

1981/82 DAIRY SEASON REVIEW

The following article briefly describes the 1981/82 dairy season, with particular emphasis on exports and the international dairy market.

NEW ZEALAND PRODUCTION

Milkfat processed at New Zealand dairy factories during the 1981/82 season totalled 282.4 mkg, almost identical to the 1980/81 total of 282 mkg but 3 per cent below the record of 290.9 mkg achieved in the 1979/80 season. Total milkfat production (including domestic milk and cream consumption plus wastage) declined marginally from 308.1 mkg in the 1980/81 season to 307.7 mkg in 1981/82.

The relatively high level of milkfat production achieved in 1981/82 was largely the result of generally favourable weather conditions. In the early months of the season milkfat production was consistently below year earlier levels mainly due to below average pasture growth and later calving. However by late spring pasture growth was excellent and production rose to record levels. There was some setback in January and February owing to a drought but conditions were again particularly favourable in the last few months of the season allowing milkfat production over the season as a whole to reach the level of the 1980/81 total. Facial eczema, which had been a serious problem in the 1980/81 season had little impact during the 1981/82 season.

Although there has been a trend away from dairy farming and towards horticulture since 1970, the favourable prices received for dairy products on international markets in the last three years have encouraged some resurgence of interest in dairying reflected in a slight increase in the number of dairy cows in milk in 1981/82. Between January 1981 and January 1982 the number of dairy cows in milk increased by 1 per cent to 2,047 thousand while between June 1980 and June 1981 the total number of dairy cattle declined by 1.3 per cent to 2,931 thousand.

Milkfat production per cow has tended to increase over time as the genetic quality of the herd has been upgraded and larger numbers of the higher producing friesian cows have been introduced into the herd. In the decade 1971 to 1980 milkfat production per cow averaged 132 kg, with 147 kg in 1980/81 and 144 kg in 1981/82. The slight decline in production per cow which occurred in 1981/82 can be attributed largely to slightly less favourable seasonal conditions when compared with the 1980/81 season.

As shown in table 2, the amount of milkfat being utilized in the production of butter and AMF has been declining while the proportion of milkfat being used in the production of wholemilk products other than butter, AMF and cheese (mainly wholemilk powders) has tended to increase. This change has largely resulted from the gradual reduction of New Zealand's access to the UK market for butter and an increase in demand for wholemilk powders.

Production of the major dairy products over the last few seasons is shown in table 3. In 1981/82 production of butter rose by 9 per cent while production of AMF declined by 53 per cent. This switch from AMF to butter was a necessary consequence of the New Zealand Dairy Board purchase, in partnership with EEC processors

and exporters, of 100,000 tonnes of United States surplus butter. This purchase was made in order to prevent the butter being 'dumped' on the world market, thereby disrupting trade. Since most of this butter has been or will be converted to AMF before being resold, the Board needed to reduce AMF production to avoid a surplus of this product building up.

Cheese production began declining in the early 1970s when Britain joined the EEC and reached a low of 78.3 thousand tonnes per annum in 1977/78. Since then production has tended to increase in response to improved demand, particularly from Japan, New Zealand's major market. In 1981/82 108.5 thousand tonnes of cheese were produced, an increase of 29 per cent over the previous season.

Production of casein declined from 59.4 thousand tonnes in 1980/81 to 47.2 thousand tonnes in 1981/82.

TABLE 1
COWS IN MILK, PRODUCTION AND HERD SIZE

Season Ended May	Total Dairy Cattle ¹ (000)	Dairy Cows in Milk ² (000)	Total Milkfat Production (000 tonnes)	Milkfat per Cow 'at factory' (kg)	Herd Size
1973	3,288	2,190	281	122	106
1974	3,159	2,140	261	118	109
1975	3,074	2,080	273	128	112
1976	2,998	2,092	297	137	115
1977	2,930	2,074	303	143	116
1978	2,899	2,053	279	131	120
1979	2,911	2,040	301	142	123
1980	2,900	2,046	318	151	126
1981	2,969	2,027	308	147	129
1982 ^P	2,931	2,047	308	144	131

Source: NZ Dairy Board

P = Provisional

¹ As at 30 June each year

² As at 31 January each year

TABLE 2
UTILISATION OF MILKFAT
(000 tonnes)

	Season			
	1978/79	1979/80	1980/81	1981/82 ^P
Butter (incl. AMF)	218.4	216.1	213.0	203.1
Cheese	34.5	40.4	32.0	39.6
Other whole milk products	21.3	34.4	37.0	39.7
Total processed by factories	274.2	290.9	282.0	282.4
Milk and cream consumed, fed to stock and wastage	27.1	27.1	26.1	25.3
TOTAL	301.3	318.0	308.1	307.7

Source: NZ Dairy Board

P = Provisional

The current US recession has had an adverse effect on demand for casein, which is used primarily as an industrial input and protein supplement, and is sold mainly to the US.

Production of both skim milk powder and whole milk powder rose in 1981/82, while production of buttermilk powder declined.

TABLE 3
MANUFACTURE OF DAIRY PRODUCTS
(000 tonnes)

Product	Season			
	1978/79	1979/80	1980/81	1981/82 ^P
Creamery butter	233.6	217.2	204.0	222.3
Whey butter	2.6	3.3	2.0	2.2
Anhydrous milkfat	18.6	34.4	41.2	19.5
Frozen cream	7.7	6.1	4.7	5.0
Cheese	90.7	105.7	84.0	108.5
Condensed and evaporated milk	5.0	6.0	4.8	4.3
Wholemilk powder	55.6	65.8	88.8	92.7
Infant food	10.3	10.7	8.0	15.2
Skim milk powder	168.8	168.5	180.8	192.8
Buttermilk powder	21.7	24.1	25.0	21.6
Acid casein	46.9	45.2	42.4	31.0
Caseinates	10.7	8.4	5.4	3.0
Rennet casein	7.0	12.6	11.6	13.2
Lactose	10.8	11.4	11.0	11.7
Whey powders	..	11.5	10.0	13.2

Source: N.Z. Dairy Board
P = Provisional

INTERNATIONAL DAIRY SITUATION

World milk production continued to increase in 1981, albeit at a much slower rate than in recent years. Production in the main producer countries (see table 4) rose by 0.2 per cent to 385,469 thousand tonnes in 1981 and according to the latest USDA estimates is expected to rise by a further 0.8 per cent to 388,745 thousand tonnes in 1982. During the decade 1971 to 1980 world milk production grew at an average rate of 1.7 per cent per annum so this represents a significant deceleration in the rate of increase.

The fastest rate of increase was recorded in the USA where production increased by 3.2 per cent. A further increase of 2.3 per cent is expected in 1982. Higher dairy cattle numbers, genetic improvement and an increase in concentrate feeding in response to a favourable milk-feed price ratio all contributed to the increase. The EEC is the major supplier of dairy products on the world market and production there has been increasing at a rate well above the world average in recent years. In the 1970s EEC milk production increased by an average of 2.5 per cent per annum, mainly due to improved feeding and handling plus genetic upgrading of the herd. In 1981 EEC production increased by only 0.3 per cent and the USDA estimates that it will increase by 1 per cent in 1982, although this is probably a conservative estimate since in the first 6 months of 1982 production was 2.4 per cent above that in the same period a year earlier. In Australia production declined by 4.1 per cent in 1981, reflecting both a decline in cow numbers and adverse seasonal conditions. In 1982 production is forecast to rise by 0.9 per cent. The Soviet Union, a major importer of dairy products in recent years, recorded a further drop in milk production in 1981 and the USDA forecasts a decline of 1.7 per cent to 87 million tonnes in 1982.

International trade in dairy products is small in comparison to the total output of the world's largest dairy producing areas and accounts for only about 3 per cent of world milk production. As a result small fluctuations in the output of countries such as the USA and the EEC can cause a large change in available supplies on the world market and hence in prices.

The EEC, in particular, has a major influence on international trade as it produces a substantial surplus of butter and skim milk powder which is sold at subsidised prices on the world market. Any alteration in the level of subsidy has direct repercussions for international prices. Production in the EEC has continued to increase, mainly in response to the incentives offered to producers under the Common Agricultural Policy (CAP) for dairy products, and this despite the absence of markets (at unsubsidised prices) for any extra production and a declining level of domestic consumption within the EEC. Support prices under the CAP are pitched at a level which will provide an adequate income for the average producer. This applies to more than three quarters of EEC dairy farmers who have herds of 20 cows or less and consequently would be unable to make a living without government assistance. However these support prices make the expansion of production very profitable for the efficient producer or those with relatively large herds. Attempts to deal with the problem have concentrated on encouraging a reduction in cow numbers but this approach has not proved effective. Cow numbers have remained virtually static over the last 20 years but production per head has continued to rise as breeding and management techniques have improved and processing plants have become larger and more efficient. In comparison with EEC and world standards the size of the average New Zealand dairy herd is large and has tended to increase over time as farm amalgamation has taken place. In 1981/82 the average New Zealand herd contained 131 cows compared with 129 in 1980/81 and 113 in 1969/70.

Largely because of the EEC's CAP, EEC stocks of butter and skim milk powder rose to record levels in the mid 1970s (see table 7). As a result prices on world markets were depressed and remained so until 1979 when there was a strong upsurge in demand, particularly from the USSR. This then enabled the EEC to keep its stocks at a relatively low level and still reduce its export subsidies, allowing a substantial improvement in world prices. Between July 1978 and July 1979, EEC stocks of skim milk powder declined by 40 per cent and butter stocks declined by 25.3 per cent. In 1979 Russian butter imports increased from 39 thousand tonnes to 174 thousand tonnes and in the three years 1979 to 1981 the USSR purchased between 25 and 30 per cent of the butter traded on the world market plus significant quantities of cheese and milk powder (see table 6). The increase in Russian purchases was principally the result of a shortfall in production due to a shortage of feed in the USSR following several poor harvests. Although the number of cows in the USSR has increased marginally, production per head has continued to fall and total milk production has dropped from 94.7 million tonnes in 1978 to 88.5 million tonnes in 1981.

In the season under review, demand remained fairly buoyant, with the USSR continuing to be a major importer. However the fragile nature of the balance achieved between demand and supply became increasingly apparent as the season progressed. This was largely reflected in an increase in stocks. At July 1982 EEC stocks of SMP totalled an estimated 548.5 thousand tonnes and stocks of butter an estimated 326

TABLE 4
MILK PRODUCTION IN MAJOR PRODUCER COUNTRIES
(000 tonnes)

	1978	1979	1980	1981 ^P	1982 ^F	% Change 1982/81
Belgium/Luxembourg	4,022	3,915	3,898	3,895	3,910	+ 0.4
Denmark	5,324	5,225	5,117	5,037	5,000	- 0.7
France	25,850	26,549	27,950	28,150	28,700	+ 2.0
W. Germany	23,291	23,907	24,778	24,800	25,000	+ 0.8
Ireland	4,803	4,908	4,826	4,770	4,930	+ 3.4
Italy	9,360	10,526	10,749	10,660	10,670	+ 0.1
Netherlands	11,367	11,587	11,785	12,160	12,360	+ 1.6
United Kingdom	15,877	15,915	15,958	15,940	15,950	+ 0.1
Greece	705	684	713	714	716	+ 0.3
TOTAL EEC	100,599	103,216	105,774	106,126	107,236	+ 1.0
Canada	7,532	7,552	7,858	7,986	8,050	+ 0.8
Mexico	6,670	6,795	6,750	6,980	7,100	+ 1.7
U.S.A.	55,094	55,978	58,298	60,162	61,553	+ 2.3
TOTAL NORTH AMERICA	69,296	70,325	72,906	75,128	76,703	+ 2.1
Argentina	5,208	5,344	5,255	5,300	5,300	0.0
Brazil	10,500	10,100	10,265	10,500	10,750	+ 2.4
Chile	978	954	1,080	1,220	1,300	+ 6.6
Peru	620	625	620	630	643	+ 2.1
Venezuela	1,237	1,263	1,318	1,385	1,449	+ 4.6
TOTAL SOUTH AMERICA	18,543	18,286	18,538	19,035	19,442	+ 2.1
Austria	3,341	3,310	3,396	3,400	3,420	+ 0.6
Finland	3,325	3,242	3,277	3,232	3,180	- 1.6
Norway	1,815	1,875	1,941	1,960	1,970	+ 0.5
Portugal	569	549	615	665	750	+12.8
Spain	5,560	5,661	5,871	6,000	6,150	+ 2.5
Sweden	3,298	3,394	3,465	3,493	3,587	+ 2.7
Switzerland	3,518	3,642	3,655	3,640	3,674	+ 0.9
TOTAL WESTERN EUROPE	121,925	124,889	127,994	128,516	129,967	+ 1.1
Czechoslovakia	5,642	5,663	5,909	5,980	5,980	0.0
German Democratic Rep	8,226	8,198	8,320	8,325	8,330	+ 0.1
Hungary	2,336	2,461	2,545	2,653	2,825	+ 6.5
Poland	17,072	16,909	16,732	15,527	16,000	+ 3.0
Yugoslavia	4,008	4,157	4,211	4,402	4,453	+ 1.2
TOTAL EASTERN EUROPE	37,284	37,388	37,717	36,887	37,588	+ 1.9
Soviet Union	94,677	93,341	90,630	88,500	87,000	- 1.7
South Africa	2,218	2,280	2,367	2,260	2,320	+ 2.7
India	10,100	12,500	15,500	16,500	17,000	+ 3.0
Japan	6,125	6,466	6,502	6,620	6,670	+ 0.8
Australia	5,642	5,804	5,562	5,333	5,380	+ 0.9
New Zealand	6,069	6,486	6,828	6,690	6,675	- 0.2
TOTAL	371,879	377,764	384,544	385,469	388,745	+ 0.8

Source: USDA
P = Provisional
F = Forecast

TABLE 5
EEC DAIRY STATISTICS

	1975	1976	1977	1978	1979	1980
Milk Production (000 tonnes)	91,987	93,528	96,186	100,383	102,352	104,200
Milk delivered to dairies (000 tonnes)	81,694	83,927	86,750	90,849	93,157	95,320
Milk yields per cow (kg)	3,665	3,749	3,851	4,000	4,055	4,073

TABLE 6
USSR DAIRY STATISTICS

	1975	1976	1977	1978	1979	1980	1981
No. of Cows (000)	41,910	41,917	41,987	42,592	43,000	43,310	43,389
Milk Yield (kg/cow)	2,204	2,179	2,294	2,260	2,207	2,143	2,080
Milk Production (million tonnes)	90.8	89.7	94.9	94.7	93.2	90.6	88.5
Imports: Butter (000 tonnes)	8.1	9.6	75.7	38.9	174.2	249.0	215.0

Source: Agra Europe
Commonwealth Secretariat

TABLE 7
STOCKS OF DAIRY PRODUCTS IN MAIN EXPORTING COUNTRIES
(000 tonnes)

As at July	1974	1975	1976	1977	1978	1979	1980	1981	1982 ^E
SMP									
EEC	465.7	963.2	1,360.0	1,185.4	994.7	597.2	398.8	427.9	548.5
USA	88.9	200.2	218.6	278.1	318.4	244.2	248.8	332.5	440.5*
Canada	38.4	94.0	166.3	94.9	32.6	23.6	35.3	42.6	47.1*
Australia	4.7	57.2	37.5	7.0	5.6	9.7	9.3	15.5	12.0
New Zealand	41.0	182.5	214.0	129.0	64.0	90.0	76.0	80.2	130.0
Butter									
EEC	320.1	324.9	466.1	512.7	582.4	636.3	475.2	287.9	326.0
USA	53.3	45.2	36.7	89.4	127.9	114.1	134.2	230.2	202.0*
Canada	18.2	26.3	37.6	22.3	32.4	30.3	21.1	20.5	20.0*
Australia	12.0	28.9	10.6	17.5	21.7	9.2	6.2	11.3	19.0
New Zealand	28.4	38.1	30.8	23.9	23.3	32.1	29.4	20.0	29.0

Source: BAE
OECD
E Estimate
* April

thousand tonnes. This is still lower than the record levels recorded during the mid 1970s when stocks reached 1,360 thousand tonnes of SMP in July 1976 and 636.3 thousand tonnes of butter in July 1979. The United States also had a serious stockpile problem in 1981/82 with stocks of butter, cheese and SMP accumulating. In the second quarter of 1981 US Government butter stocks had almost reached 200 thousand tonnes and consideration was given to disposing of some of the stockpile on the world market. Since only around 200,000 tonnes of butter are traded internationally in countries other than the USSR, which was not available to the US as a market for political reasons, this would have caused a steep decline in the international price. As mentioned earlier, the New Zealand Dairy Board therefore decided to purchase 100,000 tonnes (plus or minus 10 per cent) of the surplus and dispose of it in a manner which would avoid any disruption to international trade. Most of the butter was processed into AMF and sold in that form along with domestically produced AMF to a variety of markets. Some of it was blended with New Zealand butter and sold on the domestic market. Although the problem of surplus butter was solved at least temporarily, cheese and SMP stocks continued to grow. By April 1982 US cheese stocks had risen to the equivalent of three years supply for available non quota cheese markets while SMP stocks exceeded 400,000 tonnes. Skim milk powder stocks posed the biggest threat to international trade while the cheese in stockpile had deteriorated and was of a type not popular outside the US.

Towards the end of the 1981/82 season international prices for most dairy products tended to stabilise partly because the strength of the US dollar allowed the EEC to maintain its returns in terms of ECU's (European Currency Units) and partly because of the growth in US and EEC stocks. Taking the season as a whole however, prices were substantially up on those achieved in the

1980/81 season. In the year to March 1982 the New Zealand Dairy export price index rose by 33.1 per cent, following a rise of 30 per cent in the previous year.

GATT NEGOTIATIONS

The international dairy arrangement of the General Agreement on Tariffs and Trade (GATT) sets out minimum prices for the major dairy products traded internationally. These prices are reviewed annually and in October 1981 were raised on average by 20 per cent. At this level GATT minimum prices are still about 50 per cent below those applying in international trade and therefore do not fill their intended role in providing an effective floor price. However, it has been agreed that in future GATT minimum prices will be brought closer to actual market prices.

UNITED KINGDOM ACCESS

Up until 1973, when it joined the EEC, the United Kingdom provided the major outlet for the bulk of New Zealand's butter and cheese exports. Between 1973 and 1977 New Zealand exports of butter and cheese to the United Kingdom became subject to quotas negotiated with the Community as follows:

	Butter	Cheese
	(tonnes)	
1973	..	165,811
1974	..	158,902
1975	..	151,994
1976	..	145,085
1977	..	138,176

In 1975 and 1976 further negotiations took place in order to decide on access for New Zealand dairy products beyond 1977. Quotas as shown below were set for butter imports into the United Kingdom but no further special access could be negotiated for cheese. However, since 1980 New Zealand has had an EEC cheese quota of 9,500 tonnes set under the GATT.

			<i>Butter (tonnes)</i>
1978	125,000
1979	120,000
1980	115,000

In September 1980 the EEC agreed to raise the return on New Zealand sales of butter from 50 per cent of the intervention price to 75 per cent, by reducing the import levy. In return New Zealand agreed to a reduction in its import quota from 115,000 tonnes to 95,000 tonnes. Quotas for 1981 and 1982 were set at 94,000 tonnes and 92,000 tonnes respectively, after protracted negotiations which lasted until April 1981. Negotiations are currently underway to determine access for 1983 and beyond. At this stage a quota of 89,000 tonnes has been suggested by the EEC Commission for 1983. However there is considerable pressure from some countries within the EEC for the quota to be set at an even lower level. Those wishing to see New Zealand's quota severely reduced put forward the argument that the amount of butter being consumed in the United Kingdom has diminished much more rapidly than New Zealand's quota, allowing New Zealand to sell an increasing proportion of the total. In 1981 it is estimated that the New Zealand quota represented 31.3 per cent of the total market compared with 28.8 per cent in 1980. In 1982 United Kingdom butter consumption is expected to fall by 10 per cent which would bring the suggested New Zealand quota up to 37 per cent of estimated consumption. New Zealand however argues that the main reason for the continuing decline in United Kingdom butter consumption is the artificially high level of support prices set under the CAP. Placing further restrictions on trade in dairy products will not solve this fundamental problem. Instead it is likely to exacerbate the current imbalance between demand and supply in the EEC by encouraging an even more rapid increase in production.

EXPORT RECEIPTS

Export receipts for dairy products totalled a record \$1,441.3 million in the year to June 1982, an increase of 22.8 per cent over the previous year. This was the third year in succession in which dairy product receipts have increased at a rate well above the average; in 1979/80 dairy export receipts rose by 35.2 per cent while in 1980/81 they rose by a further 44.8 per cent. Dairy export receipts for the last four years are shown in table 8. It should be noted that the data shown in the table does not relate directly to shipments made during the period but rather to foreign currency proceeds received through the banking system in the period stated.

The United Kingdom is by far the largest market for New Zealand dairy products, accounting for 24.3 per cent of total receipts in the 1981/82 June year. However, it is gradually declining in importance as access to the United Kingdom market is reduced by a gradual lowering of quotas. In 1965, 79.3 per cent of dairy export receipts were derived from the United Kingdom but this proportion had fallen to 67 per cent

by 1970 and to 31.6 per cent by 1975. Butter is the main product New Zealand exports to the United Kingdom and makes only relatively small sales of other major dairy products there.

The USA is the second largest market for New Zealand dairy exports. In 1981/82 12.9 per cent of dairy export receipts were derived from the US market. Casein is the main product sold to the US but significant quantities of milk powder and cheese are also exported there. Other important customers for New Zealand dairy products are the USSR which in 1981/82 was the third largest customer (buying mostly butter and milk powder) and Japan, a major buyer of New Zealand cheese, casein and milk powders.

Butter receipts rose by 18.6 per cent to \$511.1 million in the year ended June 1982. Although the importance of the United Kingdom market for New Zealand butter has declined substantially since 1973 when Britain joined the EEC it still remains the major source of New Zealand butter export receipts. In 1981/82 the United Kingdom accounted for 63.3 per cent of butter receipts compared with 80.7 per cent in 1972/73. The USSR, the second largest market for New Zealand butter in 1981/82 accounted for 19.5 per cent of butter export receipts. Other major markets for New Zealand butter in 1981/82 were the USA and Peru.

Receipts for cheese rose by 35.3 per cent to \$171.1 million in the 1982 June year, reflecting an increase in both the volume of cheese traded and the average price received. The major destinations for New Zealand cheese exports in 1981/82 were Japan, the US, the United Kingdom, West Germany and the USSR.

Casein receipts increased by a more modest 15 per cent in the year ended June 1982. The USA and Japan were the major markets, accounting for 52.8 per cent and 29.8 per cent respectively of casein receipts. The

TABLE 8
OVERSEAS EXCHANGE TRANSACTIONS
EXPORT RECEIPTS: DAIRY PRODUCTS
(\$ million)

	<i>Years ended June</i>			
	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>
United Kingdom	190.3	232.1	341.5	350.9
U.S.A.	87.1	109.4	137.3	186.2
U.S.S.R.	5.3	41.9	48.0	162.4
Japan	74.1	99.3	120.8	161.2
Indonesia	15.7	35.7	64.7	60.8
Malaysia	29.0	26.2	54.1	51.2
Peru	11.5	17.5	38.4	44.5
Thailand	11.1	12.8	22.7	41.4
Mexico	2.0	12.7	23.6	41.0
Philippines	29.1	38.1	47.8	39.2
Australia	10.0	13.1	26.3	29.5
Singapore	14.1	14.0	25.2	25.6
Taiwan	13.9	10.9	16.9	22.9
Hongkong	3.9	9.0	25.8	22.5
West Germany	6.8	7.6	21.1	21.0
Nigeria	4.6	5.9	8.7	12.6
Saudia Arabia	2.1	2.5	5.8	11.5
Iraq	7.9	14.2	16.1	11.4
Other	81.1	107.7	129.0	145.5
TOTAL:	599.6	810.6	1,173.8	1,441.3
Of which:				
Butter	208.1	299.0	431.1	511.1
Casein	92.4	119.0	125.7	144.5
Cheese	81.7	87.6	126.5	171.1
Milkpowders	154.9	222.8	359.9	471.5
Other Milk Products	62.4	82.2	130.6	143.2

volume of casein exported rose in the 1981/82 season but prices were affected by the recession in the United States and were only marginally higher than in the previous season.

Milk powder receipts increased by 31 per cent to \$471.5 million in the 1981/82 June year. Both the volume and price of wholemilk powder exported increased during the year and it is tending to replace skim milk powder in some end uses. Demand for skim milk powder was adversely affected by the build up in stocks in the US and the EEC and the volume exported was well down on the previous season. As a result prices began to fall towards the end of the season.

Receipts for other milk products rose by 9.6 per cent to \$143.2 million in 1981/82. Many of the products sold under this category are experimental in nature (for example alcohol and whey cheese) and the Board is working at developing markets for them. Also included in the 'other' category are cream and AMF and ghee. Receipts for AMF and ghee fell slightly in 1981/82. Although prices rose sharply during the season the volume exported from domestic production was only about half that exported in the previous season as New Zealand was also marketing AMF converted from the United States butter surplus. Receipts for cream rose strongly in 1981/82, reflecting an increase in both price and volume.

PRODUCER RETURNS

The relatively buoyant conditions experienced in international markets were reflected in a further improvement in the surplus on the New Zealand Dairy Board's trading account. The total surplus of \$237 million represented a 22 per cent increase over the previous season. The surplus in the milkfat account showed a moderate increase from \$94 million last season to \$108 million this season, while the solids non-fat trading account displayed a stronger gain from a surplus of \$100 million in 1980/81 to \$129 million in 1981/82.

At the commencement of the 1981/82 season, the Dairy Products Prices Authority set an initial milkfat price of 189 cents/kg, while the price paid for solids non-fat was 79 cents/kg. This gave a total payment for milkfat at the farm of 268 cents, an increase of only 1 per cent on the previous season's total payment of 265 cents. However, mid-way through the 1981/82 season authority was given to increase the basic advance farm price to 285 cents. After the distribution of half the milkfat and solids non-fat products trading surplus at the end of the season, the provisional total payout by the Dairy Board came to 330 cents. This was well in excess of the Government supplementary minimum price of 280 cents/kg which had also been revised after initially being set at 265 cents/kg for the 1981/82 season.

For the 1982/83 season the price for milkfat is 224 cents while the price for solids non-fat has been set at 94 cents, to give a total advance payment of 318 cents which compares with the Government Supplementary Minimum Price for 1982/83 of 325 cents/kg.

Average income per factory supply dairy farm over the last four seasons is shown in table 9. Gross income per farm increased by 24.9 per cent to \$66,265 in 1981/82 reflecting the improvement in returns achieved during the season. Dairy farm expenditure increased at a slightly slower rate, rising by 22.4 per cent to \$46,500, giving an average net income of \$19,765, 31.4 per cent

higher than in the previous year. In real terms gross income was 7.7 per cent higher than in the 1980/81 season while net real income rose by 13.2 per cent.

Dairy farm input costs rose by 19 per cent during the year so the increase in dairy farmers' returns was sufficient to raise dairy farmers' terms of exchange from 877 to 900 (base: 1975/76 = 1000), their highest level since 1977/78.

TABLE 9
AVERAGE INCOME PER FACTORY SUPPLY DAIRY FARM

(Dairy Board Survey)
(Dollars)

	1978/79	1979/80	1980/81 ^P	1981/82 ^E
Gross income	37,384	44,947	53,047	66,265
Expenditure	24,043	31,205	38,000	46,500
Net farm income	13,341	13,742	15,047	19,765
Dairy Farmers Terms of exchange (Base 1975/76 = 1000)	874	864	877	900

Source: NZ Dairy Board

P = Provisional

E = Estimate

CONCLUSION AND OUTLOOK

The 1981/82 dairy season was a favourable one, with demand for most products buoyant and production at a near record level. The 22.8 per cent increase in dairy export receipts was particularly impressive given the weakness of the international economy and the decline in receipts for New Zealand's other major primary exports, meat and wool.

In the 1982/83 season it is expected that prices for most dairy products will tend to stabilise at or below their current level as the growth in United States and EEC stocks is likely to have a depressive effect on prices. The EEC stockpile is of greater concern than that of the US. The US has undertaken to attempt to reduce its surplus stocks through food aid programmes and subsidies on skim milk powder for stock food and in the longer term by a reduction in the milk support price. However, it is still possible that at least some of their surplus products, particularly of skim milk powder, will have to be sold on world markets along with the EEC surplus in 1982/83. The final outcome will depend heavily on the level of demand from the USSR and OPEC countries. At this stage there are indications that these countries may buy less in the 1982/83 season than they did in 1981/82 and this would also have an adverse impact on prices.

In the longer-term the danger exists that the EEC surplus may reach the levels experienced in the mid-seventies. Between 10 and 15 per cent of the milk produced in the EEC is now surplus to requirements and must be exported with the assistance of subsidies. It seems likely that EEC milk production will continue to grow over the next few years unless there is some change in the way the CAP operates. Furthermore there is still considerable potential for increased milk production in the EEC as production per cow is currently around 4,073 kg, well below the EEC's commercially possible average yield of 5,500 kg and the 8,000 kg achieved by the best cows. It therefore seems probable that milk production will continue to rise at an average of about 2.5 per cent per annum (the average rate of increase

during the 1970s) over the next few years, giving an annual production of about 120 million tonnes by 1985. Since EEC consumer demand for most products, except cheese and fresh milk, is expected to either decline or remain static over the next few years due to increased competition from alternative products such as margarine and the expected increase in price of the products, such an increase in milk production would result in a substantial increase in the production of the intervention products, butter and SMP, to the detriment of New Zealand's export trade.

Nevertheless there are reasons for being optimistic that we will not return to a situation as bad as that in the mid-seventies. Firstly the Soviet dairy sector has consistently failed to achieve its production targets and it seems that the USSR may be forced to continue importing substantial quantities of dairy products for some time in the future. Secondly the ever increasing burden of financing the CAP appears likely to lead to some check on the growth of milk production in the EEC in the longer term. In 1980 total expenditure on dairy products under the CAP amounted to 5,279 million ECUs (European Currency Units) (US\$4,997 million) while subsidies on exports of butter, milk

powder and related products amounted to 2,700 million ECUs (US\$2,556 million). Assuming that production rises at an average of 2 per cent per annum, by 1985 the level of the EEC surplus would at least double while the real cost of the CAP for dairy products would increase by at least two and a half times.

Fortunately the structure of the EEC dairy industry is gradually changing. Despite the survival of 1.5 million farmers milking fewer than twenty cows, more than half the EEC herd is now milked by fewer than 500,000 farmers. As the number of non-viable farms declines the political difficulties of introducing quotas or annual CAP spending limits should be reduced, bringing some hope that EEC demand and supply may be brought more closely into balance by the end of the decade.

Whether or not the EEC surplus is eventually brought under control, it seems likely that the New Zealand dairy industry will need to make further adjustments in both production and marketing in the next decade as access to the UK butter market continues to decline and an increasing proportion of New Zealand's dairy export receipts are derived from non-traditional markets and products other than butter.