

# GENERAL AGREEMENT ON

RESTRICTED

# TARIFFS AND TRADE

DPC/W/98  
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## 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 September 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:

- |              |   |   |
|--------------|---|---|
| DPC/W/99     | - | Milk Deliveries and Production - Statistical Note by the Secretariat      |
| DPC/PTL/W/22 | - | Committee of the Protocol Regarding Milk Fat - Summary Tables             |
| DPC/PTL/W/23 | - | Committee of the Protocol Regarding Certain Cheeses - Summary Tables      |
| DPC/PTL/W/24 | - | 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 15 August 1990.

TABLE 1

Minimum Export Prices 1980-1989

(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 7.5 per cent pushed the value of world merchandise trade in 1989 to a new record level of US\$3.1 trillion. In contrast to recent years when inflation and the depreciation of the dollar gave an added boost to the value figures, last year's gain matched 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 dollars) is the outcome of a number of offsetting changes, including moderate inflation in the average price of most traded products (excluding petroleum) and the deflationary valuation effect of the dollar's appreciation against a number of currencies. Although the expansion slowed down in 1989, the volume of world production and 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 expansion of output and trade is expected to continue at a rate of 5 to 6 per cent in 1990.

2. Developed and developing countries experienced further growth in the volume of trade in 1989, but both experienced a modest slowdown relative to 1988. There was a virtual stagnation of trade in the Eastern trading area due primarily to the disruption of trade and production in the region of Eastern Europe and the USSR. Relative to 1988, all major country groups experienced a marked deceleration in the growth rates of export and import values. Developed countries contributed most to the expansion of the volume of world trade in 1989. The volume of exports from developing countries expanded at a rate below the world average for the first time since 1985.

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, contributing 80 per cent of the total increase last year. Within mining products, the trade-to-output ratio of fuels rose sharply in 1989. Agricultural output in 1989 went against the pattern of declining output growth in manufactures and mining products, registering a strong gain (+ 4 per cent) after two years of little or no growth. Exports of agricultural products also increased by 4 per cent and the relationship between production and trade in agriculture returned to a more normal pattern in 1989 after having been adversely affected by unfavourable weather conditions in the two preceding year. As agricultural output recovered in 1989, the growth in the volume of exports declined slightly since importing countries were able to cover more of their food needs from domestic supplies.

4. There was little change in the employment situation in 1989. The underlying inflation rate in many countries rose again in 1989, and inflation remained a serious problem for a number of developing economies, notably some highly indebted ones. 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 rate of 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 1 per cent from 1988 to 1989, as reduced production and milk deliveries in North America and most European countries were outweighed by increased production in other areas, notably the USSR, India and Oceania. In 1990, world milk production was again increasing, for the first half of the year, at a rate of 1.5 per cent, notably as production increased in the European Communities and the United States and there was also an appreciable recovery in New Zealand.
- Throughout 1989, the world market for milk and dairy products remained a fairly balanced one, and intervention stocks of butter and skimmed milk powder were almost non-existent at the end of the year. However, during the first half of 1990 the balanced market situation for dairy products seemed to have come to an end, with strong downwards pressure on prices notably for butter and skimmed milk powder.
  - World butter production continued to grow at a rate of 1.4 per cent in 1989 and the trend persisted in 1990. A vigorous demand for light products in many countries entailed a substantial surplus of milk fat for which butter production represented the only commercial utilization. Furthermore, a continued and even accelerated fall in butter consumption in North America and Europe resulted in increased exportable availabilities. In particular, new economic policies in Eastern Europe resulted in higher retail prices entailing a strong decline in domestic butter demand. Additional quantities of butter could be offered on international markets in 1990/91, resulting in pressure on market prices and in increased needs for intervention purchases.
  - Cheese production grew by another 1.2 per cent in 1989, and the trend continued in 1990. Import demand for cheese remained strong and cheese trade expanded further.
  - In late 1989 and early 1990, prices for dairy products came under pressure in international markets and some sales of butter and skimmed milk powders were reportedly made at prices below the agreed minimum export prices. Depressed market prices for butter were feared also to affect adversely sales and prices of other dairy products, notably powders, as sales of dairy products are often linked or handled by the same operators.
  - The Protocol Committees established under the Arrangement expressed their concerns as to the unsatisfactory situation dominated by a fragile butter market, and urged participants to ensure full observance of the minimum export prices. An appeal was also made to non-participants not to offer or sell dairy products at prices below prevailing market prices and in particular not below the agreed minimum export prices.

Dairy policies

5. Various events affected dairy policies in 1989 and 1990. Substantial progress was made in the Uruguay Round negotiation. In April 1989, a framework approach was endorsed and agreement was reached on some interrelated long-term and short-term elements related to market access and export competition and, on arrangements on sanitary and phytosanitary regulations. A consensus was arrived at concerning agricultural policies. Such policies should be more responsive to international market signals in order to meet the objective of liberalization of international trade and support and protection should be progressively reduced and provided in a less trade-distorting manner. In conformity with the principle of special and differential treatment to developing countries laid down in the Punta del Este Declaration, the particular needs and conditions of developing countries should be fully taken into account at all stages of the negotiations.

7. It was agreed to aim at establishing a fair and market-oriented agricultural trading system and to initiate a reform process through the establishment of strengthened and operationally more effective GATT rules and disciplines. The stated long-term objective is to provide for substantial progressive reductions in agricultural support and protection, to be realized through negotiations on specific policies and measures, through the negotiation of commitments on aggregate measurement of support, or through a combination of approaches. Strengthened and improved GATT rules and disciplines and the commitments to be negotiated, should encompass all measures affecting directly or indirectly import access and export competition. Negotiations should in particular encompass tariffs and non-tariff measures, whether maintained under waivers, protocols or other exceptions; all measures not explicitly provided for in the General Agreement; and, the matter of tariffication. Negotiations should also in particular encompass internal support measures affecting trade; budgetary assistance to exports; other payments on products exported; other forms of export assistance; and, export prohibitions and restrictions.

8. In these negotiations, factors other than trade policy should be taken into account as well as proposals addressing food security concerns. It was confirmed that special and differential treatment for developing countries should be an integral part of the negotiations; that government assistance to agricultural and rural development constituted an integral part of development programmes of developing countries; and, that account might be taken of negative effects of the reform process to food importing developing countries.

9. A first tranche of agreed commitments on the long-term reform programme shall be implemented already in 1991. Several participants have advanced detailed proposals for the achievement of the long-term objective. By the end of 1990, participants will agree on the long-term reform programme and the period of time for its implementation. Soon thereafter, participants will notify their plans for meeting the obligations and commitments agreed upon. The reform programme will be subject to multilateral surveillance and other procedures necessary to ensure full compliance with commitments made in the negotiations.

10. As to short-term measures, it was agreed that until the formal completion of these negotiations on agriculture by December 1990, participants should ensure that current domestic and export support and protection levels in the agricultural sector were not exceeded. Support prices and levels of support to producers should not be raised above the level prevailing in April 1989. By now, most OECD countries and a few others have submitted notifications as agreed, explaining how they have complied with the above undertakings. Developing countries were not, however, expected to subscribe to these short-term commitments. The market situation in 1989 greatly facilitated the task of many countries in complying with the short-term elements agreed upon in April 1989, and main emphasis can now be put on long-term elements.

11. The harmonization of national sanitary and phytosanitary regulations was endorsed as a long-term goal and a work programme embodying the following objectives: - develop harmonization of sanitary and phytosanitary regulations and measures, on the basis of appropriate standards established by relevant international organizations, for instance the Codex Alimentarius Commission; - strengthen GATT Article XX so that measures taken to protect human, animal or plant life or health are consistent with sound scientific evidence and use suitable principles of equivalency; - review existing notification and counter-notification procedures to ensure transparency and effective notification; - develop a consultative process and improve the effectiveness of the GATT dispute settlement process in order to provide for the necessary input of scientific expertise and judgment, relying on relevant international organizations; - assess possible effects on developing countries and evaluate the need for technical assistance; and - examine the possibilities for implementation of the above programme in the context of short-term elements.

12. 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 even lowered. 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.

13. Political developments in Eastern Europe had a strong impact on the dairy market. Changes in economic policies resulted in higher retail prices and strongly reduced domestic demand. Exportable availabilities of dairy products increased substantially, notably for butter. Persisting balance-of-payments problems entailed products to be offered for exports at low prices and to new markets, seeking payments in convertible currencies.

14. 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.

15. 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. As an example could be mentioned that India has plans to double its milk output by year 2000, then reaching 80 million tons.

16. 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.

17. Concerns persisted that the current situation in the world market for dairy products with comparatively high prices, a falling consumption notably of butter, and an expansion of production, might result in greater supplies available for exports. 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 were again about to 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.

18. 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 been difficult to draw a borderline between what should be designated as a milk product and a non-milk product.

#### Milk and dairy production

19. In 1989, world milk production amounted to 530 million tons (including sheep, goat and buffalo milk), 1 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, Africa and Latin America. The decline in Community production was however outweighed by a continued increase in milk production in the USSR and India. Milk production increased also in Oceania and Poland. In North America, however, the up-trend was reversed and milk production decreased slightly despite a further increase in productivity. In the USSR, there was a further increase of 1.2 per cent in milk production in 1989. In India, milk production was expected to have increased by as much as 6.5 per cent in 1989, and there were substantial increases in some other Asian developing countries.

20. 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. Community milk deliveries showed an increase of 0.9 per cent for the first half of 1990 compared to the same period of 1989. Milk production was expected to show only marginal changes in other 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.

21. Considerable uncertainty was attached to projections beyond 1990, notably for the United States, where the United States Food and Drug Administration once again postponed action on whether to approve the use of bovine somatotropin. Bovine somatotropin may already be commercially available in several countries and its application might together with scientific progress, improved breeding and production management, boost productivity in milk production over the next five-year period.

22. After having stabilized in 1988, world butter and butter oil production increased by 1.4 per cent in 1989 amounting to 7.60 million tons. Butter production expanded in North America, 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 1.5 per cent, as a result of the anticipated increase of milk production and the shift in consumption towards light dairy products. Further developments in production and sales of light products tended to result in increased supplies of butter becoming available for export, a tendency notably apparent in Western Europe and the United States.

23. World cheese production continued its upward trend in 1989, totalling 14.39 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.

24. 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 major producing areas, i.e. Western Europe, North America and Oceania. World production of whole milk powder remained stable in 1989. Production increased in Argentina and in the United States but decreased in New Zealand and remained relatively stable in the European Communities and Australia.

25. 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.

26. 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.

27. 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 which continued to fall sharply during the first half of 1990. 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

28. 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.

29. 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. The trend toward blended spreads and low fat spreads had accelerated in 1989. This development resulted from a combination of factors such as changes in consumer preferences toward products with less or no fat and cholesterol and changes in legislation permitting the sale of blended products to consumers. In the short and medium term it was likely that this trend would continue or even accelerate. In 1990, increased retail prices in Eastern European countries affected adversely the consumption of butter, which in some cases fell to only one half of its previous level.

30. 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 although the growth rate appeared to have fallen slightly.

31. 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 again in 1989.

#### Trade

32. 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. From late 1989 on, import demand weakened, reflecting a continued decline in milk fat consumption in many countries.

33. Cheese trade expanded further in 1989, world exports then reaching 870 thousand tons. This was due to higher imports into the European Community and the United States and stronger import demand by OPEC countries and other developing countries such as Brazil, which more than outweighed a 2 per cent decrease in imports into Japan. The general expansionary tendencies continued in 1990, and sales in some markets increased strongly.

34. There was a further decline of 20 per cent in world exports of skimmed milk powder in 1989, when they amounted to 950 thousand tons. Sharp decreases registered by the European Communities and the United States were not outweighed by increases in New Zealand and Australian exports. However, import demand in some developing countries such as Mexico and Brazil remained strong.

35. The upward trend in whole milk powder exports was confirmed in 1988, when world exports totalled 975 thousand tons. They decreased to some 880 thousand tons in 1989. However, 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 15 per cent. Other major suppliers to the world market were Australia, Argentina and to a lesser extent Finland and Austria.

36. 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

37. 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 donators) 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

38. Reduced milk supplies, notably in Western Europe, and larger exports of dairy products continued to have a considerable impact on stocks notably of butter and skimmed milk powder in 1989. Butter stocks in the European Communities, North America and Oceania, were at the end of 1989, around 11 per cent lower than 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 1988. 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. Community intervention stocks of butter were very low at the end of 1989, but started to build up in 1990 as a result of strongly reduced domestic demand and inability of Community exporters to compete in international markets.

#### International prices

39. Reduced supplies and lower carry-over stocks resulted in continued 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 began to weaken towards the end of the year, 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. 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.

40. Butter prices in international markets continued to weaken in 1990 and certain sales had reportedly been made at prices below the minimum prices. During the second quarter of 1990, prices were in the range of US\$1,350 to US\$1,460 per ton f.o.b. for butter and US\$1,625 to US\$2,000 per ton f.o.b. for anhydrous milk fat. At meetings of the Protocol Committees in June and July 1990, participants reaffirmed their determination to defend the existing level of minimum export prices and to abide by their obligations under the Protocols. Participants were urged to take the necessary steps to ensure full observance of all the provisions of the International Dairy Arrangement, notably those related to the minimum export prices. An appeal was also made to non-participants not to offer or sell dairy products at prices below prevailing market prices and in particular not below the agreed minimum export prices.

41. Cheese prices remained fairly high in 1989 with quotations for Cheddar ranging from US\$1,900 to US\$2,400 per ton f.o.b., slightly down from the peak reached towards the end of 1988. 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. Prices eased somewhat in the first half of 1990 ranging between US\$1,700 and US\$2,000 per ton f.o.b., but remained well above the agreed minimum.

42. 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 weakened slightly 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. Prices of milk powders fell in the first two quarters of 1990, as international demand weakened and as additional supplies became available from some Eastern European countries at very low prices. Consequently, in the second quarter of 1990, prices of skimmed milk powder decreased to US\$1,500-US\$1,700 per ton f.o.b. and those of whole milk powder to US\$1,400-US\$1,600 per ton f.o.b. It might be noted that skimmed milk powder was higher priced than whole milk powder. Some milk powder had reportedly been traded at prices below the minimum prices.

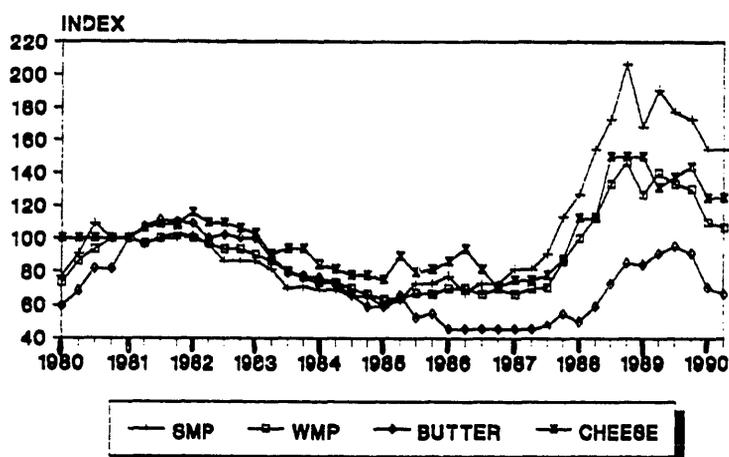
43. Prices for condensed milk were raised early in 1989 and again early in 1990, but later remained relatively stable in the first two quarters. A persisting tight supply situation for casein entailed a continuous price hike throughout 1988, with prices around US\$5,600 per ton in December 1988, almost 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 from the end of 1989 and were in July 1990 down to US\$4.400 per ton, probably because of users'

reaction to high prices. When 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. However, they declined again in the first six months of 1990.

44. The market outlook for 1990/91 indicated that the prices for some dairy products notably cheeses might remain at current levels. However, severe uncertainties persisted as to the situation for butter and anhydrous milk fat.

45. The Arrangement has now been in operation for eleven years and is considered to be a valuable means of imposing a concerted measure of discipline on export prices, bringing some stability to markets and returns. During the period, 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. Early in 1990, prices weakened very sharply in the case of milk fats and at a slower rate in the case of powders and cheeses. 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 illustrated by recent developments in powder prices, with skimmed milk powder for recombination catching a premium compared to whole milk powder. Developments in market prices, and changes in the agreed minimum export prices, clearly illustrate the difference in market trends for various milk components.

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



\* Upper level of price range.

TABLE 2

International Prices (1988-1989-1990)

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

Product	1988	1989		1990	
	January-December	January-June	July-December	January-March	April-June
Skimmed milk powder	1,300-2,270	1,700-2,100	1,800-1,950	1,600-1,700	1,500-1,700
Whole milk powder	1,400-2,200	1,800-2,100	1,750-2,000	1,550-1,650	1,400-1,600
Anhydrous milk fat <sup>a</sup>	1,325-2,100	1,900-2,300	2,050-2,500	1,625-1,950	1,625-1,930
Butter <sup>a</sup>	1,100-1,880	1,750-2,000	1,650-2,100	1,450-1,550	1,350-1,460
Cheddar cheese <sup>b</sup>	1,400-2,400	1,900-2,400	1,900-2,300	1,700-2,000	1,700-2,000

<sup>a</sup> In 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.

<sup>b</sup> Up to the end of 1988 and in early 1990, 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

46. World milk production (including buffalo, sheep and goat milk) at 530 million tons in 1989 showed an increase of about 1 per cent over the previous year. In most Western European countries and Canada, production remained subject to quotas. In the United States, production suffered from drought conditions and higher feed costs. Production rose in Oceania.

47. World milk production during the first half of 1990 was 1.5 per cent higher than in the corresponding period of 1988. Increases were registered in Western Europe, North and South America, Oceania, Japan, India and the USSR. Milk output decreased in Eastern Europe as a result of insufficient feed supplies and general economic difficulties.

48. Milk deliveries in the European Communities, reached 98.83 million tons in 1989, 0.4 per cent less than in 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. For 1990, milk deliveries were expected to increase by 0.6 per cent assuming favourable weather conditions. For the medium term, however, milk deliveries were expected to stabilize at about 99 million tons from 1991 onwards, i.e. a volume of 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 to 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.

49. The Community quota system has been prolonged until March 1992. The limitations to the intervention system for butter and skimmed milk powder has been 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 order to accommodate the needs of the so-called "SLOM" producers, allocations of 502,000 tons out of a total of 600,000 tons that were eligible for re-assignment were granted.

50. In December 1989, the Community quota reserve was increased for the 1989/90 dairy year by a little more than 1 million tons to be allocated by member States to "priority" cases in each country. Certain measures were adopted to counteract the effects of increase in quota reserve such as 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 and an 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. It was also decided 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 allowing the net amount of compensation to remain unchanged.

51. For the 1990/91 dairy year, the target price for milk was set at ECU 26.81/100 kgs., 3.7 per cent less than in 1989/90. The co-responsibility levy remained unchanged at 1.5 per cent of the target price. The quota buy-out scheme would now redistribute quotas to small producers in all areas, instead of just to the less-favoured and mountain areas. A date would be set for completing arrangements for the temporary leasing of milk quotas, as part of the general review of the quota system. A general report on the functioning of the quota system would be published by the end of 1990.

52. 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 2.58 million tons and 2.64 million tons, despite the recent improvement in climatic conditions and higher yields. The Milk Quota Act had been revised, with the result that 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.

53. In Norway, total milk deliveries increased by 1.7 per cent to 1.98 million tons in 1989 and were expected to remain at that level in 1990.

54. Milk deliveries in Sweden at 3.35 million tons in 1988, were reckoned to have increased to 3.42 million tons or by 1.9 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 1.9 per cent in 1989 and by another 5 per cent in the first half of 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.

55. In Switzerland, milk deliveries in 1989 at 3.07 million tons were 2.5 per cent up on the previous year. In the first half of 1990, however, deliveries were down by 2.5 per cent compared to 1989. 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.

56. In New Zealand, climatic variations continued to have a major impact on milk production. In the 1989/90 season, production totalled 329 million kgs. of milk fat, or 7 million tons of milk. This was 5.8 per cent higher than in 1988/89 but 6 per cent lower than the peak year (1985/86) and close to the average level of production in the past five years. Given favourable climatic conditions, production for 1990/91 was projected to be at 340 million kgs. of milk fat (7.3 million tons of milk) or an increase by 4.3 per cent on the previous season. On a calendar year basis, production for 1989 increased by 4.8 per cent to 7.85 million tons and was projected to increase by the same rate in 1990. 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 New Zealand Dairy Board's price for manufacturing milk produced during the 1989/90 season was finalized at NZ\$5.80 per kg. milk fat. In light of the market situation, the advanced price for milk for the 1990/91 season was reduced to NZ\$4.00 per kg. milk fat. Producer prices for milk continued to be determined directly by export market realizations.

57. 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.

58. In Australia, milk production in 1988/89 at 6.47 million tons registered an increase of almost 3 per cent 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 farm-gate prices for milk. Production for 1989/90 was estimated at the same level of 1988/89. On a calendar year basis, production in 1989 at 6.53 million tons increased by 3.7 per cent over 1988 and was projected to increase further by 1.3 per cent in 1990. Dairy cow numbers were expected to continue to decline, but production per cow was projected to increase through genetic and management improvements. 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.

59. Japanese milk production in 1989 at 8.06 million tons was 5.9 per cent higher than in 1988. The increase was mainly due to a further improvement in yields, while dairy cow numbers continued to fall. 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 79.77 to 77.75 yen per kg. for the 1990/91 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 50 thousand tons to 2.35 million tons for fiscal year 1991. 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 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.

60. In Argentina, milk production in 1989 at 6.72 million tons was 3.5 per cent higher than in 1988. In Uruguay, milk deliveries continued to increase in 1989 at the rate of 5.2 per cent, reaching a level of 642 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.

61. In Egypt, certain changes had been made to the import regime of certain dairy products. Total production of milk (including buffalo milk) in 1989 at 2.44 million tons was 1.7 per cent higher than the 1988 level of 2.40 million tons. Efforts were being made to develop and increase dairy production. 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 of liquid milk and fresh milk products. 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.

62. In Bulgaria, total production of milk in 1989 fell by 2.5 per cent to a level of 2.49 million tons due to a slight drop both in cow numbers and productivity per cow. The unfavourable general economic situation was likely to have an influence on the developments in the dairy sector. Hungarian production of milk increased in 1989 by 1.5 per cent to reach a level of 2.86 million tons due to growing yields having more than offset a drop in cow numbers. The bulk of dairy production covered the growing home demand, except for some special kinds of cheeses which were exported. In Romania, production of milk in 1989 remained relatively stable at 4.35 million tons, and for 1990 little or no change was expected.

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
	1989	(b) 98.83	- 0.4	+ 2.2	- 1.7
	Forecast 1990	(b) 99.39	+ 0.6	+ 1.8	- 1.2
USSR	1988	(a) 106.80	+ 3.0	+ 4.3	- 0.7
	1989	(a) 108.10	+ 1.2	+ 2.7	- 0.7
	Forecast 1990	(a) 111.30	+ 3.0		- 0.2
United States	1988	(a) 65.84	+ 1.7	+ 2.3	- 0.9
	1989	(a) 65.45	- 0.6	+ 1.0	- 1.0
	Forecast 1990	(a) 66.75	+ 2.0		- 0.5
Poland	1988	(a) 15.45	- 0.4	+ 3.0	- 2.7
	1989	(a) 16.69	+ 8.0		
	Forecast 1990	(a)			
New Zealand	1988	(a) 7.49	+ 9.3	+ 18.8	0.0
	1989	(a) 7.85	+ 4.8	- 4.0	0.0
	Forecast 1990	(a) 8.23	+ 4.8		
Canada	1988	(a) 8.42	+ 5.4	+ 3.5	- 1.6
	1989	(a) 8.11	- 3.6	+ 2.0	- 1.2
	Forecast 1990	(a) 8.11	0.0		- 1.5
Japan	1988	(a) 7.61	+ 3.7	+ 1.6	- 1.4
	1989	(a) 8.06	+ 5.9		
	Forecast 1990	(a) 8.22	+ 2.0		- 1.0
Australia	1988	(b) 6.30	- 2.4	+ 2.3	- 1.2
	1989	(b) 6.53	+ 3.7	+ 2.4	- 1.0
	Forecast 1990	(b) 6.61	+ 1.3		- 1.8

63. 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 and substantial imports were necessary until 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. Milk production recovered and was estimated to have increased by as much as 8 per cent to around 16.70 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. A new law was passed on 7 February 1990, according to which all central unions of co-operatives had been dissolved and the Central Union of Dairy Co-operatives was liquidated. The deregulation of prices after forty years of State control had resulted in a substantial rise in retail prices which affected adversely the consumption of dairy products. The contraction of domestic demand was most pronounced in the butter sector. Within a few months Poland changed from an importer to an exporter of butter.

64. In Yugoslavia, milk production increased by 8.4 per cent to 4.9 million tons in 1989, due principally to growing yields. In Czechoslovakia, production of milk increased by 0.6 per cent in 1988 to 6.96 million tons and remained relatively stable in 1989 at around 7 million tons.

65. In the German Democratic Republic, milk production amounted to 9.6 million tons in 1989 increasing 4.3 per cent compared to the proceeding year. The number of cows continued to fall and was in January 1990 at 2 million, with an average annual yield per cow of 4,650 kgs. The dairy industry is accounting for an important share of the agricultural production and milk and dairy products are assuming a significant contribution to the diet. Dairy development policies had been pursued along the lines of a centrally planned socialist economy, and were devoted particular attention in a series of economic plans resulting in the establishment of large State undertakings and a comparatively high technological level. The consumption level of dairy products had been high. Recent political changes have entailed some changes in retail prices and domestic demand has declined. Yields and milk output may have increased following better feed supplies. Measures have been under consideration, aiming at a limitation of production, but it should not be excluded that at least temporarily, surpluses available for exports might be higher than in recent years.

66. In the USSR, milk production was 108.1 million tons in 1989, or 1.2 per cent higher than in 1988. The increase was less than in recent years 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. In 1990, production was expected to increase by another 3 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. However, imports of dairy products might decline in 1990 while those of vegetable fats might increase.

67. In the United States, the summer drought in 1988 resulted in significantly higher feed prices, raising production costs and putting additional financial pressure on producers. 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. In 1989, milk production was down by 0.6 per cent to 65.43 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 support price for manufacturing milk was lowered by 50 cents to US\$10.10 per cwt. as of 1 January 1990. The support price for skimmed milk powder was kept unchanged while that for butter was cut by 9 per cent. Without altering the manufacturing milk price, the support price of butter was reduced by another 10 per cent in April 1990, offset by an 8 per cent rise in that for skimmed milk powder. The reduction in milk support price was not passed on equally to support prices for butter and skimmed milk powder, taking account of the different trends of demand for these products. 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. In the proposed new Bill, the support price of milk might remain unchanged at US\$10.10 per cwt. with adjustments according to surplus production. Commercial consumption of dairy products remained stable in 1989 but was expected to increase by 2 per cent 1990. Shifts in consumption from higher-fat products toward lower-fat products persisted entailing an increased 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, obliged processors to limit production and some milk was diverted from manufactures to meet pressing retail needs for fluid milk. The situation lasted into 1990. Milk production was expected to increase by 2 per cent in 1990, to reach a level of 66.73 million tons, as a result of higher milk prices together with falling feed costs.

68. Canadian milk production in 1989 at 8.11 million tons was 3.6 per cent down on the level of the previous year. Production was expected to show little change in 1990 as the reduction in cow numbers would be offset by increased productivity. 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.

69. Milk production in Czechoslovakia has remained around 7 million tons in recent years, with an average yield per cow of 3,710 kgs. Consumption of milk and dairy products in terms of milk equivalent has averaged 250 kgs. per head. However, recent increases in retail prices have adversely affected the consumption notably of butter and increased quantities have become available for export. Production has been restricted by poor animal health and inadequate food supplies, and may increase significantly if these problems are solved.

70. 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 remained relatively stable. 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.

71. 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. Several importing developing countries had embarked on very ambitious development programmes.

72. 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. On a calendar year basis, total milk production was estimated at 49 million tons in 1989, an increase by 6.5 per cent over 1988. However, the growth in demand slowed and stocks of dairy products increased. In this situation, food-aid shipments of skimmed milk powder and butter oil by which the EC supported dairy development in India, were temporarily halted, with India requesting assistance in the form of capital rather than commodities. 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 68 kgs.

73. 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 6.5 million tons, but the growth was slowed down in 1989 due to rising fodder costs which discouraged farmers from raising dairy cows and goats. Total milk production increased by 3 per cent to 6.7 million tons in 1989. Following rapid expansion during most of the 1980's, the Chinese dairy industry had recently been adversely affected by weakening demand and feed shortages. Moreover, profits of milk producers and processors had been squeezed by inadequate adjustment of retail prices to costs. 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.

74. 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. In early 1990, a slowdown in economic growth and particularly a sharp increase in producer and consumer prices for milk reversed the upward trend in demand for liquid milk and fresh dairy products, leading to increased manufacture of milk powder and accumulation of stocks.

75. 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 and a further increase by 8 per cent was projected for 1990. 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 and an increase by 4 per cent was projected for 1990. Favourable milk prices in Chile stimulated further increase in production in 1989 when production increased to

1.29 million tons. Production was projected to increase by 5 per cent in 1990.

### Consumption

76. 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. In some Eastern European countries, where per capita consumption had been comparatively high, strong increases in retail prices had adverse effects on the consumption of milk and fresh milk products.

77. 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.

78. 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 39 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 1988 amounted to more than 3 million tons or an estimated 4.3 kgs. per capita, a rather impressive figure. Yoghurt consumption also increased in Uruguay as a result of promotion, presentation and different flavours.

79. 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. Market information for such products have been difficult to obtain, but it was generally believed that their rôle in the market was still small in quantitative terms. 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

80. World production of butter and butter oil increased by 1.4 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 increase in 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.

81. In the Community, the 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). There was no change in production despite reduced 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.

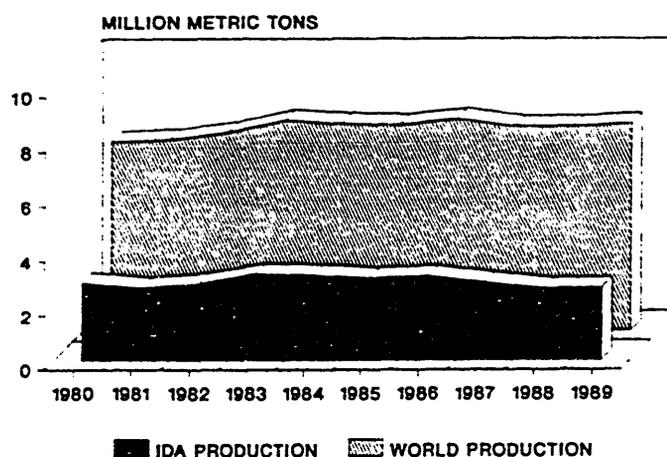
82. In New Zealand, production of butter/butter oil in 1988/89 was 246 thousand tons, 12 per cent less than in the previous season. In 1989/90, however, it recovered by 12.2 per cent to around 276 thousand tons, but still remaining lower than the output of 280.7 thousand tons in 1987/88. The dairy industry 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 100.7 thousand tons as against 94.2 thousand tons in 1987/88. It was

forecast to rise to 107 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.

83. The United States butter production increased by 0.7 per cent in 1989, reaching 547 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 the 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 5 per cent to 97 thousand tons in 1989/90, due to quota cuts caused by declining consumer demand and increased production of cheese.

84. 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 1.8 million tons in 1988 and continued to increase in 1989 but at a modest rate, i.e. only 0.4 per cent totalling 1.81 million tons. However, in the first quarter of 1990, production reportedly increased by as much as 8 per cent and was expected to be higher for the whole year. Moreover, the USSR was planning to increase its production of margarine from the beginning of 1991. In developing countries, butter/butter oil production increased by 5.2 per cent in 1988. In 1989 however, output increased by 2.4 per cent, amounting to some 1.91 million tons.

## BUTTER PRODUCTION 1980-1989



### Consumption

85. Although world butter consumption may have declined by only 2 per cent in 1989, declines in certain regions, notably in Western Europe and North America where demand for butter could be at a saturation point were much stronger than that. World per capita consumption which averaged 2.7-2.8 kgs. over the last ten years stagnated or declined slightly through 1989. In early 1990, increased retail prices in Eastern European countries also affected adversely the consumption of butter. The trend to both blended spreads and low fat spreads (both blended and margarine) had accelerated in 1989 and 1990. In the short and medium term it was likely that this downwards trend in butter demand would continue or even accentuate.

86. 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 1989 and 1990, providing funds for subsidized butter to be used in pastry products, ice-cream and sugar confectionery. 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. Taking into account the evolution of the situation in the butter market, the aid granted to butter for use in pastry products and ice-cream was increased in June 1990. Total Community consumption of butter in 1988 was 6.8 per cent less than in 1987, and a further reduction by 4.7 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.

87. 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 and 1990, as it did in the Nordic countries, Poland and Hungary. In Australia, domestic sales of butter, butter blends and butter oil remained at 54.8 thousand tons of butter equivalent in 1988/89. For 1989/90, domestic consumption was forecast to increase marginally to 55 thousand tons.

88. The repeal of the Margarine Act from 1 January 1990, meant that the manufacture and sale of saturated fat margarines on the New Zealand market became legal. These products are cheaper than both polyunsaturated margarines and butter. The repeal of the Margarine Act also allowed for sale on the New Zealand market of manufacture of blended spreads, which are margarines that have milk fat added, claiming both the benefits of margarine and the taste of butter. These developments threatened to make significant inroads into the market share for butter which currently accounts for an estimated 65 per cent of the New Zealand consumer yellow

fats market, remaining one of the biggest selling product categories in grocery outlets. The dairy industry is portraying butter as a natural spread which tastes better than any of the alternatives.

89. In North America, butter consumption continued to decrease in 1989 and 1990, but the decline may have been slowed down through promotional and marketing initiatives. 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

90. A continued decline in milk fat consumption in many countries resulted in lower import demand on one side and increased exportable availabilities on the other. As a result considerable increased quantities of butter were offered on international markets in 1990. In 1988, a large part of world exports (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 middle of 1990, expectations were for a further deterioration of the market for butter, mainly due to an absence of new sales and weaker import demand in the USSR.

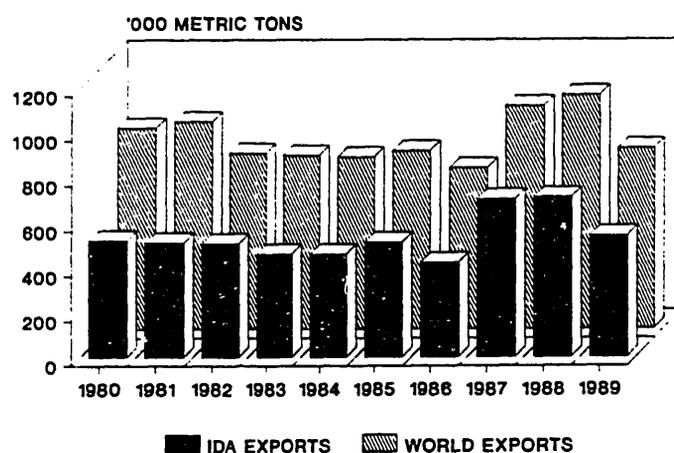
91. The Community exports of butter to third countries showed substantial increases in 1987 and 1988, the main destination being the USSR which imported mainly low priced old butter. However, in 1989, exports of butter (including butter oil) registered a substantial decline (by about 40 per cent) and amounted to some 360 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, although an increase in export refunds in July might stimulate Community butter exports.

92. Exports by New Zealand decreased in 1989 to 138 thousand tons compared to 184 thousand tons in 1988. 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. 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. Other important outlets for New Zealand butter were Iran and the USSR.

93. 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 4.4 per cent to 50 thousand tons in 1989/90.

94. As a consequence of increased production and decreased consumption due to higher retail prices, Poland resumed its exports of butter in early 1990. In March, a sale of 10 thousand tons of butter to the USSR had been concluded at a price of US\$1,350 per ton f.o.b. i.e. the agreed minimum export price. 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. In early 1990, Romania restricted its exports and allowed greater imports of dairy products with a view to increasing supplies for domestic consumption. Exports of butter by the German Democratic Republic decreased from 55 thousand tons in 1988 to 50 thousand tons in 1989. Exports in the first months of 1990 were reportedly lower than in the corresponding period of 1989.

## BUTTER EXPORTS 1980-1989



95. After having declined for the three consecutive years to a level of some 9 thousand tons, in 1989 United States 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 September, sales of 50 thousand tons of butter to the USSR had been concluded at a price of US\$1,618 per ton and the butter was shipped f.o.b. during December 1989-March 1990. 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 99 thousand tons of butterfat were reportedly sold.

96. The Community imports of butter, which in 1988 totalled 76 thousand tons, decreased to some 69 thousand tons in 1989. New Zealand remained the main source of the Community imports. Imports into Switzerland decreased substantially in 1989. Polish butter imports decreased by almost 66 per cent to 11.5 thousand tons in 1989 and there were no imports in 1990, mainly due to increased domestic production.

97. 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 purchases (at 10 thousand tons) were substantially lower than in the previous year and were expected to decrease further in 1990.

98. 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. In the first quarter of 1990, the USSR bought some 70 thousand tons of butter from New Zealand at the price of US\$1,450 per ton f.o.b. and some 10 thousand tons from Poland at the price of US\$1,350 per ton f.o.b., and Nordic countries shipped some 20 thousand tons to that market. Nevertheless, during that period imports of butter decreased by 13 per cent while those of vegetable fats increased by 17 per cent in relation to the corresponding period of 1989. In the middle of 1990, uncertainties persisted as to the USSR's import requirements and their ability to pay. Butter imports in 1990 might remain at 300 thousand tons, but this could change if butter was again offered at reduced prices and credit facilities were available.

### Stocks

99. Total stocks of butter in the European Communities, North America and Oceania on 1 January 1990, at 370 thousand tons were 11 per cent lower than a year earlier, while stocks on 1 April 1990, at 373 thousand tons, were 16 per cent higher than a year earlier. Stocks of butter in Eastern Europe on 1 January 1990 were reportedly higher than a year earlier and they continued to increase throughout the first quarter of 1990.

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

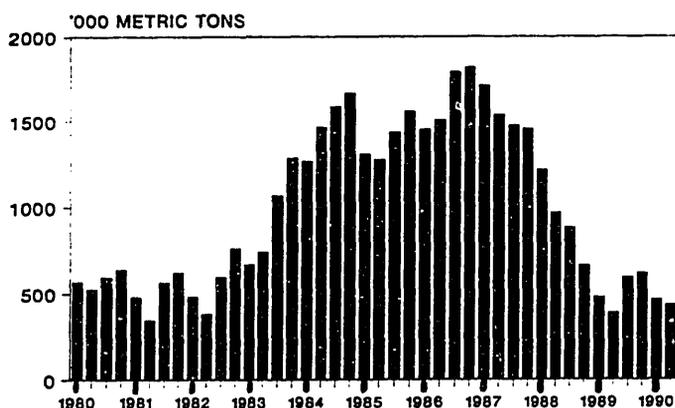
	1981-83 average	1986	1987	1988	1989
<u>Total</u>	<u>189.46</u>	<u>194.34</u>	<u>403.11</u>	<u>440.47</u>	<u>300.0</u>
of which from:					
Belgium	16.67	-	9.99	5.75	
Denmark	-	-	5.00	-	
Ireland	15.75	-	-	12.06	
Netherlands	14.71	-	113.14	121.05	
France	25.08	15.20	49.97	19.08	
Germany, F.R.	-	90.00	133.00	183.00	
<u>Total EC countries mentioned</u>	<u>72.22</u>	<u>105.20</u>	<u>311.10</u>	<u>340.94</u>	
Hungary	3.48	0.72	1.06	1.00	
Norway	1.67	-	-	-	
Finland	9.34	8.00	6.10	8.79	
Sweden	5.46	-	-	-	
Canada	0.67	-	-	-	
Uruguay	3.37	..	-	-	
New Zealand	48.71	25.11	11.38	38.29	
Others (unspecified origins)	44.38	55.31	73.47	51.45	

Source: Foreign Trade Yearbooks of the USSR 1981 to 1989.

100. The Community stocks of butter totalled 124 thousand tons (public and private) at the end of 1989 as compared to 202 thousand tons one year earlier. There were no intervention purchase whatsoever in 1989. The Commission continued to exercise its authority to suspend intervention buying of butter on certain conditions and to operate a tender system for buying butter into intervention. Following a decrease in prices, it was decided in January 1990 to buy some 12 thousand tons of butter, the first intervention purchase in two years. Intervention purchases continued and on 14 June 1990, public stocks in the Community amounted to 100 thousand tons while private stocks amounted to 90 thousand tons.

101. In Oceania, stocks of butter at 115 thousand tons on 1 January 1990 and at 113 thousand tons on 1 April 1990, were respectively higher by 15 and 41 per cent in relation to their levels on 1 January 1989 and 1 April 1989. In Poland, stocks of butter at 36.6 thousand tons on 1 January 1990 had more than doubled from a year earlier, this substantial increase being due to declining consumption in reaction to higher retail prices. In Finland, butter stocks at 15 thousand tons on 1 April 1990 were 25 per cent higher than one year earlier, mainly due to declining consumption.

## BUTTER STOCKS 1980-1990 IDA PARTICIPANTS \*



\* Includes Austria, Canada and the US

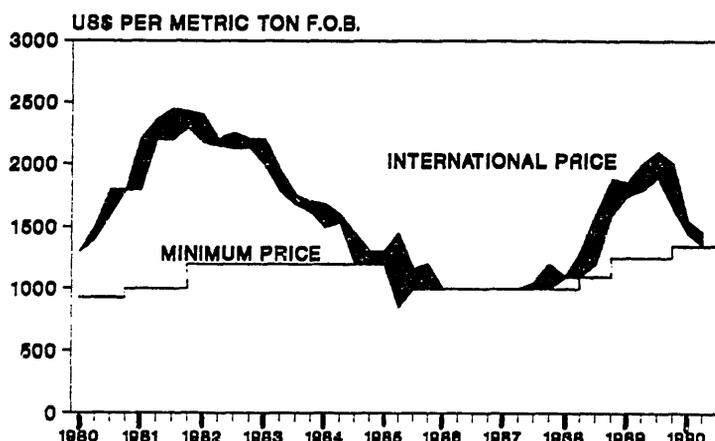
102. In the United States, government purchases of butter rose substantially, reflecting a jump in the surplus of high-fat products with public stocks continuing to swell in 1989 and early 1990 and were exceeding 200 thousand tons on 1 July 1990, nevertheless down by 5 per cent on their level a year earlier. Government support purchases of butter in January-June 1990 were large but fell about a tenth compared to such purchases made in the corresponding period of 1989. Canadian stocks reached 21 thousand tons at the end of June 1990, down 10 per cent on 30 June 1989.

### International prices

103. 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.

104. 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 started to weaken in the fourth quarter, ranging between US\$1,650 and US\$2,000 per ton f.o.b., and the decline continued in 1990, following a spectacular decline in butter consumption in many countries. International prices declined to the range of US\$1,450-US\$1,550 per ton f.o.b. in the first quarter of 1990 and then dropped to US\$1,350-US\$1,460 per ton f.o.b. in the second quarter. Certain sales had reportedly been made at prices below the minimum export price of US\$1,350 per ton f.o.b. and uncertainties persisted as to the price situation in the middle of 1990. Concern was expressed as to the unsatisfactory situation dominated by a fragile butter market, and the Committee Regarding Milk Fat urged participants to take the necessary steps to ensure full observance of the provisions of the Arrangement related to minimum export prices. An appeal was also made to non-participating countries not to undercut prices and not to sell below the agreed minimum export prices.

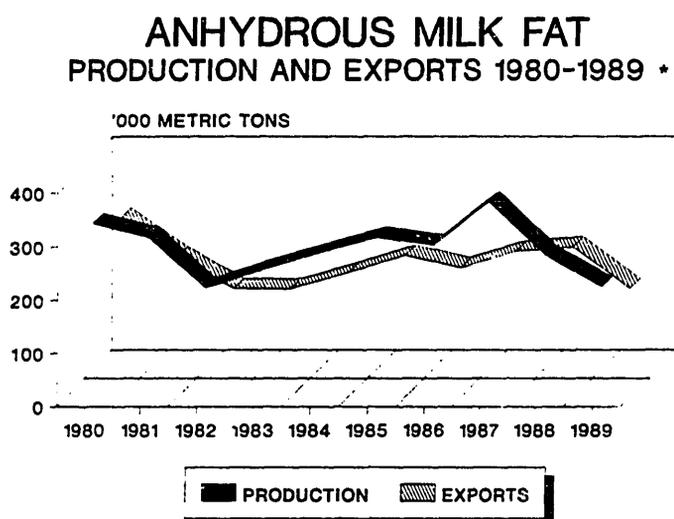
## BUTTER PRICES 1980-1990



### Anhydrous Milk Fat

#### Production and trade

105. Output of anhydrous milk fat of the European Communities, New Zealand and Australia was lower in 1989 than in the previous year. Exports by the European Communities and New Zealand decreased substantially in 1989 while exports by Australia registered an increase.



#### Food aid

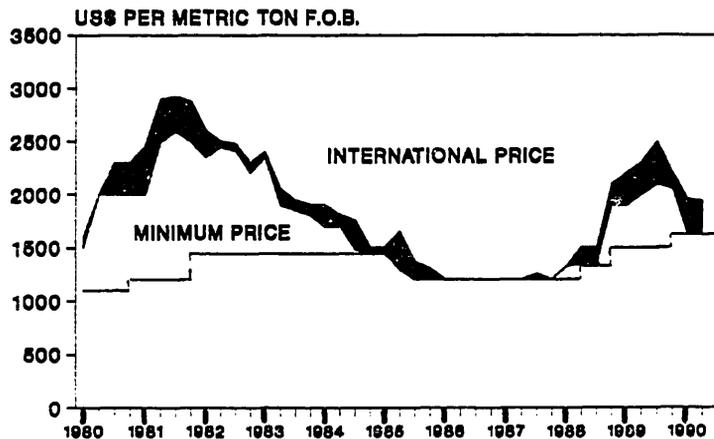
106. The 1989 Community food-aid programme provided for a maximum of 25 thousand tons of butter oil, the same as in 1988. However, for 1990, this programme provided for 18 thousand tons of butter oil. Actual food-aid deliveries in 1989, amounted to 15 thousand tons in relation to 33 thousand tons delivered in 1988. In February 1990, the Community took emergency action to supply Romania with certain agricultural products including 2.5 thousand tons of butter. In early 1989, the United States entered into discussions with Poland concerning donations of certain quantities of butter. In March 1990, the United States and Romania signed an agricultural aid package under which Romania would receive feed grains and 7.5 thousand tons of butter.

International prices

107. International prices of anhydrous milk fat which had improved throughout 1988 strengthening further in 1989 with prices fluctuating between US\$1,900 and US\$2,500 per ton f.o.b. in the first nine months of the year. However, prices started to weaken in the fourth quarter ranging between US\$2,050 and US\$2,200 per ton f.o.b., and continued to decrease ranging between US\$1,625 and US\$1,950 per ton f.o.b. during the first half of the year. Certain sales had reportedly been made at prices below the minimum export price of US\$1,625 per ton f.o.b. As regards the future outlook, prices and sales of anhydrous milk fat would remain sensitive to competition from vegetable oils and uncertainties would persist in the market.

108. 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 1980-1990



## Cheese

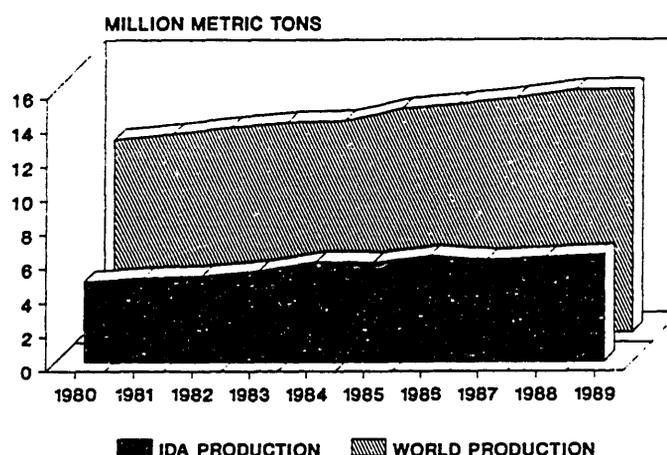
### Production

109. World output of cheese (all kinds including curd) at 14.39 million tons in 1989 was 1.2 per cent more than in 1988 and larger gain was forecast for 1990. The trend was very similar in all regions, but with some variations from one country to another. In the European Communities, cheese production in 1989 reached 4.49 million tons, an increase by 2 per cent over 1988. This partially reflected the increase in internal demand 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 was recorded, with cheese production in the first half of the year being almost 6 per cent higher than in 1989.

110. In Australia, production of cheese totalled 190.4 thousand tons in 1988/89, i.e. 8 per cent more than the level of the previous season. It was forecast to decrease by 4 per cent to 183 thousand tons in 1989/90. In New Zealand, cheese production totalled 122 thousand tons in the 1989/90 season. Production was adjusted down during the season as export sales did not achieve expected levels. Relative gains were recorded in 1989 in most other participating countries.

111. 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 and much of the increase in the milk supply would be absorbed by cheese manufacture. Production in Canada continued to grow in 1989/90, 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 274 thousand tons in 1989 and little change was expected for 1990. Production of cheese in developing countries which was slightly below 12 per cent of total world output hardly changed in 1989.

## CHEESE PRODUCTION 1980-1989



### Consumption

112. 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 1.8 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 product diversification (i.e. low-fat cheeses) were the main reasons for these positive developments.

113. 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 and 1990, cheese consumption developed appreciably in North Africa and the Middle East.

114. The expansion in demand and consumption of cheese has entailed the development and production of imitation cheeses, but such products still had captured only a marginal market share in 1989. However, cheese analogues, filled cheese and imitation cheese were, with some success, being marketed as ingredients for making pizzas and for other cooking applications, notably in the United States.

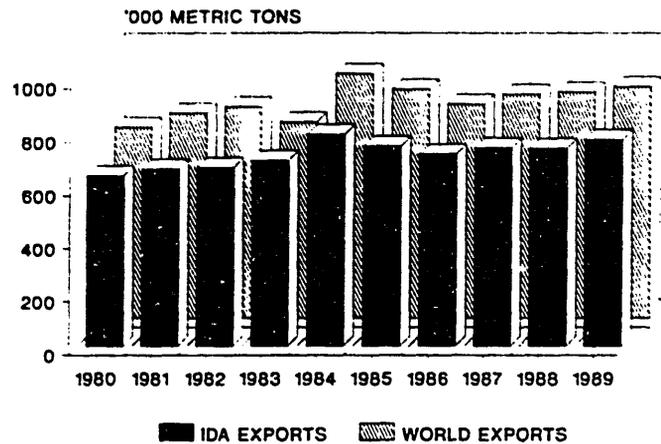
### Trade

115. 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.

116. The Community cheese exports expanded by as much as 11 per cent in 1989 to 445 thousand tons. However, exports in 1990 were expected to grow at a slower rate. New Zealand exports reached 84.5 thousand tons in 1989, being 13.6 per cent below their level in 1988, the main outlet remaining Japan. Sales of cheese below normal export quality under derogation dropped sharply in 1988 and stopped completely in 1989 reflecting improved market conditions. However, as prices eased in early 1990, New Zealand sold 1,350 tons of cheese under derogation in the period of January to May 1990. 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. Exports declined further in 1989/90 (by 12.7 per cent) to 51.5 thousand tons. The main destinations of Australia's exports continued to be Japan and South East Asia.

117. Exports by Switzerland increased significantly (by 6.9 per cent) in 1989 and amounted to 63.9 thousand tons. Exports of Finland dropped from 31 thousand tons in 1988 to 27.3 thousand tons in 1989. Exports by Argentina which more than doubled in 1988 (11 thousand tons) continued to expand in 1989 by 28 per cent to 14.2 thousand tons. Sales by Bulgaria, however, dropped by as much as 20 per cent in 1989 to 21 thousand tons.

## CHEESE EXPORTS 1980-1989



118. Cheese exports from the United States continued to be at a low level in 1988, i.e. about 24 thousand tons. In 1989, they fell substantially to a low level of 7 thousand tons. Austrian exports of cheese dropped in 1989 while exports from Canada and from the German Democratic Republic remained relatively stable.

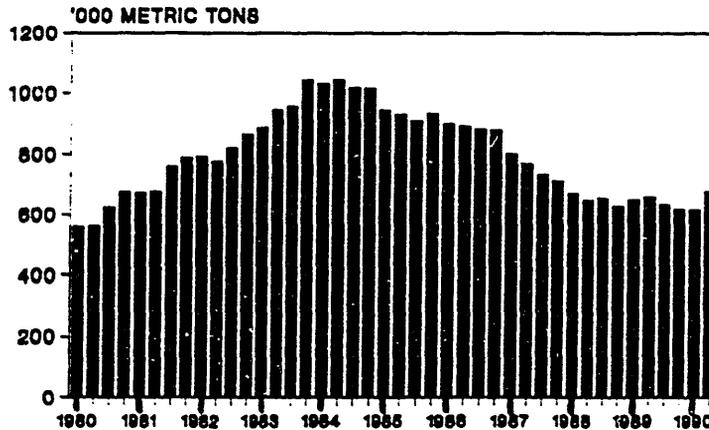
119. On the import side, Community imports at 116 thousand tons in 1989, mostly from Switzerland, were little changed in relation to the previous year. Japanese imports of cheese in 1989 at about 112 thousand tons were 2 per cent lower than in 1988, the main suppliers being the European Communities, New Zealand and Australia. Despite this small decrease in imports in 1989, domestic demand for cheese was constantly increasing and nearly doubled in ten years. This trend was likely to continue. However, as domestic milk and cheese production increased in 1990, import requirements might not increase. In Switzerland, imports of cheese remained relatively stable in 1989 at around 24 thousand tons.

120. United States purchases totalled 125 thousand tons in 1989, up by 9 per cent on 1988. The bulk of the imports was from the European Communities, New Zealand and Finland. 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, and import demand in these areas remained lively in 1990.

Stocks

121. Cheese stocks, on 1 April 1990, were higher than one year earlier in the Community, the Nordic countries and New Zealand, while they were low in Australia. United States stocks which on 1 April 1990, were slightly higher than one year earlier, but still amounting to only about two fifth of their average levels in 1981 to 1983. For all countries for which statistics on cheese stocks were available there seemed to be an increase in stocks of 2.5 per cent in 1990 compared to 1989.

**CHEESE STOCKS 1980-1990**  
**IDA PARTICIPANTS \***



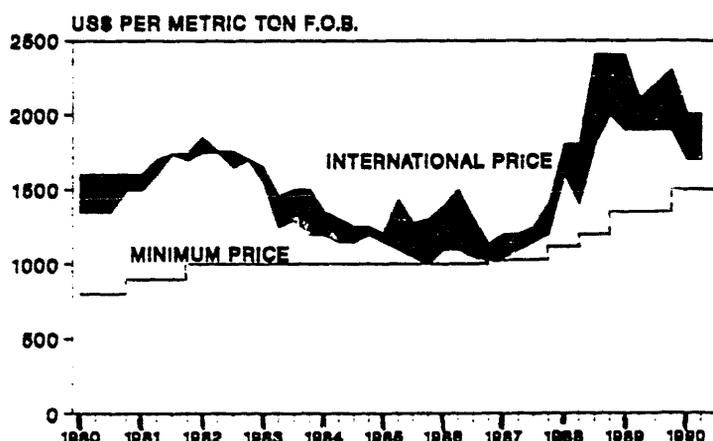
\* Includes Austria, Canada and the US

International prices

122. Cheddar cheese prices which had strengthened during 1988 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. In the first half of 1990 they tended to ease somewhat and ranged between US\$1,700 and US\$2,000 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, notably in the case of speciality cheeses. Cheddar cheese quotations were showing weakening tendencies by mid-year 1990, probably a reaction to plentiful supplies offered for export and high stocks of produce for ripening.

123. 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 1980-1990



### Milk Powders

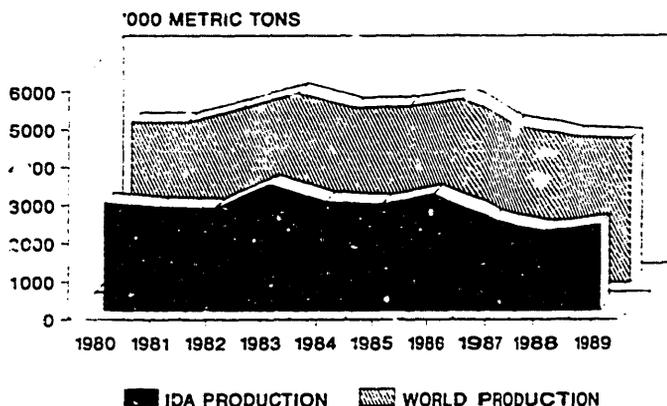
#### Skimmed Milk Powder and Buttermilk Powder

##### Production

124. 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. Decrease over three consecutive years was 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 even below 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.

125. After having decreased sharply for two consecutive years, output of skimmed milk powder in the European Communities recovered in 1989 and totalled 1.40 million tons, up by 6.5 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, Community production of skimmed milk powder showed a strong increase, of 13 per cent for the first half of the year. 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 increased by 22.7 per cent in 1989/90 to a level of 189 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. The forecasts for 1989/90 were for an increase in skimmed milk powder/buttermilk powder production by around 8 per cent to 137 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 10 per cent to 175 thousand tons. Production of skimmed milk powder by other participants followed varying trends in 1989.

### SKIMMED MILK POWDER PRODUCTION 1980-1989



126. In the United States, output decreased by 11 per cent in 1989, reaching 395 thousand tons. A further decrease was forecast for 1990, despite the projected expansion in milk production. 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 7 per cent to a level of 95 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

127. 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. However, this was due to reduced use of powder by the food compound industry; while powder used for human consumption increased strongly in 1989, exceeding 300 thousand tons. Domestic consumption of skimmed milk powder for calf feed 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. Taking into account the evolution of the market situation, the aids granted to skimmed milk powder and liquid skimmed milk used in animal feed were increased again in June 1990.

128. In Japan, where total consumption also 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. In Canada, total domestic consumption increased in 1989 and one fifth of the consumption was used for animal feed purposes.

#### Trade

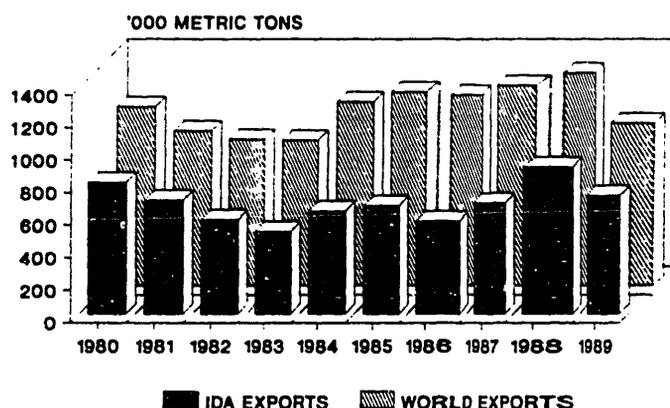
129. Due to the continued tightness in world supplies with the decline in production and the negligible level of stocks, world exports of skimmed milk powder in 1989 declined by as much as 250 thousand tons to 950 thousand tons.

130. With reduced supplies and negligible intervention stocks, Community exports in 1989 reached only about 394 thousand tons, i.e. a decline by 36 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. A substantial increase in Community exports of skimmed milk powder was registered in the first quarter of 1990.

131. Skimmed milk powder exports by New Zealand increased by 3.8 per cent in 1989 and reached 146 thousand tons. The main destinations were countries in South East and Eastern Asia and Mexico. Buttermilk powder exports registered a sharp drop in 1989. In July 1990, New Zealand gave advance notification of its intention to conclude a sale to Japan of skimmed milk powder for purposes of animal feed under derogation. The quantity involved was 3 thousand tons with delivery scheduled in August or

September 1990. Australian exports of skimmed milk powder/buttermilk powder in 1988/89 decreased by 4.5 per cent to 74 thousand tons. However, exports for the 1989/90 season were up on 1988/89 to reach some 95 thousand tons.

### SKIMMED MILK POWDER EXPORTS 1980-1989



132. In 1989, all United States skimmed milk powder exports were through commercial channels and no donations were made. United States exports in 1989, estimated at 170 thousand tons, were 22 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. Moreover, domestic demand for protein-rich products was expected to increase while stocks were presently small. 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 (by as much as 46 per cent) was registered and exports amounted to 32 thousand tons.

133. 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 1989 at 99 thousand tons were 24 per cent lower than the level in the corresponding period of 1988. This decrease was mainly due to a decline in imports for animal feed purposes which was caused by higher international market prices. Imports might decline further in 1990 as milk and skimmed milk production were projected to increase.

134. Import demand, mainly for recombination purposes 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. Mexico imported 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 Mexican 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. Brazilian imports recovered in 1989, amounting to 50 thousand tons. For 1990, imports might be low due to a general decline in demand for dairy products in conjunction with the government's new economic programme.

#### Food aid

135. 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 contracted 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 concerning how 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.

136. 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 1990, and those of butter oil from 45 thousand tons to 18 thousand tons. In 1989, actual Community food-aid deliveries amounted to 84 thousand tons of skimmed milk powder in relation to 113 thousand tons delivered in 1988.

**TABLE 5**

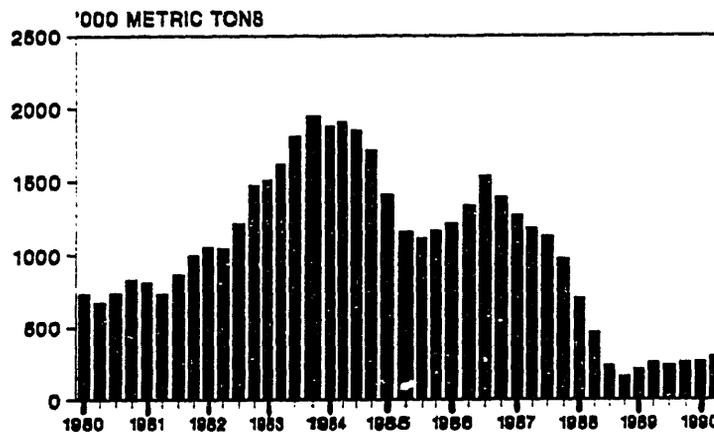
Share of Food Aid in Total Exports for Selected Countries

	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	69,900	300	-	3,200	0.4	-	4.6
EC	390,000	615,000	394,000	110,000	113,000	84,000	8.2	18.4	21.3
Switzerland	10,300	2,100	1,100	800	1,300	1,100	7.8	61.9	100.0
United States	298,800	218,600	170,000	126,800	74,100	-	42.4	33.9	-
TOTAL	766,700	897,800	635,000	237,900	188,400	88,300	31.0	21.3	13.9
	<u>Whole Milk Powder</u>								
Australia	43,100	47,000	47,000	20	66	-	0.1	0.1	-
Switzerland	2,400	1,900	2,200	2,000	1,500	1,600	83.3	78.9	72.7
TOTAL	45,500	48,900	49,200	2,020	1,566	1,600	4.4	3.2	3.3
	<u>Anhydrous Milk Fat</u>								
Australia	13,100	20,000	24,000	-	-	-	-	-	-
EC	148,000	170,000	103,000	19,000	33,000	15,000	12.8	19.4	14.6
TOTAL	161,100	190,000	127,000	19,000	33,000	15,000	11.8	20.5	11.8

Stocks

137. Total stocks of skimmed milk powder in the European Communities, North America and Oceania of approximately 164 thousand tons on 1 January 1990, were up by 29 per cent from one year earlier. However, compared to the 1981-1983 average, this figure was relatively low. On 1 January 1990, stocks held by the European Communities were at 5 thousand tons as compared to 7 thousand tons a year earlier. On the same date, stocks held by North America were at 33 thousand tons, slightly down from a year earlier and stocks held by Oceania were at 126 thousand tons compared to 84 thousand tons on 1 January 1990. At the end of 1989 there were no surplus stocks of skimmed milk powder. On 1 April 1990, total stocks of skimmed milk powder in the same areas amounted to 188 thousand tons or an increase by 10 per cent in relation to 1 April 1989.

### SMP STOCKS 1980-1990 IDA PARTICIPANTS \*



\* Includes Austria, Canada and the US

138. Limitations on intervention purchases of butter and of skimmed milk powder applied in the European Communities resulted in low public stocks of skimmed milk powder throughout 1988 and 1989. Public stocks remained negligible throughout 1989, but private stocks at the end of the year were estimated at 70 thousand tons. However, public stocks increased to 107 thousand on 14 June 1990, as internal prices weakened. Consequently, the aids granted in the form of skimmed milk powder used for feed were increased in order to promote its consumption and in an attempt to keep public stocks down

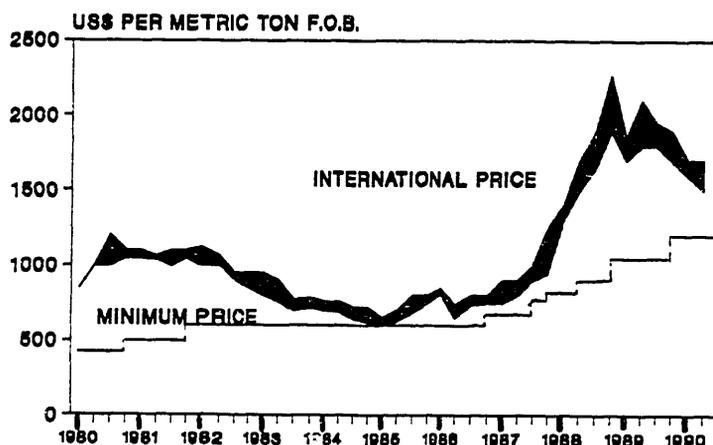
139. In Oceania, stocks remained at normal levels throughout 1989. Surplus skimmed milk powder stocks in the United States had been totally eliminated.

#### International prices

140. 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.

141. 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 started to level off, ranging between US\$1,700 and US\$2,100 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. Prices continued to weaken in 1990, fluctuating between US\$1,500 and US\$1,700 per ton f.o.b. during the first half of the year. Certain sales had reportedly been made at prices below the range indicated.

## SKIMMED MILK POWDER PRICES 1980-1990



### Whole Milk Powder

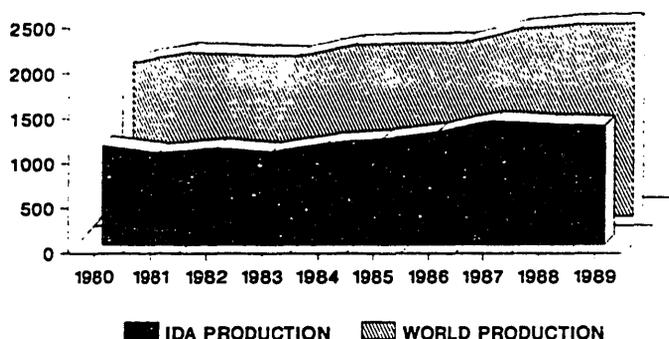
#### Production

142. In 1989, world production of whole milk powder, at around 2.20 million tons declined by 1.5 per cent compared to 1988 mainly due to a strong decline in New Zealand production and a more moderate decline in that of the Community.

143. Community output reached 863 thousand tons in 1989 against 868 thousand tons in 1988. Production again declined in 1990 by 6 per cent for the first half of the year. In New Zealand, production for export decreased to 170 thousand tons in 1989/90 compared to 195 thousand tons in the previous season. This substantial reduction in production reflected the lack of business in key markets, notably the USSR, Venezuela and Sri Lanka. 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 declined to 55 thousand tons in 1989/90. However, on a calendar year basis, production in 1989 at 67 thousand tons hardly changed from its 1988 level. In Argentina, output registered an increase by 15 per cent to 98 thousand tons in 1989. Production in Finland, declined for the second consecutive year amounting to only 11 thousand tons in 1989. In Poland, manufacture of whole milk powder remained relatively stable in 1989 at around 50 thousand tons. United States production increased by 5 per cent to 81 thousand tons in 1989 while that of Austria, remained unchanged at 11 thousand tons.

## WHOLE MILK POWDER PRODUCTION 1980-1989

'000 METRIC TONS



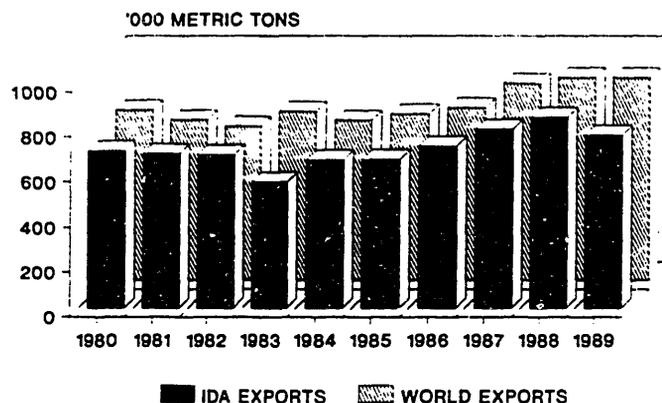
Trade

144. 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 declined to some 880 thousand tons in 1989. Community exports decreased by 6 per cent to 554 thousand tons, accounting for some 63 per cent of the world exports in 1989. A further decrease was forecast for 1990.

145. Exports from New Zealand, the world's second largest exporter, declined in 1989 and were close to 133 thousand tons. The main outlets were in South and East Asia and in South America. Exports continued to drop in 1990. Australian exports in 1988/89 at 48.4 thousand tons were marginally down as compared to the previous season and reached only 47 thousand tons in 1989. Exports from Finland, exclusively to the USSR, declined again substantially by 66 per cent to 5.5 thousand in 1989. Exports by Argentina, the main destinations being the USSR and Chile, almost doubled in 1989 and reached 25 thousand tons.

146. Whole milk powder purchases by developing countries reached 650 thousand tons in 1989, decreasing by 1 per cent from 1988. 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. Rising prices and growing foreign exchange difficulties of many importing countries may have discouraged a continued increase in purchases. Much of the powder imported into developing countries is for welfare programmes and budgetary restraints may have prevented increases in purchases to be made. Import demand remained stable in 1990, and was not showing signs of becoming more active in spite of lower prices.

## WHOLE MILK POWDER EXPORTS 1980-1989

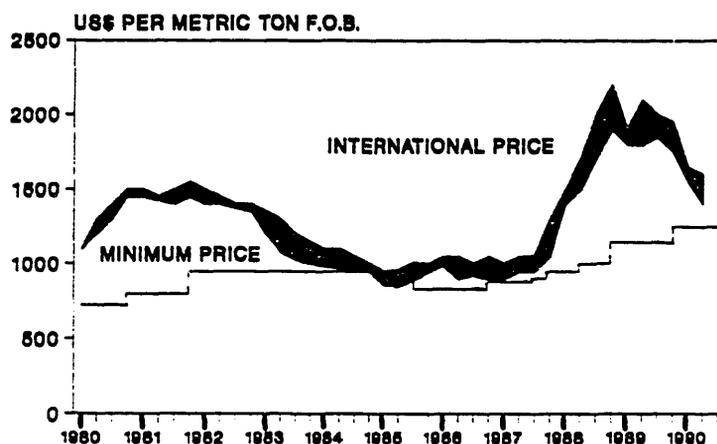


International prices

147. 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.

148. In early 1989, the rise in international prices of whole milk powder 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 started to fall late in the year, in the fourth quarter fluctuating between US\$1,750 and US\$1,950 per ton f.o.b. Prices fell further in 1990, ranging between US\$1,400 and US\$1,650 per ton f.o.b. in the first half of the year. By the middle of the year whole milk powder prices were lower than those for skimmed milk powder by US\$100 per tonne. Evidently, the depressed butter market also had negative effects on that of whole milk powder.

## WHOLE MILK POWDER PRICES 1980-1990



### Other Dairy Products

#### Whey in powder or block or concentrate

149. 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 the magnitude of the production of such products was difficult to evaluate.

150. Community production of whey powder increased by about 5 per cent in 1989 compared to 1988, and reached 925 thousand tons accounting for 60 per cent of world production. In 1989, United States production increased marginally (by 0.2 per cent) to 486.2 thousand tons, while Canadian production increased by about 7 per cent to 60 thousand tons. World production of whey powder was again increasing in 1990 with increased production in the Community and the United States, following developments in production of cheese.

151. 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 1989, the European Communities imported 52,000 tons and exported 28,000 tons of whey, mainly in connection with forward processing. Community exports were high in the first quarter of 1990, while imports were unchanged.

152. The market for whey powder showed some fluctuations in 1989 and appeared to be market driven. Prices in the United States 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 rose 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. Prices continued to weaken in 1990 when they fell in June below US\$300 per ton both in Europe and in the United States. There was still some uncertainty as to the size of the supplies coming on to the market in the near future.

#### Concentrated milk

153. World production of condensed milk recovered slightly in 1988, increasing by 1.6 per cent thus amounting to 4.64 million tons. It registered a further increase by 2 per cent in 1989 to reach 4.73 million tons. In the European Communities, output decreased by 4 per cent to 1.28 million tons and from 1988 to 1989 and continued to fall at the same

rate in 1990. In the United States and Canada, production continued to fall in 1989 respectively by 9 and 11 per cent, reaching 230 thousand tons in the United States and 74 thousand tons in Canada. Australian production of condensed milk showed a substantial increase in 1989. Also USSR production continued to expand, reaching 610 thousand tons in 1989, 2 per cent up on the previous year. Condensed milk production in the Far East and Latin America remained stable in 1989.

154. After having reached a peak of nearly 1 million tons in 1985, world trade in condensed milk declined rapidly to nearly half of that level in 1988, or some 560 thousand tons, and the decline continued. Community exports recovered in 1989 and amounted to 397 thousand tons, i.e. an increase by 3.7 per cent over 1988. However, exports again fell in 1990. Canadian exports declined in 1989 and a further decrease in exports was apparent for 1990.

155. In February 1989, condensed milk prices were raised by some 2 per cent. In 1989, wholesale prices in Europe and North America ranged from US\$1,200 to US\$1,500 per ton which corresponded to their 1987 level in dollar terms. From January to March 1990, wholesale prices in the Netherlands were raised to f. 3,400 per ton, close to US\$1,800 per ton and remained at that level.

#### Casein

156. Casein production which had increased in 1988, fell by 10 per cent in 1989 to 225 thousand tons. The European Community accounted for all of the reduction, which was related to a reduced milk output and lower supplies of milk being available for casein production.

157. Community production of casein declined in 1989 to 145 thousand tons as producers reacted to decreased export prospects and tighter milk supplies, and production was again reduced for the first four months of 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 and slaughterhouse offals, which were far cheaper. New Zealand production of casein registered a significant reduction in 1988/89 by 17 per cent to 54 thousand tons but increased by 14.8 per cent in 1989/90, to 62 thousand tons as a result of the recovery in milk production. Polish production of casein, at 20 thousand tons in 1988, was sharply down (by 20 per cent) on 1987 and remained at the lower level in 1989.

158. 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 further in 1989, with reduced supplies both to the United States and the Community markets. 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. United States casein imports declined to about 82 thousand tons in 1989, reflecting continued strength in casein import prices.

159. 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. 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\$4,400 per ton in June 1990, as compared to US\$5,350 per ton in June 1989. In the middle of 1990, the casein market was characterized by further reduction in production and supplies and a wide range of prices according to quality.