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RESTRICTED

TARIFFS AND TRADE

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Special Distribution

International Dairy Arrangement

INTERNATIONAL DAIRY PRODUCTS COUNCIL

Status Report on the World Market for Dairy Products

Note by the Secretariat

Explanatory note

The present note has been prepared by the secretariat in accordance with Article IV:1 of the Arrangement and Rule 29 of the Rules of Procedure, and with the aim of facilitating the work of the Council and the Committees at their meetings in March 1990.

In preparing the note, the secretariat based itself mainly on replies to questionnaires, other information submitted by participants and observers as well as various information arising from the operation of the Protocol Regarding Certain Milk Powders, the Protocol Regarding Milk Fat and the Protocol Regarding Certain Cheeses. Furthermore, the secretariat used supplementary information available to it from various national and international sources, notably documentation from the FAO, the IDF, the UN/Economic Commission for Europe, the OECD, the Commission of the European Communities, Agriculture Canada and the United States Department of Agriculture.

The note provides information on production, consumption, trade, stocks, and prices for milk and principal dairy products and covers developments up to and including 1989, and the outlook for 1990. The note should be read in conjunction with the statistical information circulated in the following documents:

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|--------------|---|---|
| DPC/W/95 | - | Milk Deliveries and Production - Statistical Note by the Secretariat |
| DPC/PTL/W/14 | - | Committee of the Protocol Regarding Milk Fat - Summary Tables |
| DPC/PTL/W/15 | - | Committee of the Protocol Regarding Certain Cheeses - Summary Tables |
| DPC/PTL/W/16 | - | Committee of the Protocol Regarding Certain Milk Powders - Summary Tables |

Delegations wishing to suggest modifications, corrections, or to provide additional information are invited to make relevant submissions to the secretariat, preferably in writing as soon as possible. Such submissions might cover both the present note, and the statistical information mentioned above. It should be noted that the drafting of the present note was completed on 9 February 1990.

TABLE 1

Levels of Minimum Export Prices

(US\$/metric ton f.o.b.)

Pilot products	Effective since									
	1 Jan. 1980	1 Oct. 1980	1 Oct. 1981	5 June 1985	2 Oct. 1986	25 June 1987	23 Sept. 1987	23 March 1988	21 Sept. 1988	20 Sept. 1989
Skimmed milk powder	425	500	600	600	680	765	825	900	1,050	1,200
Whole milk powder	725	800	950	830	880	900	950	1,000	1,150	1,250
Buttermilk powder	425	500	600	600	680	765	825	900	1,050	1,200
Anhydrous milk fat	1,100	1,200	1,440	1,200	1,200	1,200	1,200	1,325	1,500	1,625
Butter	925	1,000	1,200	1,000	1,000	1,000	1,000	1,100	1,250	1,350
Certain cheeses	800	900	1,000	1,000	1,030	1,030	1,120	1,200	1,350	1,500

The minimum export prices are fixed for pilot products defined in the Arrangement taking account, in particular, of the current market situation, dairy prices in producing participants, the need to ensure equitable prices to consumers, and the desirability of maintaining a minimum return to the most efficient producers in order to ensure stability of supply over the longer term. New minimum prices for all pilot products became effective on 20 September 1989. Minimum export prices must not be considered as market prices, but merely the floor price levels which the participants have agreed to observe.

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Overview of the Situation

Some points regarding the economic situation in general

1. An estimated increase of 7 per cent pushed the value of world merchandise trade in 1989 to a new record level of nearly US\$3.1 trillion. In contrast to recent years when inflation in traded goods and other price-related developments have given an added boost to the value figures, last year's gain in value matches the estimated 7 per cent increase in the volume of world merchandise trade. However, the implied stability of derived world market export unit values (in US\$) is the outcome of a number of offsetting changes, including moderate inflation in the average price of traded manufactures and commodities, offset by the deflationary valuation effect of the dollar's appreciation against a number of currencies. Production of merchandises increased by an estimated 4 per cent in 1989. Although the expansion slowed down in 1989, world production and world trade recorded their third strongest growth rates of the decade. Once again, domestic investment and trade in capital goods boosted world production and trade. The underlying inflation rate in many countries rose again in 1989, while there was a slowdown in growth. However, the expected levelling of price pressures in 1990 may presage a return to more sustainable growth rates as the expansion of output and trade is expected to continue in 1990.

2. The distribution of growth in the volume of world merchandise trade by major country group indicates that the developed countries and the developing economies experienced virtually identical growth. While these two groups of countries experienced a modest slowdown in volume growth in 1989, there was a virtual stagnation of trade in the Eastern trading area. Relative to 1988, all major country groups experienced a marked deceleration in the growth rates of export and import values.

3. According to preliminary data, exports of the three major product groups shared more or less equally in the slowdown in trade growth in 1989. Trade in manufactured goods continued to be the driving force behind the expansion of merchandise trade. In mining products, the trade-to-output ratio of fuels rose sharply in 1989, implying that while fuel production grew more slowly, an increasing share was exported. Agricultural output in 1989 went against the trend of manufactures and mining products, registering a strong gain (+ 4 per cent) after two years of little or no growth. Exports of agricultural products increased by 4 per cent also and the relationship between production and trade in agriculture returned to a more normal pattern in 1989 after the weather disruptions of the previous year. As agricultural output recovered in 1989, the volume of exports declined slightly since most countries were able to supply more of their food needs from domestic output.

4. There was only a little change in the employment situation in 1989. At present, inflation is a serious problem for a number of developing economies, including some of the most highly indebted countries. For the OECD area as a whole, the 1989 rate of inflation was estimated at 4.3 per cent, up from the 3.5 per cent increase recorded in 1988. On balance, however, the general world economic situation remained good, due in particular to better than expected output growth in a number of developed countries.

World dairy situation

Highlights

5. - World milk production increased by 0.7 per cent from 1988 to 1989 and was expected to grow at least at that rate in 1990. A continuous increase in production in North America, the USSR and India outweighed a further reduction in milk deliveries in most European countries. In New Zealand, the 1989 milk output was adversely affected by unfavourable weather conditions.
- The market for milk and dairy products remained a fairly balanced one throughout 1989, with increased supplies of milk being well absorbed. At the end of 1989, intervention stocks of butter and skimmed milk powder were almost non-existent. However, early in 1990 intervention purchases of butter were made in the European Community.
 - World production of butter exceeded its previous level by 1.2 per cent and amounted to 7.6 million tons in 1989. Early in 1990 there was a tendency for exportable availabilities of butter to increase, partly due to larger sales of light dairy products and partly due to declining butter consumption in a number of markets.
 - Production of skimmed milk powder declined for a third consecutive year in 1989, and exportable supplies remained limited.
 - Cheese production grew by another 0.2 per cent in 1989, and the trend appeared to have continued in 1990 while that for whole milk powder had stagnated. International trade in these products continued its upward trend.
 - Food aid in terms of dairy products was adversely affected by the reduction in available supplies and continued to decline in 1989, and was expected to remain low in 1990, probably being at a level of less than 100 thousand tons (product weight), roughly corresponding to one quarter of their level in the early eighties.
 - Prices in international markets which had risen strongly throughout 1988, stabilized overall in 1989. For cheese and powders, prices had reached historical records, while those for butter and anhydrous milk fat were still inferior to their levels early in the decade, confirming a difference in underlying price trends for fat and non-fat components of the milk. However, some weakening in prices of butter and skimmed milk powder was noticeable from late 1989 on.

Dairy policies

6. The wide range of measures applied in several countries to control milk production and limit support was in most cases maintained in 1989. Further efforts were made to encourage improvements in product quality and to adapt the product range to prevalent trends in demand and consumption. Efforts to prevent contamination accidents of any kind have been stepped up to keep dairy products safe for human consumption. Various measures related to milk prices remained important elements in dairy policies in 1989. Further efforts were made to contain public expenditure on dairy price support. Support prices, target prices and advance payments were maintained at the previous level or increased moderately, not always even compensating for increased costs. Quota systems were made effective through the application of two-price systems, penalty payments on production in excess of quotas and levies on production collected to provide funds for market intervention and to cover losses on exports of surpluses.

7. Efforts were also continued in many countries to encourage or facilitate structural changes and raise the productivity in the dairy industry. While in some countries the aim was to raise productivity and efficiency in the industry, in others it could be to preserve the current structure, for instance by restricting herd size and thereby facilitating a limitation of total milk deliveries or otherwise adapt the capacity to the market. However, the number of dairy farms and cows continued to decline in many countries.

8. In line with the general aim of improving nutritional standards and diversifying agriculture, high priority continued to be given to production, marketing and consumption of milk and dairy products in agricultural and development plans of developing countries. Imports of high yielding breeding stock during recent years and the introduction of better feeding practices have resulted in increasing milk production in many developing countries.

9. Concerns persisted that the current situation in the world market for dairy products with comparatively high prices might entail an expansion of production and discourage consumption notably of butter. Views have been advanced that the milk production potential in the medium term could be much greater than what projections and forecasts might indicate. Production could rise strongly due to genetic improvements, ample feed supplies and technological progress, not least due to extended application of growth hormones. The danger was obviously persisting that supplies may again increase faster than a relatively steady but nevertheless limited growth existing for import demand and consumption, and it would remain imperative that production should not be unnecessarily stimulated through support and protection. Concerns have also been expressed that quota systems had not always discouraged over-quota production.

10. The steadily growing demand for certain dairy products, notably cheese and dairy proteins, and the increase in their prices have also entailed an upsurge in output and sales of a wide variety of dairy imitations and

substitutes. These developments have caused, or threatened to cause, certain problems to fair marketing of traditional dairy products and to the protection of consumers' interests. Imitations are often to a variable degree containing milk components extensively used as ingredients in a variety of food products such as casein, whey and skimmed milk powder. Furthermore, the modern dairy tree has a number of branches and new products. In a number of milk products such as the range of light products, milk components, mostly fat, may frequently have been replaced by something else, notably ingredients of vegetable origin. Consequently it has frequently been difficult to draw a borderline between what should be designated as a milk product and a non-milk product.

Milk and dairy production

11. In 1989, world milk production amounted to 529 million tons (including sheep, goat and buffalo milk), 0.7 per cent up on 1988. Following continued efforts to contain milk production in the European Communities and other countries in Europe, a further decline was observed for that area. There were only minor changes in milk production in other countries in Europe, in Oceania, Africa and Latin America. The decline in Community production was however outweighed by a continued increase in milk production in North America, the USSR and India. Milk production in Oceania showed only little change from 1988 to 1989; a recovery in Australia being outweighed by a bad 1988/89 season in New Zealand. In North America, milk production increased further in 1989, probably by 1 per cent, mainly due to a further increase in productivity. In the USSR, there was a further increase of 2 per cent in milk production in 1989. In India, milk production was expected to have increased by as much as 7 per cent in 1989, and there were substantial increases in some other Asian developing countries.

12. In 1990, a further increase in world milk production was expected, at least at the same rate as in the previous year, due to improved dairy practices, ample feed supplies, genetic developments and remunerative prices. The increase was expected to be mainly in countries not participating in the Arrangement. Milk production was expected to show only marginal changes for European countries and for countries in Africa and Latin-America. Efforts were being made in many countries to increase milk production, but gains were partly offset by adverse effects of tight feed supplies and high feed costs.

13. Considerable uncertainty was attached to projections beyond 1990, notably for the United States, where the United States Food and Drug Administration was expected to approve the use of bovine somatotropin which might be commercially available soon. This could, together with scientific progress, improved breeding and production management, boost productivity in milk production over the next five-year period.

14. After having stabilized in 1988, world butter and butter oil production increased by 1.2 per cent in 1989 amounting to 7.60 million tons. Butter production expanded significantly in North America and only marginally in the USSR and the developing countries. This was, however,

partly outweighed by a relative stability in butter production of participants in the Arrangement, notably by the stability in Community butter production. World butter production in 1990 was forecast to increase by about the same rate, i.e. about 1 per cent, as a result of the anticipated increase of milk production and the shift to lower fat content of other dairy products. Some uncertainty was linked to further developments in production and sales of light products, as this tended to result in increased supplies of butter becoming available for export, a tendency notably apparent in the United States.

15. World cheese production continued its upward trend in 1989, totalling 14.25 million tons (all kinds of cheese). The trend was very similar in all regions, but with variations from one country to another. In most countries cheese production was encouraged by a generally favourable market outlook for cheese, and the expansion continued into 1990.

16. World skimmed milk powder production fell for the third consecutive year in 1989, partly due to a persisting strong demand for light milk products; consequently less skimmed milk being available for drying. At 3.8 million tons, it was in 1989, 18 per cent below the average for 1981-83. For 1990, world output of skimmed milk powder was projected to grow, in particular in the major producing areas, i.e. Western Europe, North America and Oceania. World production of whole milk powder was estimated to have slightly decreased or remained stable in 1989. Production increased in Oceania and in Argentina but was reported to have decreased in the European Communities and the United States.

17. Environmental regulations preventing whey to be disposed of as waste and reduced supplies of skimmed milk powder stimulated production of whey powder notably in the European Communities, Australia, Canada and the United States. Demand was not catching up sufficiently fast to prevent prices to decline, and in August 1989, whey powder prices were only half their level of one year earlier. However, prices increased later in the year.

18. World production of condensed and evaporated milk declined in recent years, being increasingly replaced by whole milk powder in the market. For 1989, declines were reported for the European Communities and North America. A good demand in international markets persisted in 1989, but with less milk being available for processing into condensed milk, production declined, with Australia being the main exception.

19. World casein production reached a level of 216 thousand tons in 1989, 10 per cent down on 1988. This strong decline was mainly due to a substantial reduction in Community output. In spite of high prices obtained for casein, it seemed to be more profitable to produce skimmed milk powder. There were also uncertainties as to the future of the casein market.

Consumption

20. World consumption of milk and fresh milk products, which had increased at an annual rate of about 1 per cent over recent years, in 1988 and 1989 showed a stronger increase of 1.5 to 2 per cent, and there was a lively demand for low-fat milk products in most regions of the world. For a number of countries, consumption of fresh milk followed variations in supplies of milk. In per capita terms it had remained stable at about 46 kgs. with a wide difference between developed and developing countries. While milk consumption in North America, Oceania, Europe and the USSR was 2 to 3 times the average, it was only a fraction of the world average in Africa, Asia and South America.

21. Throughout the 1980's, butter consumption showed very little change on average, and world per capita consumption of butter remained at a level of 2.8 kgs. The trend remained unaffected by an increasing substitution of blended spreads of butter and vegetable oil. However, in 1989, world consumption declined by 2 per cent, with sharper decreases registered in particular regions, notably in Western Europe and North America where demand for butter could have reached the saturation point. The trend toward blended spreads and low fat spreads had accelerated in 1989. This development had resulted from a combination of factors such as changes in consumer tastes and preferences toward products which have reduced levels of cholesterol and fat and changes in legislation permitting the sale of such products to consumers. In the short and medium term it was likely that this trend would continue.

22. The upward trend in cheese consumption continued in 1989, with further advances in most countries. However, in general, increases for speciality cheeses were significantly above the rate of growth for traditional cheeses. The great variety of cheese available and further active products development (i.e. low fat cheeses) were the main reasons for these positive developments in cheese consumption. World per capita cheese consumption has been increasing at an average annual rate of 2 per cent since the early eighties, and might continue to increase at that rate in the near future. Per capita cheese consumption showed great variation from one country to another, it being particularly high in some countries of Western Europe and in North America, which also showed the strongest annual increase in consumption. The general upward trend was maintained in 1990.

23. In 1989, world consumption of skimmed milk powder fell, reflecting lower supplies and rising prices to which feed compounders reacted in particular. Reduced supplies of skimmed milk powder were progressively replaced by whole milk powder for food and by whey powder and possibly also by soya bean meal for feed. Consumption of whole milk powder increased in 1988 and 1989.

Trade

24. After having reached the record level of 1 million tons in 1988, world exports of butter declined in 1989 to some 800 thousand tons. However, all sales were normal commercial transactions in 1989, while in 1988, a large

part of exports had consisted of deliveries under derogations. By the end of 1989, import demand weakened. This, along with continued decline in milk fat consumption in many countries, might have some impact on the international market.

25. Cheese trade expanded further in 1989, world exports reaching 870 thousand tons. This was due to higher imports into the European Community and Japan and stronger import demand by OPEC countries and other developing countries such as Brazil. The general expansionary tendencies continued early in 1990.

26. There was a further decline of 25 per cent in world exports of skimmed milk powder in 1989, when they amounted to 900 thousand tons, with decreases registered by the European Communities, the United States and Oceania. However, import demand in some developing countries such as Mexico and Brazil remained strong.

27. The upward trend in whole milk powder exports was confirmed in 1988, when world exports totalled 975 thousand tons. They remained relatively stable or grew only slightly in 1989. In terms of volume, whole milk powder was the most important dairy product in international trade. The European Communities covered more than 60 per cent of the world market and New Zealand some 17 per cent. Other major suppliers to the world market were Australia, Argentina and to a lesser extent Finland and Austria.

28. The international whey powder market was supply driven in 1989. Although demand was stimulated by reduced skimmed milk powder supplies, feed compounders were not able to absorb the greater supplies. World trade of condensed milk continued to decline in 1989. World exports of casein declined again in 1989, notably as imports into the United States were further reduced by another 10 thousand tons.

Food aid

29. Reduced supplies and declining surplus stocks adversely affected the amount of dairy products available for donations under food-aid programmes. The volume of dairy products provided as food aid, notably by the European Communities and the United States (the major donors) was further reduced in 1989. Food-aid shipments of dairy products, which had averaged nearly 400 thousand tons (product weight) in the early eighties, were estimated to have fallen below 100 thousand tons in 1989. The increase in prices would at the same time aggravate expenses and make the financing of food aid in dairy products more difficult. In this context, views have been expressed that it might be appropriate to get away from the idea of surplus stocks being acceptable sources for food aid, and that more realistic international dairy prices might provide an incentive to expand production in developing countries.

Stocks

30. Reduced milk supplies, notably in Western Europe, and larger exports of dairy products had a considerable impact on stocks notably of butter and skimmed milk powder in 1988 and 1989. Butter stocks in the European

Communities, North America and Oceania, were at the end of 1989, around one third their level of one year earlier, and skimmed milk powder stocks, were at the same time, down to one fourth of their level at the end of 1987. While there was some rebuilding of butter stocks in 1989, stocks of skimmed milk powder remained low. In any case, public intervention stocks remained low, except for some accumulation of CCC butter stocks in the United States. In the EC also, although public intervention stocks of butter were very low in early 1990, some 12 thousand tons of butter had been bought into public intervention in January, as a result of the fall in prices.

International prices

31. The market for butter and anhydrous milk fat improved in 1988 and at the end of the year, prices for fresh butter were between US\$1,600 and US\$1,880 per ton f.o.b.; those of anhydrous milk fat ranged between US\$1,900 and US\$2,100 per ton f.o.b. Reduced supplies and lower carry-over stocks resulted in a further improvement in prices for milk fats in 1989. Prices for fresh butter in the first nine months of 1989 were between US\$1,750 and US\$2,100 per ton f.o.b. and those of anhydrous milk fat ranged between US\$1,900 and US\$2,500 per ton f.o.b. However, prices tended to weaken somewhat in the fourth quarter, ranging between US\$1,650 and US\$2,000 per ton f.o.b. for butter and between US\$2,050 and US\$2,200 per ton f.o.b. for anhydrous milk fat, and uncertainties persisted as to the price situation in early 1990. The Committee of the Protocol Regarding Milk Fat raised the minimum export price for butter from US\$1,250 to US\$1,350 per ton f.o.b. with effect from 20 September 1989. Simultaneously, minimum export prices for anhydrous milk fat were increased from US\$1,500 to US\$1,625 per ton f.o.b.

32. Cheese prices increased throughout 1988, reflecting a persistently strong import demand. In October-December 1988, quotations for Cheddar were in the range of US\$2,000 to US\$2,400 per ton f.o.b., thus remaining well above the agreed minimum export price. However, prices levelled off in 1989 and quotations for Cheddar were in the range of US\$1,900 to US\$2,400 per ton f.o.b. in the first nine months of the year, slightly down from the peak reached towards the end of 1988. During the fourth quarter, they fluctuated between US\$1,900 and US\$2,300 per ton f.o.b. and they were expected to remain firm in coming months, as import demand was sufficient to absorb the increased supplies. The Committee of the Protocol Regarding Certain Cheeses raised the minimum export price for certain cheeses from US\$1,350 to US\$1,500 per ton f.o.b. with effect from 20 September 1989.

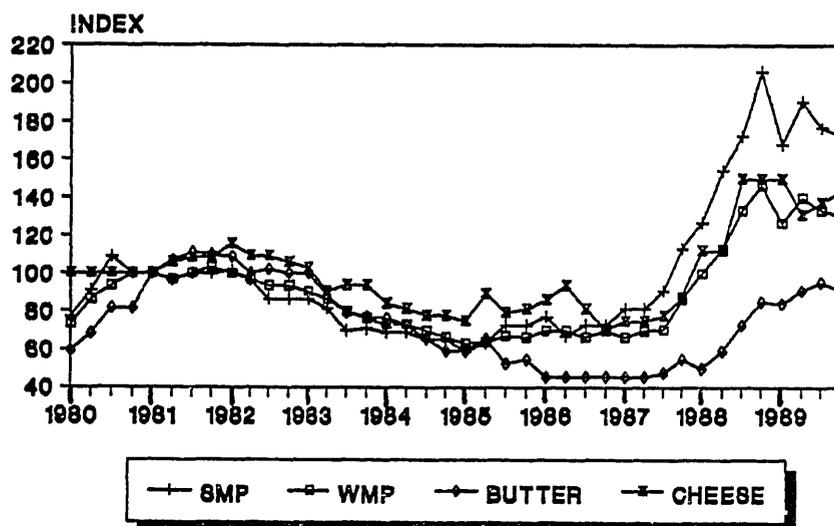
33. International prices for milk powders showed steady improvement throughout 1988. During the fourth quarter of 1988, prices of skimmed milk powder and buttermilk powder, ranged between US\$1,900 and US\$2,270 per ton f.o.b. and those of whole milk powder fluctuated between US\$1,900 and US\$2,200 per ton f.o.b. During the first three quarters of 1989, prices of skimmed milk powder levelled off ranging between US\$1,700 and US\$1,950 per ton f.o.b. and those of whole milk powder between US\$1,800 and US\$2,000 per ton f.o.b. Prices tended to weaken somewhat in the fourth quarter, ranging between US\$1,700 and US\$1,900 per ton f.o.b. for skimmed milk powder and between US\$1,750 and US\$1,950 per ton f.o.b. for whole milk powder. The

Committee of the Protocol Regarding Certain Milk Powders raised the minimum export prices for skimmed milk powder and buttermilk powder from US\$1,050 to US\$1,200 per ton f.o.b. with effect from 20 September 1989. Simultaneously, minimum export price for whole milk powder was increased from US\$1,150 to US\$1,250 per ton f.o.b.

34. The prices for other dairy products were in general increasing. Prices for condensed milk were raised in 1989. A persisting tight supply situation for casein entailed a continuous price hike throughout 1988, with prices around US\$5,600 per ton in December 1988, almost twice the price recorded one year earlier. Quotations remained at that level in the first half of 1989. However, prices of casein for technical use and of edible casein eased somewhat at the end of 1989, probably because of users' reaction to high prices. Whey prices were under pressure of affluent supplies in mid-1989, amounting to half their levels in 1988 but they recovered towards the end of 1989.

35. The major factors leading to the improvements in the dairy market were reduced supply pressures, the general rise in commodity prices and increased demand partly due to improved economic and trading prospects of many of the developing countries who account for most of the dairy imports, notably for powder and anhydrous milk fat. The improved market situation entailed some reduction in export subsidies. However, international prices of products covered by the Protocols tended to weaken somewhat in the fourth quarter of 1989. The market outlook indicated that the prices for some dairy products might remain at year-end levels or even recover although some uncertainties persisted as to the situation for certain products, notably butter.

DAIRY PRICE INDICES * (Basis: 1st quarter 1981=100)



* Upper level of price range.

36. The Arrangement has now been in operation for eleven years and market prices have gone through various phases. At the beginning of the 1980's the world dairy market was in reasonable balance. From 1982 followed a period with increased world milk production not being accompanied by increased demand and the accumulation of surplus stocks notably of butter and skimmed milk powder, which remained high and continued to have a depressive impact on the prices of all dairy products more or less until 1986-87. Thereafter a general recovery came about, first for powders and cheese and later for butter and anhydrous milk fat. The prices for powder and cheese reached new record levels in 1988, while those for butter and anhydrous milk fat although improving appreciably, did not reach their levels of the early 1980's. Milk proteins have few substitutes and are still, even at the higher price level, in a strong competitive position price-wise, compared to, for instance, vegetable proteins. That is not the situation for milk fat, which is facing a stiff competition from vegetable fat. Furthermore, demand for fats in general is being contained through prevailing dietary philosophy and advice which on the other side favour demand for milk protein. Developments in market prices, and changes in the agreed minimum prices, clearly illustrate the difference in market trends for various milk components.

TABLE 2

International Prices (1987-1988-1989)

(US\$ per metric tons f.o.b.)

Product	1987	1988		1989			
	January-December	January-June	July-December	January-March	April-June	July-September	October-December
Skimmed milk powder	750-1,250	1,300-1,700	1,650-2,270	1,700-1,850	1,800-2,100	1,800-1,950	1,700-1,900
Whole milk powder	900-1,300	1,400-1,700	1,700-2,200	1,800-1,900	1,800-2,100	1,850-2,000	1,750-1,950
Anhydrous milk fat ^a	1,200-1,250	1,325-1,500	1,350-2,100	1,900-2,200	2,000-2,300	2,100-2,500	2,050-2,200
Butter ^a	1,000-1,200	1,100-1,300	1,200-1,880	1,750-1,850	1,800-2,000	1,900-2,100	1,650-2,000
Cheddar cheese ^b	1,050-1,400	1,400-1,800	1,800-2,400	1,900-2,400	1,900-2,100	1,900-2,200	1,900-2,300

^aIn 1987 and 1988, a substantial quantity of old butter and anhydrous milk fat was sold at prices lower than the ranges indicated, by derogation under Article 7:1 of the Protocol Regarding Milk Fat.

^bUp to the end of 1988 some sales of cheese below normal export quality were made at lower prices than the ranges indicated according to Article 7:2 of the Protocol Regarding Certain Cheeses.

Developments in World Milk Production and
National Dairy Policies

37. World milk production (including buffalo, sheep and goat milk) at 529 million tons in 1989 showed an increase of about 0.7 per cent over the previous year. This virtual stagnation in milk output reflected policy induced decline in certain countries, adverse weather conditions in some major producing countries and higher feed costs in other countries and generally sluggish consumer demand. In most West European countries and Canada, production remained subject to quotas. In the United States, production suffered due to drought conditions which affected feed costs. Production rose in Australia, but fell in New Zealand and several Latin American countries due to adverse weather conditions. Similarly, production was low in the USSR due to higher feed import costs, as well as in several developing countries where imported feed concentrates were used.

38. Forecasts for 1990 suggested some increase in world production of milk. Milk deliveries were likely to remain unchanged in the European Communities in spite of an increase in quotas reserves in the 1989/90 marketing year. Milk production was expected to expand in certain European countries, Australia and Japan. New Zealand production would also recover with improved weather conditions. The USSR and a number of developing countries, notably India, might increase their production and thus offset the decline elsewhere. Milk production for the United States could increase once again due to sustained growth in yields and only a slight decline in cow numbers.

39. Milk deliveries in the European Communities, were reckoned at 99 million tons in 1989, showing a slight decline of 0.3 per cent over the previous year. Cow numbers fell to 23.1 million in 1989 from 23.5 million in 1988, but productivity per cow increased from 4,552 kgs. to 4,654 kgs. in the same period. Milk deliveries were expected to stabilize at about 99 million tons from 1990 onwards, i.e. a volume to about 12 million tons below the notional level for 1992 derived from the extrapolation of the trends before the introduction of the quotas in 1984. Yields were expected to increase by 1.8 per cent a year and by 1995 reach some 5,100 kgs. per cow and year. Cow numbers would continue to fall, for 1995 projected at 21 million, 7 million cows less than in 1983. This reduction could be accentuated by further measures to encourage some farmers to give up milk production. Further improvement in yields and feeding techniques might however tend to increase production.

40. The EC Agriculture Council, in February 1988, took the following decisions as regards the milk sector. The quota system was prolonged for another three years until March 1992. The limitations to the intervention system for butter and skimmed milk powder were also extended for the same period. The suspension of 5.5 per cent of reference quantities shall remain in place, with compensations to be paid to producers. In January 1989 - following an European Court of Justice judgement - the Council decided to add 600,000 tons of milk to the Community reserve foresee. by the quota system in order to accommodate the needs of the

so-called "SLOM" producers. It was furthermore decided that the SLOM producers would receive 60 per cent of the quantities which they were producing before joining the five-year non-marketing option. The Council also reduced the intervention price for butter by 2 per cent to ECU 306.94/100 kgs. with effect from 1 April 1989.

41. The 1989/90 farm price package, adopted in April 1989, left the target price for milk unchanged at ECU 27.84/100 kgs. No change was made in the intervention prices applicable to skimmed milk powder and cheese. The intervention price for butter was cut by a further 2 per cent to ECU 300.80/100 kgs. As from 1 April 1989 and for the 1989/90 milk year, the co-responsibility levy was reduced from 2 per cent to 1.5 per cent of the target price for producers with a quota of 60,000 kgs. or more; in addition, the levy shall not be imposed on producers in less-favoured areas and it was reduced from 1.5 per cent to 1 per cent of the target price for producers with below a 60,000 kg. quota. With regard to the future of the co-responsibility levy, the Commission undertook to make initial proposals for a subsequent step in the framework of the 1990/91 price proposals. Moreover, the Commission formulated an internal report on the functioning of the quota system in July 1989, and intended to publish subsequently a general report by the end of 1990.

42. In December 1989, the EC Council increased the quota reserve for the 1989/90 dairy year by a little more than 1 million tons which would be allocated by member States to "priority" cases in each country. At the same time, however, certain other measures were adopted to counteract the effects of increase in quota reserve. These included a 2.5 per cent cut in the intervention price for butter, a 0.75 per cent cut in the intervention price for skimmed milk powder as of 1 March 1990, a 15 per cent increase in the amount of the super levy from 100 per cent to 115 per cent of the target price as from 1 April 1990. The Council also agreed to suspend permanently 1 per cent of the 5.5 per cent of quota which had been temporarily suspended. The amount of the compensation paid to producers per percentage point suspended would be adjusted upwards such as the net amount of compensation would remain the same.

43. In Finland, milk deliveries in 1989 at around 2.62 million tons were marginally higher than in 1988, due to good climatic conditions and increased yields per cow. Forecasts for 1990 indicated milk production of a level between 2.52 million tons and 2.58 million tons, despite the recent improvement in climatic conditions and higher yields. The Milk Quota Act had been revised, following which the penalties for exceeding quotas had been reduced and the share of free quotas had been increased. Current legislation has with some amendments been extended until the end of 1990, and the two-price system continued.

44. In Norway, milk deliveries in the first half of 1989 were the same as in the same period of last year, but considerably picked up in the second half of the year so that the estimates for 1989 as a whole showed a level of 1.88 million tons, which was 1.6 per cent higher than the level of 1.85 million tons in 1988.

45. Milk deliveries in Sweden at 3.35 million tons in 1988, were reckoned to have increased to 3.38 million tons or by 1 per cent in 1989. The two-price scheme, introduced on a three-year trial basis for the period July 1985 to June 1988, was intended to discourage surplus production. Its effects in practice had, however, been stronger than was initially expected. Thus, milk production had decreased, reducing costs of surplus disposal and producers were paid a higher price for their milk. This scheme, however, ceased to be in force on 1 July 1989. As a result, milk deliveries increased by 1 per cent in 1989 and were further expected to increase by another 2 per cent in 1990. They were, however, expected to stabilize at a level of 3.45 million tons thereafter. This was considered to be sufficient to meet domestic demand and leave an occasional surplus to be exported at less than 5 per cent of total milk deliveries.

46. In Switzerland, milk deliveries in the first ten months of 1989 at 2.60 million tons were 2.4 per cent more than in the same period of the previous year and for 1989 as a whole were estimated to be 2.5 per cent more at a level of 3.07 million tons. Dairy cow numbers were expected to decline in the coming years while yields would increase further. Premiums were paid for non-marketing of milk and for processing of milk into cheese which had a relatively higher price in domestic and international markets. The basic price of milk was increased as from 1 February 1990 by 5 centimes to SwF 1.07. Domestic prices of cheese were consequently raised but prices of table butter remained unchanged and prices of cooking butter were reduced. Import charges for cheese remained unchanged.

47. In New Zealand, climatic variations continued to have a major impact on milk production. Milk production in 1987/88 at 332.5 million kgs. milk fat, was 10.5 per cent higher than in the previous season but 4.8 per cent lower than the production level achieved in 1985/86. In the 1988/89 season, production amounted to 311 million kgs. of milk fat, down by 6.3 per cent on 1987/88. This reflected adverse weather conditions, with only little change in cow numbers from the 1987/88 season. Given a return to more normal weather conditions in 1989/90, production would recover to the 1987/88 levels. However, the forecast for calendar year 1989 was for a 4 per cent decrease in production to a level of 7.13 million tons from the level a year earlier due to dry weather conditions. On a calendar year basis, production for 1990 might recover to its 1988 level. For the medium term, it was forecast that cow numbers would remain steady, yields per cow would stabilize at 3,400 kgs. per year and milk production would remain stable averaging 7.5 million tons a year. The advance basic value for manufacturing milk for the 1988/89 season was set at NZ\$3.40 per kg. milk fat in May 1988. This compared with a final value of NZ\$3.60 per kg. in 1987/88. The 1988/89 value was increased in October 1988 and in February 1989 and fixed finally for the season on 1 June at NZ\$5.30 per kg. milk fat. The advance value for the 1989/90 season was set at NZ\$4.80 per kg. milk fat. Producer prices for milk continued to be determined directly by export market realizations. The average price for manufacturing milk (4.7 per cent fat) was NZ\$0.27 (US\$0.17) per kg. in the dairy year 1988/89, as against NZ\$0.17 in 1987/88 and NZ\$0.15 in 1986/87.

48. The level of milk production in New Zealand was determined by the export performance of the dairy industry relative to other alternative uses of the land, with short-term sharp variations because of the climatic conditions. Although there were no subsidies or other regulations which could be manipulated to control production, a number of steps had been taken in recent seasons to influence it by special measures including: a supply moratorium and a milk limitation scheme, applied in the 1986/87 season. In 1987/88, a "butter realization differential" scheme was introduced which was later provided for on a continuing basis. Under this scheme, payments to dairy companies by the New Zealand Dairy Board for export butter and butter oil beyond a base production level would be made on the basis of marginal rather than average market realizations.

49. In Australia, milk production in 1987/88 at 6.31 million tons was 1 per cent down on the 1986/87 level, largely due to dry autumn conditions in the major producing States of Victoria and Tasmania. Dairy cow numbers were expected to continue to decline, but production per cow was projected to increase through genetic and management improvements. Milk production in 1988 was slightly lower and reached the level of 6.3 million tons, a decrease by 2.4 per cent on 1987. In 1988/89, milk production increased by almost 3 per cent to 6.47 million tons as a result of improved seasonal conditions and increased average yields per cow as well as increasing world market prices for dairy products and higher farmgate prices for milk. Production for 1989/90 was forecast at the same level of 1988/89. The dairy policy introduced for 1986/87 aimed at the development of a more efficient market-oriented dairy industry responsive to market conditions. The main provisions of the marketing arrangements introduced from 1 July 1986 were a Market Support Fund financed by a levy on all milk produced and a Supplementary Market Support Fund aimed at smoothing the transition from the previous arrangements to the new one. It was financed by levies on domestic sales of butter/butter oil and Cheddar-type cheeses. In May 1988, the accelerated phasing out of the levy on butter/butter oil was announced. The supplementary market support was consequently reduced in 1988/89 and all levies (including cheese levies) were terminated on 30 June 1989.

50. Japanese milk production in 1988 at 7.61 million tons was 3.7 per cent higher than in 1987. The increase was mainly due to a further improvement in yields, while dairy cow numbers continued to fall. The up-trend continued in 1989 when the output at 8.07 million tons was about 6 per cent higher than in 1988. The forecast for 1990 was that output would be at least 2 per cent higher than in 1989 in spite of a decline in cow numbers. However, the demand for drinking milk was also increasing at almost the same rate. The general balance between supply and demand for dairy products was being maintained by the LIPC mainly through substantial imports of all additional domestic requirements. The guaranteed price for milk for manufacturing had been reduced from 79.83 to 77.87 yen per kg. for the 1988/89 fiscal year, because of lower feed prices and better calf prices. The quantity of raw milk to which the guaranteed price was applied had been increased by 150 thousand tons to 2.25 million tons for fiscal year 1988. In South Africa, improved climatic conditions led to a recovery in milk output which increased by 4.7 per cent in 1989 to 1.89 million

TABLE 3

Some Data Related to (a) Cows' Milk Production or
(b) Deliveries for Selected Countries or Regions

		Milk Production/ Deliveries (million tons)	Percentage change from previous year		
			Production/ Deliveries	Milk yield	Dairy cow numbers
EC-12	1988	(b) 99.20	- 2.5	+ 1.4	- 4.3
	Preliminary 1989	(b) 99.02	- 0.3	+ 2.2	- 1.7
	Forecast 1990	(b) 99.02	- 0.0	+ 1.8	- 1.8
USSR	1988	(a) 106.40	+ 3.0	+ 4.3	- 0.7
	Preliminary 1989	(a) 108.53	+ 2.0	+ 3.0	- 0.7
	Forecast 1990	(a) 110.70	+ 2.0		
United States	1988	(a) 66.00	+ 2.0	+ 3.0	- 0.9
	Preliminary 1989	(a) 66.10	+ 0.2	+ 1.0	- 1.0
	Forecast 1990	(a) 67.65	+ 2.3		- 0.5
Poland	1988	(a) 15.45	- 0.4	+ 3.0	- 2.7
	Preliminary 1989	(a) 16.69	+ 8.0		
	Forecast 1990	(a)			
New Zealand	1988	(b) 7.43	+ 9.3	+ 18.8	0.0
	Preliminary 1989	(b) 7.13	- 4.0	- 4.0	0.0
	Forecast 1990	(b) 7.47	+ 4.8		
Canada	1988	(a) 8.42	+ 5.4	+ 3.5	- 1.6
	Preliminary 1989	(a) 8.50	+ 1.0	+ 3.1	- 1.2
	Forecast 1990	(a) 8.59	+ 1.0		- 1.5
Japan	1988	(a) 7.61	+ 3.7	+ 1.6	- 1.4
	Preliminary 1989	(a) 8.07	+ 6.0		
	Forecast 1990	(a) 8.23	+ 2.0		- 1.0
Australia	1988	(a) 6.30	- 2.4	+ 2.3	- 1.2
	Preliminary 1989	(a) 6.46	+ 2.6	+ 2.4	- 1.0
	Forecast 1990	(a) 6.54	+ 1.3		- 1.8

tons, in spite of an 11.3 per cent decrease in dairy cow numbers. Production for 1990 was expected to increase further to 1.96 million tons due to improved yields.

51. In Argentina, milk production in 1988 at 6.47 million tons was 1.7 per cent lower than the 1987 level of 6.58 million tons. This drop was attributable to the intense drought conditions. The lack of rain in 1988 and the dry conditions lasting into 1989, had the consequence of reducing feed reserves, adversely affecting milk production in 1989. This was a result of a combination of factors such as high dairy stocks at the beginning of 1988, a decreasing internal consumption due to falling purchasing power and increasing international prices. Despite the decline in production, exports increased in 1988 and 1989. The main export items were cheeses, milk powders and casein. In Uruguay, milk deliveries continued to increase in 1989 at an estimated rate of 7 per cent, reaching a level of 653 thousand tons, entailing a further significant increase in the output of dairy products. In 1990, a further increase of 5 per cent was expected. Uruguay had in recent years been the largest net exporter of dairy products among the developing countries. It sold mainly milk powders to other Latin American countries where improved prices and market conditions provided a boost to exports. Thus, in 1989, exports of dairy products were estimated to have increased by as much as 50 per cent in volume and by almost 75 per cent in value due mainly to the improved situation in the international dairy market. Production costs and prices paid to producers in these two participating countries were among the lowest in the world.

52. In Egypt, certain changes had been made to the import regime of certain dairy products. Total production of milk (including buffalo milk) in 1988 at 2.40 million tons was 1.3 per cent higher than the 1987 level of 2.37 million tons. Efforts were being made to develop and increase dairy production. Thus, production in 1989 continued to expand. Under the Second Five-Year Plan the target for milk production, at year 2000 was 4 million tons, and it was aimed at achieving full self-sufficiency. Efforts were being made to reach the objectives through increased traditional production of feed, genetic improvement and improvement of cattle health and fertility. Attempts were also made to establish a sound processing, storage and marketing system.

53. In Bulgaria, total production of milk in 1988 at 2.52 million tons was marginally lower (0.2 per cent) than the 1987 level. The number of cows remained almost the same as in 1987. In 1989, however, milk output fell by 3.9 per cent to a level of 2.43 million tons due to a slight drop both in cow numbers and productivity per cow. Hungarian production of milk increased in 1988 by 3 per cent to reach a level of 2.82 million tons due to growing yields having more than offset a drop in cow numbers. This trend continued in 1989. The bulk of dairy production covered the growing home demand, except for some special kinds of cheeses which were exported. Polish milk production remained relatively stable at 15.45 million tons in 1988. A lack of profitability in dairying had led many private farmers to reduce their herds. Milk deliveries had been insufficient to meet domestic demand for dairy products in 1987 and 1988, substantial quantities of dairy

products had to be imported and further imports were necessary in 1989. In 1989, output of milk and dairy products exceeded the level of the previous year, mainly because of favourable climatic conditions throughout the winter and the spring. Thus, milk production recovered and was estimated to have increased by as much as 8 per cent to around 16.50 million tons in 1989. The availability of dairy products in the domestic market improved significantly and the milk was of a better quality. A system of market-oriented prices was introduced on 1 August 1989 and subsidies to the dairy industry were abolished. The deregulation of prices after forty years of State control had resulted in a substantial rise in prices, but the Government was committed to restoring a normalcy in the economic situation.

54. In Romania, production of milk in 1988 remained relatively stable at 4.30 million tons, and for 1989 little or no change was expected.

55. In Yugoslavia, milk production increased by 2.2 per cent to 4.70 million tons in 1988, due principally to growing yields. In the Democratic Republic of Germany, milk production declined marginally (by 0.3 per cent) in 1988 with increasing yields being offset by a decline in cow numbers. For 1989, little or no change was forecast. In Czechoslovakia, production of milk increased by 0.6 per cent in 1988 to 6.96 million tons and remained relatively stable in 1989.

56. In the USSR, milk production was 108.5 million tons in 1989, about 2 per cent higher than in 1988. This relatively modest increase in production was due to inadequate domestic fodder and feed supplies together with high international prices of concentrate feeds. Cow numbers on State and collective farms totalled 28.4 million head, showing a decline of 0.7 per cent compared to 1988. According to the Twelfth Five-Year Plan, milk deliveries to the State by collective and State farms should be increased to 106-110 million tons by 1990, which meant annual rates of increase between 1.5 and 2.5 per cent. Production in excess of delivery plans might be sold freely and at higher prices. In 1990, production was expected to increase by another 2 per cent. Milk yield per cow was expected to increase in 1989/90 as a result of better breeding and growth of feed production. However, dairy products continued to be rationed, as domestic supplies were insufficient to meet demand. Considerable imports of dairy products were made also in 1989.

57. The application of the Dairy Termination Programme (DTP) from April 1986 to October 1987 by the United States, and a reduction of the milk support price by 2.3 per cent (from US\$11.35/cwt. to US\$11.10/cwt.) in October 1987 had some impact on the milk output. A further cut in the national support price was made effective 1 January 1988, resulting in a price of US\$10.60 per cwt., and CCC purchase prices for butter and non-fat dry milk were also reduced. The summer drought in 1988 resulted in significantly higher feed prices, raising production costs and putting additional financial pressure on producers. Milk production nevertheless showed an increase of 2 per cent to reach a level of 66 million tons in 1988. The Disaster Assistance Act of 1988 was expected to provide

additional incomes to dairy farmers totalling US\$800 million and US\$700 million in 1989 and 1990 respectively. This Act provided for a freeze on the proposed 50 cent per cwt. reduction in the support price due on 1 January 1989, and for a 50 cent per cwt. price increase from April through June 1989. The willingness of dairy farmers to produce more milk at lower real prices has dominated the eighties. If the trends of the early eighties continued, increases in milk production would probably be larger than rises in commercial use. In 1989, milk production was up by 0.2 per cent to 66.1 million tons. Cow numbers were continuing to fall, although the decline was slowing. At the same time, however, dairy farmers increased the use of feed concentrates following a 5 per cent price decline in such feeds. The US Farm Bill 1985 would expire in 1990 and discussions were under way on proposals for a successive US Farm Bill. A new legislation was not expected to contain major changes as to United States commodity programmes. Commercial consumption of dairy products increased by 1 per cent in 1988 and was expected to increase by another 2 per cent both in 1989 and 1990. Some shifts in consumption were observed from higher-fat products toward lower-fat products and this might entail a surplus of butter available for export. In 1989, fluid milk was temporarily in short supply in some areas and the United States Department of Agriculture, acting under Federal Orders, had reportedly obliged processors to limit production and that some milk was diverted from manufacturers to meet pressing retail needs for fluid milk. The situation lasted into 1990. Milk production was expected to increase by 1 to 3 per cent in 1990, to reach a level of 67.65 million tons, as a result of higher milk prices together with falling feed costs.

58. Canadian milk production in 1988 at 8.42 million tons was 5.4 per cent up on the level of the previous year, despite a reduction in the number of milk producers and cow numbers. Yields improved and milk sales off farms increased. In response to a 2.8 per cent increase in domestic consumption of industrial dairy products for the August-December 1987 period, the Market Sharing Quota was increased by 1.5 per cent for 1987/88 to a level of 47.3 million hls. A new methodology for setting target returns for industrial milk and support prices for butter and skimmed milk powder was being implemented which would allow changes in costs to milk producers to be more accurately reflected. Effective 1 February 1988, the target return for industrial milk was fixed at Can\$47.06/hl. The increase of 1 per cent, was the first since August 1986. Effective 1 August 1989, the target return for industrial milk was raised to Can\$47.45 per hectolitre, an increase of 0.8 per cent. In raising the target return, the Government considered that it had made a balanced decision, reaffirming its commitment to supply management in the dairy sector, recognizing increases in production costs and observing Canada's international undertaking. It stressed that the adjusted target price maintained, but did not increase the aggregate level of government support to dairy producers. The support price for butter was at the same time raised by 1.3 per cent to Can\$5.167 per kg. and that of skimmed milk powder by 1.1 per cent to Can\$3.046 per kg. A task force with representatives from the Federal Government, farmers, the dairy industry and consumers will identify options for the next long-term dairy policy commencing in 1991, and otherwise provide

guidance and advice to the Government. Milk production increased by 1 per cent in calendar year 1989 and increases of 1 to 2 per cent were projected for the medium term.

59. In Israel, milk production had increased continuously over a number of years and showed an increase of 5.5 per cent from 1987 to 1988, to reach a total of 939 thousand tons. Faced with a sharp decline in domestic demand, the Milk Marketing Board took steps to cut milk production quotas and in 1989 production was expected to decline by 2 per cent. Furthermore, the Milk Marketing Board encouraged the exports of dairy cows, aiming at a reduction of the dairy herd by 5 to 7 per cent. In 1989, Israel had an average yield of 8,400 kgs. per cow, the highest in the world.

60. Milk production in individual developing countries generally remained at low levels due to technical and economic factors. However, the overall output of developing countries increased by 2 per cent to 144 million tons in 1989 and the degree of self-sufficiency was expected to increase in the next few years. A number of importing developing countries such as India and China had embarked on very ambitious development programmes. Milk production in India (including buffalo and goat milk), which accounted for nearly one half of the total Asian milk production and one third of the aggregate for all developing countries, expanded under the "Operation Flood" project sponsored by the European Communities. During the 1980-86 period, the average annual growth rate was 6.4 per cent. In the 1987/88 dairy year, however, due to a severe drought and a shortage of feedgrains in most areas milk production was reduced by 3.8 per cent. Favourable weather conditions, after three consecutive droughts, led to a recovery in milk production in the 1988/89 dairy year to some 44 million tons. Milk output was projected to rise by about 40 per cent to 61 million tons by 1995 with per caput consumption increasing from its present level of 58 kgs. per year to about 66 kgs. China's production of milk increased throughout the 1980's, as a result of increased cow numbers and more emphasis in national plans on the nutritional value of milk consumption. There was a sharp increase in 1988 by 10 per cent to 6.6 million tons, but the growth was slowed down in 1989 due to rising fodder costs which discouraged farmers from raising dairy cows and goats. Original plans which indicated a target of 30 million tons by the year 2000, were revised downwards as feed supply was lagging behind the requirements of the livestock sector and fodder prices were increasing. Even so, by the beginning of the next century, China might establish itself as the second largest milk producer in the developing regions.

61. Milk production continued to expand rapidly in the Republic of Korea in 1989, amounting to 1.5 million tons. Nearly three quarters of the supply was consumed as fresh liquid milk or products. Dairy imports grew further in 1989 and were expected to increase in the future. All dairy imports were subject to quota and importers had to obtain permits from the Korean Dairy Association. Quotas for some products such as yoghurt would be lifted in 1990.

62. Strong efforts to step up milk production were also being made in several countries of South-East Asia, with a view to substituting imports and stimulating rural development. Thailand, one of the biggest importers

of dairy products in Asia, had in recent years expanded milk production significantly. In Indonesia also, milk production showed a rapid increase, but from a very low base. In Africa, on the other hand, Kenya, Zimbabwe and Madagascar obtained significant increases in 1988. Some rise also occurred in Latin America, where improved returns from exports stimulated dairying in countries having surpluses available for export. Mexico's milk production continued to rise sharply, up an estimated 4 per cent for 1988 to 9.3 million tons. The sharp increases in milk output since 1985 were partially in response to imports of high yielding breeding stock during the past few years. Production growth during 1988 was moderated by an extended summer dry period which limited forage supplies and caused relatively more milk to be used for feed. Another 4 per cent gain in milk production was recorded in 1989. Mexico was in the process of adjusting its programme designed to increase domestic milk production with the objective of establishing self-sufficiency and to ultimately reducing or eliminating the imports of milk powder. Milk production in Brazil declined slightly in 1988 to 13.2 million tons as higher feed costs and unfavourable prices caused by weak demand for dairy products further tightened profit margins. However, production recovered in 1989 to its 1987 level. Favourable milk prices in Chile stimulated further increase in production in 1989.

Consumption

63. World consumption of liquid milk over the last ten years increased at an average annual rate of 1 per cent. In 1988 and 1989, however, the increase amounted to between 1.5 and 2 per cent indicating that liquid milk consumption grew somewhat faster than the overall demand for dairy products. In per capita terms, the consumption of milk remained rather stable at nearly 46 kgs. throughout this period. In 1989, worldwide fluid per capita milk consumption was expected to have reached the 1984 record level of 47.2 kgs. For obvious reasons, glaring variations existed between countries and regions in the per capita intake of milk. On one end of the spectrum were developed countries, with 160 kgs. of liquid milk consumption; but the intake was as low as 2.5 kgs. in certain developing countries. However, while consumption levels were gradually increasing in developing countries with growing urbanization and population/income increase, milk intake was getting saturated in some developed countries either on health grounds or due to the availability of a wide variety of substitute drinks and milk imitations, of low caloric content, at moderate prices. Consumers were showing preference for semi-skimmed types of milk, so-called "light" products. The switch from whole milk to partially skimmed milk continued in 1988 and 1989, with sharp increases in consumption of the latter registered in many countries in Europe and in North America.

64. The principal area of growth in consumption was Asia, both developed and developing countries where rising incomes and changing food consumption habits had provided a strong boost to demand for milk and dairy products. In Asia, many countries were subsidizing campaigns to promote milk consumption and had introduced a school milk subsidy. As a result, per capita milk consumption had steadily increased, principally in Japan, the

Republic of Korea, Thailand, Indonesia, China and India. China's total milk consumption more than doubled and India's usage of cow's milk increased by 13 per cent from 1984 to 1989. In Latin America also, consumption increased to some extent as a consequence of milk distribution programmes.

65. The consumption of other fresh milk products such as yoghurt and other fermented or flavoured milks was steadily increasing in a number of countries and was expected to continue its upward trend. In 1988, the consumption of yoghurt and other fermented milks had reached the levels of 15 to 35 kgs. per capita in the Nordic countries, the Netherlands and Switzerland, and was rapidly approaching 10 kgs. in other European countries. Also the consumption of flavoured milks was developing rapidly. There was a potential demand for yoghurt and flavoured milks in many developing countries, but the consumption continued to be hampered by relatively high prices. Yoghurt consumption in India in 1987 amounted to more than 3 million tons or an estimated 4.2 kgs. per capita, a rather impressive figure. Yoghurt consumption also increased in Uruguay as a result of promotion, presentation and different flavours.

66. The strong demand for milk products has encouraged the development and production of dairy substitutes and imitations, which to a variable degree contain milk components. Statistics for such products have been difficult to obtain, but it was generally believed that their role in the market was still small in quantitative terms, although in Sweden, Switzerland and the United Kingdom non-dairy ice-cream consumption in 1987 amounted to 11, 9 and 7 kgs. per capita, respectively. However the appearance of dairy substitutes and imitations had given rise to some concern as to the effect this would have on the dairy market in the future and which might necessitate measures to protect the marketing of traditional milk products. In September 1988, the International Dairy Federation adopted some guidelines for the designation and presentation of substitute products. These guidelines were intended to identify and prevent misuse of designations reserved for milk and milk products and to achieve a proper labelling of substitutes so that consumers could be properly warned.

The Situation for Individual Dairy Products

Butter and Anhydrous Milk Fat

Butter

Production

67. World production of butter and butter oil increased by 1.2 per cent in 1989 and amounted to 7.60 million tons. Production in 1990 was forecast to increase by about the same rate. As a result of the estimated increases of milk production in 1989 and 1990 and the shift to lower fat content of other dairy products, world butter production tended to increase in both years. At the same time, the demand for butter decreased and the result was some accumulation of butter stocks and butter offered for exports.

68. Community manufacture of butter remained stable in 1989 at 1.66 thousand tons following sharp reductions in 1988 and 1987 (respectively by 11 and 14 per cent). Production was little changed, despite falling deliveries to dairies and increased production of drinking milk, cream and cheese. This stability was due to the slightly higher fat content of milk delivered to dairies and the reduced fat content of drinking milk and cheese produced. For 1990, butter output was expected to remain relatively stable.

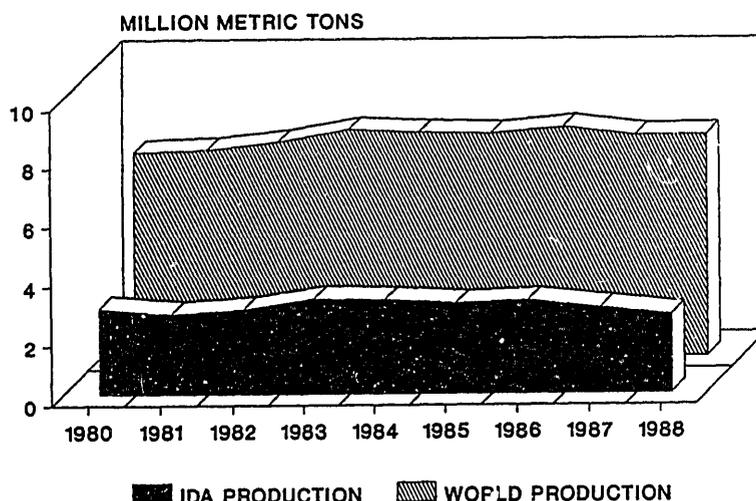
69. In New Zealand, production of butter/butter oil in 1988/89 reached 246 thousand tons, 12 per cent less than in the previous season. In 1989/90, however, it was expected to recover by 10.7 per cent to around 273 thousand tons, but still remaining lower than the output of 280.7 thousand tons in 1987/88. The dairy industry was continuing to pursue the objective of reducing the proportion of milk used in butter manufacture in face of reduced access to traditional markets and the lack of secure alternative markets. Australian butter/butter oil production for 1988/89 was 92 thousand tons as against 94.2 thousand tons in 1987/88. It was forecast to rise to 101.9 thousand tons in 1989/90. In 1989, butter output remained stable in Finland and Norway but increased in Sweden. In Poland, output increased substantially (by around 10 per cent) in 1989 to some 290 thousand tons.

70. United States butter production continued to increase by an estimated 5 per cent in 1989, then reaching 570 thousand tons. The shift in consumption of milk and dairy products toward lower-fat milk products has been an incentive to increase the output of the latter group of products, resulting in an increased quantity of milk fat being diverted to a residual butter production. Government purchases of butter were high in 1989 and were expected to continue at a high level in 1990 as well. Canadian butter production was expected to decrease by 4 per cent to 98 thousand tons in 1989/90, due to reduced Market Sharing Quota and increased production of cheese.

71. Output of butter in the German Democratic Republic in 1989 increased by 2.5 per cent to some 330 thousand tons. USSR production rose by 3 per cent, reaching a level of 1.3 million tons in 1988 and continued to

increase in 1989 but at a modest rate, i.e. only 0.3 per cent in the first nine months of the year. Consequently, only a marginal increase was estimated for the whole year of 1989. In developing countries, butter/butter oil production increased by 4.5 per cent in 1988. In 1989 however, output increased by only 0.5 per cent, amounting to some 1.88 million tons.

BUTTER PRODUCTION 1980-1988



Consumption

72. World butter consumption for 1988 declined by approximately 1.5 per cent, from 1987 levels. A further reduction by 2 per cent was estimated for 1989 with sharp declines registered in certain regions, notably in Western Europe and North America where demand for butter could have reached a saturation point. World per capita consumption which averaged 2.7-2.8 kgs. over the past ten years stagnated or declined slightly through 1989. The trend to both blended spreads and low fat spreads (both blended and margarine) had accelerated in 1989. In the short and medium term it was likely that this trend would continue.

73. In the Community, butter from intervention storage had been available since 1972 at around 50 per cent of the intervention price for non-profit making organizations and for the armed forces. Member States also subsidized butter for social purposes and the Community contributed financially to national schemes for school milk. Measures under the milk co-responsibility regime continued in 1987 and 1988, providing funds for subsidized butter to be used in pastry products, ice-cream and sugar confectionery. A scheme for butter sold for cooking, introduced in 1985, was continued in 1988 and 1989. However, in the autumn of 1988, certain limitations had been introduced in the granting of the aids, taking into account the evolution of prices and the decline in public stocks. Further reductions were announced in May 1989, i.e. a cut in the aid for sales to non-profit making organizations and the suspension of the regulation for

butter sales to the armed forces. Total Community consumption of butter in 1988 was 6.8 per cent less than in 1987, and a further reduction by as much as 10 per cent was estimated for 1989. The decline was due partly to higher prices, partly to the increased supply of imitation products in some member States and a reduction in sales at reduced prices.

74. In Switzerland, a number of measures were taken to promote butter consumption and the product was being sold at prices considerably below cost, mainly with the help of subsidies. However, domestic consumption of butter continued to decline in 1989. In the Nordic countries also, butter consumption continued to decline in 1989. In Poland, butter consumption registered an increase in 1989 while in Hungary, it declined.

75. In New Zealand, domestic consumption of butter remained relatively stable at around 37-38 thousand tons a year and was expected to remain at that level. In Australia, domestic sales of butter, butter blends and butter oil remained at 51 thousand tons of butter equivalent in 1988/89. For 1989/90, domestic consumption was forecast to increase by 6.2 per cent to 54 thousand tons.

76. In North America, butter consumption decreased slightly in 1988, and this trend continued in 1989. In the USSR, consumption increased in 1988 due to low-priced imports. The trend was reversed in 1989 as a result of a changed situation in the world market, with demand reacting to higher prices.

Trade

77. The domestic disposal and the sales under derogation of significant quantities of butter coupled with substantially reduced production in 1987 resulted in an appreciable reduction of stocks providing an improvement in the butter market in 1988 and 1989. However, a large part of world exports in 1988 (estimated at 1 million tons) consisted of deliveries under derogations agreed previously. World exports declined in 1989 to some 800 thousand tons. Sales by the European Communities and Oceania declined while those of the United States showed a substantial increase. By the end of 1989, expectations of a further strengthening of the market for butter had been dampened due to a lack of new sales and weaker import demand in the USSR. This along with continued decline in milk fat consumption in many countries, might have some impact on the international market.

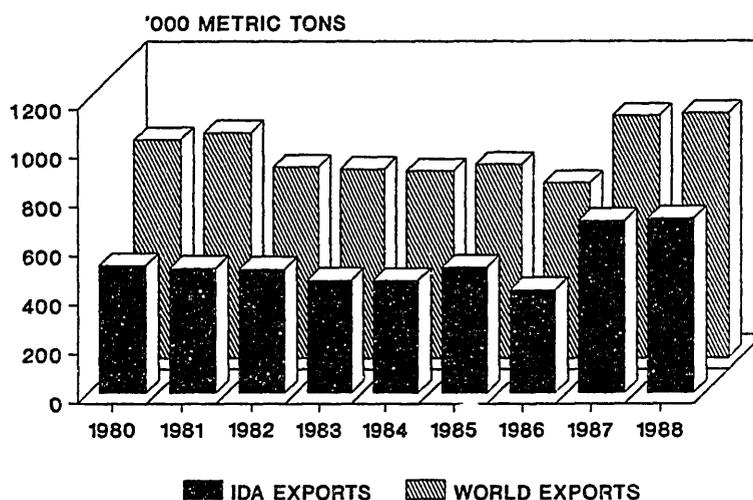
78. Community exports of butter to third countries showed substantial increases in 1987 and 1988, the main destination being the USSR which imported mainly low priced old butter. However, in 1989, exports registered a substantial decline (by about 20 per cent) and amounted to some 350 thousand tons. A large quantity again went to the USSR but at prevailing world market prices. A further decline in exports (to some 330 thousand tons) was expected for 1990.

79. After having increased in 1987 and 1988, exports by New Zealand decreased in 1989. The European Communities remained the main outlet. Under the preferential regime for butter imports, the European Communities

had imported from New Zealand 76 thousand tons in 1987 and 74 thousand tons in 1988. In September 1989, special arrangements were made for imports of New Zealand butter into the Community between 1989 and 1992 under which the global volume of butter which New Zealand could export to the European Community in 1989 was fixed at 64,500 tons. The arrangements provided for a reduction in the special import levy from 25 per cent ad valorem to 15 per cent, or 45.83 ECU per 100 kgs. For subsequent years, Community imports of butter from New Zealand under the special arrangement will be further progressively reduced to the following quantities: 61,340 tons in 1990; 58,170 tons in 1991 and 55,000 tons in 1992. Subsequently, the Council decided in December 1989, that the special levy of ECU 45.83 per 100 kgs. would be reduced to ECU 44.02 per 100 kgs. as from 1 January 1990. The levy remained 15 per cent of the butter intervention price, but because the intervention price was to be lowered by 2.5 per cent from 1 March 1990, the levy amount in ECU was accordingly cut. Other important outlets for New Zealand butter were Iran and the USSR. Australian exports of butter/butter oil at 52.3 thousand tons in 1988/89 remained unchanged as compared to the previous season and were expected to fall by 1.8 per cent to 51.4 thousand tons in 1989/90.

80. Romanian exports of butter and butter oil were around 19 thousand tons in 1988 and in 1989, the main destinations being the USSR and Egypt. Exports of butter by the German Democratic Republic decreased from 55 thousand tons in 1988 to 50 thousand tons in 1989.

BUTTER EXPORTS 1980-1988



81. United States exports of butter and milk fat in 1988 declined for the third consecutive year to the level of some 9 thousand tons, i.e. a drop of some 36 per cent on 1987, the main destinations being Iraq and Jamaica. However, in 1989, butter exports increased substantially. In early 1989, larger milk production resulted in an increase of output of butter and skimmed milk powder, the demand for the latter product being strong.

However, commercial use of butter fell and public stocks increased. In April, 3,000 tons of butter and 2,000 tons of butter oil were sold to Brazil at prices of US\$1,850 and US\$2,150 per ton f.a.s. respectively. In September, sales of 50 thousand tons of butter to the USSR had reportedly been concluded at a price of US\$1,700 per ton f.a.s. Shipment of this butter during December 1989-March 1990, would substantially reduce government stocks. The 1985 Farm Bill mandated the sale of 150,000 tons of dairy products (of which 100,000 tons of butter) annually through fiscal year 1990. This target for butter exports had not been attained in previous years but in calendar year 1989 some 70 thousand tons of butterfat were sold.

82. Community imports of butter, which in 1988 aggregated 70 thousand tons, decreased to some 65 thousand tons in 1989. New Zealand remained the main source of the Community imports. Imports into Switzerland decreased in 1989. In Poland, butter production was not in line with domestic requirements. Large quantities had been imported since 1986, and in 1988 amounted to 34 thousand tons. The main source of these imports was the European Communities. Polish imports decreased by almost 54 per cent to 11.5 thousand tons in the first nine months of 1989 mainly due to increased domestic production. The main suppliers were the European Community and the United States. Japan, whose imports of butter averaged only 2 thousand tons a year between 1981 and 1987 experienced in 1988 a temporary shortfall in its domestic production and decided consequently to offset it by supplementary purchases amounting to as much as 21 thousand tons. Total imports reached 23.3 thousand tons in 1988, the main supplier being New Zealand. Japan continued to import butter also in 1989 but the purchases were substantially lower than in the previous year.

83. The USSR, where consumption of milk and dairy products rose faster than production, remained by far the largest net importer of butter in recent years. In 1989, the USSR imported substantial amounts of butter though total dairy products imports were below the record level of 3.4 million tons in terms of milk equivalent registered in 1988. Part of the USSR butter imports in 1989 resulted from earlier purchases of cheap old butter from Community stocks, but sizable quantities of fresh butter were also purchased at prevailing world prices, chiefly from the European Communities and New Zealand. In September of 1989, the USSR turned to the United States which released surplus butter from government stocks. Imports of butter in 1989 were estimated at 300 thousand tons, down by 32 per cent from the record level of 440.5 thousand tons reached in 1988 (Table 4). Import demand in the USSR was weaker in the fourth quarter of 1989 and uncertainties persisted as to the import requirements early in 1990.

Stocks

84. Total stocks of butter in the European Communities, North America and Oceania on 1 October 1989, at 478 thousand tons were 20 per cent lower than a year earlier, while stocks on 1 January 1990, estimated at 350 thousand tons, were about at the same level as a year earlier. On the same date world butter stocks were, however, estimated to be higher than their level on 1 January 1989.

TABLE 4
Imports of Butter into USSR by Origin
('000 metric tons)

	1981-83 average	1985	1986	1987	1988
<u>Total</u>	<u>189.46</u>	<u>276.04</u>	<u>194.34</u>	<u>403.11</u>	<u>440.47</u>
of which from:					
Belgium	16.67	16.72	-	9.99	5.75
Denmark	-	-	-	5.00	-
Ireland	15.75	19.79	-	-	12.06
Netherlands	14.71	34.80	-	113.14	121.05
France	25.08	94.14	15.20	49.97	19.08
Germany, F.R.	-	-	90.00	133.00	183.00
<u>Total EC countries mentioned</u>	<u>72.22</u>	<u>165.45</u>	<u>105.20</u>	<u>311.10</u>	<u>340.94</u>
Hungary	3.48	1.76	0.72	1.06	1.00
Norway	1.67	-	-	-	-
Finland	9.34	7.07	8.00	6.10	8.79
Sweden	5.46	2.31	-	-	-
Canada	0.67	-	-	-	-
Uruguay	3.37	-	..	-	-
New Zealand	48.71	35.98	25.11	11.38	38.29
Others (unspecified origins)	44.38	63.47	55.31	73.47	51.45

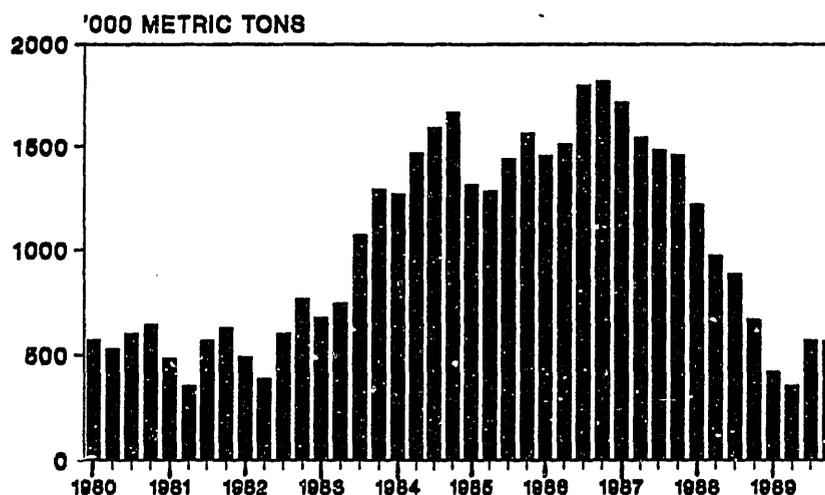
Source: Foreign Trade Yearbooks of the USSR 1981 to 1988.

85. Community stocks totalled 140 thousand tons (public and private) at the end of 1989 as compared to 202 thousand tons one year earlier. A special two-year stock disposal programme designed to dispose of 1 million tons of butter had been introduced in 1987. In addition, the Commission exercised its authority to suspend intervention buying of butter on certain conditions. Thereafter a tender system for buying butter into intervention was operated. The objectives of the disposal programme had been attained, and the results of the new tender system had been very positive. There had been no intervention purchase whatsoever in 1989 and only a few hundred tons in late 1988. However, due to the decrease in prices, the EC Commission decided on 11 January 1990 to buy some 12 thousand tons of butter, the first intervention purchase in two years.

86. In Oceania, stocks of butter at 50 thousand tons on 1 January 1990 were very low. In Poland, stocks of butter at 19 thousand tons on 1 October 1989 were also very low. In Finland, butter stocks at 20 thousand tons on 1 October 1989 were 18 per cent higher due to declining consumption and exports.

BUTTER STOCKS 1980-1989

IDA PARTICIPANTS *



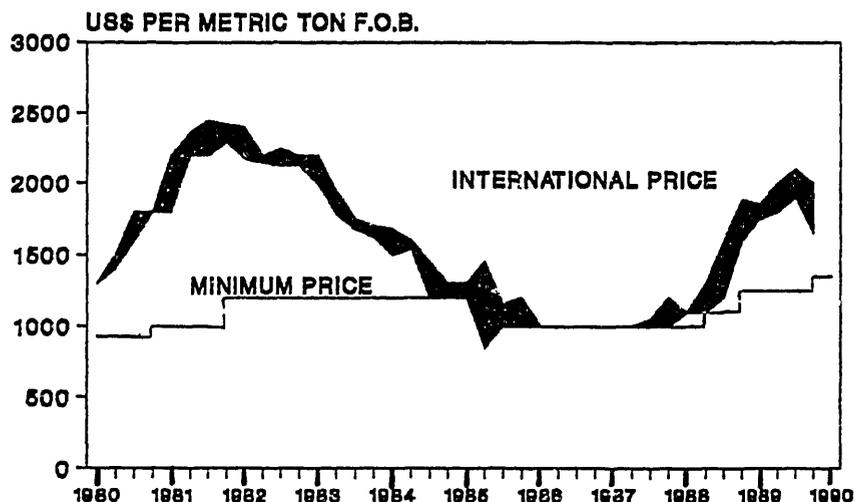
* Includes Austria, Canada and the US

87. In the United States, production having increased in 1988, government purchases of butter rose substantially, reflecting a jump in the surplus of high-fat products. Consequently, public stocks increased to 65 thousand tons on 31 December 1988. With production increasing and domestic use falling, public stocks continued to swell in 1989 and were at 150 thousand tons on 30 September 1989, i.e. 34 per cent greater than their level on 30 September 1988. The decision to authorize sales of up to 75 thousand tons to the USSR was taken in this context. Taking into account the actual sale of 50 thousand tons to the USSR and certain other deliveries mainly to Poland and Brazil, it was estimated that public stocks at the end of 1989 amounted to some 115 thousand tons, an increase by 77 per cent as compared to their level one year earlier. Canadian stocks reached 16.5 thousand tons at the end of the dairy year 1988/89, down 8 per cent on 1 August 1988.

International prices

88. Various efforts made in 1987 and early 1988 to restore the equilibrium in the butter market yielded some results. The market situation, notably for fresh butter improved appreciably and prices improved. During the first half of 1988 quotations were in the range of US\$1,100 to US\$1,300 per metric ton f.o.b., and continued to firm up in the second half of 1988, fluctuating between US\$1,600 and US\$1,880 per metric ton f.o.b. in the fourth quarter. Reduced supplies and lower carry-over stocks resulted in a further improvement of prices in 1989 with prices for fresh butter fluctuating between US\$1,750 and US\$2,100 per ton f.o.b. in the first nine months of the year. However, prices tended to weaken somewhat in the fourth quarter, ranging between US\$1,650 and US\$2,000 per ton f.o.b. and uncertainties persisted as to the price situation in early 1990.

BUTTER PRICES 1980-1989



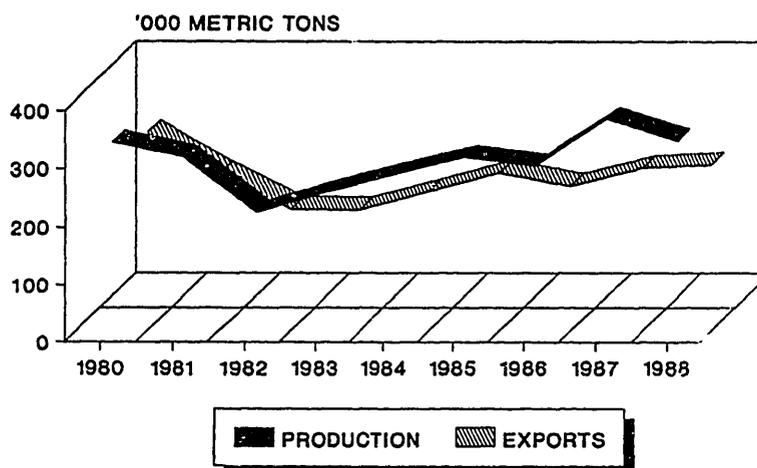
89. In light of the improved market situation, but taking account of uncertainties persisting in the butter market, the Committee of the Protocol Regarding Milk Fat raised the minimum export price for butter from US\$1,250 to US\$1,350 per metric ton f.o.b. with effect from 20 September 1989.

Anhydrous Milk Fat

Production and trade

90. Output of anhydrous milk fat of the European Communities, New Zealand and Australia was lower in the first nine months of 1989 than in the corresponding period of the previous year. Exports by the European Communities and New Zealand decreased substantially in the period considered while exports by Australia registered an increase. Production and trade of other participants remained negligible.

ANHYDROUS MILK FAT PRODUCTION AND EXPORTS 1980-1988 *



* IDA participants only

Food aid

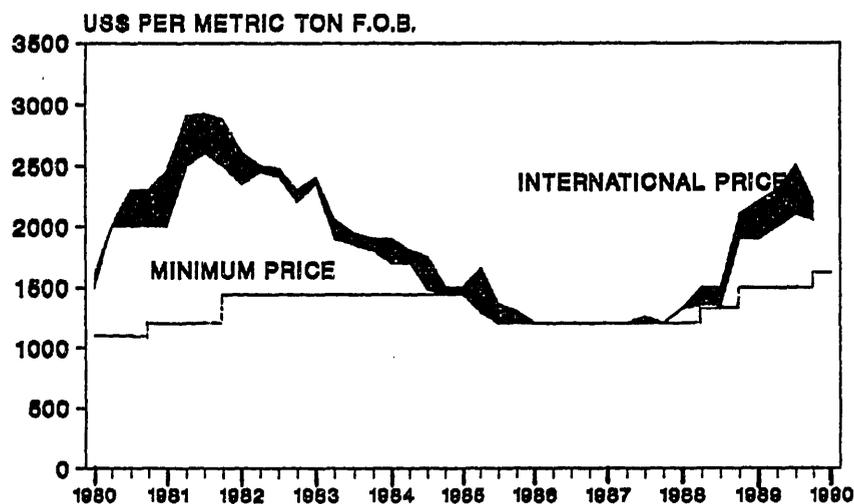
91. The 1989 Community food-aid programme provided for a maximum of 25 thousand tons of butter oil, the same as in 1988. Actual food-aid deliveries in the first nine months of 1989, amounted to 11 thousand tons in relation to 26 thousand tons delivered in the corresponding period of 1988. In early 1989, the United States entered into discussions with Poland concerning donations of certain quantities of butter.

International prices

92. International prices of anhydrous milk fat improved throughout 1988 ranging between US\$1,900 and US\$2,100 per ton f.o.b. in the fourth quarter. This strengthening continued in 1989 and prices fluctuated between US\$1,900 and US\$2,500 per ton f.o.b. in the first nine months of the year. However, prices tended to weaken somewhat in the fourth quarter ranging between US\$2,050 and US\$2,200 per ton f.o.b. As regards the future outlook, prices and sales of anhydrous milk fat remained sensitive to competition from vegetable oils and uncertainties were persisting in the market.

93. The Committee of the Protocol Regarding Milk Fat raised the minimum export price for anhydrous milk fat from US\$1,500 to US\$1,625 per ton f.o.b. with effect from 20 September 1989.

ANHYDROUS MILK FAT PRICES 1980-1989



Cheese

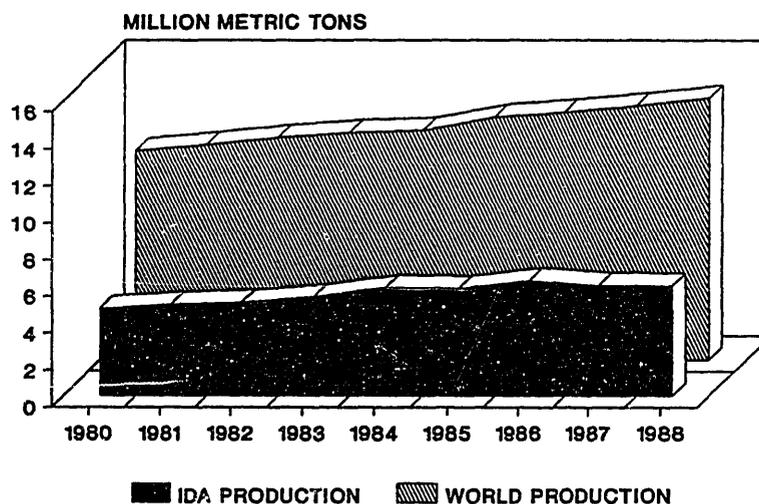
Production

94. World output of cheese (all kinds including curd) at 14.25 million tons in 1989 was 0.2 per cent more than in 1988 and larger gain was forecast for 1990. The trend was very similar in all regions, but with somewhat greater variations from one country to another. In the European Communities, cheese production in 1989 reached 4.49 million tons, an increase by 1 per cent over 1988. This partially reflected the increase in domestic consumption and also the application of a modified intervention system for skimmed milk powder and butter. Larger quantities of milk had been diverted into the production of cheeses. For 1990, a further increase by about the same rate was anticipated.

95. In Australia, production of cheese totalled 190.7 thousand tons in 1988/89, i.e. 8.2 per cent more than the level of the previous season. It was forecast to decrease marginally to 187 thousand tons in 1989/90. In New Zealand, cheese output at 128 thousand tons in 1988/89 was slightly lower than in the previous season, but was expected to increase to 131 thousand tons in 1989/90. Relative gains were recorded in 1989 in most other participating countries.

96. In 1989, United States cheese production increased by some 1 per cent to about 2.53 million tons following growth in commercial demand. With domestic demand continuing to increase a larger growth was expected for 1990. Thus, much of the increase in the milk supply would be absorbed by cheese manufacture. Production in Canada continued to grow in 1989, in response to rising domestic demand. In the USSR, production of cheese (excluding curd and fresh cheese) in 1989 at 900 thousand tons, was around 1 per cent higher than in 1988. A further increase was projected for 1990. USSR production of curd and fresh cheese was estimated to have exceeded 1 million tons in 1989. In the German Democratic Republic, production remained at 267 thousand tons in 1989 and little change was expected for 1990. Production of cheese in developing countries which was a little over 12 per cent of total world output hardly changed in 1989.

CHEESE PRODUCTION 1980-1988



Consumption

97. Cheese consumption for the major producing countries continued to expand, up 1 per cent in 1989. In the United States domestic sales of cheese remained strong in 1989, increasing by 1.5 per cent and growth in the European countries continued. In the European Communities, a gain of 1 per cent was registered in 1989. The outlook for 1990 was for continued growth in total cheese consumption of about 1 per cent over 1989. The great variety of cheese available and further active products development (i.e. low-fat cheeses) were the main reasons for these positive developments in cheese consumption.

98. World per capita cheese consumption was moving up steadily, showing an average annual increase of over 2 per cent since the early eighties. However, the outlook for 1990 was for little change in per capita use. Per capita consumption was particularly high in Western Europe (around 13 kgs.) and in North America (around 11 kgs.); the increase in consumption seemed to be the strongest in these high level consumption countries. The increasing trend in Western Europe and North America was expected to continue at an average annual rate of 2 to 3 per cent. In 1989, cheese consumption started to develop in North Africa and the Middle East.

99. The expansion in demand and consumption of cheese has entailed the development and production of imitation cheese, but such products still had obtained only a marginal market share in 1989. A Cheddar-type imitation cheese was introduced in the United Kingdom market in 1989 in two forms: as hard cheese and as spread. It was produced from skimmed milk powder and whole milk powder and 75 per cent of the fat was of vegetable origin, mainly sunflowerseed oil. Considerable amounts in the order of 3 to 4 million pounds sterling were being spent on brand advertising of the product.

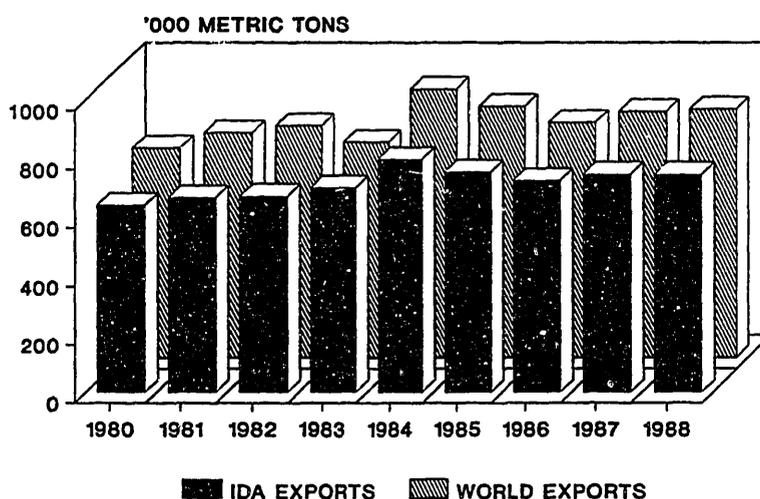
Trade

100. World exports of cheese were up 2.4 per cent for 1989 and reached some 870 thousand tons. The general expansionary tendencies observed in the market for 1989 continued into 1990. The international cheese market was dominated by Western Europe and New Zealand, which together accounted for over 75 per cent of exports.

101. Community cheese exports expanded by as much as 10 per cent in 1989 to 440 thousand tons. However, exports in 1990 were expected to grow at a slower rate. New Zealand exports reached 103 thousand tons in 1989, being 30 per cent above their average level of 1981-83, the main outlet remaining Japan. Little change was expected for 1990. Sales of cheese below normal export quality under derogation dropped sharply in 1988 and stopped completely in 1989 reflecting improved market conditions. Australian exports of cheese in 1988/89, at 62 thousand tons, were substantially lower (by 15.6 per cent), reflecting the effect of stock run-down in 1987/88. However, as a consequence of the recovery in the cheese market, exports were forecast to increase by 11 per cent to some 69 thousand tons in 1989/90. The main destinations of Australia's exports continued to be Japan and South East Asia.

102. Exports by Switzerland increased significantly (by 6.6 per cent) in the first nine months of 1989 and amounted to some 45 thousand tons. Exports for the whole year 1989 registered an increase. Exports of Finland dropped from 31 thousand tons in 1988 to some 26 thousand tons in 1989. Exports by Argentina which more than doubled in 1988 (11 thousand tons) continued to expand in 1989 by around 40 per cent to some 15 thousand tons. Sales by Bulgaria, however, dropped by as much as 12 per cent in 1989 to 23 thousand tons.

CHEESE EXPORTS 1980-1988



103. Cheese exports from the United States continued to remain at a low level in 1988, i.e. about 24 thousand tons. A further drop to 18 thousand tons was registered for 1989. Austrian exports of cheese dropped in 1989 while exports from Canada and from the German Democratic Republic remained relatively stable.

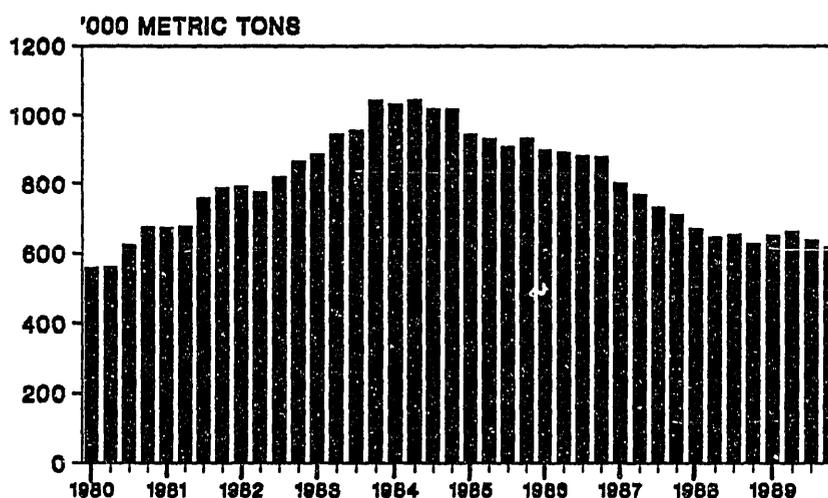
104. On the import side, Community imports at 115 thousand tons in 1989, mostly from Switzerland, were little changed in relation to the previous year. Japanese imports of cheese in 1989 at about 120 thousand tons were 5 per cent higher than in 1988, the main suppliers being the European Communities, New Zealand and Australia. Demand for cheese was constantly increasing and had in the past ten years almost doubled. This trend was likely to continue. In Switzerland, imports of cheese remained relatively stable in 1989 at around 24 thousand tons.

105. United States purchases totalled 135 thousand tons in 1989, up by 17 per cent on 1988. The bulk of the imports was from the European Communities, New Zealand and Finland. Little or no change was expected for imports in 1990. Import demand for cheese in North Africa and the Middle East was again strong and increasing in 1989, with imports of Feta cheese into Egypt and Iran increasing by more than one third compared to 1988.

Stocks

106. Cheese stocks, on 1 January 1990, were lower than one year earlier and might decline further throughout 1989. The decrease was mainly due to the decline in United States stocks which on 1 January 1990, were estimated at 160 thousand tons as compared to 180 thousand tons one year earlier, amounting to only a good one third of their average levels in 1981 to 1983.

CHEESE STOCKS 1980-1989 IDA PARTICIPANTS *



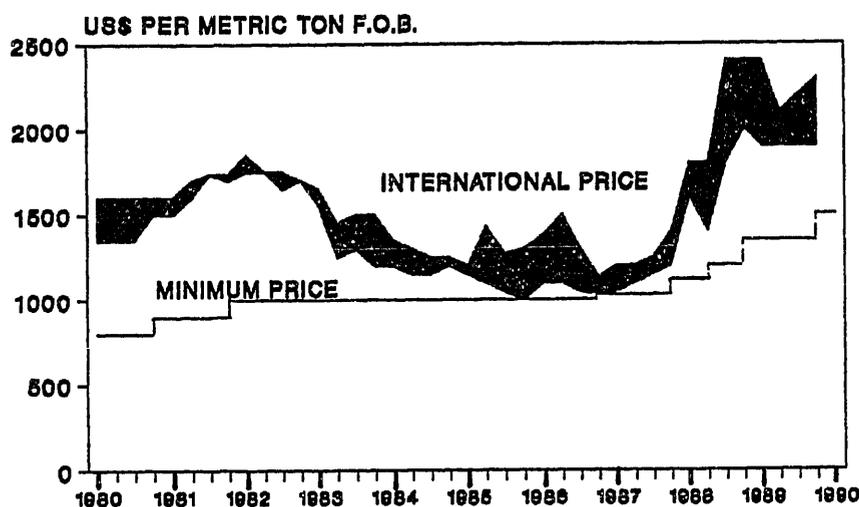
* Includes Austria, Canada and the US

International prices

107. Market prices for cheese continued to vary according to types of cheeses and markets throughout 1988 and 1989. Cheddar cheese prices strengthened during 1988 and fluctuated between US\$2,000 and US\$2,400 per ton f.o.b. during the fourth quarter. However, prices levelled off in 1989 with quotations for Cheddar being in the range of US\$1,900 to US\$2,400 per ton f.o.b. in the first half of the year, slightly down from the peak reached towards the end of 1988. During the fourth quarter of 1989 they fluctuated between US\$1,900 and US\$2,300 per ton f.o.b. Prices remained well above the agreed minimum export price and were expected to firm in coming months, as import demand was sufficient to absorb the increased supplies. However, developments might differ for different qualities.

108. In light of the market situation and on the expectation that demand would remain strong, the Committee of the Protocol Regarding Certain Cheeses raised the minimum export price for certain cheeses from US\$1,350 to US\$1,500 per ton f.o.b. effective from 20 September 1989.

CHEESE PRICES 1980-1989



Milk Powders

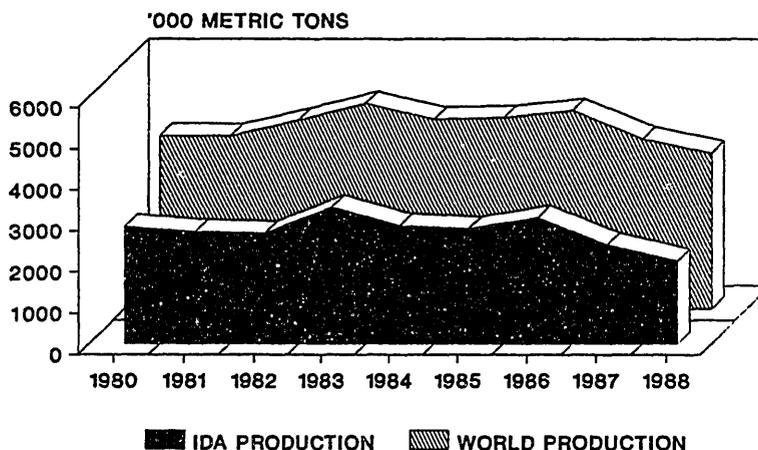
Skimmed Milk Powder and Buttermilk Powder

Production

109. World production of skimmed milk powder in 1989 at 3.8 million tons was 1.1 per cent lower than in 1988 when it had decreased by 7.4 per cent. Thus, the upward trend of recent years for skimmed milk powder production was halted in 1987 and the decline continued in 1988 and 1989. These decreases for three consecutive years were mainly due to reduced butter production and larger sales of light milk products and consequently less skimmed milk becoming available for drying. Much of the decline can be attributed to Community efforts to reduce milk output and surplus stocks. The reduction in Community production was particularly important as it had accounted for nearly half the world production since the 1960's but in 1989 was only slightly over one third of world production. The United States also curtailed skimmed milk powder output. For 1990, world output of skimmed milk powder was projected to grow in relation to 1989 with increases registered in the major producing areas, i.e. Western Europe, Oceania and North America.

110. After having decreased sharply for two consecutive years, output of skimmed milk powder in the European Communities recovered in 1989 and was estimated at 1.28 million tons, up by 5 per cent on 1988. Despite the increased allocations to drinking milk and cheese, production of skimmed milk powder increased mainly due to the cutback in the production of casein and in the use of liquid skimmed milk for animal feeding. For 1990, a further decrease in output was anticipated. In New Zealand, production of skimmed milk powder declined by 10 per cent to 154 thousand tons in the season 1988/89 in line with the reduction in butter output but was expected to increase by 8.4 per cent in 1989/90 at a level of 167 thousand tons. Buttermilk powder production decreased also in 1988/89. In Australia, production of skimmed milk powder/buttermilk powder in 1988/89 was at 126.8 thousand tons, a decline by 0.8 per cent over 1987/88. Current projections for 1989/90 were for an increase in skimmed milk powder/buttermilk powder production by around 10 per cent to 139 thousand tons. However, some shifts in domestic utilization from skimmed milk powder to skimmed milk concentrates might reduce the growth in skimmed milk powder production. In Japan, production increased by some 10 per cent in 1989 to 178 thousand tons as a result of the growth in milk production. In Poland, production increased by 7 per cent to 170 thousand tons. Production of skimmed milk powder by other participants followed varying trends in 1989.

SKIMMED MILK POWDER PRODUCTION 1980-1988



111. In the United States, output decreased by 8 per cent in 1989, reaching 400 thousand tons. However, production might recover in 1990 as milk production was projected to increase. Canadian production in 1988/89 at 102 thousand tons was 13 per cent lower than in the previous dairy year. In 1989/90, it was expected to decline by another 2 per cent to a level of 100 thousand tons, due to a reduction in industrial milk quotas. Production in the USSR continued to increase in 1988, reaching 518 thousand tons and registered a slight gain also in 1989. In the

German Democratic Republic, output continued to increase in 1988, amounting to 55 thousand tons but a slight drop was registered in 1989. Output in India was estimated to have increased by as much as 20 per cent in 1989 to 85 thousand tons while Brazilian production reportedly developed at a very rapid pace and reached 35 thousand tons in 1989 compared to 20 thousand tons in 1988.

Consumption

112. World consumption of skimmed milk powder fell in 1989, reflecting the tighter supply situation for milk powders. In the European Communities, total domestic consumption declined in 1988 and 1989. In Japan, where consumption decreased in 1989 about one fourth of the consumption was used for animal feed purposes. In the United States total domestic consumption decreased in 1989 and the use in animal feed dropped to negligible levels.

113. In Western Europe, where skimmed milk powder was used mainly for animal feed, measures were applied throughout the 1980's to promote its consumption. In the European Communities, the use of liquid skimmed milk and skimmed milk powder for animal feed purposes was subsidized. As milk supplies were reduced, export prices were rising and stocks were declining, domestic subsidization schemes in Western Europe (and particularly in the EC) were curtailed as from late 1987. Further cuts were made in 1988 and 1989. In May 1989, Community aid was reduced on skimmed milk powder used in animal feed from ECU 65 to ECU 60 per 100 kgs. and on liquid skimmed milk for similar use from ECU 5.28 to ECU 4.87 per 100 kgs. Domestic consumption of skimmed milk powder for calf feed consequently declined from 1.11 million tons in 1987 to 980 thousand tons in 1988 and decreased further in 1989 to some 750 thousand tons. This declining use in feeding could partly be attributed to a reduced raising of calves in line with reduced cow numbers. There was also an increasing substitution for skimmed milk powder by whey powder and possibly also soya bean meal.

Trade

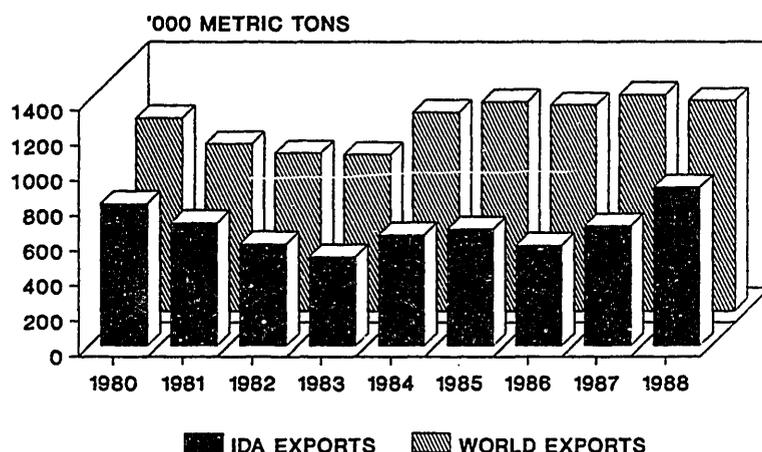
114. World exports of skimmed milk powder declined by 3 per cent in 1988 to 1.2 million tons. Due to the continued tightness in world supplies with the decline in production and the negligible level of stocks, world exports in 1989 might have declined by as much as 300 thousand tons to 900 thousand tons.

115. A considerable increase took place in the exports of skimmed milk powder by the European Communities (including food aid) when they totalled 615 thousand tons in 1988 from 388 thousand tons in 1987, i.e., a rise of 58.5 per cent. However, with reduced supplies and negligible intervention stocks, exports in 1989 reached only about 350 thousand tons, i.e. a decline by 43 per cent compared to 1988. The market share of the European Communities decreased to 40 per cent in 1989 from 50 per cent in 1988. It was forecast that for 1990, exports might remain relatively stable.

116. Skimmed milk powder exports by New Zealand decreased by 2 per cent in 1988 and reached 141 thousand tons. The main destinations were countries in South East and Eastern Asia and Brazil. Buttermilk powder exports

continued to decline in 1988. A further decrease in skimmed milk powder exports by as much as 10 to 13 per cent was estimated for 1989. Australian exports of skimmed milk powder/buttermilk powder in 1988/89 decreased by 4.5 per cent to 74 thousand tons. However, export availability for the current 1989/90 season was expected to be slightly up on 1988/89 and to reach some 83 thousand tons.

SKIMMED MILK POWDER EXPORTS 1980-1988



117. Exports by the United States registered a sharp decline in 1988 for the second consecutive year and amounted to 219 thousand tons, down by 27 per cent on 1987. The principal destinations were Mexico, the Philippines and Iraq. The amount of powder for food aid was also strongly reduced. In 1989, all skimmed milk powder exports were through commercial channels and no donations were made. United States exports in 1989, estimated at 200 thousand tons, were 9 per cent down on 1988 and well below those of 1985-87, when the Commodity Credit Corporation exported large quantities of surplus skimmed milk powder through donations and direct export sales. A further drop was projected in United States skimmed milk powder exports in 1990. Commercial use of cheese and liquid milk would keep domestic skimmed solids fairly tight and skimmed milk powder manufactures were not likely to over-commit to the export market for a second year. In Canada, exports of skimmed milk powder increased in 1988 to 59 thousand tons, i.e. by 28 per cent as a result of decreasing domestic usage and of the situation in the international market. However, for 1989 a sharp decline was registered.

118. On the import side, purchases by Japan increased substantially (by 41 per cent) to 130 thousand tons in 1988 as domestic demand was brisk. Much of the powder imported was for use as animal feed. The principal

sources of supplies were New Zealand, Australia and the European Communities. Imports in the first nine months of 1989 at 75 thousand tons were 18 per cent lower than the level in the corresponding period of 1988. This decrease was due to an increase in prices for powder used for animal feed purposes, imports of which declined by 29 per cent as against imports for human consumption purposes which increased by 8.6 per cent during this period. Total imports for the whole year 1989 were substantially lower than the previous year.

119. Import demand in some developing countries remained strong. Mexico had maintained imports of dairy products at a high level, in spite of a sharp fall in foreign exchange earnings and larger domestic output. Imports of skimmed milk powder into Mexico reached 170 thousand tons in 1988 as against 150 thousand tons in 1987; the principal supplier was the United States with a share of 83 thousand tons, with an increasing proportion being sold by the US private sector. It was reported that Mexico imported as much as 240 thousand tons in 1989 thus becoming the world's largest importer of skimmed milk powder. The United States remained the main commercial supplier in 1989 and was likely to retain the leadership in 1990. It was also reported that plans to achieve self-sufficiency in fluid milk production would not be reached any time soon, and it was estimated that skimmed milk powder import needs for 1990 would remain near the previous year's level. Brazil, faced with a decline in domestic output and rapidly rising demand, became one of the world's largest buyers of milk powders and butter oil. Imports of skimmed milk powder into Brazil showed a very substantial increase in 1986, reaching some 156 thousand tons, the principal suppliers being the United States, the European Communities and New Zealand. However, total imports declined to about 98 thousand tons in 1987 and to only 30 thousand tons in 1988 as higher retail milk prices limited consumption. However, imports recovered in 1989, amounting to 50 thousand tons.

Food aid

120. Food-aid deliveries of dairy products consisted mainly of skimmed milk powder and anhydrous milk fat (Table 5). The decline in surpluses was affecting the availability of milk products that could be provided under food-aid programmes. In recent years, food aid had accounted for about 20 per cent of total exports of dairy products, most of it coming from the United States and the European Communities. However, for 1989, shipments under food-aid programmes were forecast to contract even more than total exports. Food-aid shipments of dairy products, which had averaged nearly 400 thousand tons (product weight) in previous years, were estimated to have fallen below 100 thousand tons in 1989. Two aspects were contributing to this situation; shorter supplies and increased market prices; so, it was difficult to find the powder needed and if it was found, there were budgetary problems occurring when the supplies should be paid for. The reduction in food-aid shipments by the United States had been the result of lower supply. As regards skimmed milk powder, foreign donations by the United States decreased to 74 thousand tons in 1988 from 127 thousand tons in 1987. As uncommitted stocks had remained at minimal levels since August 1988, no foreign donations could be made in 1989 nor in 1990.

TABLE 5

Share of Food Aid in Total Exports for Selected Countries

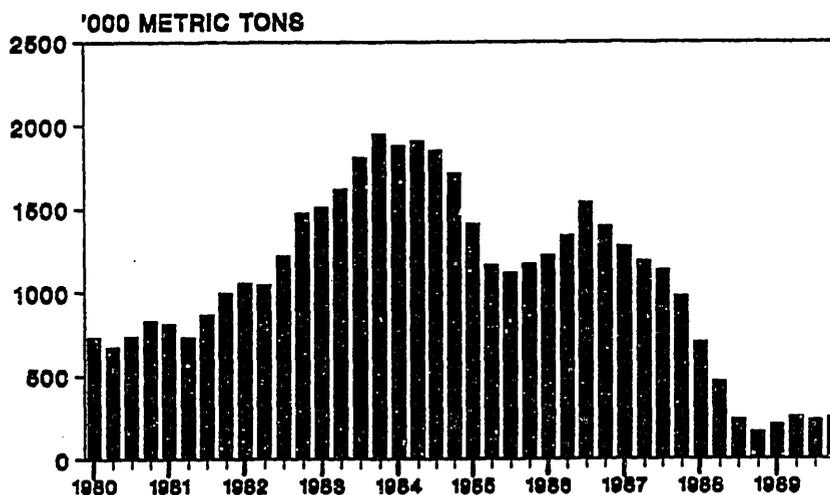
	Total exports			Food aid			Food aid/ Total exports		
	1987	1988	1989	1987	1988	1989	1987	1988	1989
	Metric tons						Per cent		
	<u>Skimmed Milk Powder</u>								
Australia	67,600	62,100		300	-		0.4	-	
EC	390,000	600,000		110,000	113,000		8.2	18.8	
Switzerland	10,300	2,100		800	1,300		7.8	61.9	
United States	298,800	218,600		126,800	74,100		42.4	33.9	
TOTAL	766,700	882,800		237,900	188,400		31.0	21.3	
	<u>Whole Milk Powder</u>								
Australia	43,100	47,000		20	66		0.1	0.1	
Switzerland	2,400	1,900		2,000	1,500		83.3	78.9	
TOTAL	45,500	48,900		2,020	1,566		4.4	3.2	
	<u>Anhydrous Milk Fat</u>								
Australia	13,100	20,000		-	-		-	-	
EC	148,000	170,000		19,000	39,000		12.8	22.9	
TOTAL	161,100	190,000		19,000	39,000		11.8	20.5	

121. Since the early 1980's, the European Communities had been reducing the share of milk products in food aid, replacing it by larger supplies of vegetable foods, notably cereals. Annual allocations of skimmed milk powder were reduced from 150 thousand tons at the beginning of the decade to 94 thousand tons in 1989, and those of butter oil from 45 thousand tons to 25 thousand tons. In 1988, actual Community food-aid deliveries amounted to 113 thousand tons of skimmed milk powder in relation to 110 thousand tons delivered in 1987. In the first nine months of 1989, food-aid deliveries totalled 48 thousand tons of skimmed milk powder compared to 78 thousand tons delivered in the corresponding period of 1988.

Stocks

122. Total stocks of skimmed milk powder in the European Communities, North America and Oceania of approximately 148 thousand tons on 1 October 1989, were up by 70 per cent from one year earlier. However, compared to the 1981-1983 average, this figure was relatively low. On 1 October 1989, stocks held by the European Communities were at 5 thousand tons as compared to 12 thousand tons a year earlier. On the same date, stocks held by North America were at 42 thousand tons, unchanged from a year earlier and stocks held by Oceania were at 101 thousand tons compared to 33 thousand tons on 1 October 1988. At the end of 1989 there were no surplus stocks of skimmed milk powder.

SMP STOCKS 1980-1989 IDA PARTICIPANTS *



* Includes Austria, Canada and the US

123. Following limitations introduced by the European Communities in 1987 on intervention purchases of butter and of skimmed milk powder, offers of skimmed milk powder to public intervention decreased very sharply. At the end of 1988, there were hardly any uncommitted public stocks of skimmed milk powder, but private stocks had increased. Public stocks remained negligible throughout 1989, but private stocks at the end of the year were estimated at 70 thousand tons. However, public stocks might increase in early 1990 as internal prices and import demand tended to weaken.

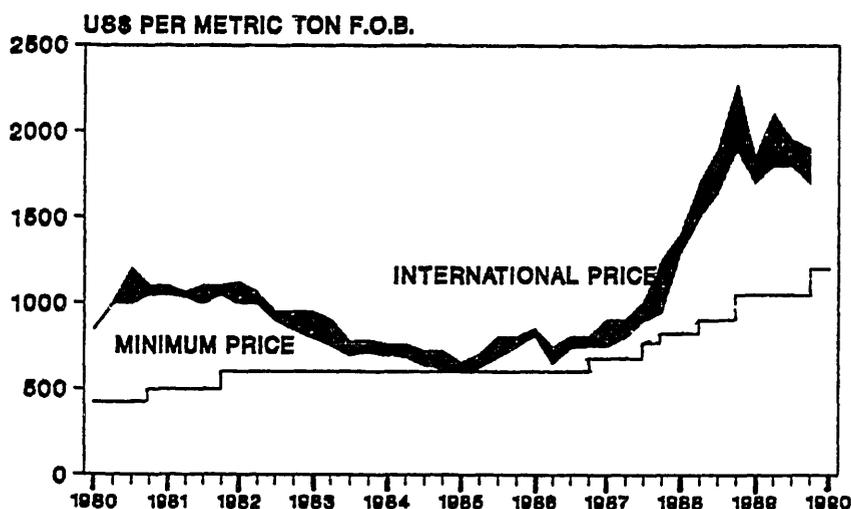
124. In Oceania, stocks remained at normal levels throughout 1989. Surplus skimmed milk powder stocks in the United States had been totally eliminated.

International prices

125. The Committee of the Protocol Regarding Certain Milk Powders raised the minimum export price for skimmed milk powder and buttermilk powder from US\$1,050 to US\$1,200 per ton f.o.b. with effect from 20 September 1989.

126. International prices of skimmed milk powder showed a steady improvement throughout 1988 and import demand remained strong. As supplies available for export became more restricted in the European Communities, New Zealand and the United States, prices rose rapidly. In the fourth quarter of 1988, prices fluctuated between US\$1,900 and US\$2,270 per ton f.o.b. International prices of skimmed milk powder more than doubled in 1988 and were, at the end of the year, substantially higher than those of butter and butter oil. In 1989, prices of skimmed milk powder levelled off during the first three quarters of the year, ranging between US\$1,700 and US\$2,100 per ton f.o.b. Prices tended to weaken somewhat in the fourth quarter, fluctuating between US\$1,700 and US\$1,900 per ton f.o.b. This weakening in prices was partly due to lower casein production together with progressive reduction of subsidized use schemes for skimmed milk powder.

SKIMMED MILK POWDER PRICES 1980-1989



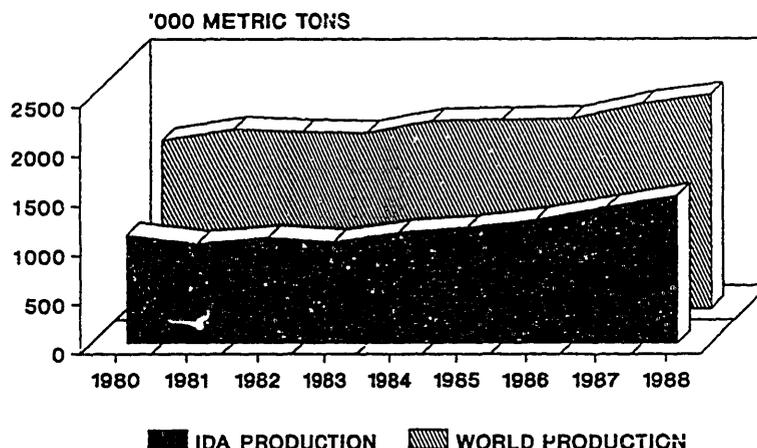
Whole Milk Powder

Production

127. Aggregate output of whole milk powder, closely related to specific demand, continued to expand in 1988, reaching 2.18 million tons, 4.4 per cent more than in 1987. Production increased in all regions, but most strongly in Oceania and the European Communities. However, world production of whole milk powder was estimated to have slightly decreased or remained stable in 1989.

128. Community output showed an increase in the order of 8.6 per cent in 1988 amounting to about 1 million tons. However, production decreased by 3 per cent in the first nine months of 1989 and for the year as a whole, the estimated production at 980 thousand tons registered a decline by about the same rate. Output might recover in 1990. In New Zealand, despite the lower level of milk production, output of whole milk powder was increased in the 1988/89 season. Manufacture of whole milk powder rose by 10.5 per cent to 189 thousand tons. The emphasis having been placed on expanding whole milk powder production, output was expected to increase further by 5.8 per cent to a level of 200 thousand tons in 1989/90. In Australia, output in 1988/89 increased by around 7 per cent to 68 thousand tons in response to the continuing trend in international market demand but was forecast to decline to 65 thousand tons in 1989/90. In Argentina, output registered an increase by 13 per cent to 98 thousand tons in 1988 and reportedly continued to expand by around the same rate in 1989, reaching some 110 thousand tons. Production in Finland, registered a very substantial decline for the second consecutive year and was estimated to have amounted to only 7 to 8 thousand tons in 1989 in relation to 14 thousand tons in 1988. In Poland, manufacture of whole milk powder remained relatively stable in 1989 at around 50 thousand tons. In the United States, production declined by 10 per cent to 70 thousand tons in 1989 while in Austria, it remained almost unchanged at 11 thousand tons.

**WHOLE MILK POWDER
PRODUCTION 1980-1988**



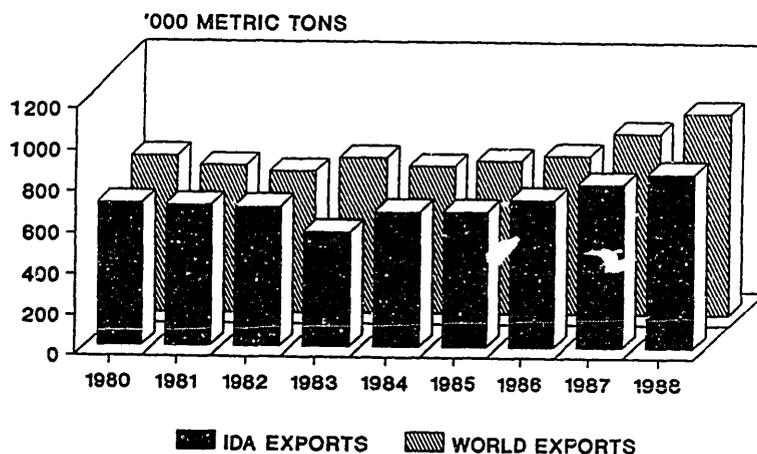
Trade

129. Whole milk powder exports continued their upward trend in 1988 and were around 975 thousand tons reflecting a strong import demand. It was estimated that they remained relatively stable or grew slightly in 1989. Community exports showed an appreciable increase amounting to 588 thousand tons, accounting for nearly 60 per cent of the world exports in 1988. In 1989, exports reportedly increased by a modest 1 per cent to some 594 thousand tons and a further slight increase was forecast for 1990.

130. Exports from New Zealand, the world's second largest exporter, recovered in 1988 and were close to 180 thousand tons. The main outlets were in South and East Asia and in South America. Exports continued to expand in 1989. Australian exports in 1988/89 at 48.4 thousand tons were marginally down as compared to the previous season and were forecast at a similar level in 1989/90. Exports from Finland, which went exclusively to the USSR, amounted to some 16 thousand tons in 1988, a decrease of 38 per cent and were almost halved in 1989. Exports by Argentina, which were nil in 1987, amounted to 13.8 thousand tons in 1988, the main destinations being the USSR and Chile. They almost doubled in 1989 and were estimated at around 25 to 27 thousand tons.

131. On the import side, whole milk powder purchases by developing countries reached the record level of 650 thousand tons in 1988, an increase by 11 per cent over 1987. Owing to the rising demand of the developing countries, whole milk powder had become the most important item in terms of volume in international dairy products trade in recent years. This increase in whole milk powder purchases at a time of rising prices and growing foreign exchange difficulties of many importing countries appeared to reflect a certain amount of precautionary buying in anticipation of further rises in prices. Moreover, when international prices of skimmed milk powder temporarily exceeded those of whole milk powder, certain users switched to the latter. The estimates for 1989 were for either a modest decrease or a relative stability in imports by the developing countries.

WHOLE MILK POWDER EXPORTS 1980-1988

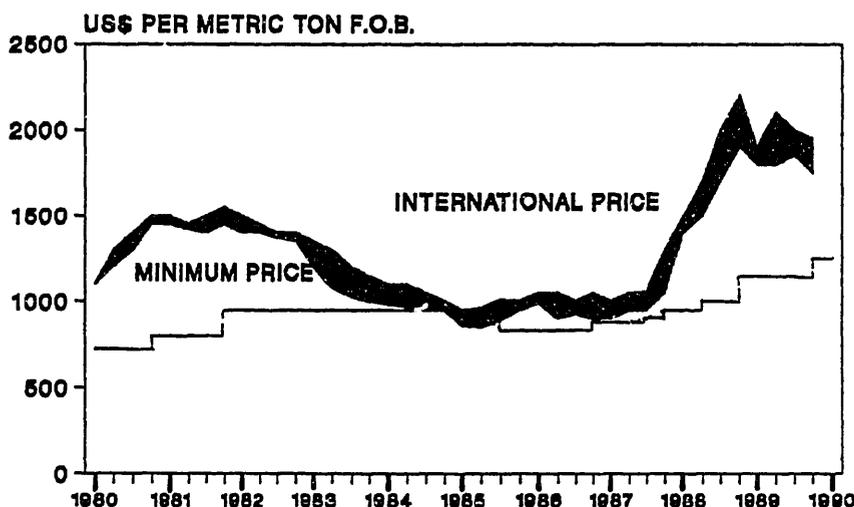


International prices

132. The Committee of the Protocol Regarding Certain Milk Powders raised the minimum export price for whole milk powder from US\$1,150 to US\$1,250 per ton f.o.b. with effect from 20 September 1989.

133. International prices of whole milk powder showed a steady increase throughout 1988. In the fourth quarter of 1988, prices fluctuated between US\$1,900 and US\$2,000 per ton f.o.b. In early 1989, the rise in world prices levelled off and settled at around the same level as for skimmed milk powder of about US\$1,800 to US\$2,100 per ton f.o.b. for the period January-June. Prices were between US\$1,850 and US\$2,000 per ton f.o.b. in the third quarter. However, they tended to weaken somewhat in the fourth quarter and fluctuated between US\$1,750 and US\$1,950 per ton f.o.b. It should be noted that prices of whole milk powder, after moving in line with skimmed milk powder prices for many months, attracted a milk premium of about US\$50 per ton at the end of 1989. However, it was expected that the current weaker butter/anhydrous milk fat prices would put pressure on this premium in the future.

WHOLE MILK POWDER PRICES 1980-1989



Other Dairy Products

Whey in powder or block or concentrate

134. A rational utilization of whey has become a great challenge to the dairy industry, and the commercial importance of whey would most likely increase. At the end of the eighties, roughly one quarter of the world milk production was devoted to cheese manufacture. Only about one half of the solids in the milk being retained in the cheese, the other half would

finish up in whey. Most of this whey was still disposed of as feed or as waste. To dispose whey as waste has met with environmental problems and the industry has been looking for commercial uses of whey. It should therefore be expected that supplies of whey products will increase rapidly over coming years.

135. The demand for whey and whey products for use as food and feed ingredients and in pharmaceutical applications remained strong in 1988 and 1989 providing incentives to expand production in several countries. However, towards the end of 1989, demand was weaker as a result of the strong increases in prices. World production of whey powder was estimated to have reached 1.55 million tons in 1989, some 4 per cent up on 1988. Furthermore, the production of other related milk concentrates, including lactose, continued to expand, but statistics remained insufficient to evaluate the magnitude of the production of such products.

136. Community production of whey powder increased by about 6 per cent in 1988 compared to 1987, and reached 327 thousand tons accounting for 55 per cent of world production. In the period January-October 1989, production increased by 4.4 per cent and it was estimated that output for the year as a whole grew at the same rate to some 860 thousand tons, accounting again for 55 per cent of world output. United States production increased by 2 per cent in 1988 to 485 thousand tons, and there was a similar increase in Canadian production. In 1989, United States production was estimated at 490 thousand tons, up by a modest 1 per cent, while Canadian production increased by about 10 per cent to 62 thousand tons. World production of whey powder was again increasing in 1990, following developments in production of cheese.

137. In mid-May 1989, the European Communities reduced the levies for skimmed milk powder and for whey powder, which could entail larger imports from third countries. In 1988, the European Communities imported 44,000 tons and exported 36,000 tons of whey, mainly in connection with forward processing.

138. The market for whey powder remained firm in 1988, mainly due to the significantly reduced supply of skimmed milk powder and a consequent increased demand of whey powder in milk replacers. Whey powder prices have traditionally been subject to seasonal variation, with a peak in the autumn. In 1988, the peak occurred already in July, with prices both in Europe and the United States culminating just above US\$600 per ton. Prices in the United States fell later in the year and continued to fall during the first half of 1989, in September of that year being only half their level a year earlier. However, the bottom had been reached and prices started to recover. Thus, in November 1989, prices in the United States were again close to US\$600 per ton, i.e. the same as in the peak of July 1988. However, prices in Europe at the end of 1989 were at around US\$500 per ton. The reason for the relatively low whey powder prices in the first nine months of 1989 was a strong and unexpected increase in supplies and new suppliers entering the market. There was some uncertainty as to the size of the supplies coming on to the market in the near future.

Concentrated milk

139. World production of condensed milk recovered slightly in 1988, increasing by almost 1 per cent thus amounting to 4.5 million tons. There was a strong increase in Australian production of 45 per cent, bringing total production up to 82 thousand tons. Community production reached 1.22 million tons, 4 per cent up on 1987. Also USSR production continued to expand, reaching 625 thousand tons in 1988, 5 per cent up on the previous year. There was a further decline in North America, with United States production falling to 253 thousand tons and that of Canada to 84 thousand tons. The upward trend in condensed milk production in the Far East and in Latin America levelled off in 1988, and production for these major areas remained at its level of the previous year. World production of condensed milk decreased in 1989. In the European Communities, output was estimated to have decreased by 6 per cent to 1.15 million tons and a slight decrease (by 1 per cent) was anticipated for 1990. In the United States and Canada, production continued to fall respectively by 10 and 15 per cent, reaching 230 thousand tons in the United States and 72 thousand tons in Canada. Figures for the first six months of 1989 suggested a further increase by 40 per cent in Australian production of condensed milk, and output for the year 1989 as a whole showed a substantial increase.

140. After having reached a peak of nearly 1 million tons in 1985, world trade in condensed milk declined rapidly reaching only a bit more than half of that level in 1988, or some 560 thousand tons. Community exports again declined by 3 per cent to 375 thousand tons in 1988. Canadian exports registered a dramatic fall from 138 thousand tons in 1985/86 to 20 thousand tons in 1988/89 and a further decrease in exports was expected for 1989/90. Imports into developing countries which had been declining between 1985 and 1987 recovered in 1988 and totalled 540 thousand tons compared to 517 thousand tons in 1987, thus representing the bulk (about 88 per cent) of world trade in this product. In 1989, world trade continued to decline with Community exports registering again a decrease by 1 per cent to 370 thousand tons. However, it was expected that exports might remain relatively stable in 1990.

141. In 1988, condensed milk prices were raised first by 5 per cent in May and by another 4 per cent in October. Prices were again raised in February 1989 by some 2 per cent. In May 1989, wholesale prices in Europe and North America ranged from US\$1,200 to US\$1,500 per ton thus returning to their 1987 level in dollar terms. In January 1990, wholesale prices in the Netherlands were at f. 3,350 per ton, i.e. close to US\$1,650 per ton.

Casein

142. Casein production increased in 1988, when total production amounted to 240 thousand tons, 3 per cent more than in the previous year. Output was estimated to have decreased by 10 per cent in 1989, the European Community accounting for all of the reduction, which stemmed from a fall in milk output and reduced supplies of milk being available for casein production.

143. Community production of casein increased from 168 thousand tons in 1987 to 174 thousand tons in 1988, but was estimated to have declined in 1989 to 150 thousand tons as producers reacted to decreased export prospects and tighter milk supplies. A further drop was expected for 1990. Higher skimmed milk powder prices resulted in stronger competition for supplies of raw material for processing into casein. Furthermore, the Community production subsidy on casein was reduced in October 1987, in June 1988 and in January 1989. Under a new regime on granting aid for skimmed milk processed into casein, the aid was restricted to casein for specific uses as from 1 March 1989. Community casein producers were consequently facing substantially increased production costs. Furthermore, the casein market suffered from competition of casein substitutes, mainly soya, which were far cheaper. New Zealand production of casein, which in 1986/87 was severely influenced by reduced milk supplies, recovered appreciably in 1987/88, when it reached the average level of recent years, namely 65 thousand tons. However, with skimmed milk powder production down by 7 per cent in line with the reduction in butter output, casein production registered a more significant reduction in 1988/89 and decreased by 17 per cent to 54.5 thousand tons. Casein production was expected to increase by 14.7 per cent in 1989/90, to a level of 62.5 thousand tons as a result of the anticipated recovery in milk production. Polish production of casein, at 20 thousand tons in 1988, was sharply down (by 20 per cent) on 1987 but it was estimated to have remained relatively stable in 1989.

144. Stocks of casein were very low at the end of 1988 and supplies depended almost entirely on current production early in 1989. World exports declined sharply in 1988, with reduced supplies both to the United States and the Community markets. The decline continued in 1989. As international market prices increased, United States interest in foreign manufactured dairy products declined. This was particularly the case with casein, as prices were boosted by the increasing skimmed milk powder prices. Domestic substitutes for casein became much more attractive. In 1988, United States casein imports declined substantially (by 32 per cent) to 73.7 thousand tons and were estimated to have fallen to about 65 thousand tons in 1989, reflecting continued strength in casein import prices.

145. The market situation which throughout 1987 and 1988 was characterized by tight supplies and firming prices, continued in early 1989. The reductions on several occasions of Community producer subsidies for casein, the high skimmed milk costs and the depreciation of the United States dollar also contributed to higher prices in international markets. At the beginning of 1988 casein quotations had reached a level of almost US\$150 per 100 lb. or US\$3,230 per ton, which was 50 per cent higher than a year earlier. In December 1988, prices were reported to have again sharply increased to about US\$5,600 per ton, almost double the price recorded one year earlier. Prices remained at that level throughout the first half of 1989, in spite of a higher value of the United States dollar. Later in 1989, a users' reaction to the high prices was apparent and prices for casein for technical use came under pressure. In the United States, prices for edible casein were around US\$5,000 per ton in January 1990, as compared to US\$5,400 per ton in January 1989.