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MILK QUOTAS IN THE EUROPEAN COMMUNITY
Highlights For American Policy Makers

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I. INTRODUCTION

Dairy surplus seemed too large in the United States (US) during the early 1980s. By 1985, farmers and legislators were seriously discussing supply management as a policy option. Canadian experiences with dairy quotas were studied. It was known that the European Community (EC) had initiated dairy quotas in April, 1984, but little information was available about them during the policy debates in the US. The experience of activating quotas on so large a scale should provide valuable lessons were the US to adopt milk production quotas in the future (70).[1]

The national legislation that came out of the 1985 US policy debates did not include supply management. The recent report of a dairy farmer commission stated that the use of production controls on a permanent basis was not in the best interest of the dairy industry. But, on a temporary basis, one of the two options the commission did favor was a two-tier price program (pp.45-57, 68). As described in their report, the two-tier pricing plan has some of the elements of a quota system.

Surveys in the Lake States show supply management is still a policy option in the minds of dairy farmers. In Michigan, nearly 60 percent of the respondents either agreed or strongly agreed that some form of supply management should be instituted. (p.46, 24). Milk output in the US could expand significantly given the right price environment. If this happens, future dairy policy debates are likely to include supply management. There will be a need for more information about the use of dairy quotas in the EC. The purpose of this report is to provide that information in a form that legislators, farmers and others interested in US policy will find useful.

II. METHODOLOGY

This paper is a review of literature. Being written in England, it draws heavily on English source material, most notably on publications cited in Dairy Science Abstracts and World Agricultural Economics and Rural Sociology Abstracts published by the Commonwealth Agricultural Bureau International. Additional materials were found in various English libraries. An effort was made to include materials not generally available in US libraries, so that US researchers interested in EC dairy quotas should find the references of interest. Preference was given to publications printed in English.

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[1] Numbers in parentheses refer to citations in the list of references.

After a brief description of the background to milk quotas within the EC, the paper outlines the introduction and initial response of dairy farmers to the scheme. This is followed by a discussion on the mechanisms set up for transferring quotas. Finally, the success of quotas in regulating milk production within the EC is examined and the implications for the US assessed.

III. BACKGROUND TO QUOTA INTRODUCTION

World War II left Europe with a special respect for the benefits and needs of its agriculture. This led to the creation of the Common Agricultural Policy (pp. 11-60, 43), whose goals implicitly included (i) self-sufficiency of food production, (ii) income parity for farmers with other occupations and (iii) maintenance of the family farm. Implementation of these objectives called for agricultural price support, the long-term consequence of which has been the steady and continuing over-production of many key commodities. The basic dilemma for the Community has been how to find a balance between supply and demand for food products, while ensuring a fair standard of living for farmers. In the milk sector, the attempt to reconcile the former with the latter has proved to be the major preoccupation of the policy directives and the lack of success has given rise to major problems of structural surplus. The price mechanism alone has been unable to achieve both objectives. It is against this background of continued over-production that milk quotas have to be seen.

Milk Pricing Arrangements In The EC

The basic arrangements within the Community for supporting dairy farmer incomes, set out in 1964, is similar to that in the US (pp.92-106, 43). A central 'target price' for milk of 3.7% fat content is announced. This is not a guaranteed price, but one which milk producers should be able to obtain on average for all milk sold. The target price is achieved through the purchase of butter, skimmed milk powder and certain types of cheese by national intervention agencies, and through a complex system of subsidies for consumption and export. 'Intervention prices' for butter and skimmed milk powder are set at a level which, after allowing for processing costs, enables processors to pay the target price to farmers.

To prevent imports from undercutting the target price, a system of 'variable levies' is applied to imported dairy products. The variable import levies are charged as the difference between world prices and something called the 'threshold price'. Conceptually, the threshold price is the external equivalent of the target price. The import levy system prevents milk products from being sold internally for less than the threshold price. The practical implications of this are that no dairy products can enter the EC without some special concession, as applies to the United Kingdom's (UK) trade with New Zealand.

Prior To Quotas

It did not take many years for the consequences of these policies to result in excess supplies of milk, forcing the EC to look at ways of reducing the surpluses. Measures which have been tried include producer subsidies on skimmed milk going into animal feeds and consumer subsidies on butter and school milk. Attempts have also been made to encourage dairy farmers to leave milk production and go into other enterprises, or to stop farming completely. Assessments on milk production called 'co-responsibility levies', have been instituted. These are charged at the processor level and are intended to reduce the farm level price and to help finance disposal operations. These have

ranged from 2.0 to 2.5 percent of the target price of farm milk in the early 1980s (pp. 92-106, 43).

Despite these measures, stocks of manufactured dairy products grew due to high farm prices and unrestricted intervention buying (p.18, 21). Milk equivalent (butterfat basis) consumption increased by only 0.7 percent annually from 1970 to 1984, while from 1971 to 1983 deliveries to dairies increased 2.6 percent annually. The effect was a rising cost for storage and disposal of surpluses, with the budget costs per 100 kg. of milk fluctuating between 7 and 22 percent of the intervention (equivalent) price of milk (p. 79, 73). One way to measure excess supply is the ratio of internal production compared to consumption. A self-sufficiency ratio of 127 means production was 27 percent greater than consumption that year. During 1983, the last year before quotas, selected dairy products had the following self-sufficiency ratios in the 10 EC countries combined:

Whole and semi-skimmed milk powder	390
Casein supplies	194
Condensed milk	177
Butter	145
Skimmed and butter-milk powder	129
Butterfat	127
Solids-not-fat	123
Whey powder	118
Cheese	110

At the same time, liquid milk needs were being completely met (58). By 1989, it was calculated that without quotas EC dairy farmers would have been supplying 142 percent of domestic consumption (6).

In the fall of 1983 the EC Commission decided that dairy surpluses were becoming so expensive to maintain that either the farm milk price would have to be dropped 12 percent or quotas would have to be introduced. A price drop of that magnitude was not acceptable to the majority of member states due to the goal of farm income maintenance. Thus, quotas became the inevitable choice. This abrupt change of policy was received positively by the dairy industry (pp. 21-22, 21).

Table 1 shows size and yield factors on dairy farms in the 10 countries that made up the EC just before quotas were introduced.[2] Their individual contribution to total production, herd size distribution and yield per cow are quite different. Italy and Greece produce about 10 percent of the milk; over 90 percent of their farms have less than 20 cows each. In the UK, nearly 50 percent of herds have more than 50 cows. Of all the EC countries, the size distribution of UK herds is closest to that in the North Central and Northeastern US.

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[2]The UK's Milk Marketing Board publishes annually separate books of UK and EC dairy statistics. They include explanations of regulations and have conversion factors (38,39,57,58,59,60). As these are in English and draw from several European data sources, they may be all the reader needs to stay informed. Other data sources may list values in European Currency Units or Green Rates or mention Monetary Compensatory Accounts. Definitions of these can be found in (Chapter 8, 43).

TABLE 1. MILK PRODUCTION AND HERD SIZE DISTRIBUTION EC-10, 1983

	Percent of Total Cows Milk	Number of Herds % by No. of Cows			Pounds of Milk Per Cow
		Under 20	20-49	50 +	
France	27.8	67.4	28.8	3.8	8,505
Germany	22.6	75.7	22.1	2.2	10,635
United Kingdom	15.2	20.9	31.3	47.8	11,091
Netherlands	11.0	26.8	38.9	34.3	11,662
Italy	9.3*	92.0	6.0	2.0	7,804 **
Irish Republic	5.1	67.2	25.2	7.6	8,126
Denmark	4.6	42.3	43.3	14.4	11,940
Belgium	3.5	58.2	35.8	6.0	8,675
Greece	.6	98.7	1.3	0.0	6,515 **
Luxembourg	.3	37.9	51.2	10.9	9,601
Total Ten	100.0	74.5	19.8	5.7	9,674

Sources: (57, 58)
* = Includes buffalo milk
** = Estimated

Portugal and Spain are not in Table 1 because they did not join the EC until 1986. They have a 10-year transition period and special rules for adapting to the dairy quota system (p.13, 59).

IV. STARTUP AND RESPONSE TO THE QUOTA SCHEME

In 1968, the EC had been given the authority to control the marketing of milk. The regulations which initiated quotas primarily set the 'reference quantities' which each country would be allowed to produce, fixed the levies on excess production and laid out the guidelines for how the countries should implement the quotas. The regulations were passed by the EC Commission on March 31, 1984 and went into effect on April 2, 1984 (72). The initial goal was to allow total EC milk production to equal what it was in 1981. This was done in the UK by setting basic farm quotas at either 1983 levels minus about 7 percent or at 1981 levels plus 1 percent, with adjustments for special situations. No distinction was made between milk sold for liquid or for manufactured uses in determining quotas in the EC.

Plan A Or B

It was recognized that quotas represented a major policy change and could cause administrative problems for the ten countries. To help meet the diversity of conditions, the EC gave member states two choices of how quotas could be applied. In Plan A they would be assigned farm by farm. Belgium, Germany, the Netherlands, Northern Ireland and the Isles of Scilly (part of the UK) chose this option. The levy on production in excess of quota was fixed at 75 percent of the target milk price (pp. 6-15, 38).

The remaining countries chose Plan B which involved quotas being assigned to the first buyer of the milk, which in England and Wales was the Milk Marketing Board (MMB). The buyer's quota would cover the total milk from all supplying farmers. The levy on production in excess of quota was to be 100 percent of the target milk price. Special rules would be set up for producer handlers, who sold directly to retail customers (pp. 6-9, 59).

Plans A and B, as defined by the EC, are only two of many ways in which supply management policies may be implemented. Reference to (48, 49) will show how the EC situation compares with experiences elsewhere in the world.

Whole Farm Buyouts

To soften the blow of the production cutbacks which would be needed, the EC encouraged countries to buy up quotas on a whole farm basis to be used for reserves and for reallocation to special cases. In England this was called the 'outgoers scheme'. Most countries had some form of this policy. The EC put up part of the funds for it, but each country determined their own way of doing it.

The subscription to whole farm quota buyouts was difficult to predict. Germany and the Netherlands over-estimated the amount they could buy. Consequently, they assigned too much quota to their farmers by 4 and 1 percent respectively (90, 91).

Apparently, the EC expected that more countries would choose Plan A, where individual farmers would be held liable for their above-quota production. Instead, Plan B was more often used. In this case the first buyer of milk might be right on quota but have some farmers over-producing and some under-producing. In this situation, those farmers who were above quota were offset by those who were below. The above-quota farmer in this case did not have to pay a levy. The effect of this was for total EC production to be higher than expected.

Dismayed by the way the rules were being interpreted initially, EC officials reacted by imposing further quota cuts (71).

Later changes in the rules have allowed countries operating Plan A to settle their quota accounts as if they had Plan B (84). Thus, the Netherlands has received permission to shift to Plan B to gain the flexibility of handler-wide pooling. Germany has applied to do the same, but currently permission has been refused by the EC Commission (7).

Initial Reaction Of Milk Producers

Although EC personnel had evidently been publicly discussing quotas since the fall of 1983, many in the agricultural sector were unprepared for them. This is reflected in the surprise shown in many English farm publications. We did not attempt to find citations from comparable publications in the other EC countries. Among the typical reactions were:

> "Now that the initial shock of quota introduction has passed ..." (28);
> "most dairy farmers, consultants, feed and fertilizer salesmen are dazed and reeling" (31);
> and "...introduction of dairy quotas ... was a traumatic event for dairy farmers throughout the European Community." (44)

Certainly, right up to the end, the MMB of England and Wales actively opposed them and publicly said that quotas would not be implemented.

Though hard to prove, there is a feeling that many individual milk producers throughout the Community deliberately increased their production in 1983 in anticipation of quotas. Production was definitely expanding in England and Wales by early 1984. There were several possible reasons for this. In particular, government grant schemes tended to encourage expansion of cow numbers on UK dairy farms. Coupled with this, productivity on UK farms was high by world standards and, with costs of production below EC market prices, there was incentive for expansion.

Whatever the initial reactions, the first year was characterised by widespread confusion. There was uncertainty both about the operation of the quota scheme and about what was the best way in which to cope with it at the farm level. In particular, during the first year there was confusion about whether quotas were to operate on a monthly or an annual basis. By the second year it had become clear that the quota would be assessed on an annual basis, with the year running from April 1 to March 31. It became important for individual farmers to track exactly where they stood as the year progressed. As part of the National Farm Records scheme, which is similar to Dairy Herd Improvement in the US, the MMB developed a weekly forecasting program. With this, individual producers could predict with considerable accuracy what production would be in the next few months.

Information on how to maintain farm profitability given a ceiling on milk output was vital. The speed with which quotas were adopted precluded much work on predicting their impact, except by EC staff. However, once enacted the policy stimulated a major institutional reaction. Considerable attention was given to forecasting future effects. Entire meetings of industry trade associations were devoted to quotas (15, 19, 27, 46, 47, 74, 79, 84). The European Association of Agricultural Economists devoted a whole issue of its journal to the topic (13). This included several prediction models, many of which were striking in their predictive accuracy, despite the limited experience with quotas. Reports by farm consultants explored the type of actions farmers should adopt to maintain profitability (65,88). Some works concentrated on interpreting the laws and rules (20).

With time, better information became available and was communicated to the milk industry by consultants and advisory services (26, 32, 35, 40). Research was started on specific ways to adapt the feeding management of dairy cows to the quota regime (82). After two years of operation, EC quotas started to be compared to similar policies throughout the world (48, 51).

Secondary Impacts

Dairy farmers were not the only ones to feel the impact of quotas. They were felt throughout the agricultural economy. During the first few months with quotas, farmers tended to cull more animals and bred fewer cows. The use of artificial insemination services fell 11 percent (55). While this later recovered somewhat, beef sires were increasingly used (56). Since the dairy herds are a major supplier of veal and beef throughout the EC, the reduction in dairy cows led to reduced beef supplies (33).

Another immediate result of quotas was a cut back in concentrate feeding. Despite generally attractive prices for feedstuffs, sellers of grain and protein supplements faced a particularly large drop in their market during 1984. This occurred due to confusion about how to best bring production into line with quotas. It is generally believed that feed dealers cut back their operations during this period, though later a portion of the market was regained.

Less milk production also meant resources became available for alternative enterprises. To most farmers, this meant diversifying into other types of livestock and cropping enterprises. Serious attempts were made to find profitable alternatives to milk (17). The difficulty for the EC was that many of the alternatives were already in surplus, so that the land released from dairying only served to exacerbate the problem elsewhere.

Farmers in the EC have expanded sheep production since quotas started in 1984 as shown in Table 2. Beef and veal production in the EC appeared to increase, but then dropped in 1987 and 1988.

TABLE 2. SUPPLIES OF SHEEP AND BEEF IN THE EC
Production: Actual and Forecast ('000 tonnes)*

Year	Sheep Meat	Beef and Veal
1985	976	7,898
1986	946	8,000
1987 (a)	995	7,970
1988 (b)	1,032	7,601

* Carcass weight equivalent
(a) Estimate
(b) Forecast
Source: (54)

In the UK, dairy farmers tended to turn first to other livestock enterprises, and secondarily to cash crops. The main switch would seem to be into sheep meat production, which is currently relatively profitable. Table 3 shows that mutton and lamb production have increased in recent years, especially since the introduction of milk quotas. On the other hand, the switch to beef production has been less. In fact, UK beef and veal supplies have decreased and are expected to drop further during 1989.

TABLE 3. ESTIMATED SUPPLIES OF MEAT IN THE UK
Production: Actual and Forecast ('000 tonnes)

Year	Mutton and Lamb	Beef and Veal
Annual Averages:		
1975-80	244	1,075
1981-85	280	1,070
1986	291	1,046
1987	297	1,069
1988*	323	970
1989*	340	948

* Forecast
Source: (54)

Quotas have also had impacts on international trade. There was, and continues to be, increased pressure for New Zealand to give up more of its favored export market into the EC (41). A US study showed that fewer cows in the EC would affect both US crop exports and international price levels for dairy products (83). Still more effects are likely to become evident as the intervention stocks of manufactured dairy products are eliminated.

1986 Changes

The early problems of making quotas work in the EC resulted in amendments to the rules, which came into force in December 1986. The core problem was still too much milk production. This caused more butter to be bought into intervention in 1986 than had been in 1983, so that stocks of skimmed-milk powder and butter remained excessively high (pp. 31-32, 21). The main change was a further reduction in the overall level of quotas. However, a part of the cutback was deemed to be 'temporary' and milk producers received compensation for this fraction. At the same time, the levy for over production was increased to 100 percent of the EC target price, which for UK producers meant a penalty which exceeded the farm milk price. The intervention procedures were also changed to reduce the amounts purchased, while resources were put into financing disposal of manufactured products currently in storage. Lastly, the use of whole farm quota buyouts was encouraged by increasing the funds available for this and by making the rules more flexible (p. 42, 21).

V. TRANSFERRING QUOTAS

A major issue in designing any supply management policy is whether or not the privilege to sell milk will be freely transferrable. If it is, then it must be decided whether an open market will be allowed to set the price and consequent value of the quota. From the outset, the EC required milk quotas to be linked to land. This was intended to reduce the likelihood of milk production becoming consolidated onto large farms in a few regions. However, tying quotas to land is thought to have inflated land prices. For this reason, an internal EC committee has suggested that the Community untie the link between land and quota, which would bring the system closer to the one in operation in Canada (90). However, for the moment, each country has been allowed to set up its own schemes for enabling the transfer of quotas. Not surprisingly, the schemes adopted have varied among member states.

France

The French did not want a financial market to control the transfer of quotas, and they did not want to create assets in the form of quotas. France therefore opted to control quota transfers through a hierarchy of regional administrators, farmer committees and national agencies. Thus, individuals have been forbidden to trade quotas among themselves, so that a milk quota has no market value in France (p. 42-43, 78). The acceptance has been aided by the success of France's whole farm quota buyout project. This has freed up enough quota to redistribute to those who need it, without stressing the system.

UK

In contrast to the French, the UK has been prominent among those who have sought to get the EC to allow quotas to be leased year-by-year or to be sold (19, 76). The scheme devised by the British involves the MMB acting purely as a clearing agent for the lease and sale of milk quotas. The actual trade in quotas is conducted by real estate agents, who act as quota brokers (64). However, because the EC requires the quota to be tied to land, land leases or sales have to be part of the transaction. The solution to this adopted by the UK has been to permit purchased quota to be transferred to land previously owned by the purchaser. Given certain conditions, the land purchased with the quota can then be resold without it. In this way, quota can 'move' long distances, so enabling ongoing change, although farmers wanting to get into dairy farming are now faced with the extra cost of rent or purchase of quota (52). In the year ending March 31, 1987, about 5 percent of the total milk quota in England and Wales was transferred. Another 1.7 percent was leased for a portion of the year (p. 9 and 23, 89).

However, before this scheme could operate effectively, certain difficulties arising from the land ownership system had to be overcome. About 35 percent of UK dairy farm land is rented (61). There is a legal tradition that once tenants are on a farm, they effectively have a lifetime lease of it. Thus, it is nearly impossible for the landlord to remove a tenant in England. This immediately caused a problem over who owned the quota, since it was supposed to be tied to the land. A system involving splitting up the quota between tenant and landlord at the end of a leasehold was worked out (53).

When sold, quota is taxed as a long term capital gain. Researchers currently show quota transactions and over quota penalties netted out in income statements and cash flow reports from farm surveys (77). However, the asset values of quotas are not yet appearing on UK balance sheets. This may in part be due to the fact that the EC is not committed to quotas beyond 1992, so all the implied asset values would evaporate if quotas were not continued.

Other EC Countries

The Netherlands, Denmark and Germany allow quota to be bought and sold. However, in both the Netherlands and Denmark land must go with it. In Germany the government takes a percentage of the quota traded. In addition, there is also an upper limit on how much quota any one farmer can own (p. 25, 4). Finally, Ireland has a leasing arrangement (69, 78).

When land is included, it is difficult to know how much of the transaction price is attributable to the quota and how much to the land. However, during early 1988, in England and Wales, quota was being sold for 2 to 2.5 times the farm milk price (34, 84). During the same period, in the Netherlands, quota was selling for 3 to 4 guilders per litre (3, 86). The ratios of quota price to milk price are similar to those in Ontario Province, Canada (42).

VI. SUCCESS OF QUOTAS IN EC

Economists have argued that quotas, including dairy quotas, involve a series of trade offs. Success depends on one's priorities. Reduced supplies should reduce the burden to taxpayers of carrying out surplus disposal programs, but they will also tend to increase consumer prices. A reduction in available milk is likely to reduce the production capacity needed for manufactured dairy products. Against this, farmers face extra costs in acquiring quota, which they will expect to offset by receiving higher prices. Even four years later, it is not currently clear what the full range of impacts of the EC quotas will be. In particular, the impact of the rule changes in late 1986 are only beginning to be evident in published statistics. However, several facts have emerged.

Milk Supplies

The EC's quota program has been successful in cutting the aggregate amount of milk marketed in member countries. Total milk production was 112 million tonnes in 1983. This dropped to 110.5 million tonnes in 1984 and is expected to drop to 107 and 106 million tonnes in 1985 and 1986 respectively (p. 122, 23). In the years ended 1985, 1986 and 1987, the total EC supplies as a percent of quota was -0.4%, +0.9% and +0.8% respectively (pp. 48-49, 60). However, there was considerable variation among regions in the amount of over- and under-quota production.[3] (67, 78)

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[3]Part of the administrative costs of a quota system is the information systems required for reporting and monitoring. Monthly tracking of production versus quota allowance by country is published (2). However, there appears to be differences among countries in the speed with which the reporting is done.

By mid-1988 the effects of the 1986 rule changes began to appear. Comparing the period January through April in 1988 with the same time period in 1987, it is evident that the production of butter was down 20.6 percent and that of skimmed milk powder down by 30 percent. These figures are for 8 EC countries, excluding Greece, Italy, Portugal and Spain. Liquid milk sales were about the same (p. 9, 8). Weather differences between the two years may have accounted for part of the impact, but it is unlikely that they explain the total drop.

There are also signs the EC is getting on top of surpluses. As late as June, 1987, stocks of butter and skimmed milk powder were increasing (5, 90). Faced with a continued fall in the demand within the EC for butter (23), the Commission concluded that total milk quotas were still set too high. Accordingly, the EC lowered them for years ending in 1988 and 1989, plus it tightened the rules on butterfat deliveries (pp. 46-47, 60).

The result is that for 1988, the aggregate EC quotas are about 12 percent less than 1983 production levels. By mid-1988 , the EC had eliminated public stocks of skimmed milk powder, although the private sector inventories were not reported. One consequence of this has been that the price of skimmed milk powder has increased to the point where subsidies for its use as animal feeds need reviewing. In fact, the lack of intervention stocks has led one speaker to call for quota increases to ensure that powder supplies will be available for food aid projects (p. 10, 8). Certainly, demand for dried milk in the northern EC countries has caused Spain to export milk for this use, leading to price increases in its own domestic liquid milk market (p. 23, 9).

Taxpayer Burden

Without quotas, EC farmers would have been producing at 142 percent of domestic consumption by 1989. Quotas have relieved governments of buying up surpluses of this order (6). However, while the EC still has a legacy of butter stocks which has to be dealt with by the public sector (22), there are signs that the imposition of quotas have helped contain the budgetary costs of milk disposal. Setting the EC expenditure on subsidies for milk and milk products at 100 in 1984, the expenditures in 1985 and 1986 along with the budget for 1987 were 109%, 99% and 108% respectively (p. 11, 60). The forecast for 1988 and 1989 is for a fall in expenditure, as falling milk production accompanied by the liquidation of publicly held skimmed milk powder stocks are achieved.

Processing Capacity

Whether the introduction of milk quotas has led to greater rationalisation of processing capacity in the milk sector is more difficult to assess at the moment. On the one hand, there has been a steady decline in the number of organizations processing milk and milk products over the last ten years. In 1976, for the 9 EC countries excluding Greece, there were 7,844 firms processing milk. This figure had declined to 6,833 in 1979, 6,140 in 1982 and 5,567 in 1985 (Supplement p. 2, 60). Thus, at least up to 1985, there does not appear to have been any significant acceleration in the fall in the number of processors following the introduction of quotas.

On the other hand, the recent experience of the MMB of England and Wales suggests that quotas may be beginning to affect processors. In 1987 the MMB subsidiary making butter and powder saw a 21.6 percent decline in volume of milk handled. Intervention sales of the 2 products fell from 129.5 million in 1986/87 to 24.4 million pounds Sterling in 1987/88. As a result processing capacity had to be closed (p. 29, 9). In an effort to encourage farmers to even out seasonal production and help plant utilization,

the MMB in 1989 plans to pay positive price differentials in July through October of about 30 percent above the annual average price. The current negative differentials in the spring will be maintained (p. 26, 8).

Farmer Responses

English farmers have generally accepted quotas as a necessary evil. Surveys run in early 1986 (75) and 1987 (66) found 77 and 72, percent respectively, favored continuing quotas. This is surprising given that the increase in the average price paid for milk during the period 1984 to 1987 was insufficient to compensate for the drop in volume of milk sales from dairy farms (p.140, 39). However, despite farmer acceptance, quotas are not a forgotten issue. Agricultural magazines and newspapers continue to devote considerable space to them (10, 14, 30, 45, 81) and not all the comment is favourable (12, 87). Varying opinions about quotas appear in farmer publications throughout EC countries.

Whether or not farmers like quotas, they have responded to the challenge of finding ways of maintaining profits with a lower milk output. This can be seen from the annual milk cost surveys conducted by the MMB (61, 62, 63). In the first year of operation, 1985, dairy farm cash flows were actually better than the year before, when there were no quotas. Weather may have played a part (29), but equally so did the drop in grain fed to cows. After the transition year, the trend has been to get more milk per cow, keep fewer cows per farm, while returning to pre-quota levels of concentrate feeding (45). It is now generally accepted that it is more profitable for a dairy farmer to keep yield per cow high and maintain income with alternative enterprises, instead of trying to cut back yield per cow and maintain the same number of cows (11, 25). Particularly, on larger farms, this strategy offers the opportunity to cut labor costs. Some farmers have also saved labor by moving away from 3 times to 2 times per day milking (16).

Consumer Prices

A criticism of quotas is that, compared to a free market situation, they increase the cost of the final product to the consumer and so depress consumption. It has happened in Spain (p.23,9). Up to 1987, it is not clear that this has happened in the UK (statistics about this from other EC countries were not found). Liquid milk consumption in that country has dropped from 4.89 pints per capita in 1965 to 4.15 pints per week in 1987. However, there is no evidence that this trend has accelerated since the introduction of quotas (p. 171, 39). At the same time, although there is evidence that weekly household expenditure on dairy products has dropped from 16.28 percent of total expenditure in 1983 to 15.27 percent in 1986 (p.178, 38 and p. 170, 39), this cannot be directly attributed to quotas. A variety of economic developments were probably responsible for this and more research would be needed to identify the sole impact of milk quotas on prices and consumption.

Nevertheless, the price of fluid milk may well increase with more noticeable results after the current EC dairy surpluses are eliminated. There are signs that the elimination of surplus manufactured dairy products is having important consequences for the food sector. It has been privately admitted that, with the advent of quotas, two UK food companies lost their traditional sources of manufactured dairy products. Finding new sources proved difficult and more expensive, leading to higher costs which were probably passed on to the consumer.

VII. FUTURE OF QUOTAS IN THE EC

When initially implemented quotas were seen by the European Commission as a temporary measure which would be removed after 1989. This was later extended to 1992 (1). What will happen after this date is uncertain. One EC official is reported to have said that the industry should not count on quotas staying beyond 1992 (36). Others feel that the Community will continue to have a serious over-supply of dairy products, which can be best solved by quotas, for several years to come (80). A recent study of the EC dairy industry concluded quotas are the most likely policy for the future, but suggested that consumer prices would have to be adjusted downwards (50). Similarly, a study of opinions held by European dairy industry officials, using Delphi forecasting techniques, revealed a 70% probability of quotas continuing (37).

VIII. IMPLICATIONS FOR THE US

Quotas have worked for the EC in that aggregate milk production at the farm level has been reduced. Such a policy could do the same for the US. However, whether quotas within the EC will be successful in reducing government costs, while avoiding unacceptable increases in consumer prices for dairy products, cannot as yet be answered. Thus, a valid assessment of the effectiveness of quotas as a method of managing milk supplies may well have to wait until 1992, when the policy is scheduled to be reconsidered by the Community.

Certainly, the implementation of quotas in the US would represent a drastic measure. Before moving in that direction, policy makers should ask themselves if the situation they are currently facing is as bad as that faced by the EC in early 1984. Economists would argue that lower prices are a more efficient means of controlling the volume of milk output than are quotas. One of the factors in the EC decision to adopt quotas was that the milk support price was sufficiently above the cost of production on many farms that it needed to be dropped considerably to have a restraining effect on aggregate production. Given the structure of farming in many of the member states, lowering prices to this extent was not politically acceptable. Thus, one lesson for US policy makers might be to make sure the support price does not get too high.

An argument used in the past against quotas is that US dairy farms are so diverse that quotas which would operate equitably cannot be designed. However, this contention seems weak. The diversity of dairy farms throughout the 12 EC member states is greater than that found among the 50 US states. If intelligent people have been able to make the system work acceptably within the EC, there seems no reason why intelligent people cannot do the same in the US.

If milk quotas are considered to be a feasible policy option, then attention needs to be paid to three key aspects: (i) the scheme should be flexible enough to accommodate local situations; (ii) it should allow for the transferability of quota; and (iii) the secondary consequences for the rest of the agricultural sector should be fully explored.

The important thing in designing any quota scheme is to allow some flexibility in its operation to meet local conditions. The European Commission showed flexibility in its working relationships with member countries and their organizations. Powers were delegated downward where possible, while retaining the authority to assure compliance. The US congress could work in the same way through a variety of agencies already in existence.

The transferability of quotas is an important operational question. There are several ways to do it. England and Wales has an organized market, but some observers think the Canadian one is better. The latter does not tie quota to land. If monetization of quotas is to be avoided, then the French experience would be a model to follow. Their administrative controls provide flexibility without creating market values for quota.

Lastly, secondary impacts should be considered. In the EC the whole agriculture service industry supplying the dairy sector experienced varying degrees of disturbance as a result of quotas. In addition, milk quotas may force farmers to diversify into other enterprises. In particular, the imposition of quotas in the US might well add to the burden carried by crop support programs, if resources freed from dairy farms were to go into grain production.

IX. SUMMARY

An excess inventory of manufactured products and a continuously expanding supply of raw milk were becoming too expensive for the EC governments to carry. After years of trying alternatives, milk production quotas were started on April 2, 1984. However, the ten countries which were members of the EC at the time were permitted considerable flexibility in how they administered the policy. The result is that there is a wealth of variety which can be used to study how to run a quota program.

The implementation of the policy was not without its problems. It took nearly three years to work out administrative problems, to allow for special cases, and to judge the effectiveness of quotas. At the outset, limited provision was made for the transfer of quotas. With time, this came to be seen as a major omission and the EC permitted countries to set up schemes to do this, subject to the condition that sales of quota were accompanied by land sales. Some countries, like the UK, allow quota to be re-allocated through free market forces, while others, like France, use administrative means. Time also revealed important secondary impacts on input suppliers, milk processors and other farm sectors which had not been anticipated.

It is only now, some 3 to 4 years after its introduction, that the full impact of the policy is being felt. Only since the tightening of quotas in late 1986 have the amounts of manufactured products held in intervention storage declined significantly. Overall milk production in 1988 is about 90% of what it was in 1983. This has principally been achieved through a drop in cow numbers, while maintaining or increasing yield per cow. The whole policy is due for re-assessment by 1992. By that date it should be clear whether it has been effective. Until then, the EC experience should provide some interesting lessons to US policy makers who are considering quotas as an alternative.

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