew rapidly during this period (an average rate of 2.2 per cent per annum between 1961 and 1973) and at a faster rate than that of beef and veal production (1.7 per cent per annum). Production growth paralleled that of cattle numbers. From 1974, however, trends in the general market situation in the Community diverged from those being experienced elsewhere in the world. After an initial sharp increase in 1974 beef and veal production continued on an uptrend until the end of the decade. Production increased at an average annual rate of 0.9 per cent between 1975 and 1985. Although consumption also trended upward (after only a "modest" increase of 3.5 per cent in 1974, compared to the production rise of 19 per cent in the same year) between 1975 and 1985, it was at a slower pace than that of production, i.e., 0.6 per cent per year. The events of 1974 and after were such as to change the Community from a net deficit producer to, on average, a net surplus producer. Between 1961 and 1973, the countries of the EC averaged, collectively, about 92 per cent of self-sufficiency, whereas from 1974 to 1985 they averaged about 102 per cent self-sufficiency.

¹Nine member countries
*FAO production and trade yearbooks

34. One of the more interesting aspects of beef and veal production in the EC, since 1975, is that it has not been clearly paralleled by an increasing trend of cattle numbers (indeed, cattle numbers even trended down at an average annual rate of 0.12 per cent per year between 1975 and 1985.) A large part of the initial sharp increase in EC production in 1974 and the persistence of this increase in subsequent years was due to a major shift away from the slaughtering of calves to retention of these for feeding out to mature weights. Thus, while cattle numbers increased by about 10 per cent from late 1971 to late 1973 (cow numbers by only 7 per cent) then trended down slightly, beef and veal production increased by 19 per cent during 1974 and continued to increase thereafter. Calf slaughter began trending down in the late sixties, but the decline accelerated in 1971-72, and has been maintained at a level well below that of the sixties since then. The trend away from slaughtering of calves for veal, although sustained, slowed down after 1974-75 (i.e. the major adjustments occurred between 1970 and 1975). Thereafter the gains in beef and veal production have been due more to increased average carcass weights of cattle and calves slaughtered, suggesting more intensive feeding and finishing.

	<u>Cattle and calf slaughter, EC (9)</u>			
	<u>1960-69</u>	<u>1970-75</u>	<u>1976-80</u>	<u>1981-84</u>
	(000 head)			
Cattle slaughtering	17,218	19,571	20,995	21,040(21,396) ^{1/}
Calf slaughtering	10,637	7,565	6,942	6,804 (6,876) ^{1/}
Total	27,855	27,136	27,937	27,844(28,272) ^{1/}
Calves as % of total	38.2	27.9	24.8	24.4(25.2) ^{1/}

	<u>Average carcass weights, EC (9)</u>			
	<u>1960-69</u>	<u>1970-75</u>	<u>1976-80</u>	<u>1981-84</u>
	(kg.)			
Cattle	255	271	281	291 (290) ^{1/}
Calves	70	96	108	116 (116) ^{1/}

^{1/} Figures in brackets are for the EC(10)

Source: Eurostat, Animal Production Books

Briefly, therefore, it seems evident that the beef production gains in the EC, since the sixties, were due rather more to more intensive utilization of cattle (i.e. reduced calf slaughter) and increased productivity (increased carcass weights) than to any expanded reproductive potential as would have been evidenced by an uptrend in cow numbers. In 1980, beef and veal production reached a cyclical peak and in the subsequent two years decreased by some 6 per cent as the result of both lower slaughter levels and carcass weights. In 1983, cyclical and trend increases in cattle numbers and productivity (expansion of dairy herd, higher slaughter rates and higher carcass weights) translated into increased production. The situation was exacerbated in 1984 by the implementation by the EC of measures to reduce milk output. Production of beef and veal increased sharply, 8.4 per cent, to a record level of 7,499,000 tons and, although declining, remained high in 1985.

35. The deceleration of the rate of growth of beef and veal consumption in the EC during the seventies and the first half of the eighties relates, inter alia, to slower rates of economic growth reflecting world-wide "stagflation" and to the increases in beef market prices (in nominal terms, average live weight adult cattle prices increased at an average rate of 3.7 per cent per annum between 1961 and 1970, at 4.8 per cent per annum between 1971 and 1980 and at 2.4 per cent per annum between 1981 and 1985) both absolutely and relative to market prices of other meats. Per capita consumption of bovine meat in the EC was virtually static during the seventies (reflecting a decrease in veal consumption and an increase in beef consumption) implying that growth in total consumption was due primarily to growth in population. From 1980 to 1982, consumption declined as the result of the difficult economic conditions and rising unemployment rates. Improvements in the general economic conditions has allowed a certain recovery of per capita consumption since 1983/84.

36. The shift from deficit producer to surplus producer of beef and veal was a major cause of the change in the EC's trade position in beef and veal and live cattle and calves with third countries. The policy measures taken since 1973 to cope with this basic shift (both internal measures and trade measures) also appear to have influenced the change in trade position. In essence, the EC has changed from being a major net importer of beef and veal prior to 1974 to being a net exporter since 1980. Keeping in mind that a record high level of beef and veal imports occurred in 1973, therefore representing a rather poor base from which to compare subsequent events, it could be noted that imports of fresh, chilled and frozen beef and veal declined from 783,000 tons (carcass weight equivalent) in 1973 to 106,000 tons in 1975, and then fluctuated between 175,000 and 240,000 tons to 1985. Exports of fresh, chilled and frozen beef and veal increased from 62,000 tons in 1973 to 204,000 tons in 1975, declined to 87,000 tons in 1977 then increased steadily to 1980 (to 545,000 tons), declined in 1981 and 1982 and rose again in the subsequent years reaching a peak of 692,000 tons in 1985. The EC remained a major importer of live cattle and calves even after 1980. In spite of strong annual variations, imports trended downwards by only an annual average of -0.2 per cent from 1972 to 1985, while exports trended upwards sharply, by 24.3 per cent during the same period.

Finland

37. Cattle numbers in Finland have, as a result of deliberate policy measures to reduce milk production, tended to decrease since the late sixties. In 1985 cattle numbers were 21 per cent lower than in 1969. The reduction has affected, in particular, cow numbers but also calves. Slaughter rates dropped by around 26 per cent in the seventies compared to the previous decade (and by a further 11 per cent from 1980 to 1985). On the contrary production increased by around 20 per cent (and by some 11 per cent from 1980 to 1985) indicating an increase in average slaughter weights and a big drop in calf slaughter (which decreased by nearly 600 per cent between 1960 and 1979 and by a further 42 per cent from 1980 to 1985). During the sixties and the first half of the seventies total beef consumption increased regularly each year. In 1976, however, consumption of beef started to decline and, after a brief recovery in 1979, has since then trended downwards (-2.0 per cent on average per year between 1980 and 1985). It would appear that competitive pork prices are in part responsible for this. Finland imports very little beef since domestic production is generally sufficient for domestic requirements. Imports are used mainly as a means to keep domestic prices and supply stable. The goal in Finland is to keep production and consumption in balance but a small surplus is allowed, occasioning from time to time the need to export some quantities of beef. However, since the beginning of the eighties, and as a result of the sustained increase in production and declining consumption, exports have risen sharply, averaging some 13,000 tons yearly since 1981, compared to an annual average of about 2,000 tons over the previous twenty years.

Hungary

38. Cattle numbers in Hungary in the last two decades have remained fairly stable. Off-take rates have varied on a year-to-year basis between 18 and 25 per cent. The average off-take rate from 1960-1969 was somewhat higher (around 9 per cent) than that of 1970-79. Production, however, showed an appreciable increase, when comparing one decade with the other: average production in the seventies was some 15 per cent higher than in the sixties. These increases can be fully attributed to considerably higher slaughter weights in the seventies. It would seem that these productivity gains can be ascribed to the reforms introduced in the management system in 1968 and also to the support programmes implemented a few years later. Hungary is a traditional exporter of live bovine animals and meat. However, since the beginning of the eighties, production has gone through a series of ups and downs and although it can be noted that in 1983, at 138,000 tons, it was some 26 per cent higher than the annual average of the sixties, and some 10 per cent higher than the annual average of the seventies, the trend is now clearly a declining one, averaging some minus 3.9 per cent per annum. The production increases noted in the past two decades contributed almost exclusively to an increase in exports, whereas domestic consumption has not risen appreciably (the self-sufficiency ratio increased from an annual average of 113 per cent in the sixties to 133 per cent in the seventies). In fact, consumption of beef and veal, on a per capita basis, has been declining since the

last half of the seventies. Exports of beef and veal increased by some 40 per cent in the seventies compared to the previous decade and by a further 47 per cent from 1980 to 1984. The increase in the first half of this decade has been possible, in spite of the declining trends in production, thanks to the still very high self-sufficiency ratio (about 132 per cent on average from 1980 to 1985).

Japan

39. The most significant trend in Japan as regards bovine meat during the past twenty-five years has been the rapid growth in beef consumption. On a per capita basis beef consumption rose from an average of just under 2 kgs per year during 1961-65 to an average of almost 6 kgs during 1981-85. In terms of total consumption, it grew from about 195,000 tons to about 781,000 tons. The growth in consumption broadly paralleled the increase in consumer disposable income. The rate of expansion of consumption, while remaining high, slowed down in the seventies and eighties relative to the sixties, growing at an average annual rate of 6.5 per cent in the last fifteen years compared to more than 11 per cent in the sixties.

40. Beef and veal production in Japan has also risen rapidly during the last twenty-five years. It grew at an average annual rate of 9 per cent in the sixties and 5.5 per cent between 1971 and 1985. A rather complex mixture of factors have influenced Japanese beef production since 1960, but two trends seem to be of most importance. Firstly, since 1960, the cattle herd has changed from one composed predominantly of beef breeds to one composed mainly of animals of dairy breeds. This shift reflected both an uptrend in the number of cattle of dairy origin and a downtrend in those originating from beef breeds, the latter reflecting, in part, the mechanization of Japanese agriculture and, therefore, decreased requirement for the native draught (Wagyu) cattle. Although rationalization of Wagyu cattle holdings has been occurring, these still tend to be small and have had difficulty in keeping pace with the rising costs of production. Cattle of dairy breeds now account for roughly two thirds of total cattle numbers in Japan versus less than half in 1960.

41. Secondly, there has been a sharp decrease in dairy calf slaughter, particularly since 1970, which, accompanied by the increase in dairy cow numbers, has meant that a considerably increased share of Japanese beef production has originated from dairy steers. Moreover, there has been an increased "off-take" rate from the dairy herd. This permitted beef production to expand at a faster rate than cattle numbers throughout the seventies to date (5.5 per cent versus 1.7 per cent). Notwithstanding this expansion it did not match the growth in consumption. "Self-sufficiency" declined from an average of 95 per cent in the period 1961-65 to 68 per cent in the period 1971-1985. The major part of the growth in beef imports, up to 1979, was constituted of frozen boneless beef destined in large part to either restaurants or the retail markets. Chilled beef imports, which grew relatively rapidly from 1970 to 1977, have been trending down since 1978. Since 1979 the proportion of "high-quality" beef in frozen beef imports has tended to increase quite substantially, in particular as a result of understandings with certain exporting countries. The divergent trends in production of dairy and Wagyu have been reflected in the price trends for each quality of beef.

While the wholesale price of Wagyu steers has risen consistently and rapidly (from 1,283 Yen per kg. for second-grade steer carcasses in 1973 to 1,786 Yen per kg. in 1983), that of dairy steers has trended upward more slowly (from 1,022 Yen per kg. in 1973, for second grade steer carcasses, to 1,298 Yen per kg. in 1983).

New Zealand

42. During the sixties and seventies, the New Zealand beef cattle industry was subject to the same cyclical adjustments in cattle numbers and beef production as was experienced in other major beef exporting and importing countries. Beef cattle numbers grew steadily from the early sixties to 1975, and then declined from 1975 to 1979. Herd rebuilding appeared to begin in 1980 but the industry moved again into liquidation in 1981, due in part to adverse weather conditions, a liquidation which lasted until 1984. Dairy cattle and calves currently constitute about 37 per cent of total cattle numbers in New Zealand (compared to less than 10 per cent in Australia, around 13 per cent in the United States and about 20 per cent in Canada). Although the proportion of dairy to beef cattle has declined over the last twenty-five years (from roughly equal numbers in 1961) this was due more to the rapid increase in beef cattle numbers than to decreased dairy cattle numbers.

43. The beef cattle industry's most rapid period of growth was between 1966 and 1975 (during which time beef cattle numbers increased by 63 per cent), a fact largely related to the expansion of demand for imported beef in the United States and Canada. It also corresponded, however, to a period of relative weakness in the wool and sheepmeat markets, to a period of over-production in the dairy industry, and to weakness in international dairy product markets. The period of decline, from 1975 to 1979, was associated with decreased demand for imported beef in Canada and the United States and to improvement in the sheepmeat and dairy markets. The herd rebuilding, which began in 1980, was related to the sharp recovery in export prices during 1978 and 1979 and the relapse into liquidation in 1981 was due (apart from adverse weather conditions) to the world-wide economic recession and producers' lack of confidence in the market. In mid-1983, cattle numbers started to increase, as a result principally of the general strengthening in producer cattle prices during 1982-83. 1984 and 1985 saw a continuation of herd rebuilding.

44. Beef and veal production in New Zealand more than doubled from the early sixties to the mid-seventies. The growth trend in production (6.6 per cent per year on average) between 1961 and 1976 significantly exceeded that of cattle numbers. Higher average carcass weights arising mainly from the increased proportion of beef cattle and a downtrend in calf slaughter were largely responsible for the divergent trends. Production peaked at 600,000 tons in 1976 (compared to 233,000 tons in 1961) before trending down to less than 500,000 tons in 1980. The first few years of the eighties saw two years of production increases due to the restart of liquidation, followed by two years of decreases. Since 1985 production has again been increasing.

45. Beef and veal exports also more than doubled from the early sixties to the mid-seventies based largely on the rise of demand in North America. Since the growth of beef and veal production was founded mainly on expansion in the export market, exports have accounted for an increased share of total production. This share which amounted to less

than 40 per cent in the early sixties averaged over 46 per cent in the seventies, and reached 52 per cent in 1980-85. Currently, over 80 per cent of New Zealand's beef and veal exports are to North America, compared to less than half in the late fifties and early sixties.

46. Due to New Zealand beef industry's orientation towards the North American market, price trends for cattle in New Zealand largely reflect those in North America, adjusted for fluctuations in the exchange rate of the New Zealand dollar against the US dollar. Consequently, prices, which were depressed from 1974 to 1977, increased sharply in 1978-79 and have weakened somewhat since. The weakening, however, has not been proportionate to that for manufacturing beef in the United States since the value of the New Zealand dollar depreciated between 1980 and mid-1985.

Norway

47. Cattle numbers in Norway decreased by around 13 per cent on average in the seventies when compared to the sixties. However, between 1976 and 1981 cattle numbers increased and the net gain by 1981 was some 9 per cent (totalling 1,017,000 head). In the early eighties, governmental measures were introduced to cope with surplus production problems, resulting by 1985 in a herd reduction of some 4 per cent. Slaughter rates have followed fairly closely the evolution of cattle numbers. On average off-take rates were 15 per cent higher in the sixties than in the seventies. However, slaughter rates have trended upwards since 1977 (+11 per cent in 1985 compared to 1977). Production of beef and veal increased on average by 10 per cent in the seventies compared to the sixties, indicating higher slaughter weights and a 75 per cent decrease in calf slaughter. As a result of the calf premium paid from August 1982 to September 1985 (Nkr 700- for calves weighing less than 30 kgs) calf slaughter increased strongly in 1982 and 1983 and remained at higher than previous levels in 1984 and 1985. Total consumption of beef and veal rose by some 47 per cent between 1965 and 1980, but the rate of increase has been appreciably higher since the introduction of consumer subsidies in 1970. A 12 per cent drop in consumption occurred in 1981, mainly as a result of a 50 per cent cut in consumer subsidies. With the exception of 1982, consumption in the eighties has remained well below that of the seventies in spite of governmental efforts to increase consumption. Norway was until 1981 a net importing country which occasionally exported any surplus production, if necessary with the help of export subsidies. Imports increased considerably in the seventies (by around 74 per cent) compared to the sixties, reflecting a self-sufficiency ratio of around 82-85 per cent in the seventies, compared to 95-100 per cent in the sixties. Due to ample domestic supplies, imports have been restricted since 1981. In 1983, Norway exported a record level of 7,300 tons of bovine meat but in 1985, exports fell to a mere 600 tons.

Poland

48. In the last twenty-five years, the Polish cattle herd has seen a net gain of around 1.9 million animals. During the 1960s the herd gained regularly year to year, but in the seventies numbers fluctuated, although for the decade as a whole there was a 10 per cent net gain. Between 1960 and 1980 the level of slaughter increased by some 10 per cent while that of beef and veal production increased by some 50 per

cent, indicating a substantial increase in slaughter weights. This appears to be due in part to the decreasing number of calves being slaughtered relative to adult cattle, as well as to increased weights of those calves and other slaughter animals. After a sharp decline in 1981, both slaughter and production have increased erratically by 4 per cent and 9 per cent respectively. The increased production has been partly reflected by a rise in consumption of beef and veal. Although fluctuating considerably in some years, reflecting supplies available for home consumption, per capita consumption rose by some 5 kgs between 1971 and 1980 (from 13 kgs to 18.5 kgs). However, due to economic difficulties and meat shortages on the domestic market, consumption dropped by some 16 per cent in 1981, a drop that continued the following year. By 1985, consumption had recuperated somewhat (16.3 kgs per capita) as a result of substantial increases in domestic production. Poland is a traditional exporter of bovine animals and meat. Exports of beef and veal showed a marked increase on average for the decade 1971-1981 (+57 per cent) compared to 1960-1970 (an average of 21,520 tons in the sixties and of 3,370 in the seventies) although there were rather sharp year-to-year fluctuations with a peak in 1975 (71,500 tons) and a low in 1960 (2,000 tons). In 1982 exports reached their lowest level since 1960. Although recovering somewhat, they have remained at relatively low levels since.

Romania

49. The cattle herd in Romania increased on average by 1.45 per cent per year between 1961 and 1984 or by more than 2.5 million head. The length of the cattle cycle has fluctuated strongly but in the sixties and seventies a growth period of five to seven years was usually followed by a liquidation period of only one to two years. In the eighties, an exceptionally long period (three years) of liquidation occurred due to the difficult economic situation. Slaughter has increased at a lower rate (1.18 per cent per year on average) than that of cattle numbers, reflecting government policy to increase and improve the cattle herd. Between 1961 and 1979, production of beef and veal trended upwards by around 1 per cent per year on average, although strong fluctuations have occurred from year to year. In 1980 and the years following, production decreased reaching in 1982 the lowest level since 1969. Figures for 1984, however, indicate that production has started to expand again. As a result of efforts to increase slaughter weights, production of veal is small and falling in Romania. Consumption of beef has grown by some 22 per cent in recent years but remains still low (around 11 kgs) compared to consumption of pork and poultry (total consumption of meat is around 70 kgs per person). Romania is a net exporting country of live cattle and meat. Exports of meat increased more than five times between 1970 and 1979. Due in part to the 10 per cent decrease in slaughter and production levels in 1980 and in part to market access difficulties, exports of fresh, chilled and frozen bovine meat dropped in that year (by 33 per cent). Further drops were registered in 1981 and 1982. No figure is available for 1983, but in 1984 exports increased by nearly 200 per cent compared to 1982, as a result of the production increase.

South Africa

50. Over the last twenty-five years the South African cattle herd has remained fairly stable with a long-term tendency to decrease. Since 1961, there have been three periods of liquidation, mainly due to drought conditions, one between 1961 and 1967 when the herd diminished by some 1,700,000 head, the second one between 1978 and 1980 when it decreased by around 1,100,000 head and a third between 1983 and 1985 which resulted in a loss of 377,000 head. Liquidation appears to have stopped in all three instances due to the cessation of drought conditions. Production of bovine meat, although trending upward since the late forties, has fluctuated greatly from one year to another. Peaks were achieved in 1979 and 1984 while the lowest level of beef production was reached in 1974, following several years of herd rebuilding (there is a difference of almost 340,000 tons between the lowest production year and the peak year). Production, at 636,000 tons, was 45.5 per cent higher in 1985 than in 1961. Total beef and veal consumption in South Africa increased by around 20 per cent in the seventies compared to the previous decade. After an increase of auction prices of 49 per cent in 1980, consumption dropped by 7 per cent in 1981. However, due to near record production levels and relatively stable prices, consumption has increased significantly in the last few years, reaching a level in 1985 which was 42 per cent higher than in 1961. As a result possibly of continuous price increases and the availability of cheaper meats, especially chicken and pork, per capita consumption trended downwards in the sixties and seventies. Although there have been occasional increases (for instance in 1964, 1972 and 1977) per capita consumption declined by some 28 per cent between 1961 and 1981 before picking up somewhat in 1982 and 1985. South Africa is usually a net importer of live animals for slaughter, as well as meat. In the past, it has imported between 11 and 27 per cent of its requirements. Normally, beef is imported from neighbouring countries, including those with which South Africa maintains a customs union. Since 1975 South Africa has exported only small quantities of beef. Before that year, exports were more substantial although hardly ever large, except perhaps in 1972 (64,800 tons). These exports are carried out as a means of stabilizing the supply of meat and maintaining domestic prices at a reasonable level. When the prices on the export market are lower than on the domestic market, assistance is granted to exporters from the Meat Board's stabilization fund. The large stocks which South Africa accumulated in 1984, were absorbed by the domestic market in 1985 instead of being exported as expected.

Sweden

51. In the past twenty-five years, cattle numbers in Sweden have slowly trended downward. Currently the cattle herd is some 24 per cent smaller than in 1961. Off-take rates have tended to increase over the years while slaughter weights have fluctuated but still trended upwards. Production of beef has increased faster than that of slaughter, due to heavier animals. As a result of consumer resistance to higher food prices, production and consumption declined considerably in 1971-1972 before starting to pick up again with the introduction of a price freeze and food subsidies in 1973. The preferred meat in Sweden is pork, which is also lower priced than beef as a rule. (Another product of

importance is fish which could also be considered to compete with beef to a certain degree.) With few exceptions, veal production and consumption have steadily decreased for at least the last twenty-five years. In 1985, production of veal was approximately 38 per cent of veal production in 1957, corresponding in that year to 33 per cent of bovine meat production, while the share of veal production in that of total bovine meat had dropped to around 8 per cent in 1985. The explanation for this would mainly appear to be the higher total value a farmer could get for an animal at mature weight. For many years, Sweden has been pursuing a policy of balanced supply and demand and is stabilizing the domestic market prices through a regulated import and export policy. Of the last twenty-nine years, Sweden has been a net importer of beef and veal for fourteen years (1957-1962 and 1973-1978) and a net exporter for eighteen. The export periods broadly reflected an increase in production not accompanied by a proportionate increase in domestic consumption. The same situation exists at the present time. Since 1979, production has surpassed consumption, especially since 1981 when consumption dropped due to reduced, and eventually eliminated food subsidies, before picking up again as a result of sales campaigns in 1984 and 1985 and of improved economic situation.

Switzerland

52. The cattle herd in Switzerland has trended upwards for many years with occasional drops in numbers, mainly due to forced slaughterings because of adverse weather conditions. Most of the Swiss cattle herd is raised for dairy purposes but specialization did start a few years back and a few per cent of the herd are now beef cattle. The objective for cattle breeding, fixed in legislation, is to produce not more than 85-90 per cent of the heavy cattle required for meat, the rest being provided by imports. Production of beef has increased steadily for the last twenty years or so (by some 51 per cent between 1965 and 1985). Part of this increase appears to be due to increased slaughter and part to a gain in slaughter weights. In 1980, for example, the increase in production was due to an unusual amount of dairy cows being slaughtered as a result of adverse weather conditions, while the rise in 1984 was due to the expansion of the herd as a result of exceptionally good fodder conditions in that year. Production continued to increase in 1985. Veal production has remained fairly stable over the years although, as in other countries, veal's share of total bovine meat production has decreased (42 per cent in 1965 compared to 22 per cent in 1985). Consumption of beef and veal has increased by some 28 per cent since 1965 but a slump in the upward trend can be noticed between 1972 and 1975, due to the economic recession at that time. Another drop in consumption can be noticed in 1982-83 reportedly due to increased retail prices and to general economic conditions. Switzerland is a traditional importer of bovine meat and prior to 1974 the country imported 16-24 per cent of its import requirements. Since 1975 between 6 and 11 per cent of its needs have been imported, except during 1980 when, for the exceptional reasons mentioned above, less than 6 per cent were allowed.

Tunisia

53. Estimates of cattle numbers in Tunisia suggest a gain of only around 13 per cent in 1985 compared to 1961. The relatively small difference in numbers between 1961 and 1985 is due to a loss of almost 40 per cent of the herd in 1978 and 1979. It would appear that the reason for this was a number of serious drought years which affected all

agricultural production in Tunisia between 1976 and 1979. Another weather-related liquidation occurred in 1981 and 1982. Since 1983, the cattle herd is being rebuilt. Cattle slaughter has almost doubled since the early sixties and so has production, indicating only a modest increase in slaughter weights. Since 1975, beef consumption in Tunisia has quintupled (from 12,000 tons to 60,800 tons in 1985), aided by stable retail prices (fixed by the Government) and by Government-paid consumer subsidies. In the last decade, in order to complement domestic production to meet consumer demand, Tunisia has been importing increasing quantities of beef, mostly in the form of live animals for slaughter. Meanwhile, imports of fresh, chilled and frozen meat have shown a higher rate of increase. In 1985 Tunisia imported 1,000 per cent more bovine meat than in 1975, whereas live animal imports had risen by some 200 per cent in the same period.

United States

54. During the last thirty years or so cattle numbers, production, consumption, imports and prices of bovine meat have been characterized in the United States by a marked upward trend. From 1950 to 1980, cattle numbers increased by approximately 43 per cent; production of bovine meat by 104 per cent; consumption by 121 per cent; imports by 637 per cent; and prices by 168 per cent. Between 1975 and 1985, however, cattle numbers decreased by some 16.9 per cent while production in 1985 was 13.3 per cent below its record level in 1976. Cattle numbers in the United States are, as in other countries, subject to cyclical changes. The average length of a cycle has been about ten years (approximately five years of growth succeeded by five years of liquidation). Notwithstanding the tendency toward cyclical behaviour, the actual cycle between 1957-58 and 1974-75 is difficult to detect. However, the strong growth in bovine meat demand combined with marked gains in the productivity of cattle feeding (aided by declining real prices of feedgrains) resulted in virtually uninterrupted growth of cattle numbers between 1957/58 and 1974/75. These favourable circumstances ended abruptly in 1974. Bovine meat demand was weakened by the onset of economic recession. Bovine meat supplies increased mainly as a result of the decline in feeder cattle prices, drought conditions, and the increase in grain prices which shifted pasture land to crop production. These factors were the principal cause of the sharp downturn of the cattle cycle between 1975 and 1979. After a three-year period of herd rebuilding, the cattle industry relapsed prematurely into liquidation in the middle of 1982 as a result of persistent poor returns to producers. Continued low feeder cattle prices, recurring drought conditions in certain areas and higher production costs are responsible for the cattle cycle now being well on its way into its fourth year of liquidation.

55. Between 1950 and 1976 consumption of bovine meat increased steadily, with only brief interruptions of this trend in 1958, 1962 and 1973, mainly reflecting sharply higher prices in those years. This growth probably reflects the general North American preference for beef, a preference which could be indulged because of the unprecedented growth in real consumer income which occurred during this twenty-five year period. On the other hand, slower rates of consumer income growth since 1973 corresponded to a period of higher production costs. It appears that pork and poultry producers were better able to cope with these

since both pork and poultry were offered on the market at lower prices than beef, and beef lost market share. Production of bovine meat roughly reflects the evolution of the cycles in numbers. However, while cattle numbers increased by approximately 23 per cent between 1959 and 1981, production of bovine meat more than doubled. This was mainly due to the improvements achieved in the animal feeding and fattening techniques, which led to considerably higher slaughter weights. In the first half of this decade, production again trended upwards but at a considerably slower pace than in the seventies.

56. During the fifties, sixties and seventies one of the main events in the world trade of meat was the increase in United States imports of bovine meat. In 1957-58, cow beef imports, in response to increasing beef demand, rising prices and reduction of national production, marking the beginning of a rebuilding phase, rose sharply (57,300 tons in 1957, four times higher than in 1956; and 162,495 tons in 1958, twelve times more than in 1956). Thereafter beef imports grew rapidly, with only brief interruptions (the main one in 1974), until 1979. The growth of beef imports appears to be closely linked to the expansion of the "food service" industry (broadly defined) in the United States and to an apparent growth in demand for "ground beef" for consumption both at home and in restaurants. It has been estimated that approximately 60 per cent of the United States beef imports are consumed in ground form (either as "hamburger" or as processed products). The remaining 40 per cent is consumed mainly in the so-called "hotel, restaurant and institutions trade" in the form of cuts (mainly steaks). Between 1979 and 1984 imports trended downwards, except during 1982, and bovine meat imports in 1984 were down by 27 per cent compared to the record level imported in 1979. The drop in imports was a result of increased domestic production. In 1985, imports of beef and veal expanded as a consequence of a slowdown in production.

Uruguay

57. In Uruguay, cattle numbers exhibited no distinctive upward or downward trend during the sixties. In response to escalating international beef prices from 1970 to 1975 however, cattle numbers grew rapidly. Between 1971 and 1975 they expanded at an average annual rate of 6.0 per cent, reaching a total of 11.5 million head (35 per cent more than in 1970). The collapse of international prices in 1974-75 and the sharp decrease in EC imports in those years, led to the commencement of herd liquidation in 1976. In August, 1978, domestic beef prices were freed from Governmental control. This development coincided with a recovery in international beef prices. Producers' returns (in real terms) more than doubled and herd expansion resumed for three years. Producer net returns have been seriously affected by the weakening of international beef prices since 1980, by the rapid increases in production costs, and by the failure of pesos devaluations to match the rate of domestic inflation, leading to another period of liquidation between 1982 and 1984. As a result of higher domestic prices and incomes and of expansion of demand, herd rebuilding started in 1984 with a 45 per cent drop in slaughter of cows and heifers.

58. Beef production in Uruguay has followed, with a lag of about one year, the cyclical behaviour of cattle numbers. The fluctuations of beef production have, however, been considerably greater than those of cattle numbers. Production grew by 62 per cent from 1971 to 1976 (to 427,000 tons), fell by 37 per cent to 1979, then increased by 65 per

cent to 1983 (to 442,000 tons). These fluctuations reflect, in part, the tendency of withholding meat from the market during periods of declining prices. The animals are then marketed during periods of rising prices.

59. Uruguay is one of the world's major bovine meat consumers on a per capita basis. In the last fifteen years the domestic market has absorbed between 52 and 70 per cent of production, the fluctuations being due, mostly, to the level of production and of exports. Moreover, in the last ten years beef has accounted, on average, for 74 per cent of per capita meat consumption. Contrary to the tendencies in many other countries, and generally speaking, when beef consumption declines in Uruguay, so does that of other meats and vice versa. Consumption is also affected by changes in retail prices but traditionally per capita income levels have had little impact on per capita meat consumption. It appears, however, that income levels have become more important in the recent past and will probably have more of an impact on consumption in the future.

60. Uruguay's beef exports (fresh, chilled and frozen) exhibited a modest upward trend during the sixties, although sharp year-to-year fluctuations were evident, occasioned mainly by changes in domestic production. Exports generally rose in proportion to increased international demand from 1969 to 1972 (despite a decrease in 1970 due to an embargo by the United Kingdom for veterinary health reasons). They declined from 1975 to 1979 as international demand dropped and unfavourable exchange rate movements took place. In 1980-81 exports recovered and reached a record high level in 1983 (222,000 tons) as a result of unprecedented production levels (442,000 tons) due to liquidation of the herd. Uruguayan exports were significantly affected by the sharp decrease in imports by the EC after 1974 and Uruguay was, consequently, forced to diversify its markets. Since 1976 Brazil has developed as Uruguay's major market, with Egypt and other North African destinations taking on unprecedented importance. Notwithstanding this diversification, the domestic market absorbed a sharply increased share of production in the years 1974-75, and comparatively high (although fluctuating) levels to the end of the decade. Because of relatively high levels of production this share decreased significantly between 1981 and 1984.

Yugoslavia

61. The Yugoslav cattle herd has for the last twenty years remained fairly stable. Since 1960 the herd has never numbered more than 5.9 million head, nor less than 5.1 million head. Within those limits there have been periods of two to five years of herd liquidation, followed by two to five years of herd rebuilding. It would appear that these periods tend to get longer, as can be noticed from the build-up period in the first half of the seventies (1971-1975) followed by a liquidation phase from 1976 until 1985, interrupted momentarily twice (in 1979 and 1981). Average slaughter rates have increased by 20 per cent in the decade 1970-1979 compared to 1960-1969. Comparing the same periods as concerns production of beef and veal, the increase in the seventies amounts to 27 per cent on average, reflecting some 7 per cent higher slaughter weights. This growth reflects, *inter alia*, the technological changes which were introduced in meat production in the sixties and which resulted in intensive fattening of steers. Between

1960 and 1980 slaughter increased by some 102 per cent, while production expanded by 115 per cent. Moreover, the growth in production resulted in substantial consumption increases (two to three times in twenty years). Yugoslavia has for many years been a net exporter of live bovine animals and meat. After a record 63,900 tons of live animals exported in 1972, exports fell off drastically in 1973 and 1974 (by 85 and 95 per cent respectively compared to 1972). It would seem that this was due to import restrictions imposed by several importing countries. Yugoslav exports of bovine meat, being relatively low in 1960-61, had almost tripled by 1980, reaching 61,900 tons. However, average exports of meat in the sixties were some 62,900 tons per year compared to some 54,500 tons in the seventies. This could in part be explained by the partial loss of some traditional export markets due to restructuring of the latter in the late sixties and in part to an increase in consumption which has been evident since the sixties. In 1981, exports fell sharply in spite of expanded levels of production, apparently due to a rise in demand on the domestic market as well as a fall in demand on traditional export markets due, in part, to the economic recession. Since then, exports have recovered, although to lower levels than in previous years. Yugoslavia also imports certain quantities of beef. Imports increased substantially in the late seventies, compared to the sixties when imports were negligible and the early seventies when they were still very small. Between 1977 and 1980 imports of beef grew by around 171 per cent. After 1980, imports have moved downwards, except in 1983, mainly as a result of higher domestic production. Most of the bovine meat is imported fresh or chilled.

SUMMARY OF POLICIES AND MEASURES IN THE BOVINE MEAT SECTOR

(a) Domestic Policies and Measures

62. Since the forties there has been a significant increase in both the degree of regulation of the cattle and beef industries of many participating countries and of the amount of assistance (of a variety of forms) granted to beef and cattle industries. Frequently these measures were introduced as part of a general policy of support for agriculture. Usually they were implemented to meet one or more of the following objectives: an income objective (i.e. to raise and/or stabilize income levels of agricultural (beef) producers at levels comparable to workers in other sectors of the economy); a production objective (i.e. to increase national self-sufficiency levels for strategic or other reasons); a productivity objective (i.e. to increase agricultural efficiency). There has been a great diversity of measures introduced to meet these objectives. Most popular, and perhaps most important, however, has been the variety of price support or price stabilization schemes introduced in a number of countries. These systems usually operate by either attempting to adjust domestic beef supplies to cause market prices to remain near "targeted" levels, or by adjusting trade levels to achieve the same result. Related programmes in other countries operate on a "deficiency payment" basis, that is to say, making outright payments to producers equalling the difference between "targeted" and market prices. Programmes to subsidize inputs (feeds, fertilizers, etc.), to reduce cattle producers' tax burdens, to subsidize interest rates, and to encourage production of certain types of animals are other examples of programmes aimed at direct or indirect financial assistance to producers.

63. These programmes appear, in many countries, to have significantly stimulated beef and veal production during the past twenty to thirty years. These increases, where they occurred, were largely due to increased "off-take" rates from cattle herds, mainly because of reduced calf slaughter. Additionally, it is evident that certain of these policies directly encouraged, or created, the environment for the adoption of more efficient production methods, such as better feeding and breeding techniques. It would also appear that measures, particularly price support measures, have impeded the growth of beef consumption in some countries by maintaining beef retail prices higher than they would otherwise be, and higher than prices of competitive meats. Thus, it seems that the consumption of those meats competitive to beef and veal has progressed relatively more rapidly in countries operating beef or cattle price support programmes during the past ten to twenty years, than in countries which have not had such programmes. Some of these countries have attempted to offset this price effect by introducing consumer subsidies for beef. A combination of increased production and a slowdown in consumption growth, therefore, has resulted in higher beef and veal self-sufficiency ratios in many countries. This development has had a direct impact on trade in many cases: there has been a tendency either for imports to decline or for bovine meat exports to increase.

(b) Trade Policies and Measures

64. Among participating countries there are, broadly speaking, three categories of rules and measures related to trade in bovine meat (apart from veterinary regulations, labelling and packaging, etc.), namely, those introduced to complement an internal price support and/or stabilization system; those introduced to safeguard domestic prices on an otherwise free market; and those introduced to enhance the organization of exports either by improved market organization or by export assistance.

65. The first category encompasses measures at the border which are considered an integral part of the domestic price support or stabilization system. Some of these measures are generally viewed as preventing either excessive increases or decreases in market prices in the interest of both cattle producers and beef consumers. Frequently, such measures are used to maintain prices near a predetermined "target" price or within a range around such a price. These measures include a system of import controls at the border and in some countries a system of export incentives in surplus situations. Thus, when production rises (or consumption falls) and prices tend to decrease, imports may be restricted and/or exports encouraged by export subsidies. Imports of beef are currently restricted primarily by the following measures: tariffs, variable levies and more or less temporary import bans and quotas. In the past, tariffs had a prominent place as a barrier to trade. Today, after successive negotiations resulting in concessions given in the field of bovine meat, tariffs have become relatively more unimportant for live animals and meat, but are still of some importance for processed products. Another system tending to restrict beef imports is that of variable import levies. This system, first introduced in the late fifties, basically levies the difference between the "world market price" and the domestic price on imports of beef. There are several variations used but the charge is variable in order to take into account external and internal price movements. The variable levy in fact imposes a minimum price on the imported product, corresponding to the prices charged on the internal market.

66. Some countries use a general import ban on beef imports in order to protect their domestic market. This ban is lifted when supplies run low or prices are near, or exceed, a certain level. Amounts to be imported are either left free until the desired supply and/or price level is restored or decided upon in advance by the competent body. Restrictions in the form of quotas are imposed either in countries that wish to control global imports or in those that wish to check the quantities imported under "preferential" agreements. It would appear that the effects of these measures and regulations on world trade were relatively less important while world supplies were comparatively low and while national supply/demand balances were favourable. From the mid-seventies, however, as world beef supplies increased sharply, beef demand growth slowed down, and national beef production in many of these importing countries increased, the restrictive aspects of the import policies of these countries manifested themselves.

67. The second category of rules or measures refers to countries which usually do not have a domestic price support system but generally view imported beef as low-priced relative to domestically-produced beef, and thus a threat to domestic beef and cattle prices. These countries protect their bovine meat industries from perceived outside competition by imposing restrictions (quotas) when imports reach a certain level in relation to domestic production. In general, quota levels are based on some form of legislative mathematical formula which is designed to estimate requirements of imported beef (taking into account past import levels). This kind of system is intended to restrict imports during times of rising domestic production and vice versa. Consequently, it has been suggested that a significant share of the burden of internal supply adjustment is imposed upon the external market. In practice, the operation of this kind of restriction includes methods of distributing shares of quotas amongst exporters, sometimes on the basis of voluntary export restraint agreements. It could be noted, however, that import control systems of this nature, in countries where they exist, also grant the government the power to modify calculated quota levels in light of consumer or other interests. In other words import restrictions would not be imposed during certain periods even if the "formula" indicated that such should be the case.

68. The third category of rules or measures concerns primarily the traditional exporting countries and are of an essentially different nature than import measures. Most of these exporting countries have "Meat Boards" which have often been endorsed with some regulatory powers by legislation. Traditionally these powers related mainly to the promotion, in one form or the other, of exports. As the volume of exports grew, or as the restrictions in import markets increased, the various Boards' powers evolved to promote both more orderly exporting and to meet the exigencies of import markets (for instance in quota or voluntary export restraint situations). In addition, most of these countries have endorsed their Boards with the power to engage in the negotiation of export sales to countries whose import agencies are state-controlled. This latter power has been of greater relevance in recent years since imports by many of the "new" or "recently emerged" import markets are state-controlled.

69. It would seem that export measures, used by traditional exporting countries, have involved disincentives more often than incentives. These have mainly concerned export taxes and minimum export prices. Both of these have been used occasionally, inter alia, to control domestic inflation rates, to help correct balance-of-payments deficits, to maintain domestic beef consumption levels, or to raise export prices to world market levels.

70. Other measures of importance for trade in meat are veterinary and sanitary regulations. All countries participating in the Arrangement Regarding Bovine Meat have regulations concerning veterinary and sanitary standards of imports and exports of bovine animals and meat. Most of these regulations are strict but usually no stricter than regulations for domestic animals and meat. In most of the participating countries veterinary and sanitary regulations of today are based on legislation that came into force many years ago, sometimes as far back as the beginning of the century. Many veterinary and sanitary regulations obviously restrict trade but possibly for good reasons in most cases. It has been suggested, however, that there may be such regulations that have an unnecessary restrictive effect on trade either through wording or through the application of them.

MEDIUM-TERM OUTLOOK(a) General

71. The GATT secretariat had at its disposal information concerning medium-term forecasts to 1990 from ten of the twenty-six countries or group of countries participating in the Arrangement Regarding Bovine Meat.¹ These ten countries represent only a small part of production, consumption and imports of bovine meat among participating countries. For the period 1983-1985² they accounted for around 18 per cent of beef and veal production, 16 per cent of consumption, 19 per cent of imports and 43 per cent of exports. As concerns world production, consumption, imports and exports, they represented 13 per cent, 11 per cent, 13 per cent and 39 per cent respectively in that period.

TABLE 1

PRODUCTION, CONSUMPTION AND TRADE OF BOVINE MEAT
AVERAGE 1983-85 ('000 TONS)

	PRODUCTION	CONSUMPTION	IMPORTS	EXPORTS
WORLD	41,841	40,855	2,642	3,451
Participating countries	30,689	29,204	1,854	3,183
% of the world	73.3	71.5	70.2	92.2
For which data available for 1990:	5,583	4,564	354	1,353
% of the world	13.3	11.2	13.4	39.2
For which data not available for 1990:	25,106	24,640	1,499	1,830
% of the world	60.0	30.3	56.7	53.0

¹ Forecasts for production and consumption for 1990 were provided by ten countries (Australia, Bulgaria (per capita), Canada, Finland, Japan, New Zealand, South Africa, Sweden, Switzerland and Uruguay) for exports by nine countries (the above except Bulgaria and Japan, but plus Colombia), and for imports by four countries (Canada, South Africa, Sweden and Switzerland).

² The comparisons in this paragraph as well as in Table 1 are based on USDA estimates.

72. These figures indicate that no data for 1990 are as yet available from participating countries which, in the most recent three-year period for which data are available, accounted for 82 per cent of total production of participating countries, 84 per cent of consumption, 81 per cent of imports and 58 per cent of exports. As concerns world production, consumption, imports and exports, these countries represented 60 per cent, 60 per cent, 57 per cent and 53 per cent respectively in that period. Of the countries for which no projections for 1990 are available, four¹ accounted for 75 per cent of production, 77 per cent of consumption and 51 per cent of exports of participating countries, while three of the four countries imported some 67 per cent of participating countries' beef and veal purchases. These same four countries produced 55 per cent of world supplies of bovine meat, consumed 55 per cent, exported 47 per cent and three of them imported 47 per cent of world purchases in the base period.

73. In these circumstances, it was decided to only revise earlier production and consumption projections for 1987, using data furnished in recent questionnaire replies, in projections available and, in some cases, estimates for 1987 based on projections given for 1986, for all participating countries where such data is available. For information, production and consumption forecasts for those countries which have provided such projections for 1990, are included but as indicated above, no global conclusions can be drawn from those.

(i) Summary of Production Forecasts

74. The projections of bovine meat output for the fourteen participating countries for which such data were available for 1987 suggest that total production for these countries will be 0.2 per cent higher in 1987 than the average level for 1983-1985, i.e. 27,857,000 tons compared to 27,797,000 tons in the base period. Nine countries are expecting to produce more in 1987 than in the base period. Among these, six countries forecast an increase of more than 4 per cent and four of these an expansion of more than 7 per cent (Bulgaria, Japan, New Zealand and South Africa). Moreover, all major exporting countries, or regions, except the European Community (of ten) are projecting a growth in their output. None of them, however, is expecting to reach the record levels of the 1970's. The three major exporting countries (Australia, New Zealand and Uruguay) which have provided forecasts for 1990, all foresee higher levels of bovine meat production in 1990 than in either 1987 or in the base period but they still do not expect these to be higher than the record levels reached in the second half of the seventies. Only one traditional exporting country (Bulgaria) is anticipating record high levels of bovine meat production both in 1987 and 1990 where the expansion by 1990 is forecast to be of some 32 per cent compared to the base period. Moreover, available data suggest that one major importing country (Japan) will produce 8 per cent more in 1987 and some 19 per cent more in 1990 compared to the base period. A growth in output levels is also expected in two other importing countries in 1987 (Switzerland and South Africa), one of which (South Africa) anticipates a further sizeable expansion by 1990.

¹ Argentina, Brazil, European Community and United States.

TABLE 2

BEEF AND VEAL PRODUCTION IN CERTAIN COUNTRIES, ANNUAL AVERAGE
1983-85, AND FORECAST LEVEL FOR 1987 AND 1990
(¹000 tons)

	Average 1983-85	Forecast 1987	%Change 1987/1983-85	Forecast 1990	%Change 1990/1983-85
Argentina	2,561	2,670 ^{1/}	+4.3	..	..
Australia	1,333	1,375	+3.2	1,570	+17.8
Brazil	2,190	2,300	+5.0	..	..
Bulgaria	108	123	+13.9	143	+32.4
Canada	1,022	996	-2.5	1,062	+3.9
EC	7,264	7,485 ^{2/}	+3.0	..	..
Finland	123	120	-2.4	114	-7.3
Japan	528	570	+8.0	630	+19.3
New Zealand	483	520	+7.7	550	+13.9
South Africa	643	694	+7.9	753	+17.1
Sweden	157	150	-4.5	140	-10.8
Switzerland	162	167 ^{1/}	+3.1	165	+1.9
United States	10,877	10,337 ^{1/}	-5.0	..	..
Uruguay	343	344	+0.3	353	+2.9
TOTAL	27,794	27,851	+0.2	..	..

^{1/} Secretariat estimates

^{2/} EC(12)

75. Five participating countries, for which 1987 forecasts are available, are foreseeing a reduction in their bovine meat output levels. The biggest drop in production would take place in the United States (-5 per cent), the world's major importing country, as well as the main producing country. Two other major importing countries are also anticipating a contraction of bovine meat output (Canada and the European Community(10)) as well as two Nordic countries (Finland and Sweden). These latter are projecting further production declines by 1990 whereas Canada forecasts a picking up in levels of production by the end of this decade. No figures are as yet available for the European Community for 1990 but, according to some indications, production of bovine meat will start to expand again toward the end of the 1980's.

(ii) Summary of Consumption Forecasts

76. Available forecasts suggest that consumption of bovine meat in 1987 will grow less than anticipated in earlier projections. In total, data indicate a rise of some 3.3 per cent, in aggregate, in consumption for thirteen participating countries, to 27,147,000 tons compared to 26,288,000 tons in the base period. The biggest increases are projected to take place in Argentina (+11 per cent), Brazil (+7.3 per cent), Japan (+10 per cent) and South Africa (+9.7 per cent). Four of the thirteen countries (Canada, New Zealand, Switzerland and United States) are forecasting a reduction of bovine meat consumption of between 0.6 per cent and 12.9 per cent, in spite of an expected production

growth in two of these countries. Data available for 1990 for nine of the thirteen above-mentioned countries suggest that all of them except one (Finland) foresee higher consumption in 1990 than in the base period. Four countries (Australia, Canada, Japan and South Africa) expect rises of more than 5 per cent whereas three other would increase bovine meat intake by between 0.7 per cent and 1.5 per cent. Finland, the only country which is anticipating a drop in consumption by 1990, is, however, foreseeing a bigger drop in production, thus reducing supplies available for exports.

TABLE 3

BEEF AND VEAL CONSUMPTION IN CERTAIN COUNTRIES, ANNUAL AVERAGE
1983-85, AND FORECAST LEVEL FOR 1987 AND 1990
(¹000 tons)

	Average 1983-85	Forecast 1987	%Change 1987/1983-85	Forecast 1990	%Change 1990/1983-85
Argentina	2,162	2,400 ^{1/}	+11.0	..	..
Australia	637	644	+1.1	733	+13.8
Brazil	1,864	2,000	+7.3	..	..
Canada	1,026	1,009 ^{2/}	-1.7	1,066	+5.6
EC	6,802	7,550 ^{2/}	+11.0	..	..
Finland	103	104	+1.0	101	-2.9
Japan	748	823	+10.0	885	+7.5
New Zealand	132	115	-12.9	115	0
South Africa	679	743	+9.4	810	+9.0
Sweden	136	140	+2.9	141	+0.7
Switzerland	175	174 ^{1/}	-0.6	176	+1.1
United States	11,634	11,246 ^{1/}	-3.3	..	..
Uruguay	190	199	+4.7	202	+1.5
TOTAL	26,288	27,147	+3.3	..	..

^{1/} Secretariat estimate

^{2/} EC(12)

(iii) Balance between Production and Consumption

77. Contrary to previous forecasts (see IMC/W/16/Rev.1), perspectives for 1987 indicate an improvement in the balance between supply and demand in the thirteen countries for which projections were available. Figures suggest that the excess of production over consumption will decline by about 58 per cent (in the previous forecast, which included Poland instead of Uruguay, this excess showed an increase of about 60 per cent). The major reason for this improved balance is the projected, much lower, production increase than in the previous forecast.

78. The levels of self-sufficiency for 1987 are projected to decline for the majority of the countries. Only Australia, New Zealand and Switzerland are forecasting increases. This means that two of the world's major exporters are foreseeing an improvement in the level of their export availabilities. On the other hand, these countries' major markets, Canada, the United States and Japan are projecting declining

self-sufficiency levels, in Canada and the United States, as a result of stronger drops in production than in consumption and in the case of Japan because of a lower rise in production than in consumption. Also, the European Community foresees an important reduction in self-sufficiency, which, if it were not for the stocks, would bring it back to its pre-1979 position of net importer, after having been in 1984, 1985 and probably 1986, the world's first exporter. The three largest South American exporting countries, Brazil, Argentina and Uruguay, are all expecting more or less important falls in self-sufficiency. Other, smaller, exporting countries (Finland and especially Sweden) anticipate an improved internal supply/demand balance, suggesting less exportable supplies. While consumption forecasts for Bulgaria for 1987 are not available, production figures suggest a higher level of self-sufficiency next year. As concerns smaller net importing countries, Switzerland would be somewhat more self-sufficient in 1987 than in the base period while the contrary would be the case in South Africa.

79. The above suggests in other words that the excess of production over consumption of these countries in 1987 will be smaller (+2.6 per cent) than in 1983-85 (+5.7 per cent). It also suggests an uptrend in the level of trade amongst these thirteen countries since the anticipated decline in the self-sufficiency ratios of some major importing countries should be compensated by the increase in that ratio in some major exporting countries (traditional suppliers of the importing countries in question) leading to higher imports and exports respectively.

TABLE 4

SELF-SUFFICIENCY RATIO IN CERTAIN COUNTRIES, ANNUAL AVERAGE
1983-85, FORECAST 1987 AND 1990

	Average 1983-85	Forecast 1987	Forecast 1990
Argentina	118.5	111.3 ^{1/}	..
Australia	209.3	213.5	214.2
Brazil	117.5	115.0	..
Canada	99.6	98.7	99.6
EC	106.8	99.1 ^{2/}	..
Finland	119.4	115.4	112.9
Japan	70.6	69.3	71.2
New Zealand	365.9	452.2	478.3
South Africa	94.7	93.4	93.0
Sweden	115.4	107.1	99.3
Switzerland	92.6	96.0	93.8
United States	93.5	91.9 ^{1/}	..
Uruguay	180.5	172.9	174.8

^{1/} Secretariat estimates

^{2/} EC(12)

80. As concerns prospects for 1990, available information (nine participating countries) indicate that two major exporting countries (Australia and New Zealand) would be at a higher level of self-sufficiency compared to the base period whereas another exporter (Uruguay) would be on a declining trend. Self-sufficiency in Japan and Switzerland would increase slightly while Finland, South Africa and Sweden are forecasting a "worsening" of their production/consumption ratios compared to the base period. Only one country (Canada) expects the same balance in 1990 as in 1983-85.

(b) Observations

81. Keeping in mind the necessarily uncertain nature of forecasts, probably the main conclusion which can be drawn from the present ones, as mentioned in paragraph 77, is a better supply/demand balance among the thirteen countries in 1987. It can however be questioned whether this will translate into a more balanced world supply/demand situation.

82. As we have seen, the expected increase in self-sufficiency (compared to the base period) in two major exporting countries (Australia and New Zealand), coupled with its decline in these countries' main markets (United States, Japan and Canada), may result in increased trade of bovine meat between these five countries. However, it would seem that the two exporters' increased availabilities would be higher than the three importers' forecast increased import requirements. In these conditions the import demand in other countries (and especially in Asian countries) would remain an important factor affecting Australian and New Zealand export possibilities.

83. A major factor appearing from the forecasts is the EC's level of consumption which is higher than its level of production for the first time since 1979. Although this does not preclude the Community from continuing to be an important exporter, it means at least that the level of export availabilities would decline, and that the Community would be called upon to reduce exports. (It could be argued whether the EC could instead, or also, increase imports. According to forecasts, stocks will still be high enough to avoid this possibility. Indeed, available data suggest both declining exports and imports.) In South America, the forecast decline in self-sufficiency also suggests lower levels of export availabilities, compared to the reference period 1983-85. However, it should be noted that the 1987 self-sufficiency ratio in a country such as, for instance, Uruguay (the same reasoning can also be applied to other countries), although lower than in the reference period, is projected at almost 173, higher than in 1985 (157) and 1986 (151), meaning that export availabilities would be on an upward trend. Indeed, Uruguay is foreseeing a rise in export levels in 1987, compared to a probably historical low in the current year. Nevertheless, and taking into account what has been said about the outlook in the Community, a major market for South American exporters, and in some other smaller markets (such as Switzerland, where imports are expected to decline somewhat), it is important to assess the prospects in other markets. Keeping in mind the traditional trade flows, these markets are especially the Middle East, North Africa and the USSR.

84. The importance of these markets has grown during the seventies and the beginning of the eighties. In 1975, for example, North African countries (Morocco, Algeria, Tunisia, Libya and Egypt), Middle Eastern countries (Iran, Iraq, Israel, Saudi Arabia, Syria, Kuwait, Lebanon and the United Arab Emirates), and Asian countries (Republic of Korea, Hong Kong, Philippines and Singapore) are estimated to have accounted, in aggregate, for roughly 9 per cent of world imports of fresh, chilled and frozen beef and veal (FAO data). In 1984, these countries combined represented roughly 24 per cent of world imports. If the USSR and the Eastern European countries are included in the calculations, then the 1984 proportion rises to about 42 per cent.

85. As regards 1987, and although there are no forecasts available regarding these countries' supply and demand outlook, the following remarks can be made. In the Asian countries, beef and veal demand is largely dependent, in particular, on income levels. The economic activity of some of these countries which, in the last one or two years has slowed down, may be expected to recover, and the impact on incomes could boost beef and veal consumption. The importance of other meats, and especially pork and poultry, in the overall meat consumption in these countries should also be taken into account. The recent example of the Republic of Korea is a good illustration of how a country can suspend bovine meat imports because of the over-supply of domestically produced pork (and beef). However, there seems to be enough room in many of these countries for an increased intake of beef and although the price (especially relative to other meats) will play a major rôle, it may be assumed that beef demand will improve along with higher incomes. Taking into account the forecasts available, and what was said about the Oceanian exporters' expected increased availabilities, and the decreased availabilities of South American countries, of the United States and the EC, it could be speculated that the countries in the best position to take advantage of this possible increased demand would be Australia and New Zealand.

86. In the Middle Eastern and certain North African countries, a major factor conditioning beef demand in the last few years has been oil prices and revenues. For the current year, the sharp decline in those prices is expected to result in a drop in these countries' import demand for beef. It is hazardous to guess how oil prices will evolve in the months to come and even more to do so for 1987. It can nevertheless be reasonably expected that bovine meat demand will remain relatively depressed, especially if the efforts to increase poultry meat output in some of these countries during the last few years continue to be successful. Also, the lack of foreign exchange (often a result of low oil prices) has been and will presumably continue to be a problem, conditioning some of these countries' imports (in spite of the various special concessional credit arrangements, or barter deals with some major exporters). In this connection, it can be noted that, reportedly, the Egyptian Government has recently cancelled an old law banning private firms from importing vital goods, including meat. It is difficult to assess whether the direct access of private traders to imports of meat will have an impact on the Egyptian import level of beef and veal (estimated by the USDA to have reached 240,000 tons in 1985). However, due to the importance of this market, it is perhaps a new factor which should be taken into account in any export plans to that country (especially, probably, in terms of the quality of the meat and

its price). Although, as already mentioned, the import demand in this group of countries may remain depressed in 1987, it will presumably remain important and, according to available forecasts, will coincide with lower export availabilities of major traditional suppliers (the EC and South American countries). In these conditions it could be expected that although the volume of trade among these countries will probably decline, some price recovery may occur (especially if oil prices recover somewhat) and, at a stretch, other exporters may find some exporting opportunities there.

87. Beef and veal import demand in the Eastern European countries, and especially in the USSR in 1987 will essentially, as usual, depend on the results of their efforts to increase output, and on weather and feed conditions. The Soviet authorities' decision to increase the price bonus on the production of meat in order to bolster output above the average 1981/86 level during the period 1986/90, suggests that output in that country may increase by 1987. Also, reported reductions in consumer subsidies may curb the demand. This would mean that the Soviet Union's imports might decline further in 1987 (after a forecast drop in the current year). Nevertheless, the unpredictability of the USSR import demand is well known and it is generally accepted that this country will remain a major importer in the next few years.

88. Many other comments or observations could be made here on a number of other factors affecting the international bovine meat trade perspectives for 1987. The price and supply situation of feedgrain is one of them. Their large availabilities and low prices in recent years have been largely responsible for the increase in output of all kinds of meat, and especially of poultry meat, and they certainly had an impact on world trade of beef and veal. The results of policy measures introduced in other sectors and their repercussions in the bovine meat sector were recently illustrated by the EC dairy programme. Moreover, repercussions of the "whole herd dairy buy-out programme", which the United States introduced at the beginning of the year, risk being felt in the international markets over the next one to two years.¹ Also, the monetary instability with erratic variations of exchange rates, high interest rates, the possible "saturation" level of beef consumption in some industrial countries, etc. are factors which will continue to affect trade in the years to come. They have, however, been treated at length in a number of other secretariat studies and market reports and it seems unnecessary, at this stage, to develop them further here.

89. In summary, it would seem that in 1987, while the level of trade (probably both in volume and value terms) will rise among the thirteen countries for which forecasts are available, i.e., among some of the major traditional suppliers and their clients, import demand from the so-called "new" or "recently expanded" markets may decline somewhat. However, taking into account the fall in export availabilities of some of these latter markets' major traditional suppliers, there seems to be scope for a better balance between supply and demand between those countries (although at a lower volume of trade) and consequently for strengthened international bovine meat prices.

¹Reportedly, the United States have recently reached an agreement with Brazil for the sale of 90,000 tons of beef to that country. This tonnage corresponds to the quantity that the United States intended to place on world markets, as a result of the programme.